

!Bienvenido a Miami y SCP!

We are thrilled that you are here in the iconic city of Miami to participate in SCP's Annual Winter Conference. This promises to be an exciting and intellectually stimulating conference given the high number and quality of submissions, which forced us to be extremely selective in our acceptances. This year, the keynote speakers are Paul Rozin and Hazel Markus who will deliver their addresses on March 7<sup>th</sup> (Friday) and March 8<sup>th</sup> (Saturday), respectively.

We also have the pleasure of featuring three SCP award addresses on Saturday, March 8<sup>th</sup>. In recognition of their outstanding contributions to consumer psychology, Vicki Morwitz and Sharon Shavitt have been named SCP Fellows and Jennifer Aaker has received the 2014 SCP Distinguished Scientific Contribution Award.

To enhance high-level discussions of issues of current interest to consumer psychologists, we are also continuing the "Conversation Sessions" initiated two years ago. The conference will feature Conversation sessions on various consumer research topics of interest. As previous years, each Conversation session will feature leading researchers in the field who will provide brief presentations on the most pressing questions in the area, followed by a stimulating and thought-provoking interactive conversation.

We would like to extend our sincere thanks to the many reviewers, authors, presenters, discussants and volunteers who have helped ensure a phenomenal conference program. We are deeply grateful to SCP president Darren Dahl for his encouragement and efforts (and humor!) and to Larry Compeau for his rock solid, stoic vision and patience throughout this process. We would also like to thank Cait Lamberton and Mike Norton for their outstanding job in organizing the SCP Doctoral Consortium, which is in its sixth year and is underwritten by funds from Jane and David Schumann.

We also are immensely indebted to Paul Belcastro, Aleksey Cherfas, and Patty Salo Downs for their flawless and tireless behind-the-scenes efforts in supporting this year's conference. Juliano Laran and Claudia Townsend deserve special thanks for sharing their indispensable local knowledge. Finally, we would like to thank our sponsors: the University of Washington Foster School of Business, University of Miami marketing department, The Wharton School's marketing department, Wharton's Risk and Decision Processes Center and Wharton's Baker Retail center as well as the University of Pittsburgh and Harvard University for sponsoring various events at this year's conference.

We are grateful to have such wonderful contributions from so many people for the benefit of the society. We hope you enjoy SCP 2014!

Mark Forehand



The University of Washington

Americus Reed, II



The Wharton School

## **Working and Individual Papers Reviewers**

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# Program Overview

## Thursday, 06 March 2014

8:00am - 6:00pm <b>(CHOPIN BALLROOM)</b>	DOCTORAL CONSORTIUM Sponsored by the University of Pittsburgh and Harvard University
3:00pm - 8:00pm	REGISTRATION ( <b>BALLROOM FOYER</b> )
3:00pm - 5:30pm	SCP EXECUTIVE COMMITTEE MEETING ( <b>SANDRINGHAM/WINDSOR</b> )
6:00pm - 8:00pm	OPENING RECEPTION ( <b>TRIANON</b> )
6:00pm - 7:30pm	WORKING PAPER SESSION 1 ( <b>TRIANON</b> )

## Friday, 07 March 2014

7:00 am – 8:00 pm	REGISTRATION ( <b>BALLROOM FOYER</b> )
7:30 am – 8:15 am	BREAKFAST ( <b>BALLROOM FOYER</b> )
8:15 AM - 9:30 AM	SESSION 1
9:30 am – 9:45 am	BREAK ( <b>BALLROOM FOYER</b> )
9:45 am - 11:00 am	SESSION 2
11:00 am – 11:15 am	BREAK ( <b>BALLROOM FOYER</b> )
11:15 am – 12:15 pm	PLENARY SESSION 1 – Paul Rozin, University of Pennsylvania ( <b>TRIANON</b> )
12:30 pm – 2:00 pm	LUNCHEON AND PRESIDENTIAL ADDRESS ( <b>VERSAILLES</b> )
2:15 PM - 3:30 PM	SESSION 3
3:30 pm – 3:45 pm	BREAK ( <b>BALLROOM FOYER</b> )
3:45 PM - 5:00PM	SESSION 4
4:00 pm – 4:55 pm	JCP AE RESEARCH AND REPORT MEETING ( <b>CAMBRIDGE</b> )
5:00 pm – 7:00 pm	JCP ERB MEETING ( <b>CHOPIN BALLROOM</b> )
6:00 pm – 7:30 pm	WORKING PAPER SESSION 2 ( <b>TRIANON</b> )
6:00 pm – 8:00 pm	RECEPTION ( <b>TRIANON</b> )

## Saturday, 08 March 2014

7:00 am - 3:45 pm	REGISTRATION ( <b>BALLROOM FOYER</b> )
7:30 am - 8:15 am	BREAKFAST ( <b>BALLROOM FOYER</b> )
8:15 am - 9:30 am	SESSION 5
9:30 am 9:45 am	BREAK ( <b>BALLROOM FOYER</b> )
9:45 am - 11:00 am	SESSION 6
11:00 am - 11:15 am	BREAK ( <b>BALLROOM FOYER</b> )
11:15 am - 12:15 pm	PLENARY SESSION 2 - HAZEL MARKUS TRIANON ( <b>TRIANON</b> )
12:30 pm - 2:00 pm	AWARDS AND BUSINESS LUNCHEON ( <b>VERSAILLES</b> )
2:15 pm - 3:30 pm	SESSION 7
3:30 pm - 3:45 pm	BREAK ( <b>BALLROOM FOYER</b> )
3:45 pm - 5:00 pm	SESSION 8
6:30 pm - 11:00 pm	SATURDAY NIGHT ROOFTOP EXTRAVAGANZA ( <b>FIFTY Lounge—50th Floor of the Viceroy Hotel</b> )

# Thursday, 06 March 2014

**DOCTORAL CONSORTIUM** Sponsored by the University of Pittsburgh and Harvard University

8:00am - 6:00pm

CHOPIN BALLROOM

**REGISTRATION**

3:00pm - 8:00pm

BALLROOM FOYER

**SCP EXECUTIVE COMMITTEE MEETING**

3:00pm - 5:30pm

SANDRINGHAM/WINDSOR

**OPENING RECEPTION** Sponsored by: University of Miami School of Business Administration, The Wharton School,  
University of Pennsylvania, and University of Washington Foster School of Business

6:00pm - 8:00pm

TRIANON

**WORKING PAPER SESSION 1** Sponsored by: University of Miami School of Business Administration,  
The Wharton School, University of Pennsylvania, and University of Washington Foster School of Business

6:00pm - 7:30pm

TRIANON

*Working Papers:* **WORKING PAPERS SESSION 1 (TRIANON)**

# Friday, 07 March 2014

REGISTRATION  
7:00 am – 8:00 pm  
BALLROOM FOYER

BREAKFAST  
7:30 am – 8:15 am  
BALLROOM FOYER

SESSION 1  
8:15 AM - 9:30 AM

- 1.1 *Symposium: Number Cognition* (BALMORAL)
- 1.2 *Individual Papers: The Choice is Yours: Biases in Consumer Preference and Judgments* (SANDINGHAM)
- 1.3 *Symposium: I Still Haven't Found What I Am Looking For: (Mis)Matching Pre- and Post-Consumption Preferences* (WINDSOR)
- 1.4 *Individual Papers: It's Not Just About Dollars: Issues in Financial Decision Making* (ESCORIAL)
- 1.5 *Individual Papers: Getting Personal About Consumption: Identity Signals and Identity Threats* (ESCORIAL)
- 1.6 *Individual Papers: The Moral Consumers: Understanding Motivations for Prosocial Behavior* (MICHELANGELO)

BREAK  
9:30 am – 9:45 am  
BALLROOM FOYER

SESSION 2  
9:45 am - 11:00 am

- 2.1 *Symposium: Crowds Made Wiser: Four Factors That Can Limit Crowd Wisdom and What To Do About Them* (BALMORAL)
- 2.2 *Individual Papers: Frames and Primes: Novel Insights into Judgment and Decision-Making* (SANDINGHAM)
- 2.3 *Symposium: And Now for Something Completely Different: The Meaning of Life* (WINDSOR)
- 2.4 *Individual Papers: Self-Control in Everyday Consumer Experiences* (ESCORIAL)
- 2.5 *Individual Papers: Not All "Others" Are the Same: Relationship Type in Social Influence* (ALHAMBRA)
- 2.6 *Conversations: New Directions in Cognitive Science* (MICHELANGELO)

BREAK  
11:00 am – 11:15 am  
BALLROOM FOYER

PLENARY SESSION 1 – Paul Rozin, University of Pennsylvania  
11:15 am – 12:15 pm  
TRIANON

**LUNCHEON AND PRESIDENTIAL ADDRESS**

**12:30 pm – 2:00 pm**

**VERSAILLES**

**SESSION 3**

**2:15 PM - 3:30 PM**

- 3.1 *Symposium*: New Directions in Hedonic Adaptation for Consumer Well-Being (BALMORAL)**
- 3.2 *Individual Papers*: From Top to Bottom: The Meanings and Consequences of Spatial Position (SANDINGHAM)**
- 3.3 *Symposium*: Identity Threats and Consumption: Causes, Cures, and Costs (WINDSOR)**
- 3.4 *Individual Papers*: Doing vs. Having: What's Unique about Experiential and Material Consumption (ESCORIAL)**
- 3.5 *Individual Papers*: Money, Power, and Control (ALHAMBRA)**
- 3.6 *Conversations*: Goal Pursuit (MICHELANGELO)**

**BREAK**

**3:30 pm – 3:45 pm**

**BALLROOM FOYER**

**SESSION 4**

**3:45 PM - 5:00PM**

- 4.1 *Symposium*: Consumer hands make light work: How procedural involvement changes judgments and decisions in the consumption process (BALMORAL)**
- 4.2 *Individual Papers*: The Role of Inferences and Expectations in Consumer Behavior (SANDINGHAM)**
- 4.3 *Symposium*: Signaling Self and Social Identity in Consumer Decisions Making (WINDSOR)**
- 4.4 *Individual Papers*: With a Goal in Mind: Goals Activation, Goal Focus, and Goal Pursuit (ESCORIAL)**
- 4.5 *Individual Papers*: Spreading the Word: Antecedents and Consequences of Word-of-Mouth Behavior (ALHAMBRA)**
- 4.6 *Symposium*: Products as Stimuli: Consequences of Product Use, Access and Touch on Dimensions of Performance (MICHELANGELO)**

**JCP AE RESEARCH AND REPORT MEETING**

**4:00 pm – 4:55 pm**

**CAMBRIDGE**

**JCP ERB MEETING**

**5:00 pm – 7:00 pm**

**CHOPIN BALLROOM**

**WORKING PAPER SESSION 2 Sponsored by: University of Miami**

**6:00 pm – 7:30 pm**

**TRIANON**

**Working Papers: WORKING PAPERS SESSION 2 (TRIANON)**

**RECEPTION Sponsored by: University of Miami**

**6:00 pm – 8:00 pm**

**TRIANON**

# Saturday, 08 March 2014

REGISTRATION  
7:00 am - 3:45 pm  
BALLROOM FOYER

BREAKFAST  
7:30 am - 8:15 am  
BALLROOM FOYER

SESSION 5  
8:15 am - 9:30 am

**5.1 Symposium: The Prosocial Life Cycle: Antecedents and Consequences of Charitable Behavior (BALMORAL)**

**5.2 Individual Papers: Mind and Body: Embodied Cognition and Physical Experiences (SANDINGHAM)**

**5.3 Symposium: A 360-Degree Review of Negative Emotions and Consumer Behavior: Comparing 4 Theoretical Perspectives (WINDSOR)**

**5.4 Individual Papers: In Pursuit of Health: Understanding the Effects of Nutritional Information (ESCORIAL)**

**5.5 Individual Papers: The Devil is in the Details: The Effects of Branding Decisions on Consumer Evaluation (ALHAMBRA)**

**5.6 Symposium: Cool Consumers and Cool Products – Antecedents, Interpretations & Consequences of Cool (MICHELANGELO)**

BREAK  
9:30 am 9:45 am  
BALLROOM FOYER

SESSION 6  
9:45 am - 11:00 am

**6.1 Symposium: Insights into Decision Making Under Risk & Uncertainty (BALMORAL)**

**6.2 Individual Papers: All About Memory: Structure, Antecedents, and Outcomes (SANDINGHAM)**

**6.3 Symposium: Affect Regulation: Persuasion, Daily Life, and the Effects of Changing Feelings (WINDSOR)**

**6.4 Individual Papers: Motivated Consumption (ESCORIAL)**

**6.5 Individual Papers: With a Grain of Salt: The Skeptical Consumer: Insights on Consumer Skepticism and Persuasion (ALHAMBRA)**

**6.6 Conversations: Self Identity and Social Influence (MICHELANGELO)**

BREAK  
11:00 am - 11:15 am  
BALLROOM FOYER

PLENARY SESSION 2 - HAZEL MARKUS TRIANON  
11:15 am - 12:15 pm  
TRIANON

**AWARDS AND BUSINESS LUNCHEON Sponsored by: The Wharton School, University of Pennsylvania**

**12:30 pm - 2:00 pm**

**VERSAILLES**

**SESSION 7**

**2:15 pm - 3:30 pm**

**7.1 *Symposium*: Understanding the “How” and “Why” of Consumer Behavior: The Promise of Eye-Tracking for Consumer Research (BALMORAL)**

**7.2 *Individual Papers*: The Time Has Come: Exploring Temporal Distance and Temporal Resources (SANDINGHAM)**

**7.3 *Symposium*: Do Positive Self-Perceptions Always Lead to Healthy Behaviors? (WINDSOR)**

**7.4 *Individual Papers*: Getting Emotional About Consumption (ESCORIAL)**

**7.5 *Individual Papers*: The Construction and Properties of Attitudes (ALHAMBRA)**

**7.6 *Special Awards Session*: SCP Fellow Awards and Distinguished Scientific Accomplishment Addresses (MICHELANGELO)**

**BREAK**

**3:30 pm - 3:45 pm**

**BALLROOM FOYER**

**SESSION 8**

**3:45 pm - 5:00 pm**

**8.1 *Symposium*: Earmarking Money in Mental Accounts (BALMORAL)**

**8.2 *Individual Papers*: Brains and Brands: Cognitive Perspectives on Branding (SANDINGHAM)**

**8.3 *Symposium*: Imagined Experiences: The Impact of Experiential Imagery on Consumer Attitudes Intentions and Food Consumption (WINDSOR)**

**8.4 *Individual Papers*: New Perspectives on Self-Control (ESCORIAL)**

**8.5 *Individual Papers*: Engaging the Senses: Sights and Scents in Consumer Research (ALHAMBRA)**

**8.6 *Conversations*: The Effect of Affect (MICHELANGELO)**

**SATURDAY NIGHT ROOFTOP EXTRAVAGANZA Sponsored by: University of Miami School of Business Administration,**

**The Wharton School, University of Pennsylvania, and University of Washington Foster School of Business**

**6:30 pm - 11:00 pm**

**FIFTY Lounge—50th Floor of the Viceroy Hotel**

# Thursday, 06 March 2014

**DOCTORAL CONSORTIUM** Sponsored by the University of Pittsburgh and Harvard University

8:00am - 6:00pm

CHOPIN BALLROOM

**REGISTRATION**

3:00pm - 8:00pm

BALLROOM FOYER

**SCP EXECUTIVE COMMITTEE MEETING**

3:00pm - 5:30pm

SANDRINGHAM/WINDSOR

**OPENING RECEPTION** Sponsored by: University of Miami School of Business Administration, The Wharton School, University of Pennsylvania, and University of Washington Foster School of Business

6:00pm - 8:00pm

TRIANON

**WORKING PAPER SESSION 1** Sponsored by: University of Miami School of Business Administration, The Wharton School, University of Pennsylvania, and University of Washington Foster School of Business

6:00pm - 7:30pm

TRIANON

## ***Working Papers: WORKING PAPERS SESSION 1***

**Room: TRIANON**

### ***Talking About Brands! Electronic Word-of-Mouth in Twitter and Sina Weibo***

Shu-Chuan Chu, DePaul University, USA\*

Microblogging sites are a communication channel that allows individuals to deliver short comments to a network of friends and contacts. This study examines what factors influence users' decisions to engage in brand-related electronic word-of-mouth (eWOM) in the context of Twitter and Sina Weibo, two popular microblogging sites in the U.S. and China respectively. It is proposed that microblogging usage, information factors, and culture factors, motivate users to share eWOM messages on Twitter and Sina Weibo. Theoretical and practical implications for global brands using microblogging sites as part of their marketing communications strategy are discussed.

For more information email: [schu7@depaul.edu](mailto:schu7@depaul.edu)

### ***Process of Solution Design: between the Curator's Intent and the Viewer's Interpretation***

Hee Young Chung, Hongik University, Korea\*

Nara Youn, Hongik University, Korea\*

We address how to best minimize mismatch occurrences between what the provider intends to provide versus what the customer envisions, especially in the context of art exhibition. We conducted ethnographic research featuring in-depth interviews and participant observation on the curator's solution design process and the viewer's consumption experience.

For more information email: [nara@hongik.ac.kr](mailto:nara@hongik.ac.kr)

***The Effect of Emotion Expression on Evaluations of Emotional Authenticity***

Cammy Schulz, University of Florida, USA\*

Typically, emotional experiences are automatically deemed authentic. However, this research shows that individuals can deem an emotional experience inauthentic, which affects subsequent behavior. Emotional authenticity is affected by emotional expression, the nature of the experience, and the emotional valence. Study 1A shows how the suppression of happiness for a continuous sequence of happy events decreases the perceived authenticity of happiness. Study 1B, shows how the suppression of sadness or an interrupted sequence of sad events decreases the perceived authenticity of sadness. Study 2 shows how the intensity of the emotional experience interacts with persuasion knowledge to influence charitable behavior.

For more information email: [cammy.schulz@warrington.ufl.edu](mailto:cammy.schulz@warrington.ufl.edu)

***Do You Aspire to Own a Rolex? An Exploratory Analysis on the Luxury/Aspirational Brand***

Ruby Q. Saine, University of South Florida, USA\*

Philip Trocchia, University of South Florida St. Petersburg, USA\*

Michael Lockett, University of South Florida St. Petersburg, USA\*

There is limited academic research in marketing concerning the distinction between the terms "luxury" and "aspirational" in regards to brands, both conceptually and empirically, although both terms are frequently used interchangeably in business. In this paper, we attempt to fill this gap by asking a sample of 452 consumers to provide examples of brands that they consider to be either luxury, aspirational, or both, which are then compared between Baby Boomers and Millennials, males and females, and high-income and low-income consumers.

For more information email: [Ruby.Saine@yahoo.com](mailto:Ruby.Saine@yahoo.com)

***Repeatedly Experiencing Information Overload in a Product Customization: a Case of Sequential Overchoice.***

Michael Dorn, University of Berne, Switzerland\*

Adrian Brügger, University of Berne, Switzerland

Claude Messner, University of Berne, Switzerland

The present study demonstrates how consumers can suffer from sequential overchoice. Customizing a tailor-made suit from combined-attribute choices (e.g., deciding on color and fabric in combination) leads to less satisfaction and less additional

consumption than customizing it from single-attribute choices (e.g., deciding on color, then on fabric). The effect is mediated by information overload and moderated by consideration set size.

For more information email: michael.dorn@imu.unibe.ch

***Packages That Look Like You: The Effect of Customer Body Size on Product Recommendations***

Dan Rubin, Baruch College, USA\*

Lauren Block, Baruch College, USA

Beth Vallen, Fordham University, USA

Jennifer Argo, University of Alberta, Canada

Veronika Ilyuk, Baruch College, USA

In this research, we show that when making product recommendations for others, people will select rounder products for heavier individuals more often than non-round products. We demonstrate this effect in two studies. First, in a field study conducted in shopping mall retail stores, we provide evidence that salespeople make disparate recommendations to potential customers based on the customers' physical appearance. We follow this with a lab study in which we replicate the effects when people are simply choosing which product they believe a heavier (vs. thinner) person would select.

For more information email: daniel.rubin@baruch.cuny.edu

***“Be Careless with That!” Upgrade Availability Increases Cavalier Cognition toward Owned Products***

Silvia Bellezza, Harvard Business School, USA\*

Joshua Ackerman, Massachusetts Institute of Technology, USA\*

Does the availability of product upgrades affect how consumers evaluate and treat their own belongings? In contrast to cognitive biases that strengthen psychological connections with owned products, such as the endowment effect, we propose that consumers may experience detachment from their own belongings if an opportunity to purchase a better product arises. In a series of experiments with a variety of products, we examine the consequences of product upgrade availability. We find that individuals tend to nonconsciously disengage emotionally from and act more recklessly with owned products when in the presence of preferred product substitutes.

For more information email: sbellezza@hbs.edu

***How Does Shelf Placement of National and Private Label Brands Affect Consumer Evaluation and Purchase Intent?***

Maryam Tofighi, Concordia University, Canada\*

Bianca Grohmann, Concordia University, Canada

Although the retailing literature highlights the importance of shelf placement for retailers' private label brands (PLB; i.e., brands created and sold exclusively by a retailer), research on the relative shelf placement of private label brands and manufacturer's national brands (NB) on consumers' brand evaluations and purchase intent is scarce. In two experiments, we show that NB benefits from being placed next to a PLB on a shelf whereas PLB benefits more from being placed next to another PLB. Moreover, we investigate moderation and mediation of this effect.

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***An Exploration of the Effect of Language on Processing of Numbers in Alphanumeric Brand Names***

Kunter Gunasti, University of Connecticut, USA

Selcan Kara, University of Connecticut, USA\*

Rod Duclas, Hong Kong University of Science and Technology

William T. Ross, University of Connecticut, USA

This research examines the effect of linguistic properties and audio effects of number systems on consumers' reactions to alphanumeric brand names (ABNs). Based on an international experiment, we show that processing of numeral parts of ABNs in different languages leads to variation in the perceived differences between new and existing brands. Specifically, based on linguistic properties of numbers in ABNs, consumers evaluate the difference between the new and existing ABNs differently across five languages that are English, German, French, Chinese and Turkish.

For more information email: selcan.kara@business.uconn.edu

***Fitting Product Placements: The Role of Product Placement in Consumer Enjoyment of Media***

Brian Gillespie, University of New Mexico\*

Darrel Muehling, Washington State University, USA

Individuals are frequently exposed to products that are highly integrated into storylines when consuming media (e.g., television, film), though past research has indicated that this high integration is more likely to result in less favorable brand evaluations. We propose, however, that products highly integrated into storylines can offer benefit to consumers through proper "product placement fit," operationalized along orthogonal affective fit and narrative fit dimensions. Through four studies, empirical evidence is presented demonstrating that as consumers' active goal of media enjoyment is met through product placement advertising, consumers respond with more favorable brand evaluations toward the placed product.

For more information email: briangillespie@unm.edu

***Direct Effects and Carryover Effects of Comparative versus Singular Judgment Tasks on Omission Detection and Evaluation***

Wan Kam (Priscilla) Chan, \*

Frank Kardes, University of Cincinnati

Consumers often make decisions based on different amounts of product information. Omission neglect (insensitivity to missing information) leads consumers to make extreme and biased judgments with a high degree of confidence on the basis of weak evidence. Our research indicated that comparative (versus singular) judgment tasks not only produce less extreme evaluations in an initial task but also induce omission detection in a subsequent task. Comparative (but not singular) judgment tasks elicit higher omission detection when set-size is small (versus large), and omission detection mediates the effect of judgment task on product evaluation.

For more information email: priscilla.chan.bear@gmail.com

***Ugh, \*Eyeroll\*, Brrrr: The Conceptualization and Use of Textual Paralanguage in Consumer Contexts***

Andrea Webb, University of Wisconsin - Madison, USA\*

Joann Peck, University of Wisconsin - Madison, USA

In this paper, we conceptualize and test a new concept, textual paralanguage, which is a written manifestation of voice qualities, vocalizations, and body language that adds meaning or emotion to a message. Language has the capacity to reveal our social and psychological selves, and we seek to better understand what consumers infer from textual paralanguage in written marketing communications. We develop a typology of textual paralanguage, conduct a lab study to test its effects, and discuss theoretical and managerial implications.

For more information email: awebb@bus.wisc.edu

***Bitter Mouth, Sweet Future: The Effect of Bitter Flavor on Consumers' Saving Behavior***

Fengyan Cai, Shanghai Jiao Tong University, China

Zhiyong Yang, University of Texas at Arlington, USA

Ying Yu, Huazhong University of Science and Technology, China\*

This research examines whether tasting something bitter leads individuals to save more. The mechanism underlying this process is the precautionary motive activated by the bitter taste. Two studies provide converging evidence on these effects. Study 1 shows that bitter taste activates the abstract concepts related to bitter life. Study 2 further reveals that tasting bitter flavor facilitates people's actual saving behavior by increasing their precautionary motive.

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***Is Revenge Sweet? The Differentiated Effects of Direct versus Indirect Revenge Behaviors on Consumers' Desire for Revenge***

Fateme Ghadami, HEC Montreal, Canada\*

Sylvain Senecal, HEC Montreal, Canada

Yany Gregoire, HEC Montreal, Canada

Sandra Laporte, HEC Montreal, Canada

Denis Larocque, HEC Montreal, Canada

The purpose of our research is to examine, in a consumer context, whether initial revenge behaviors: i) quench a desire for revenge (a "revenge is sweet" effect), or rather ii) sustain this desire (a "salted water" effect). Conducting a longitudinal field study, we found that the evolution of a desire for revenge depends on the form of revenge, direct or indirect, that is enacted against the firm. Revenge is "sweet" when customers directly enact revenge against a firm, and it resembles "salted water" when customers seek revenge indirectly against a firm. Reconciling these two rival explanations constitute the key contribution of this research.

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***"I stole it on impulse": Do impulse purchases instigate bad behavior?***

Saar Bossuyt, Ghent University, Belgium\*

Patrick Van Kenhove, Ghent University, Belgium

Tine De Bock, HUBrussel, Belgium

Many stores are designed to encourage impulse purchases. Retailers praise the extra revenues from unplanned purchases, though consumers often face negative consequences (cognitive dissonance, credit card debts...). But there may be a flip side to the coin for retailers as well. In particular, we hypothesize that the feelings of arousal and self-control depletion evoked by impulse purchases facilitate unethical consumer behavior, such as shoplifting. Two studies manipulating impulse buying and measuring subsequent (unethical) behavior provide tentative evidence for this hypothesis.

For more information email: [s.bossuyt@ugent.be](mailto:s.bossuyt@ugent.be)

### ***Disrupting the Healthy-Tasty Trade-off: the Case of Food Shape Modifications***

Caroline De Bondt, Ghent University, Belgium\*

Anneleen Van Kerckhove, Ghent University, Belgium

Maggie Geuens, Ghent University, Belgium

Healthy food often is perceived as poor tasting. As consumers are rarely willing to compromise on taste for health benefits, this inferior perception raises a problem for healthy food promotion. We argue that product shape modification may succeed in cueing that a healthy product is tasty without decreasing health perceptions and that this positive association transfer leads to a higher purchase intention. However, a positive association transfer is only likely to occur in case of perceived fit between the healthy product and the product of which associations are leveraged. In the absence of a fit, negative associations may be transferred.

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### ***The Context-Sensitive Self and Consumers' Self-Connection to Group-Referent Objects: A Cross-Cultural Study***

Burak Tunca, University of Agder, Norway\*

Reference groups influence the degree to which consumers integrate commercial objects into their self-concepts. This paper explores two novel moderators of the relationship between reference groups and consumers' self-object connections, namely, consumption situation and cultural context. We find that consumers' levels of self-connection to group-referent objects fluctuate across situations among the members of a collectivistic and less complex culture (Zambia). However, the relationship between reference groups and self-object connections was consistent across situations in an individualistic and highly complex cultural setting (Norway). The results are discussed in light of the notions of context-sensitivity and cultural complexity.

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### ***Extending Product Lines to Increase Sales of Original Products***

Brittney Dalton, Washington University, USA\*

Stephen Nowlis, Washington University, USA

Line extensions are often considered a threat to preexisting products in the line, as their introduction may cannibalize sales of original products. Our research shows that this effect of cannibalization is reversed when the items in a line extension are perceived as highly

innovative. In four studies, we demonstrate that introducing highly innovative items to a product line actually increases purchase incidence of the original products and that this effect is consistent across multiple product categories.

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***Tastes Like Freedom: Perceived Choice Improves Taste***

Aner Tal, Cornell University, USA\*

Across three studies, we demonstrate that consumers rate foods as tastier when given the feeling of free choice. Choice enhances experience even when it is enacted not with the tasted food itself, but rather in peripheral elements, and when no choice at all is given but rather a false feeling of customization. Accordingly, studies show that even choice of a side (study 2) or of the order in which fillings are put into a sandwich (study 3) affects taste.

For more information email: at425@cornell.edu

***Peering into the future: When does temporal-distance affect product valuation, purchase intent, and post-purchase regret?***

J. April Park, Fort Hays State University, USA\*

Trey Hill, Fort Hays State University, USA\*

Melanie Mabrey, Fort Hays State University, USA

Raul Lemus-Hernandez, Fort Hays State University, USA

The current study attempted to extend the findings from CLT (Trope, Liberman, & Wakslak, 2007) and investigate whether or not focusing exclusively on feasibility or desirability may have differential effects on perceived product value and any resulting purchase intentions. Additionally, this study looked at the potential effects of temporal-distance and emphasis on regret, if the product being purchased turned out to be of poor quality. Results showed that the effect of temporal-distance moderated perceived product value, purchase intent, as well as the experienced regret level.

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***The Persuasive Bird Gets The Worm: Empowering Consumers And Fostering Trust In The Retail Context***

Raymond Lavoie, University of Manitoba, Canada\*

Kelley Main, University of Manitoba, Canada

Wenxia Guo, City University of Hong Kong

Darren Dahl, University of British Columbia, Canada

Influence tactics play a prominent role in the development of business-consumer relationships and consumer satisfaction. Prior literature has primarily focused on how companies and their agents use influence tactics to achieve such outcomes, leaving the consumers' role in the process a fruitful and intriguing topic for exploration. This research suggests that consumers can manage service agents' levels of trust and perhaps subsequently influence the outcomes of their interactions through either social or economic influence tactics. We find that the type and timing of influence tactics interact with the experience of service agents to moderate trust attributions made towards consumers.

For more information email: raylavoie88@gmail.com

***Diluted by association: Exposure to copycat brands impairs processing fluency of senior brands***

Thomas Carpenter, Baylor University, USA\*  
Chris Pullig, Baylor University, USA  
Caroline Simmons, Washington Lee University, USA  
Alex Simonson, Simonson Associates Inc., USA

Copycat branding is the imitation of well-known brands' trade dress by off-label brands. Before taking defensive legal action, senior brands must provide evidence of harm. However, little research has examined such harmful effects. Across two studies, we found evidence that exposure to copycat brand stimuli impairs the processing fluency (e.g., recognition speed) of senior brands (Study 1), even at 1-week and 2-week follow-ups (Study 2). Results indicate that mere exposure to copycat brands can harm the feature-based and meaning-based cognitive processing of senior brands. Implications for branding strategy and new methodology for detecting harmful effects of copycatting are discussed.

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***A Touch of Evil: Harmfulness Alters Sensory Characteristics***

Aner Tal, Cornell University, USA\*  
Brian Wansink, Cornell University, USA

Sensory pleasure is a function of potential harm and benefit. This can extend to judgments of sensory attributes relating to sensory pleasure, such that potential harm influences judgment of attributes relating to pleasant visuals or touch. Across 3 studies, we demonstrate that perceived potential harm influences sensory judgment. Participants told animals are dangerous rate sensory properties (beauty, softness) lower. These effects extend to actual sensory judgment of products derived from these animals, such that fur products derived from harmful animals feel less pleasant.

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***Pride and Category Ambiguity***

Sean Hingston, University of Guelph, Canada\*  
Theodore Noseworthy, University of Guelph, Canada

Pride is a positive emotion that evokes social display goals which can ultimately influence consumer preferences. Research has also shown that goals can shape categorization through a top down process. Adopting an evolutionary perspective of emotion, the current research shows the social display goals evoked by pride can override the category label cue and influence categorization and performance estimates. More specifically, pride can lead an ambiguous product to be assigned to the single category that is most relevant to the social display goals it evokes.

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***Consumers are more risk-seeking for experiential rewards***

Sarah Roche, University of Texas at San Antonio, USA\*

Sommer Kapitan, University of Texas at San Antonio, USA

David H. Silvera, University of Texas at San Antonio, USA

We propose that contemplating experiential purchases and rewards leads to an increased connection to the self that enhances the value of experiences and heightens risk-seeking for special experiences. In a study of risky choice, we find that consumers are more risk-seeking for material goods that are framed in experiential terms (e.g., listening to an iPod). We further find that connectedness to an experience mediates choice, driving choice of a lower-probability, higher-reward experiential prize. Taken together, these studies reveal that consumers are more connected to, and consequently, more risk-seeking for experiences than for material rewards.

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***Marketers Want to Know: Who's Laughing Now? The Impact of Narrative Transportation on How Consumers Develop Television Programming Consumption Habits***

Mark Mulder, Pacific Lutheran University\*

Brian Gillespie, University of New Mexico\*

Consumer researchers utilize narrative transportation in many interesting domains, and in the present research this is used to explore consumers' television consumption. With over 530 trillion viewing hours each year, and with recent changes in DVR technology encouraging binge TV consumption, gaps exist in our understanding of consumers' viewing habits. Results of two studies show that narrative transportation's effect on binge consumption by consumers is mediated by narrative enjoyment. Further, results show that program familiarity is a moderator of this mediation, as consumers lower in program familiarity use narrative transportation in binge consumption decisions while individuals high in narrative transportation do not. Insights and implications for marketers are explored.

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***When Does Weight Influence Evaluations? Examining the Moderating Role of Consumers' Construal Level***

Hiroaki Ishii, Chiba University of Commerce, Japan\*

Jaewoo Park, Chiba University of Commerce, Japan\*

Taku Togawa, Chiba University of Commerce, Japan\*

Previous studies have confirmed the positive effect of weight on the evaluation of an object. However, how and when perceptions regarding weight can affect evaluation remains unanswered. Hence, in this study, we draw on construal level theory and examine the moderating effect of psychological distance on the relationship between perceived weight and evaluation. We show that consumers with low-level construals who tend to process an object depending on contextual or goal-irrelevant aspects are influenced more strongly by weight than consumers with high-level construals who tend to process the object depending on decontextual or goal-relevant aspects.

For more information email: ishii@cuc.ac.jp

***How Others' Body Height Affects Product Evaluations***

Utku Akkoc, University of Alberta, Canada\*

Jennifer Argo, University of Alberta, Canada

We present and test a framework that shows how the height of another individual can influence a consumer's product evaluations. Our findings reveal that the height of a nearby individual activates a height related association, which leads to product evaluations consistent with this association.

For more information email: akko@ualberta.ca

***Donating a Meal or Donating Money? Effects of Different Types of Cause-Related Marketing Campaigns***

Marijke C. Leliveld, University of Groningen, The Netherlands\*

Jan-Willem Bolderdijk, University of Groningen, The Netherlands

Charities can turn to profit organizations to boost their funding by starting so-called Cause Related Marketing campaigns. For each product sold, the company donates to that charity. This study focusses on the differences between traditional monetary donations, and non-monetary donations (e.g., tetanus vaccines) regarding consumer's evaluations and purchase behavior. It is a first study in a larger line of research of a personal research grant (250K Euro) awarded to the first author.

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***I Want, therefore, I Need: The Distortion of Anticipated Consumption Utility to Justify Purchase***

Sheikha Alia , Indian School of Business, India\*

Sridhar Samu, Indian School of Business, India

Piyush Kumar, University of Georgia, USA\*

Transaction and consumption utilities play an important role in consumer purchases (Thaler 1985). In this study, we hypothesize a causal relationship between transaction utility and anticipated consumption utility. We also show that consumers anticipate higher levels of consumption utility when an external stimulus is desirable (deep discount). Finally, this paper also examines product related factors (benefits) on anticipated consumption utility and purchase intention. To explain this phenomenon, we discern that consumers engage in thought processes characteristic of motivated reasoning while assessing anticipated consumption.

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***Are Curse Words a Blessing? The Effect of Reading Profanity on Male Consumers' Feelings of Masculinity***

Michael Hair, Georgia Tech, USA\*

Sara Dommer, Georgia Tech, USA

Can reading curse words make men more likely to purchase shampoo? Our research explores the effects of reading profanity on feelings of masculinity and femininity among consumers. Findings reveal that males who read product blogs containing profanity experience increased feelings of masculinity. As a result, we believe that these increased feelings of masculinity will lead to increased purchase likelihood of more feminine products and brands (e.g., shampoo) and that increased perceptions of product and brand masculinity will mediate this effect.

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### ***Hunger Makes Consumers Impatient***

Yuhao(Johann) Zhao, Antai College of Economics & Management, Shanghai JiaoTong University, China\*

Wei Lyu, Antai College of Economics & Management, Shanghai JiaoTong University, China

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Based on recent research on the influence of visceral factors on intertemporal choice, this paper explores how being hungry for food can induce impatient behaviors outside of the eating domain. We found that hungry participants were more likely to choose a “smaller and sooner” money reward over a “large but later” option. This effect, however, only exists for those who are sensitive to reward.

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### ***Experiential or Material? That is the Question. How Life History Theory Predicts Purchase Type Preferences.***

Sarah Roche, University of Texas at San Antonio, USA (PhD student)\*

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Whereas previous research has greatly improved our understanding of why experiences make us happier, the current research makes a significant contribution by offering insights into how life history strategy can lead some consumers to follow (defy) the experiential recommendation (the idea that experiences are more effective in bringing consumers happiness than material purchases). It is proposed and demonstrated in 2 studies that consumers with faster (vs. slower) life history strategies are less (more) apt to comprehend the future value of experiences, and, therefore, less (more) likely to choose to spend money on experiences versus material purchases.

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### ***Atypicality Activates Extensive Processing in the Consumer Environment***

Iris van Ooijen, University of Amsterdam, The Netherlands\*

Marieke L. Fransen, University of Amsterdam, The Netherlands

Peeter W. J. Verlegh, University of Amsterdam, The Netherlands

Edith G. Smit, University of Amsterdam, The Netherlands

This study investigated the role of atypical packaging design as a cue for extensive processing of product claims, which we predicted to affect product evaluation in turn. Participants were presented with either a typical or an atypical product design, and with product

claims that were either weak or strong. Results showed that atypical shaped packaging design increased cognitive processing, which in turn decreased the persuasive impact of weak, and increased the persuasive impact of strong product claims on product evaluation.

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### ***Bragging Arms Race: Normalization of Conspicuous Brand Mentions on Social Media***

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People routinely brag about their associations with high status brands on social media despite the existence of a strong cultural norm favoring modesty. We posit two explanations for this phenomenon- 1) there are reputational advantages of it in terms of signaling wealth to a physically absent audience and 2) brand related bragging by someone in our social network leads to implicit behavior matching in terms of more bragging by us. We provide support for both of these hypotheses. Our results show that individuals mentioning high status vacation destinations in their Facebook posts are perceived as more arrogant but are also seen as wealthier. Moreover, such posts increase the likelihood of mentioning of a high status brand by observers in their own posts.

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### ***When Surprise is Good: How Surprising Corporate Social Responsibility Benefits Brands***

Ali Tezer, Concordia University, Canada, Ph.D Student\*

H. Onur Bodur, Concordia University, Canada

Bianca Grohmann, Concordia University, Canada

In this research, we propose an alternative two-dimensional conceptualization of CSR fit. The first dimension, relevance is the degree of match between brands' core business activities and the CSR activity, and the second dimension, expectancy, is the degree of match between consumers' schema on brands' CSR activities and the CSR activity. We show that when relevance is high, an unexpected CSR activity leads to more favorable brand evaluations compared to an expected CSR activity (surprise effect). We further demonstrate that this effect is due to increased elaborations on the CSR information, and eliminate alternative explanations.

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### ***Searching for Meaning in Life: Life Reminiscence and Brand Love***

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Meaning in life, the concept which encapsulates our human's desire to understand ourselves and the world around us, has guided how we live and how we evaluate our life. This research focuses on the different ways in which meaning in life can be created. Life reminiscence may strengthen meaning in life. Additionally, relationships with brands may enhance our life meaning. However, once life meaning has been fulfilled by one source, we may not need to rely on the other.

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***To Lend or Not to Lend: An Investigation of Heuristics Used in Making Lending Decisions in Peer-to-Peer Context***

Yuliya Komarova Loureiro, Fordham University, USA\*

Laura Gonzalez, Fordham University, USA

The present work examines how individuals make lending decisions in peer-to-peer context (i.e., via online platforms such as Prosper.com among many others) by investigating the specific heuristics lenders use when making decisions to loan money (e.g., applicant attractiveness, age, and gender), inferences they make, and biases they suffer from as the result. This research aims to help peer-to-peer lending platforms provide lenders with the right information cues that would decrease uncertainty and support more optimal decision-making, while informing loan applicants of the potential pitfalls which may lead to failure in securing loans.

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***What drives individual purchase decisions in a network: Consumer motivation to follow others***

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Firms are interested in identifying customers who generate more revenues. While some of the empirical studies suggest that people's connections with others may not be directly translated into revenues to the firm, behavioral studies report that customer purchase decisions are affected significantly by connected others. This study conducts both empirical analysis and experimental designs to explicitly show how the individuals' motivation to follow others influences moderates purchase decisions.

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***Expected Happiness From Material Objects Versus Experiences: The Effect of Choosing for Oneself Versus Others***

Christopher Ling, University of South Carolina, USA\*

Thomas Kramer, University of South Carolina, USA

We examine whether the recipient type of a chosen option (i.e., purchase for self vs. gift from other) moderates the effect of experiential versus material choices on happiness. Although the literature has shown that consumers associate greater happiness with experiential (vs. material) choices for themselves, we hypothesize and find greater happiness associated with material (vs. experiential) options chosen by others. Next, we look at the role of gift-recipient identity in receiving gifts. These results are expected only to occur when there is high congruence between the recipient and the chosen option. Incongruence will attenuate or even reverse the effect.

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***Affecting Choice and Desire: Hedonic and Utilitarian Attribute Sequences***

Aaron Snyder, Stanford University, USA\*

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Consumer products are often conceptualized and marketed to fulfill either utilitarian needs or hedonic desires. In reality, most products possess multiple attributes, some of which are utilitarian, and others that are hedonic. When learning about a new product, people generally process only one attribute at a time. Does the order with which a person learns about hedonic and utilitarian facets of a product affect her desire for that product? We present evidence from a lab study to suggest that a hedonic-to-utilitarian—i.e., Hedonic Primacy—sequence (versus a Utilitarian Primacy sequence) is more effective at generating desire for the product. Furthermore, this process is mediated by distorted importance ratings for utilitarian attributes among individuals in the Hedonic Primacy group. Application of this phenomenon using practical methods to directing choice and desire by ordering product and decision information to reflect natural attentional and construal processes is discussed.

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***Suddenly, it becomes better: The effect of threshold-based free shipping on product perceived quality***

Chi Zhang, University of Mississippi, USA\*

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Product quality is generally thought of as being comprised of price, brand and store name. Rationally, shipping fee structure should be an irrelevant element to product quality. However, in our study the evidence suggests that the threshold free shipping policy could moderate the effect of price on the product perceived quality. The results extend the knowledge about how a context variable, individuals' motivational states caused by different shipping fee schedules, influences product quality perceptions. That confirms the motivated reasoning theory (Kunda, 1990) in the context of the product perceived quality and purchase behaviors.

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***Social Network Use: Social Comparisons and Their Emotional Consequences***

Sumitra Auschaitrakul, McGill University, Canada\*

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Past research has investigated the effects of social network use on outcomes such as self-control (Wilcox and Stephen 2013) and life satisfaction (Krasnova et al. 2013). However, research has not yet examined social networks in the light of social comparison processes and their emotional consequences for consumers. We demonstrate in the two studies that social networks facilitate upward social comparisons which, in turn, increase the level of experienced envy. We conclude by discussing the implications of envy for risk taking behaviour.

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### ***When More Information is Bad Information: Maximizer Involvement and Decision Outcomes***

Nicholas Olson, University of Minnesota, USA\*

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Compared to satisficers, decision maximizers exert more effort when making choices. Yet this extra effort does not necessarily produce better outcomes. Research has shown that in many cases, maximizers' decision outcomes are actually worse than those of satisficers. Reconciling these seemingly contradictory findings, we propose that maximizers tend to be more impression-involved than satisficers, making decisions in a manner that can be justified to others. This involvement difference leads maximizers to consider all available information regardless of its diagnosticity, which then causes them to make worse decisions than satisficers. Results from several studies offer support for this notion.

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### ***Factors Affecting Consumers' Perceived Credibility of Online Product Review for Search and Experience Products***

Young K. Kim, University of Iowa, USA\*

The purpose of this study was to investigate perceived credibility of online reviews for search and experience products, as affected by different types of review features including evidence (statistical vs. narrative), reviewer (expert vs. consumer), and review website (marketer-developed vs. consumer-developed). Results suggest that search product shoppers are more likely to perceive credibility when they read expert reviews with statistical evidence from marketer-developed websites. For experience product, online customers tend to trust reviews with narrative evidence than those with statistical review. Accordingly, the findings provide some implications.

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### ***The Effect of Time of Message on the Emotional Content of Word-of-Mouth***

Cansu Sogut, Boston University, USA\*

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Frederic Brunel, Boston University, USA

This research investigates the role of the timing of a word-of-mouth message relative to the consumption experience on the content of that message. Although WOM has usually been focused on retrospective sharing about a past consumption experience or on prospective sharing about future consumption, technological advances in mobile communication have enabled a new form of WOM: one that occurs during the consumption experience. In this paper we examine how the emotional content of WOM changes based on the timing of sharing relative to the consumption experience. We report the results of a study that examines emotional content of tweets before, during and after a TV show. Directions for future research are discussed.

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### ***How to Increase Saving Intention: Exploring Psychological Mechanisms of the Increased Saving Intention at the Exposure of Future Self-Image***

HoEun Chung, Fayetteville State University, USA\*

Sugato Chakravarty, Purdue University, USA

Meghan Norris, Purdue University, USA

Previous research suggests that people are apt to increase their retirement savings when they see their future self images (Hershfield et al., 2011). We seek to empirically examine why this might be so. Drawing upon Construal Level Theory (CLT) (Liberman & Trope, 2003) in conjunction with the Expectancy-Value perspective (Shah & Higgins, 1997), we demonstrate that exposure to an image of one's future self leads individuals to perceive their futures as temporally closer to the present. Such decreased temporal distance between the present and the future also increases expectancy levels about savings which, in turn, increases the value levels about savings. This increased level of value towards savings then leads to a greater saving intention. The findings of our research contribute to a better understanding of how exposure to one's future self image might lead to positive behavior modifications like increased savings intention.

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***Comfortably Numb: The Impact of Excessive Student Loan Debt on Price Sensitivity for Major Purchases***

Ron Wilcox, University of Virginia, USA

Yi Zhang, University of Virginia, USA\*

Excessive student loan debt can numb students to the cost of major purchases and cause them to become less price sensitive, whereas presenting loan debt in monthly payment term can reverse this effect. Participants were randomly assigned into the debt primed condition or the monthly payment condition before completing a conjoint exercise of automobile purchases. Students with a high level of student loan debt were significantly less price sensitive than their less-indebted counterparts in the debt primed condition, but became more price sensitive in the monthly payment condition. Our results are directly suggestive of a student loan policy change.

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***Empty Bags, Fuller Stomachs: How Empty Bags Give the Illusion of Fullness***

Aner Tal, Cornell University, USA\*

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Eating behavior is heavily influenced by cues given by the person's environment: external, rather than internal, cues. Past research has demonstrated that external cues in a meal effect when a person stops eating. The current research demonstrates that external cues may influence perceived fullness even when divorced from what a person has actually eaten. Specifically, the presence of empty packages effects perceived level of satiety, such that larger empty bags lead to reports of higher satiety than do smaller bags.

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***Fear of Failure and Charitable Donations of Time versus Money***

Lale Okyay-Ata, Koç University, Turkey\*

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The present research investigates the effect of a specific type of self-threat, fear of failure, on making charitable donations of time or money. We suggest that how fear of failure will influence the tendency for making donations of money or volunteering for a charitable cause will depend on the communication mode for fear of failure, highlighting its personal-identity threat versus social-identity threat component. We further discuss the impact of need for uniqueness on the time versus money ask based on the salient component of fear of failure.

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### ***Using Social Norm Theory to Improve Mexican American Family Fruit and Vegetable Purchases - Results of a Grocery Store Intervention***

Mihai Niculescu, New Mexico State University, USA\*

Collin Payne, New Mexico State University, USA

David Just, Cornell University, USA

This research details two novel grocery store interventions to increase Mexican American family fresh fruit & vegetable consumption. We use prescriptive and descriptive information, respectively, to imply social norms and provide consumers with easy-to-understand reference points to aid decision-making on what and how much produce to buy. Grocery store sales data suggested a 5-10% increase in fresh fruit & vegetable purchases when interventions were deployed separately, but a decrease of 6-8% when both interventions were deployed concomitantly.

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### ***Why We Love Brands: The Roles of Brand Personality and Trust***

Tin Lam, National University of Vietnam, Vietnam\*

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Across three studies, we investigate how brand personality plays a meaningful role in establishing consumer trust on a brand, which in turn increases consumer brand loyalty and the likelihood to purchase. Moreover, we demonstrate that this effect is moderated by consumer motivation (i.e., self-verification or self-enhancement) and whether the product is publicly or privately consumed.

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### ***Investigating the Psychological Underpinnings of the Fair Skin Bias in the Indian Subcontinent***

Tanuka Ghoshal, Indian School of Business, India\*

Tripat Gill, Wilfrid Laurier University, Canada

In eastern cultures like India and China, fair skin is considered to be a social advantage and a critical component of physical attractiveness. In this research we systematically investigate whether there is a fair skin premium in the mating and employment contexts in India. We hypothesize that there are gender differences, and fair-skinned women are considered more attractive mates but

fair-skinned men have an advantage in the employment context, being associated with higher perceived power and competence. These findings are explained with the lenses of evolutionary psychology.

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***Connecting product and service, a study of spillover effects in the telecommunication context.***

Natalie Truong, Norwegian School of Economics, Norway\*

The current research investigates consumers' level of self-disclosure when performing self-services on their mobile phones. In particular, the author examines whether there is a spillover between consumers' trust in their phones and trust in the telecom brand, which in turn influences consumers' willingness to disclose their private information. Moreover, the study explores the role of ambiguity in facilitating spillover process. Specifically, the author seeks to answer the question if spillover effect will be more pervasive when the consumer perceives his or her relationship with the telecom brand ambiguous. Experiments will be conducted in which participants are real customers.

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***I Want You More After Being Rejected Because You are Worth It: The Moderating Role of Self Esteem and Brand Status in the Effect of Brand Rejection***

Fang Wan, University of Manitoba, Canada\*

Daniel Sun, University of British Columbia, Canada\*

Pingping Qiu, Monash University, Australia

Amitava Chattopadhyay, INSEAD, Singapore

Luxury brands tend to employ the strategy of "people want what they can't have." Yet when mainstream brands extend to upper segment, can brand exclusion be an effective tool for mainstream brands to establish themselves? In this paper, we found that brand rejection can heighten brand desire only for high self esteem consumers and when the brand is high status (vs. low status).

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# Friday, 07 March 2014

**REGISTRATION**  
**7:00 am – 8:00 pm**  
**BALLROOM FOYER**

**BREAKFAST**  
**7:30 am – 8:15 am**  
**BALLROOM FOYER**

**SESSION 1**  
**8:15 AM - 9:30 AM**

## ***1.1 Symposium: Number Cognition***

**Room:** BALMORAL

**Chair:** Hannah Perfecto, University of California Berkeley, USA

Leif Nelson, University of California Berkeley, USA

**Discussion Leader:** Leif Nelson, University of California Berkeley, USA

### ***Precision Aversion in Pay-What-You-Want Pricing***

Hannah Perfecto, University of California Berkeley, USA\*

Minah Jung, University of California Berkeley, USA

Leif Nelson, University of California Berkeley, USA

Numbers are an integral part of any consumer context. It is no wonder, then, that a rich literature exists, studying how consumers process numeric information. However, nearly all of this research examines this issue from a receiver's perspective: assessing product prices (Thomas, et al 2005), product information (Pandelaere, et al 2011), alphanumeric brand names (Gunasti & Ross 2010), etc. This asymmetry is understandable, as contexts in which consumers can give their own prices without rejection (e.g., tipping) are far less common, but merits correction in order to achieve a more complete understanding of number cognition in a consumer context. Our research aims to fill this gap through analyzing patterns in payments under a pay-what-you-want pricing model.

Pay-what-you-want contexts are ideal to study this behavior because of the great flexibility and the lack of strong prescriptive norms (e.g., tip servers 20%) that could otherwise obscure people's true preferences. This flexibility should lead to a uniform distribution of payments, which would favor precise over round numbers, as they are more frequent. However, we find an overwhelming preference for paying in round numbers, often in spite of incentives for precision and financial strain on the consumer. Because precision is linked with confidence in the estimate (Mason, et al 2013; Zhang and Schwarz 2012), we believe that part of this precision aversion derives from the uncertainty inherent in pay-what-you-want contexts.

Our first study demonstrates this effect of precision aversion in an environment with maximal flexibility and minimal external influences: we analyzed sales data from a card-game company whose payment page featured a single text box with two reference prices (an unexplained default of \$5 and the cost of production, \$3) and a minimum price of \$0. In this data set (N=74,592), we found that, of customers paying a nonzero amount, 95.3% paid in whole-dollar amounts, with the majority of the residual paying in numbers

ending in .50. Clearly, most people's baseline preference is to pay in round numbers and avoid precise payments. Studies 2 and 3 will examine if an implicit or explicit suggestion pay in precise numbers can combat this preference.

For Study 2a, we ran a field experiment (N=5,124) on an ebook retailer's website, manipulating whether customers could see the current average price paid by the previous customers. The retailer provided no incentive to exceed this price—its main incentive was to pay \$10 or more, to receive two bonus books—however, customers may still want to beat the average to assure themselves that they are paying an appropriate amount (Gneezy, et al 2012). Our question was by how much would they beat it, by a penny or by rounding to the next whole dollar? The average was usually between \$11 and \$12: we found a significantly higher incidence of customers paying \$12.00 when they knew the average (13.5%) than when they did not (5.5%). Overall, 95.4% of customers who saw the average paid in whole dollars, while 97.9% of customers who did not see in average did. Study 2b replicated these effects in a subsequent promotion (N=1,338) with a wider range of averages shown. These two field experiments show that a nudge towards paying in precise numbers (e.g., beating the average price by a cent) was not enough to mitigate customers' precision aversion and, in fact, lead customers to pay more money for the same product.

In another field experiment, for Study 3 (N=3,010), we manipulated the default price to be either \$14.00 or \$28.88 on the ebook retailer's website. Past research has shown that although precision can be informative, that aspect is lost in an average, which is nearly always non-round (Zhang & Schwarz 2013). Perhaps having a precise default would lessen the anxiety of deviating from this precision-aversion norm as it would better signal to customers that the retailer endorses and even expects non-round payments. As in Studies 2a and 2b, we see many more customers rounding up from the default—paying \$30.00—in the precise condition (1.8%) than in the round condition (0.6%). Moreover, precision aversion still prevailed overall: 94.0% paid whole-dollar amounts in the precise-anchor condition, a portion nearly identical to the 98.3% who did in the round-default condition. That this license to be precise had nearly no effect on customers' behavior, we can likely rule out social norms as an explanation for these effects.

How would a more explicit incentive affect payments? For Studies 4a and 4b, we analyzed the sales data from two companies who provide such an incentive: beating the current average by one cent or more unlocks bonus products for the customer. Since the average price is rarely round, rational customers desiring the bonus products will likely pay with a precise number. In Study 3a, we looked at sales from five promotions (N=20,835) of a computer game retailer and found that, although 12.6% do eclipse the average by \$0.01, we see a much larger 45.3% of customers rounding up from the average to the next quarter. Study 3b features the sales data of 78 promotions (N=111,287) from a different computer game retailer with similar results: some do pay the minimum for the bonus (22.2%), but there is still a sizable portion (13.8%) of customers rounding up from the average. Although these more explicit, economic incentives did entice some customers enough to overcome their precision aversion, people's preference for round numbers still persisted.

Taken together, Studies 2, 3, and 4 may help us to resolve an oft-cited problem of what actually counts as rounding (e.g., Thomas, et al 2010): it may be a matter of scale. Both across companies and within promotions, we see that as people pay less for a product, the smaller the number they are likely to round to (e.g., to the nearest quarter, not the nearest dollar). All six studies, though, demonstrate the immense pull of round numbers in pay-what-you-want pricing, showing that consumers' precision aversion is highly robust to both psychological and economic incentives.

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### ***Numeric Fluency: A Processing Fluency Account of Consumers' Preference for Round Numbers***

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William Jones, University of South Dakota, USA

Gerald Häubl, University of Alberta, Canada

Consumers assess numbers in many contexts: they estimate expenses (Menon et al. 2003), set budgets (Ülkümen et al. 2008), make investment decisions (Slovic 2001), and choose among products described by quantitative attributes (Payne et al. 1993). Interpreting numeric data, be it the result of a statistical test or the price of a dress, entails the assignment of meaning to a number. Central to this process is conceptualizing the number at a level of precision appropriate for the context (Goldman and Booker 2009). For instance, people commonly describe a quantity of 47 or 53 as “50”. This process is referred to as “rounding”, and numbers that are multiples of ten (10, 20), twenty-five (25, 75), or powers of ten (100, 2000) are commonly called “round numbers” whereas other numbers are known as “sharp numbers.”

Although research has primarily focused on the deliberate cognitive evaluation of quantitative information, a growing body of work suggests that people simply like some numbers more than others. For instance, consumers spontaneously round off estimates of time and money (Schindler and Kirby 1997) and both stock prices and initial public offers (IPOs) of stock disproportionately congregate at prices ending in “0.00”, “.00”, “.50” and “.25” (Gwilym and Alibo 2003). We propose that these numeric biases can be explained by the fluency experienced when processing the number.

According to the processing fluency model, exposure to a stimulus creates a feature- and/or meaning-based representation of that stimulus in memory that, in turn, enhances the ease with which one processes the stimulus in subsequent exposures (Lee & Labroo, 2004). Fluency is enhanced by incidental exposure and increases monotonically with repeated exposure (Janiszewski & Meyvis, 2001). Because round numbers are used in written and spoken language with greater frequency than sharp numbers (Dehaene 1997), we hypothesized that the repeated exposure to round numbers enhances their processing fluency. We tested our theoretical account in four studies.

Study 1 examined the effect of round numbers on consumers’ preference for promoted products. Participants chose one from a set of 5 microwaves; we manipulated the price and discount of one alternative (the focal alternative). Price was manipulated by having the non-discounted price of the focal alternative be either a round number (\$120) or a smaller sharp number (\$117); discount was manipulated by having the focal alternative discounted by either a round number (20%) or a larger sharp number (22%). We predicted that consumers would be more likely to select promoted products that have either a round discount (e.g., 20%) or a round base price (e.g., \$120), even though those values imply a higher total cost than identical products with a sharp discount (e.g., 22%) or a sharp base price (e.g., \$117). The results supported our prediction: consumers were more likely to choose the focal product when either the price or quantity was round (as compared to sharp).

Studies 2 and 3 examined numeric fluency in the domain of choice between risky prospects. Each prospect was described in terms of two numeric properties – a monetary payoff and the probability of attaining that payoff (as opposed to receiving nothing) – that jointly determine the expected value. This context enabled us to disentangle our processing fluency account from two alternative accounts of the preference for round numbers: effort minimization (Luce et al. 1997) and aversion to ambiguity (Camerer and Weber 1992).

In study 2, we disentangled the processing fluency and effort minimization explanations by independently manipulating the number of steps necessary to calculate the expected value, as well as whether a prospect was comprised of round or sharp numbers. An effort minimization account suggests that a preference for alternatives involving round numbers would reflect one’s desire to avoid difficult calculations or comparisons, and should thus be attenuated by the effort required to determine the expected value of a prospect. The results of study 2 reveal that, in support of our theoretical account, although participants exerted additional effort to estimate the

expected value of the more arithmetically complex prospects, participants were significantly more likely to choose the prospect comprised of round numbers irrespective of the amount of effort required.

In study 3, we disentangled the processing fluency and ambiguity aversion explanations by independently manipulating whether the prospects represented losses or gains and whether or not participants were shown the expected value of each prospect in a pair, in addition to whether a prospect was comprised of round or sharp numbers. If the preference for round numbers is driven by a preference for certainty, then individuals should prefer round prospects in the domain of gains (when they seek certainty) but should prefer sharp prospects in the domain of losses (when they avoid certainty), and showing individuals the expected value of each prospect should eliminate the effect of round numbers on choice. In support of our theoretical account, participants were significantly more likely to choose the prospect comprised of round numbers in both losses and gains, also preferred the round prospect when the expected value of each prospect was provided.

Finally, in study 4 we examined the role of affect. Using the same paradigm as study 1 (choice of promoted products), we measured positive and negative affect after each choice using the PANAS scale (Watson et al. 1988), then asked participants to estimate the discounted prices and to indicate their confidence in their estimate. Our key prediction was that the presence of round numbers in a choice set would lead to greater positive affect and that the experience of positive affect would induce consumers to choose the focal alternative when it was comprised of round numbers, and that this would not be mediated by feelings of confidence. The results show that, as predicted, consumers were more likely to choose promoted products when either the price or discount was round, they reported greater positive affect in those conditions. Importantly, the effect of positive affect on choice was not attributable to their confidence in their price estimate. This pattern of results provides compelling direct evidence that processing fluency drives consumers' preference for round numbers.

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### ***The Top-Ten Effect: Consumers' Subjective Perceptions of Rankings***

Matthew Isaac, University of Seattle, USA\*

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Lists of ranked items (e.g., *Business Week's* top 25 MBA programs, *Car and Driver's* top 10 cars) are ubiquitous in Western culture. From a consumption standpoint, there is considerable evidence that individuals find these lists informative and influential. Therefore, it is important to know exactly how the information provided in ranked lists is interpreted by users.

This research provides the first demonstration that people subjectively generate categories when encountering a ranked but uncategorized list of numbered items. In addition, we show that this tendency to subdivide ranked lists influences how specific items on the list are evaluated. Even though a ranking is an ordinal scale of measurement, prior research suggests that users might interpret items at adjoining ranks as having equal differences in the ranked attribute (Monks and Ehrenberg 1999a, b). In contrast, we find that the subjective categorization of ranked lists leads to an exaggeration of the perceived distance between items at category boundaries. Although the effects we find on perceived distance are consistent with prior research (e.g., on geographic borders), our work shows that the perceptual consequences of categorization apply not only to arrays that are already categorized at the time of presentation (as in previous research) but also to subjectively-generated categories containing numerical symbols.

What are the possible categories that might be formed by consumers when processing uncategorized ranked-list information? One possibility, supported by research on multidigit numerical processing and price-response judgments (Pollock and Schwartz 1984;

Thomas and Morwitz 2005), is that individuals see ranked lists in terms of categories based on the value of a rank's leftmost digit. For ranks up to 100, such *place-value categories* would consist of ranks 1-9 (0 as the tens digit), ranks 10-19 (1 as the tens digit), ranks 20-29 (2 as the tens digit), and so on. An alternative possibility is that individuals see ranked lists in terms of categories based on round numbers. In our decimal number system, round numbers are those that are multiples of 10 (such as 10, 20, 30) and halfway points between these multiples (e.g., 5, 15, 25). Support for this possibility is provided by the extensive evidence for the cognitive salience of round numbers (Coupland 2010; Dehaene and Mehler 1992; Jansen and Pollmann 2001). For ranks up to 100, such *round-number categories* would consist of ranks 1-5 (i.e., the top five), ranks 1-10 (i.e., the top ten), ranks 1-15 (i.e., the top fifteen), ranks 1-20 (i.e., the top twenty), and so on.

Across six studies, three of which are described in this abstract, we provide evidence that information users do in fact subjectively form categories to interpret uncategorized ranked lists. Furthermore, we show that round-number categories, and not place-value categories, are typically created when considering ranked lists. Finally, we demonstrate an exaggeration of the perceived distance between ranks that border round-number categories. We refer to this as the *top-ten effect* since "top ten" lists are among the most prevalent round-number categories. In addition to highlighting certain boundary conditions of the top-ten effect, we show that it occurs because round-number categories are cognitively accessible due to their prevalence in everyday communication.

In Study 1, we used a longitudinal data set provided by the Graduate Management Admissions Council (GMAC), the organization that administers the GMAT exam that is typically required prior to business school admission. We conducted a series of regressions to assess the relationship between yearly changes in a school's rank on the *U.S. News & World Report* list and yearly changes in the number of GMAT score reports that were sent to the school by GMAC (a proxy for completed applications). We found a significant and direct effect of a positive round-number category shift on the year-to-year change in number of GMAT score reports sent to a particular school. Whereas traversing a round-number category boundary (e.g., improving one's rank from number 21 to 20) affected the number of GMAT score requests (and presumably, the number of subsequent applications) that a school received, place-value category shifts of similar magnitude (e.g., improving one's rank from number 20 to number 19) had no such effect.

Study 2 shows that evaluations of an identical target differ when its position on a ranked list is varied between participants. More specifically, when judging the math ability of a student with a rank of 8, 9, 10, 11, or 12 on a list of 28 students, between-round-number-category rank differences (i.e., 10 vs. 11) exerted greater impact on information users' evaluations of the target than equivalently sized within-round-number-category differences (i.e., 8 vs. 9, 11 vs. 12). Further, we found no evidence that between-place-value-category rank differences (i.e., 9 vs. 10) exerted greater impact on evaluations than within-place-value-category rank differences.

Given our hypothesis that the top-ten effect occurs because round-number categories (e.g., top 10) are cognitively accessible to consumers, we attempted to eliminate the effect by reducing the accessibility of round-number categories. In Study 3, we implemented this by temporarily increasing the accessibility of ranked lists that highlight "sharp numbers" (Dehaene 1997) rather than round ones, such as the "top 101" or the "top 49" in a priming task. When the cognitive accessibility of round number categories was high, we replicated the effects of prior studies. However, as predicted, when the cognitive accessibility of round number categories was low, the top-ten effect was eliminated.

This research provides converging evidence that information users tend to form round-number categories (and not place-value categories) when presented with an uncategorized ranked list. This tendency to generate round-number categories results in an exaggerated difference in evaluations of items that traverse a round-number category boundary. Because consumers create mental partitions along round-number category boundaries (e.g., top ten), the evaluative distance between adjacent items on opposite sides of this partition (e.g., 10 vs. 11) exceeds the distance between adjacent items that fall into the same round-number category (e.g., 9 vs.

10). In addition to enriching our understanding of categorization and numerical cognition, this research has important managerial implications because ranked lists are so pervasive in marketing communications.

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### *In Search of Optimal Defaults*

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Pre-set default options are one of the most widely adopted elements of choice architecture, and have been shown to be effective in consequential domains, such as organ donation and retirement savings. However, some research has suggested that a high default might yield a behavioral backlash, particularly if it is seen as a recommendation inconsistent with initial impressions (Fitzsimons and Lehmann 2004), invokes negative assessment of motives (Brown and Krishna 2004), or if the source is distrusted (Liersch and McKenzie 2011). We investigate the critical unanswered question of how to set optimally effective defaults given a fixed set of choice options. In particular, we test the impact of setting defaults low or high relative to the other options.

In ten completed studies (N=2540) across diverse domains, with both hypothetical and real stakes (Study 1-2: Setting a saving goal, hypothetical; Study 3: WTP, real; Study 4-7: Charitable contribution, probabilistically real; Study 8-10: Accepting marketing emails, hypothetical) we empirically test the potential for negative backlash effects of high defaults and anchoring effects of low defaults on active choices (i.e. not passive enrollment). We measured the impact of default size on net 'contribution', and decomposed this into separate effects on participation rate and average contribution when participating. We also investigate the effect of psychological reactance and trust on different levels of default.

Our individual studies show very limited evidence for backlash against high defaults on net contribution, but substantially reduced efficacy for low defaults. The overall participation rate does tend to fall at higher levels of default, but this fall is compensated for by those people who do participate choosing larger amounts. For example, in Study 1 (N=502), we tested defaults for consumers' choices of monthly savings goals (defaults of 7%, 5%, 3%, 1% or no-default; b/w/s). Higher defaults resulted in higher savings goal relative to the no-default condition (5.1% vs. 3.7%,  $t=3.61$ ,  $p<.01$ ), with the savings goal among consumers who decided to participate increasing with increasing defaults. We extended this finding in Study 2 to extremely high default options for monthly savings rate (40%, 20%, 5%, or no-default; b/w/s).

To draw generalizable conclusions, we pooled the data from all our experiments and conducted an internal meta-analysis. We find that net contribution increases and then levels off as the default option increases. In particular, setting a low default (defined as an option below the median choice in the no-default condition), results in a lower net contribution than not setting a default at all. This pattern is driven by two effects. Participation rates peak for moderate defaults (60<sup>th</sup> percentile options) and then decline as the default increases. However, contribution conditional on participation monotonically increases with larger defaults. Importantly, choice of the defaulted option itself falls as the default size increases. Thus, the observed benefit of high defaults is not due to people sticking with the default *per se*, but rather due to the influence of the default on their choice (Dhingra, Gorn, Kener, and Dana 2012). High reactance or situations generating low trust make defaults less effective in general, but do not lead to negative effects of high defaults specifically.

Our findings suggest a minimal potential for backlash due to high defaults, but significant risks from low defaults. This finding is in stark contrast to both standard practices (based on a review of online charity solicitations) as well as the intuitions of experts in

decision-making (SCP conference attendees). In a second meta-analysis of published and unpublished default studies conducted by others, we find a similar pattern of results. We discuss the implications of our findings for competing psychological accounts of how defaults impact decisions.

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## ***1.2 Individual Papers: The Choice is Yours: Biases in Consumer Preference and Judgments***

**Room: SANDINGHAM**

**Chair:** Rom Shrift, The Wharton School, University of Pennsylvania, USA\*

### ***The Impact of No-choice Options on Post-Choice Persistence***

Rom Shrift, The Wharton School, University of Pennsylvania, USA\*

Jeffrey Parker, Georgia State University, USA

Individuals regularly choose among courses of action requiring ongoing commitment in the pursuit of delayed and often contingent rewards. Persistence, going on resolutely in spite of adversity, greatly affects the extent to which the individual will reap the path's rewards. Adversity, an incentive to abandon a chosen path, arises in many forms such as ego depletion (Muraven & Baumeister, 2000), satiation (McAlister, 1982), boredom (Wyatt & Langdon, 1937), and even perceived or actual discrepancies between the required input (e.g., time and effort) and expected utility. Whether complying with drug, diet, or exercise regimens, or simply completing different tasks at work or at home, the ability to persist is important for achieving both long- and short-term, as well as finite (e.g., "losing 30 pounds"; Locke & Latham, 1990) and ongoing (e.g., "exercising regularly"; Kruglanski, 1996), goals. Thus, exploring how individuals can overcome adversity and stay the course is both theoretically and substantively important.

Drawing on research on choice architecture (Sunstein & Thaler, 2008), in the current paper we argue and demonstrate that the inclusion of a seemingly irrelevant no-choice option at the time of choice, increases decision-makers' persistence on their chosen course of action. We show that the presence (or absence) of a no-choice option in the original choice-set reduces the intensity of counterfactual thoughts through a self-perception mechanism. Consequently, the likelihood of persisting in the face of adversity increases.

Consider an individual choosing task A from the set [A, B], without loss of generality. This individual can infer from this choice only a relative preference for A over B. However, choosing task A from a set also containing a "neither" option (i.e., choosing from the set [A, B, Neither]) allows the individual to additionally learn something unique about his preferences. Specifically, by vetting and choosing task A over B *and* over a "neither" option, the individual can infer not only his relative preference for A over B, but also his absolute preference for A. That is, choosing A from a rejectable choice-set (a set that includes a no-choice option; Parker and Shrift 2011) tells the individual not only that task A is better than B, but also that it is good enough to be chosen (otherwise, he would have opted out). We argue that this information, which is unique to no-choice options, bolsters the individual's commitment to the chosen path and increases persistence. This prediction is consistent with previous literature documenting the impact of choice architecture on post-choice behavior via self-perception-based inferences (Carroll et al., 2009; Cioffi & Garner, 1996; Keller et al., 2011).

We present 6 studies that (i) document the predicted effect with behavioral measures of persistence, (ii) explore and rule out several alternative explanations, and (iii) directly support the proposed underlying process.

In Studies 1 and 2 we demonstrate that participants choosing a task from a choice-set that contains a no-choice option (hereafter a rejectable choice-set) are willing to wait longer for the task to begin as well as persist longer in completing the task, compared with participants choosing from a choice-set that does not contain a no-choice option (hereafter a forced choice-set). In addition, in Study 2 we demonstrate that this effect is unique to the inclusion of seemingly irrelevant no-choice option and does not occur with the addition of any undesirable third alternative. Thus, ruling out a mere contrast effect.

Study 3 demonstrates, in an incentive-compatible design, that the no-choice option must be embedded in the choice-set to affect persistence by replicating the previous results despite giving all participants the choice of opting-in (or out) prior to choosing a task. These results (i) reduce concerns that the reported effect is triggered by negative affect (or reactance) among participants that face a forced choice-set, and (ii) demonstrate that simply choosing to do *something* over *nothing* cannot explain differences in persistence found between the rejectable and forced choice-set conditions (because all participants actively chose to do something by opting in).

Study 4 shows that choosing from a rejectable (vs. forced) choice-set impacts persistence only on the chosen task, and not on other, unrelated tasks that also occur after the choice. Thus, the effect is task specific and choices made from rejectable choice sets do not increase motivation in general. This further supports our contention that persistence increases only when the selected option is directly vetted against the no-choice option in the set.

In studies 5 and 6 we directly test the proposed underlying mechanism. Specifically, we show that increased persistence due to the inclusion of a no-choice option is fully mediated by reduced counterfactual thoughts.

In summary, this paper examines how merely including a no-choice option at the time of choice influences consumers' persistence along their chosen paths. The results of six studies demonstrate that the presence of a no-choice option, even if it is undesirable and should logically be ignored, increases consumers' persistence when facing adversity along their chosen path. While previous research mainly explored how factors encountered during goal pursuit impact consumers' persistence, this paper demonstrates that factors encountered earlier, at the time of choice may have a substantial impact on post-choice persistence. In one of the studies persistence and compensation increased by 20%.

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### ***Within-Category versus Cross-Category Substitution in Food Consumption***

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Substitutes are goods that can replace one another by satisfying, at least partly, the same consumers' needs (Nicholson 1998). When a desired product is not available or its price is deemed too high, consumers may look for and switch to a substitute. Substitutes can be classified as within-category and cross-category substitutes based on whether they belong to the same or a different product category as the target product. Within-category substitutes are often less desired than the target as they are not the consumer's preferred choice (i.e., the target), but—by definition—share many features with the target and satisfy the same consumer needs. Store brand potato chips, for example, would be a within-category substitute for Lay's potato chips. However, substitution can occur across product categories, too, where the cross-category substitute satisfies a higher level consumer need as the target. For example, Rold Gold

pretzels are not potato chips but they satisfy a consumer's craving for snacks, so pretzels are a cross-category substitute for Lay's potato chips.

Although cross-category substitution is common (Park and Gupta 2011), surprisingly little research has examined how cross-category substitutes influence consumption experiences. In the current research, we examine how the consumption of cross-category versus within-category substitutes influences craving for and consumption of the desired target food. Specifically, we show that although consumers prefer within-category substitutes over cross-category substitutes when the target is not available, consuming a cross-category substitute actually satisfies consumers' needs better than within-category substitutes.

Study 1 tested consumers' preference for a within-category substitute and a cross-category substitute to satisfy their craving for the target. Participants first sampled one piece of a target chocolate (Ritters Sports Hazelnut chocolate), which whetted participants' appetite for the target food (Wadhwa, Shiv, and Nowlis 2008), and indicated how much they craved for another piece of the target chocolate. Participants then chose between a within-category substitute (store-brand chocolate) and a cross-category substitute (granola bar) to satisfy their craving for the target chocolate by consuming a larger amount of their chosen substitute. 72.7% chose the within-category substitute. Logistic regression showed that the more participants craved the target after initial exposure, the more they were likely to choose the within-category substitute.

In Study 2, we examined whether participants in Study 1 were correct in predicting that consuming the within-category rather than the cross-category substitute would be more effective in satisfying their craving for the target food. As in the previous study, participants first sampled one piece of the target chocolate. They then consumed one of three foods: the same target (Ritters chocolate), a within-category substitute (store-brand chocolate), or a cross-category substitute (granola bar) before consuming the target ad libitum. We found that participants who had eaten the within-category substitute subsequently ate more of the target than those who had eaten the cross-category substitute and those who had eaten the target again (the latter two conditions did not differ in terms of amount consumed). The results of Study 2 suggest that although consumers believe a within- rather than a cross-category substitute would better satisfy their craving for the target, a cross-category substitute actually satisfies consumers' craving for the target better than the within-cross category substitute.

Study 3 examines the role of comparison between the target and the substitute in the substitution effects. Participants consumed either a within- or cross-category substitute which is as good as the target or inferior to the target before consuming the target ad libitum. Among those who had consumed the within-category substitute, participants who had consumed the inferior substitute subsequently consumed more target than those who had consumed the substitute which was as good as the target. However, the amount of target consumed was not different between those who had consumed the cross-category substitute. The results suggest that substitution effect occurs because the within-category substitute is compared to the target food resulting in a contrast effect, but no such contrast arises when the cross-category substitute is compared to the target food.

In summary, we demonstrate that although consumers prefer within-category substitutes, the consumption of cross-category substitutes can be more effective in reducing craving for the target food. Such substitution effects are driven by contrast between the target and the substitute, which occurs only within the same category, but not across different categories.

The current research contributes to research on substitutes by providing insights on how within- versus cross-category substitutes influence consumption experiences. Previous research found that cross-category substitution is common due to consumers' variety-seeking tendencies as well as frequent promotions in all relevant product categories. However, there has been little research that examined how cross-category substitution influences consumption experiences. Our findings suggest that although consumers prefer within-category substitutes, consuming cross-category substitutes can be more effective in satisfying craving for the desired target.

The findings also contribute to our understandings of categorization processes. Barsalou (1983, 1985) suggests that consumers construct taxonomic categories and goal-directed categories. Previous research in this area (e.g., Ratneshwar et al. 2001) examined how personal and situational goals influence category representations of products, however little research has examined how different categorization influences consumer preference and consumption. We found that consumers prefer within-category substitutes, which share the taxonomic category membership with the target, but consuming cross-category substitutes, which are constructed based on goal-directed categorization, may satisfy consumers' craving for the target better. These findings imply that taxonomic categories which focus on physical similarities influence choice decisions but may not necessarily lead to better consumption experiences. Goal-derived category members may satisfy the higher level consumer need better than taxonomic category members.

Finally, our findings contribute to research on contrast effects. Consistent with previous research (e.g., Raghunathan and Irwin 2001; Zeller, Rohm, Bassetti, and Parker 2003; Zeller, Kern, and Parker 2002), we found that contrast effects occur when there is categorical similarity between target and context stimuli, but not when they are perceived to be dissimilar. Our findings suggest that the substitute is contrasted to the target when a within-category substitute is consumed, but no such comparison arises when a cross-category substitute is consumed.

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### *Choice Utility*

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A basic tenet of rational choice theory is that people choose the outcome that produces the highest subjective expected utility (Savage, 1954; von Neumann and Morgenstern, 1947). Decades of research in psychology shows that judgments of utility are in fact malleable, and that choice is affected by the decision context (Slovic, 1995; Tversky and Kahneman, 1981). In the present work we argue that the malleability of people's preferences extends to the context in which an outcome is reached. Thus, people's choices can be influenced simply by how they are going to attain an outcome, independent of what the actual outcome is. We call the utility that people gain (or lose) from the process of how an outcome is obtained, "choice utility," which is distinct from outcome utility and which can either enhance or detract from the overall attractiveness of an option.

We focus on two normatively equivalent processes for obtaining the same outcome: action and inaction. Drawing on research in philosophy, morality, the law, and psychology, we argue that these two processes are not equivalent in people's minds even if they lead to an identical outcome. For instance, moral philosophers argue that people cannot be held morally responsible for inactions (Foot, 1967; Thomson, 1985). Legal scholars argue that because there is no behavior involved, it can be assumed that inactions do not cause any change in the physical environment relative to actions (Duttwiler, 2006). Similarly, substantial research in psychology indicates a distinction between action and inaction in various types of judgments, both in the moral domain (e.g. Sugarman, 1986) and in non-moral decisions (Kahneman and Tversky, 1982; Landman, 1987).

Building on these insights we develop our theory of choice utility. Our theory predicts that when people detect a difference in the utility between two options so that preference uncertainty is low, they prefer to obtain the additional utility given by the high utility option through action rather than inaction. Thus, the choice share of a high utility option will be lower when it is framed as an inaction than as an action. In contrast, when people have difficulty detecting a difference in the utility between two options so that preference uncertainty is high, the inaction frame functions as a tie-breaking mechanism that makes either option framed as an

inaction appear more attractive. Thus, the choice share of either option framed as an inaction will be greater than when it is framed as an action.

We provide empirical support for the existence of choice utility in seven studies. In our first two studies we demonstrate the effect of choice utility on decisions made in the context of classic problems from judgment and decision-making literature. The context of study 1 is the Asian Disease problem (Tversky and Kahneman, 1981). The context of study 2 is money illusion (Shafir, Diamond, and Tversky, 1997). We chose these problems because their results have been replicated in previous research and, therefore, we can easily predict what participants' predominant choices will be. In these studies we randomly assign participants to either the classic versions of the problems, or to a condition where one of the two options is framed as the result of inaction. We find that preference for the predominant response (e.g., certain option for gain frame and risky option for loss frame in study 1) significantly decreases when that option is framed as inaction. We find no significant effect when the infrequent response (e.g. risky option for gain frame and certain option for loss frame in study 1) is framed as inaction.

Studies 3a and 3b further replicate the effect of choice utility (Part A) in a different decision problem (the disjunction effect: Tversky and Shafir, 1992), but also demonstrate the predicted fluctuations in the relative utility of the two outcomes as the result of framing the option with the highest utility as the result of inaction (Part B). Participants in study 3b perceive the difference in the relative attractiveness of the two outcomes to be higher when both result from action compared to when the predominant option results from inaction, while the infrequent option results from action. Moreover, framing the infrequent option as inaction yields no effect.

Study 4 provides evidence about the underlying mechanism for our findings in another decision problem (decision (i) of Problem 3 in Tversky and Kahneman (1981)). We find that our effect is moderated by self-construal. People who endorsed high levels of independence or low levels of interdependence were less likely to select the certain gain when it was framed as inaction. These results provide further evidence that our effect is driven by a need to independently obtain desired outcomes. The more people seek this need, the more likely they are to forego an otherwise-preferred option when they cannot acquire it through their own action.

Finally, studies 5 and 6 demonstrate the effect of choice utility in decisions with high difficulty. We show that people prefer inaction when there is difficulty in choosing, similar to a default effect. Participants in study 5 choose between seven risky gains. We find that inaction increased preference for all options except one. In study 6 we examine choice utility in the context of the asymmetric dominance effect (Huber, Payne and Puto, 1982; Simonson 1989). We replicate the attraction effect when there is no inaction frame. We further find that preference for the asymmetrically dominating option decreases when it is framed in terms of inaction (i.e., when preference uncertainty was low). Moreover, preference for that very same option marginally increases when it is framed as inaction, but it is not dominating (i.e., when preference uncertainty was high). Our findings have important implications for default effects and choice architecture, particularly in contexts where preference uncertainty is low. In such cases, preference for a given option seen as superior in terms of utility may be harmed as a result of making it attainable through inaction.

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### ***Uniformity Bias in Attribute Perception and Evaluation***

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Companies oftentimes offer consumers a set of product alternatives that vary in terms of an attribute. For instance, the iPad mini has a capacity of 16, 32, or 64 Gigabytes; Marriot hotel members acquire silver, gold, and platinum status after respectively 10, 50, and 75

qualifying nights; and Starbucks coffee comes in 12, 16, and 20 ounce sizes. The way consumers process information about product attributes has attracted significant attention in the marketing literature (Huber, Payne, and Puto 1982; Simonson 1989; Simonson & Tversky 1992). We add to this literature by showing that consumers exhibit a strong bias toward uniformity when evaluating the different levels of an attribute. Specifically, the levels of an attribute can be spaced in an accelerating way (e.g., 16-32-64 GBs for the capacity of iPad mini), a decelerating way (e.g., 10-50-75 qualifying nights for status in Marriott's loyalty program), or in a uniform way (12-16-20 ounces for sizes of Starbucks coffee). Because it takes fewer cue values to detect a linear trend, compared to a non-linear trend, past research has demonstrated that it is easier to extrapolate linear (i.e., uniformly spaced) trends than non-linear trends (Juslin, Karlsson, & Olsson 2008).

In the current manuscript, we investigate *Uniformity bias*, which refers to consumers' tendency to interpret the ordinal ranking of alternatives (i.e., worst, intermediate, best = third, second, first) on an interval scale (i.e., three, two, one), and as a consequence, judge the value of intermediate options uniformly between the lowest and highest options regardless of the actual spacing. For instance, when considering a 16, 32, and 64 GB iPad mini, consumers perceive the value of the middle option as closer to the highest option than it really is. Similarly, when considering the 10, 50, and 75 qualifying nights associated with the various levels of Marriott membership status, consumers perceive the value of the middle option as closer to the lowest option than it really is.

Study 1 examined how product alternatives are actually spaced in the marketplace. We recruited 98 participants to go online and find products with three or more levels. The final dataset had 466 products with an average of 3.76 levels. Results indicated that product-level spacing was accelerating for 282 products (60.5%), uniform for 112 products (24.0%), decelerating for 45 products (9.7%), and mixed (not wholly accelerating, uniform, or decelerating) for 27 products (5.8%).

Study 2 examined whether consumer intuitions about attribute spacing correspond to marketplace reality. If consumer intuitions about attribute spacing conform to marketplace reality, consumers should believe that product levels are spaced in an accelerating way. We find however those intuitions are determined (partly) by uniformity bias. Participants were randomly presented with 10 sets of products (taken from Study 1). Some sets were accelerating, others decelerating, or uniform. Regardless of the actual spacing, participants expected the intermediate options to be approximately uniformly spaced between lower and higher options.

Study 3 examined implications of uniformity bias for product valuation. All participants were presented a set of three cameras that differed in terms of Megapixels. The worst camera offering 5 Megapixels and best camera offering 15 Megapixels were identical for all participants. The intermediate option was manipulated between-participants to be either 7 (accelerating), 10 (uniform), or 13 (decelerating) Megapixels. Participants indicated their willingness to pay (WTP) and judged picture quality for each camera. Although participants' judgments for the intermediate level were sensitive to the actual number of Megapixels, judgments were strongly biased toward uniformity. That is, the intermediate option was overvalued relative to the worst and best options in the set when Megapixels were spaced in an accelerating way but undervalued when Megapixels were spaced in a decelerating way.

Study 4 examined uniformity bias when attributes were not specified in a quantitative way (e.g., Megapixels in Study 3) but instead in a qualitative way. Furthermore, Study 4 assessed (1) consumers' judgments both pre- and post-experience and (2) whether serial or joint presentations moderate uniformity bias. Participants were presented the qualitative labels for different internet speeds (i.e., "Basic", "Standard", "Quick", "Turbo", "Ultimate") and asked to indicate their willingness to pay per month for each speed. These judgments were either performed jointly (on the same screen) or serially (on randomly ordered screens). After a 10 minute distractor task, participants experienced the time required to download a 15 Megabyte file at each speed, also either jointly or serially. As expected, when only ordinal information was available (i.e., that "Ultimate" was the fastest and "Basic" was the slowest), participants' willingness to pay was spaced uniformly between product levels. Uniformity bias occurred when the judgments were made jointly and serially. Participants still exhibited uniformity bias post- experience, although the effect was weaker than pre-experience.

To control for potential response biases (Fox and Rottenstreich 2003), Study 5 replicated the design of Study 4, but instead of asking participants to indicate their willingness to pay, they made a choice about whether or not they would purchase the internet connections used in the previous study for \$30 per month. Choice proportions were approximately uniformly spaced between product levels, regardless of evaluation mode (joint vs. serial) or experience (pre vs. post).

In sum, we demonstrate that attribute levels are generally spaced in an accelerating way (study 1) but that consumers' intuitions about attribute spacing are strongly biased toward uniform spacing (study 2). This bias affects perceptions of product quality, willingness to pay, and choice (studies 3-5). Experience with the actual consumption benefits of a product only partly debiases consumers' judgments (studies 4 and 5). Should our manuscript be accepted for presentation, we will discuss broader implications of uniformity bias for marketing (e.g., pricing, conjoint analysis, and innovation).

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### ***1.3 Symposium: I Still Haven't Found What I Am Looking For: (Mis)Matching Pre- and Post-Consumption Preferences***

**Room: WINDSOR**

**Chair:** Chadwick Miller, Arizona State University, USA

#### ***The Effect of Deliberative and Implemental Mindsets on Consumer Information Processing at Websites***

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Caglar Irmak, University of Georgia, USA\*

Peter Gollwitzer, New York University, USA

Gabriele Oettingen, New York University, USA

Imagine a consumer buying a camera. In the first stage of the shopping process, she compares and evaluates different brands of cameras until she decides to buy a specific brand. In this first, pre-decisional phase, when consumers are uncertain about their shopping goals (e.g., which brand to buy), they are in a *deliberative* mindset focusing on the pros and cons of the different brand options and possess a broader memory span. In the second stage, she focuses on the process of buying the brand she chose. In this second, post-decisional phase, when consumers have ascertained their goals, they switch to an *implemental* mindset focusing on “when, where, and how” aspects of goal attainment (e.g., how to buy the chosen brand) and have a limited memory span.

Consumers are exposed to a plethora of information (in the form of text, images). Yet, it is unclear if the information is imposing a cognitive strain (Sweller 1988) or providing a stimulating, information-rich environment (Berlyne 1960; Steuer 1992) to consumers in each of the shopping stages. We draw on the literature on mindsets (Gollwitzer 1990; 1999) to examine how the amount and type of information at the website interact with the mindset evoked in the two shopping phases to influence consumers' processing efficiency and preferences toward the website.

Building on the body of research that examines the significance of external influences in pre- and post-decisional phases of decision making (Cheema and Patrick 2008; Lengfelder and Gollwitzer 2001), we investigate whether consumers in various shopping stages exhibit differences in preferences and processing efficiency toward shopping environments (e.g., websites) with varying amount of information. We predict that consumers in an implemental mindset will have better recall of information at websites with limited (vs. extensive) information, as the multitude of information at an extensive website poses a strain on the limited memory span of these

individuals (Fujita, Gollwitzer, and Oettingen 2007). In contrast, consumers in a deliberative mindset do not display such recall difference, as they are open-minded and have a broader memory span (Fujita et al. 2007). In terms of preference, due to their open-mindedness, we propose that consumers in a deliberative mindset will display a more positive attitude toward the website with a high (vs. low) amount of information. However, due to their lack of preference for variety, consumers in an implemental mindset will report no differences in attitude towards website with low and high amount of information. Further, we examine the interplay between amount and type of information in consumer information processing in the two shopping phases in an effort to understand whether amount or type of information is more influential in consumers' processing efficiency.

We conducted two studies to test our predictions. Study 1 had a 2(Amount of information: low vs. high) X 3(Mindset: implemental, deliberative vs. control), between-subjects design. We gave 88 participants an unrelated mindset manipulation task, given that the evoked mindset will get transferred to the website domain (Gollwitzer and Kinney 1989). Next, participants browsed a blues music website with low or high amount of information (i.e., amount of text and images). After browsing for five minutes, participants provided their attitude toward the website. Next, participants were exposed to webpages that varied on low or high amount of information and were asked to recall information about the content of the webpage. The results showed that while those in a deliberative mindset liked the website with a high amount of information better than the one with a low amount of information ( $M_{\text{high}} = 3.96$ ,  $M_{\text{low}} = 2.88$ ,  $p < .01$ ), their performance in the recall task did not change with the amount of information at the website ( $M_{\text{high}} = 5.15$ ,  $M_{\text{low}} = 4.33$ ,  $p > .40$ ). On the other hand, while those in an implemental mindset did not show a significant difference in their attitude toward websites with low and high amount of information ( $M_{\text{high}} = 3.52$ ,  $M_{\text{low}} = 3.45$ ,  $p > .80$ ), their performance in the recall task was significantly better at the website with low (vs. high) amount of information ( $M_{\text{high}} = 4.33$ ,  $M_{\text{low}} = 6.67$ ,  $p < .05$ ).

In our second study we wanted to i) investigate the interaction of mindsets and amount of information on recall of different types of information and ii) replicate study 1 findings with a mindset manipulation that is more relevant to the specific consumer setting (adapted from Heckhausen and Gollwitzer 1987). The study was a 2 (Amount of information: low vs. high) X 2 (Mindset: implemental vs. deliberative) between-subjects design. One hundred and ten participants first went through the mindset manipulation and then were presented with specific webpages containing generic (i.e., slogan at the homepage), instrumental (i.e., how to shop at the blues website) and evaluative information (i.e., reviews of albums). The results pertaining to the recall of generic information replicated those of study 1. Further, we found that consumers in an implemental mindset showed a better recall of evaluative information at a website with low (vs. high) amount of information ( $M_{\text{high}} = 1.00$ ,  $M_{\text{low}} = 1.86$ ,  $p < .01$ ); whereas consumers in a deliberative mindset had a better recall of instrumental information at a website with high (vs. low) amount of information ( $M_{\text{high}} = 2.50$ ,  $M_{\text{low}} = 1.95$ ,  $p < .01$ ). These results demonstrated that while those in a deliberative mindset are more efficient in processing evaluative (vs. instrumental) information and those in an implemental mindset more fluently process instrumental (vs. evaluative) information (Gollwitzer 1990), this efficiency can be overturned when specific types of information is processed at environments with preferred amount of information.

The findings contribute to recent research on shopping phases by illustrating how the interplay of amount and type of information plays a significant role in determining the effects of mindsets evoked in each of these phases. From a practical standpoint, the results suggest that if marketers can monitor the specific decisional orientations (pre vs. post) in the marketing environment, it is possible to tailor the amount of information in the environment so that it best suits individuals' orientations, and results in enhanced task performance and favorable evaluations at the environment.

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### ***Predicting the Impact of Adding Features on Future Purchases***

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Customers often choose hotels and resorts on the basis of service amenities that differentiate them from competitors, encouraging managers to add more and more features to their offerings (Victorino, Verma, Plaschka and Dev 2005). For example, hotels may provide features such as wireless Internet service, fitness centers and bottled water to their guests. Because these features are not standard for the industry (as a bed and a shower are), we refer to them as “amenities.”

Clearly, firms incur costs to provide these amenities, but the short and long-term revenues they will derive from offering them are harder to predict. An amenity like free wireless Internet service may attract more guests initially, but will offering this amenity increase the repeat purchases of these new guests? Previous research shows that consumers often overestimate the number of features they want when they choose products, resulting in “feature fatigue” (Thompson, Hamilton and Rust 2005). This systematic overestimation by consumers makes it difficult for firms to decide how many amenities to offer because they must balance the positive effects of adding features on the initial attractiveness of the offering (Brown and Carpenter 2000; Carpenter, Glazer and Nakamoto 1994) with the potentially negative effects of adding features on consumer satisfaction after consumption (Thompson et al. 2005).

In this research, we build a model incorporating costs and both the effects of adding an amenity on revenues from initial choice and its effects on revenues from repeat purchases to help firms decide which amenities offer the highest financial return. Thus, in contrast to traditional marketing research methods, which focus on the financial returns of marketing initiatives and product design choices based on how they affect initial choice (e.g., Ofek and Srinivasan 2002), we examine the effects of adding an amenity on revenues over time. This is particularly important for services, which often involve ongoing customer relationships (Rust and Huang 2013), meaning that the financial returns from services play out over time (Bolton 1998; Gupta, Lehmann and Stuart 2004; Gupta and Zeithaml 2006).

In our model, initial purchase is a function of expected amenity use as well as other factors such as demographics and past purchase behavior. That is, the fact that the firm offers an appealing amenity may increase initial choice for some customers. However, because the amenity is not a core feature of the offering, the customer may or may not use the amenity during the focal service occasion, even if he or she chose the service in part because the amenity was offered. Thus, both the consumer’s expected use of the amenity and actual use of the amenity are incorporated into our model, and we control for the effect of expected amenity use when we compute the effect of actual amenity use on future purchases and revenues.

We estimated our model using a detailed longitudinal dataset developed in collaboration with a global hotel company. This dataset includes longitudinal revenue data and amenity usage data for over 700 guests staying at 33 different hotel properties that span different price tiers, brands and geographic areas. Working with the hotel company, we created a pre-stay survey that was sent to guests about a week before their check-in date. In the pre-stay survey, guests predicted whether they would use each of 50 different hotel amenities during their upcoming stay. About a week after each of these guests had checked out, we recontacted them and asked them to complete a post-stay survey. In the post-stay survey, guests reported whether they had actually used the same 50 hotel amenities during their stay. (For comparison, a holdout sample completed either only the pre-stay survey or only the post-stay survey.) To create our longitudinal dataset, we combined the pre- and post-stay survey data with guest-level data collected by the global hotel company detailing loyalty program membership, prior revenues and stays, revenues during the focal stay, and subsequent revenues and stays.

We used hierarchical Bayesian techniques to estimate the model with this longitudinal dataset. Because the use of many hotel amenities is correlated (e.g., those who use the fitness center may also be more likely to use bottled water), we used factor analysis to

create uncorrelated independent variables. The dependent variables in our model are future purchase incidence and revenue conditional on purchase; the equations for purchase incidence and revenues conditional on purchase were estimated simultaneously for each hotel brand. Using the resulting coefficient estimates in addition to internal company data on costs and margins, we can compute the return on investment for each of the individual amenities for each of the hotel brands.

We find that return on investment varies substantially across amenities and that the return on a single amenity can vary substantially across different brands. For example, the fitness center amenity provides a significant and positive financial return for one brand, but a significant and negative financial return for another brand, even though these brands are owned by the same company. These empirical results show that the pattern of return on amenities can be complex, and that each brand needs to carefully evaluate the profitability of each service amenity.

Our model can serve as a useful decision tool for managers deciding which amenities to provide to their customers. Service providers like hotels and airlines are particularly well suited to this kind of analysis. Firms in these industries typically keep detailed records of customer purchases and can try out amenities for a subset of properties or routes to calculate return on investment before rolling out the new amenity more widely.

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### ***Simply Desirable, Preferably Complex: Feature-Richness in Experiential Purchases***

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A trip to a travel agency or an electronics store reveals a dizzying array of options and an even greater array of features. Despite the fact that consumers desire and are attracted to such feature-rich products before consumption, they tend to be more satisfied with limited (feature-poor) products after consumption (Thompson, Hamilton, and Rust 2005). However, when it comes to experiences, which are intangible and have a finite usage time, will consumers still experience “feature fatigue?”

How might the number of features on an experience impact consumer choice and post-consumption evaluation? Prior work offers some clues. The task complexity literature has shown that as the number of events in a given task increase, the outcome of the task becomes more difficult to predict (Campbell 1988). Additionally, because experiential purchases have finite usage periods (products are infinite), consumers should view experiences with low temporal distance (products with high temporal distance). This reasoning suggests that consumers may prefer feature-poor experiences because they are more feasible than feature-rich experiences (Trope and Liberman 2003). Post-consumption, however, there is evidence that consumers should prefer feature-rich experiences. For instance, a feature-rich experience should provide more opportunities for stories (Van Boven and Gilovich 2003; 2005), a better chance for a higher peak and end (Kahneman 1999), and more disruptions throughout the overall experience (Nelson, Meyvis, and Galak 2009).

In the current research, we show that consumers prefer feature-poor experiences pre-consumption (Study 1), yet prefer feature-rich experiences post-consumption (the opposite of “feature fatigue,” Study 2). We also show that these preferences can be flipped (aligned with post consumption preferences) by changing the temporal distance associated with the purchase (Studies 3a and 3b). That is, when temporally close, feasibility concerns (low-level construals) should make the feature-poor experiences preferred. However, when the experience is temporally distant, feature-rich experiences should seem more desirable (high-level construals).

In an initial pretest, we compared preferences for features across material vs. experiential goods. Participants (N=39) were asked

how many features they would include on their ideal digital camera (vacation package). In line with our conceptualization, participants preferred the product to have more features than the experience ( $M_{\text{digital-camera}}=11.18$ ,  $M_{\text{vacation-package}}=7.82$ ,  $F(1,37)=5.03$ ,  $p<.05$ ). To test how consumers viewed the temporal distance of material products and experiences, participants in a second pretest indicated how long (months) they expected to be involved in the purchase (planning, experiencing, recollecting). Participants expected to be involved with a material purchase significantly longer than an experiential purchase ( $M_{\text{vacation-package}}=9.41$ ,  $M_{\text{digital-camera}}=34.11$ ,  $F(1,225)=48.34$ ,  $p<.001$ ).

In our first study, we conducted a 2 (product vs. experience) x 2 (within-subject: feature-poor (3) and feature-rich (19)) mixed design study. Participants ( $N=147$ ) rated how much they liked and desired ( $\alpha=.85$ ) a feature-poor versus feature-rich digital media player (material) or a set of comedy videos (experience). The media player was designed to mimic that of Thompson, Hamilton, and Rust (2005). The comedy videos told exactly the same jokes and lasted about 10 minutes, in the “feature-rich” condition there were 19 individual segments, while in the feature-poor condition, there were only 3 individual segments. Participants preferred the feature-rich product ( $M_{\text{feature-poor}}=4.29$ ,  $M_{\text{feature-rich}}=4.87$ ,  $F(1,77) = 5.47$ ,  $p<.05$ ) and the feature-poor experience ( $M_{\text{feature-poor}}=5.8$ ,  $M_{\text{feature-rich}}=4.07$ ,  $F(1,68)=29.46$ ,  $p<.001$ ). Thus, we show that contrary to the case of material goods, consumers prefer simpler experiences pre-consumption (or feature apprehension). In our next study, we tested whether this preference flipped post consumption.

In study 2, we used the same stimuli as in study 1 with participants from the same population. However, participants ( $N=288$ ) either used the digital media player (feature-poor or feature-rich) or watched the comedy videos (feature-poor or feature-rich). We found a significant interaction between product/experience and the number of features ( $F(1,284)=7.76$ ,  $p<.01$ ). Participants in the material condition preferred the feature-poor product ( $M_{\text{feature-poor}}=2.96$ ,  $M_{\text{feature-rich}}=2.41$ ,  $F(1,284)=4.42$ ,  $p<.05$ ); however, in the experiential condition they preferred feature-rich experiences ( $M_{\text{feature-poor}}=5.33$ ,  $M_{\text{feature-rich}}=5.96$ ,  $F(1, 284)=3.83$ ,  $p=.05$ ). Thus, we replicate the findings of “feature fatigue” but also find that consumers preferred feature-rich experiences post-consumption. In the next two studies, we show that by changing the temporal distance (from low to high) of an experience, consumers change their pre-consumption preferences such that they match their post-consumption preferences.

In study 3a, participants ( $N=112$ ) were shown 21 features that they could include on a personalized vacation package and were asked to indicate the features they would include on their vacation package. We then manipulated whether participants were taking their vacation in one-week (low temporal distance) or one-year (high temporal distance). Results revealed that those in the low temporal distance condition included fewer features in their vacation than participants in the high temporal distance condition ( $M_{\text{low}}=9.94$ ,  $M_{\text{high}}=11.31$ ,  $F(1,110)=3.9$ ,  $p=.05$ ). These results suggest that when the temporal distance is increased for an experiential purchase, consumers prefer more features pre-consumption. An alternative explanation may be that this temporal distance is activating participants’ variety seeking behavior. In our fourth study, we remove this explanation and test an alternative temporal distance manipulation.

In study 3b, we manipulate the amount of time that participants have to make use of a hypothetical experiential Starbucks voucher purchase (either one-week or two-years). Participants were told they could either purchase five vouchers at \$6 each (feature-poor), or fifteen vouchers at \$2 each (feature-rich), we then asked them to choose one of these options. As expected, participants in the one-week condition chose more \$6 vouchers (29, 74%) than \$2 vouchers (10, 26%). However, participants in the two-year condition chose more \$6 vouchers (23, 62%) than \$2 vouchers (14, 38%). A chi-square analysis of the distributions shows this is a significant difference in consumer’s choice across temporal distance conditions ( $\chi^2(1) = 10.31$ ,  $p<.01$ ).

In sum, consumers have a different reaction to the number of features included on experiential purchases compared to material purchases in both pre- and post-consumption evaluations. We also show that consumers’ avoidance of complexity in experiential purchases can be attributed to the temporal distance associated with experiential purchases. Finally, by manipulating temporal distance

(both distance in the future and usage time) we are able to align consumers' purchase preferences to more closely match their post-consumption preferences.

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### ***Giving and Receiving Happiness***

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Consumers give mostly material gifts, but would their recipients be better off with an experiential gift? This research investigates what type of gifts gift-giving consumers believe will lead to more receiver happiness before purchase, and it investigates what types of gifts actually lead to more receiver happiness post-purchase. I explore whether consumers are biased in their gift-giving due to an inability to estimate their receiver's post-consumption happiness.

Gift giving is a common occurrence in consumer behavior (\$800+ billion), and thus it has received enormous attention—not only from consumer researchers (e.g., Belk & Coon, 1993; Otnes & Beltramini, 1996), but also from sociologists, anthropologists, economists, and psychologists (e.g., Camerer, 1988; Komter, 1996; Robben & Verhallen, 1994; Schwartz, 1967). Much of this research is qualitative or game theoretic, and has provided a wealth of insight. However, there is little empirical evidence as to what type of gifts lead to the most recipient happiness, and whether consumers accurately estimate these differences. After all, the goal of gift giving is not to increase the giver's happiness, but to increase the happiness of the person receiving the gift.

To further examine what type of gifts consumers believe will lead to the most happiness, I asked 100 Mechanical Turk (MTurk) workers to list gifts that they recently received, and then rate each gift as more material or more experiential. We found that 81% of holiday gifts and 66% of birthday gifts were viewed as more material than experiential. Thus, it seems that consumers believe giving material gifts will lead to more happiness.

However, current theories on spending and happiness predict that material gifts may not be advantageous. When spending money on oneself, research shows that experiences lead to more happiness than material goods, assuming they turn out positively (Nicolao et al., 2009; Van Boven & Gilovich, 2003). The process leading to this "experiential advantage" is due to several factors associated with experiences: greater identity relevance (Carter & Gilovich, 2012), more comparability (Carter & Gilovich, 2010), less regret and interchangeability (Rosenzweig & Gilovich, 2012), slower adaptation (Nicolao et al., 2009), and greater social associations (Caprariello & Reis, 2013). On the one hand, these theories suggest that a gift should be different because the choosing is done for the recipient, and thus it will not be susceptible to choice comparability, decision regret, or identity relevance, suggesting that an experiential gift is unlikely to be more central to the recipient's self-concept. On the other hand, the adaptation and the social association theories predict that the experiential advantage should hold for gifts. I conducted five experiments to test these competing accounts and to examine whether consumers accurately predict the best gifts.

In study 1 (2 (give vs. receive) x 2 (material vs. experiential) between-subjects design), I asked participants to recall an experiential/material gift that they received/gifted for the holidays. Participants then indicated how much this gift contributed to their own/recipient's happiness across three happiness measures (adapted from Nicolao et al., 2009). A significant interaction ( $t(132)=2.00$ ,  $p<.05$ ), supports the experience recommendation for gift recipients ( $M_{\text{Experience}}=5.61$  vs.  $M_{\text{Material}}=4.74$ ,  $t(132)=3.41$ ,  $p<.01$ ). However, gift-givers did not think their recipients were happier with experiences ( $M_{\text{Experience}}=4.97$  vs.  $M_{\text{Material}}=4.81$ ,  $t<1$ ). Thus, consumers are biased towards material goods when in fact experiences would lead to more recipient happiness.

Study 2 used a different methodology. In a 2 (give vs. receive) x 2 (positive vs. negative) between-subjects design, participants recalled three gifts that they received/gave, and turned out positively/negatively. As in study 1, participants rated how much each gift contributed to their own/recipient's happiness, and rated each gift as more material or more experiential. Using a hierarchical analysis regressing happiness onto each participant's material/experiential ratings, we found a significant valence by give/receive interaction ( $t(120)=2.18, p<.05$ ): Only recipients indicated that experiences led to more happiness than material gifts, and only when they turned out positively ( $b=.23, t(120)=2.40, p<.05$ ).

Study 3 measured happiness over time: before and after Christmas. The repeated measures results again showed a significant difference between givers and receivers. Givers did not believe that their experiential gifts led to more happiness ( $b=.034, t(233)=1.10, p=.27$ ), with no difference across time ( $b=-.055, t(233)=1.51, p=.134$ ). Receivers, however, said that experiential gifts led to more happiness ( $b=.157, t(233)=3.30, p<.01$ ), with a marginal increase immediately after Christmas ( $b=.093, t(233)=1.61, p=.1$ ). The results suggest that the bias toward material gifts may be partly due to a misprediction about the future, but it is also due to a misprediction about others.

Study 4a and 4b addressed why consumers purchase material gifts when experiences lead to more happiness. One possibility is that givers maximize their own happiness. However, study 4a suggests that givers give to "increase friends" and "show appreciation", and the most common objective is recipient happiness. Another explanation is social norms—the proper gift fits into a box and can be easily exchanged. Study 4b examined this and several other alternative explanations by asking 375 MTurkers to list three gifts that they were thinking about giving and rate them on the following dimensions: giver effort, receiver effort, decision difficulty, traditional, memorable, enjoyable, negative outcome, appreciation, and material/experiential. Two conclusions emerged. Experiences were perceived as being less traditional ( $M_{Experience}=3.56$ ) than material gifts ( $M=3.92, t(403)=2.21, p<.05$ ), supporting the notion that experiences can violate gift giving norms. Second, givers perceived experiences as requiring more receiver effort ( $M_{Experience}=2.89$ ) than material gifts ( $M_{Material}=2.06, t(401)=5.58, p<.001$ ), suggesting that the extra planning required for an experience can place an extra burden on the recipient.

In sum, the research suggests that consumers would be better off giving more experiences than material gifts, assuming that their goal is to maximize the happiness of their recipient. Yet, this may be a hard pill to swallow for many gift givers, because they mispredict their recipient's happiness pre-consumption. And even if givers overcome their mispredictions about experiences, the extra happiness associated with experiential gifts comes at a cost—they are perceived as less traditional and requiring more effort from the recipient.

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## ***1.4 Individual Papers: It's Not Just About Dollars: Issues in Financial Decision Making***

**Room: ESCORIAL**

**Chair: Stephanie M. Tully, New York University, USA\***

### ***Greedy loss prevention in economic decision making***

Goedele Krekels, Ghent University, Belgium\*

Mario Pandelaere, Ghent University, Belgium

### **Economic greed**

Greed is omnipresent in our current society and highly relevant to economics. For instance, the media and public opinion attributed the

financial crisis to the greediness of bankers and stockbrokers, who risked clients' money to ensure greater turnover to satisfy their greed (Papatheodorou, Rosselló, & Xiao, 2010). Greed has also been related to corporate fraud (Smith, 2003) resulting in the downfall of international corporations (Wells, 2011). On a smaller scale individual greed is shown to be associated with higher debts (Lunt & Livingstone, 1991).

### Dual vision on greed

When people think about the concept of greed, they typically focus on acquisitive behavior (Wachtel, 2003), classifying greed as an insatiable desire. Though we endorse this wanting more perspective of greed, an important aspect is missing from prior conceptualizations. More specifically, avoiding losses might be another important characteristic of greedy people. Preventing that one loses certain items could be an essential part of attaining as much as possible.

This dual vision on greed is often indirectly incorporated in research, where the same uncooperative behavior might be explained by preventing losses in pay-offs, labeled fear, or increasing pay-offs, labeled greed (Rapoport & Eshed-Levy, 1989). We believe that both these labels are an essential part of dispositional greed. An initial study (N = 184, 91 males, M age = 30.9, SD = 11.8) indeed indicates a positive correlation between dispositional greed (table 1) and both a promotion and prevention focus (Grant & Higgins, 2003) ( $r = .25$  and  $.26$ ,  $p < .001$ ). Three studies show that preventing losses is an essential part of a greedy disposition and indicate that this motivation is able to predict the effect of greed in economically relevant contexts.

TABLE 1  
The Dispositional Greed Scale

Items	Factor loadings
No matter how much I have of something, I always want more.	.78
One can never have enough.	.71
Even when I am fulfilled, I often seek more.	.67
The pursuit of more and better is an important goal in life for me.	.66
A simple basic life is sufficient for me.*	.63
I am easily satisfied with what I've got. *	.61

\* indicates reverse scored items

### Study 1: Loss aversion

As both prevention and promotion correlated equally strong, we study loss aversion to examine the impact of one compared to the other. Therefore we employed the method of Tom, Fox, Trepel, and Poldrack (2007), where respondents indicate their willingness to participate in a coin toss gamble with an equal chance of winning (10 - 45€, increments of 5€) or losing (5 - 25€, increments of 2.5€). These amounts were chosen as previous studies indicated people are roughly twice as sensitive to losses (Tversky & Kahneman, 1992). 152 Students (102 males, M age = 21.1, SD = 2.7) participated in 66 randomized trials.

Linear regression showed that dispositional greed predicted respondents' loss aversion (table 2). Greedy people (+1SD) exhibit an average loss aversion ratio of 5.62 (SD = .59), indicating them to need more than 5 times the amount of gain versus loss to participate. For non-greedy people (-1SD) this ratio is 3.82 (SD = .59). This shows that greedy people are not only oriented towards gaining more, but are also focused on preventing losses.

TABLE 2  
Study 1: Effect of Dispositional Greed on Loss Aversion

	Beta	SE	t	p
Constant	.18	.09	2.14	.034
Dispositional Greed	.19	.02	2.35	.020
F (df)	5.53 (1, 151)			
R <sup>2</sup>	.035			

### Study 2: Auctions

Auction paradigms have often been used in economic research (Cilia & Buchmann, 2002), simulating real life auction websites (Bajari & Hortascu, 2003). Research has shown that bidding can produce a pseudo-endowment effect (Ariely & Simonson, 2003), which might result in loss experiences when people do not become the final owner. 471 Americans (244 males, M age = 32.5, SD = 11.3) imagined being in an online auction. They saw ten items (e.g. an iPhone, a table lamp) and indicated the highest price they were willing to bid, ranging from 10% to 120% of the retail price.

Dispositional greed predicted the amount respondents were willing to bid ( $F(1, 469) = 12.82, B = .16, p < .001$ ). A binomial logistic regression, indicating whether one bids less than the retail price on any item, showed that greedy people were even more likely to bid at least 100% of the retail price ( $Wald = 5.57, B = .30, p < .05$ ). It appears that greedy people are willing to bid more in an online auction, possibly to ensure not losing the object they already feel owner of, even if this means paying more than their value.

### Study 3: Experience of loss in economic games

In this final study we investigated what happens when greedy people experience losses. Previous research has shown that allocators in an ultimatum game feel ownership of the money endowed to them and experience losses when the recipient rejects their offer (Leliveld, van Dijk, & van Beest, 2008). Therefore, in this study 184 Americans (93 males, M age = 34.6, SD = 11.0) played a 1\$ ultimatum game with a computer programmed to reject any offer. Answers on an open ended question ensured that respondents were unaware of this fixed response. They indicated their feelings following this rejection on an 8-item bipolar scale (e.g. frustrated – relaxed, disappointed – not disappointed). After some filler items, they were allocated the role of proposer in a 1\$ dictator game with a different recipient, to exclude a punishing explanation.

Greed significantly predicted the proposed amount in the ultimatum game ( $F(1, 182) = 9.50, B = .22, p < .01$ ) but not their emotions following rejection of their offer ( $F(1, 182) = 1.19, B = .08, p = .28$ ). In the dictator game, both greed and their emotions associated with rejection were able to predict the amount people kept for themselves (table 3). There was a significant interaction between greed and the emotions associated with rejection: Whereas for non-greedy people the emotions predicted how much they would keep, for greedy people it seems that there is no negative emotional response needed to increase their own portion (figure 1).

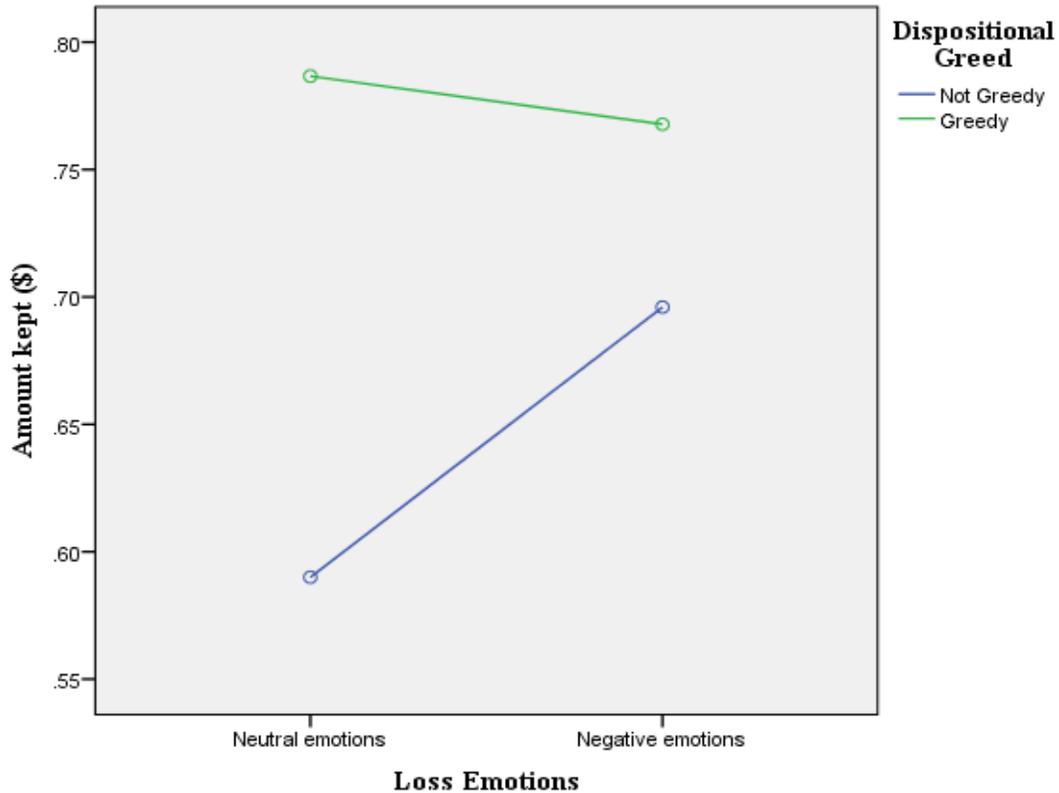
TABLE 3

Study 3: Effect of Dispositional Greed and Loss Emotions on Dictator Game Outcomes

	Beta	SE	t	p
Constant	.41	.09	4.51	.000
Dispositional Greed	.23	.01	3.22	.001
Loss Emotions	.14	.02	2.03	.046
Constant	-.07	.28	-.26	.793
Dispositional Greed	.87	.07	2.45	.015
Loss Emotions	.58	.07	2.31	.022
Dispositional Greed * Loss Emotions	-.82	.02	-2.02	.047
F (df)	6.243 (3, 180)			
R <sup>2</sup>	.094			

FIGURE 1

Study 3: Effect of Dispositional Greed and Loss Emotions on Dictator Game Outcomes



## Conclusion

In three studies we show that loss prevention has a big impact on greedy behavior in economic decision making. A prevention focus is an essential part of dispositional greed, and has an even larger impact than the promotion focus, resulting in bigger loss. Furthermore, when greedy people experience an imagined ownership of an object, they are willing to pay more to prevent losing this object. Finally, when they are confronted with an actual money loss, it causes them to behave more acquisitive in later non-relating economic decisions, possibly to make up for this imagined loss.

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### *Making Discretionary Money Last: Financial Constraints Increase Preference for Material Purchases by Focusing Consumers on Longevity*

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Financially constrained consumers have to make frequent trade-offs when allocating their limited financial resources. One of the most basic trade-offs is the choice between spending on material versus experiential purchases—a trade-off with substantial consequences for well-being (e.g., Van Boven and Gilovich 2003). In this research, we examine how feeling financially constrained influences how consumers resolve this trade-off, that is, their relative preference for material versus experiential purchases.

Since financial constraints highlight opportunity costs (Spiller 2011), we expect that financially constrained consumers will recognize that a purchase today may inhibit a purchase tomorrow—and that this will increase their concern about the longevity of their purchase. That is, we propose that financially constrained consumers want to spend their limited resources in a way that provides lasting utility. This could increase preference for experiential purchases since those have been shown to provide greater long-term happiness. However, this requires that consumers recognize the long-term utility that memories provide. Instead, we propose that financially constrained consumers focus on a more obvious fact: the physical persistence of material goods. Five lab studies and an archival study provide evidence consistent with this view: we observe that thinking about real or hypothetical financial constraints increases preference for material over experiential purchases.

In Study 1, we manipulated financial constraints by asking consumers to write an essay about life on (or not on) a budget. Next, they were asked to imagine that they were looking to buy something nice for themselves as a treat and were then provided with six pairs of material and experiential options. Compared to participants in the no-budgeting condition, participants imagining life on a budget were more likely to prefer the material options ( $F(1,71) = 12.02, p < .001$ ) and were more likely to mention longevity as a factor in their choice ( $F(1,71) = 4.30, p < .05$ ).

In Study 2, we address the alternative explanation that financial constraints evoke negative feelings that make experiences seem less desirable. We manipulated financial constraint by asking participants to imagine that their income had either increased or decreased by thirty percent. Furthermore, some participants were asked to devise a plan for living on their new monthly income, whereas others were asked to write about how they would feel about their new income. All participants then completed a shopping task similar to the one used in Study 1. As predicted, participants who imagined an income decrease (vs. increase) were more likely to prefer the material options ( $F(1,252) = 21.01, p < .001$ ) and more likely to mention longevity as a reason for their choice ( $F(1, 252) = 31.50, p < .001$ ),

which significantly mediated the effect of income change on preferences (as tested with a bootstrapping analysis, Preacher and Hayes, 2008). The effect of income change did not depend on whether participants were planning or feeling ( $F_s < 1$ ), suggesting that the effect is not driven by negative feelings.

In Study 3, we manipulated the extent to which participants considered their real (rather than imagined) financial constraints while making their choices—by explicitly asking some participants to consider their current financial situation before completing the shopping task. As predicted, those participants were more likely to prefer the material options than participants in the control condition ( $F(1,160) = 3.89, p = .05$ ). An increased focus on longevity again significantly mediated the effect of the manipulation on preference for the material options.

In Study 4, we demonstrate that the effect of financial constraints on preference for material purchases persists even when those material options are more frivolous and wasteful than the experiential options (indicating that the effect is not driven by an increased concern for practicality). Participants were presented with five replicates in which the material option (e.g., a revolving tie rack) was rated as more frivolous and wasteful than the experiential option (e.g., dinner at an Indian restaurant) in a separate pre-test. The extent to which participants were considering their real financial constraints was not manipulated, but measured at the end of the survey. As predicted, participants who thought more about their financial constraints were more likely to prefer material options ( $\beta = 0.21, t(182) = 2.95, p < .004$ ), which again was significantly mediated by an increased focus on longevity.

In Study 5, we made the choices incentive-compatible by informing participants that some would win all their chosen options. To create this incentive-compatible choice task, we changed the response format to be dichotomous and used gift cards to companies that offer relatively more material (e.g., the Gap) or experiential (e.g., iTunes) options. As in Study 4, how much a person was considering their financial constraints was measured at the end of the study. As predicted, participants who thought more about their financial constraints chose a greater number of material gift cards ( $\beta = 0.12, t(429) = 2.58, p = .010$ ).

Finally, using discretionary spending data from The Bureau of Economic Analysis (BEA), we show that in quarters of higher unemployment, when feelings of financial constraints are likely heightened, consumers spend disproportionately more on material items (goods) than experiences (services) ( $\beta = .06, t(210) = 5.25, p < .001$ ). We also examined a second proxy of consumers' feelings of financial constraint: the University of Michigan Consumer Sentiment Index. We find that in quarters of lower consumer sentiment (higher perceived financial constraints), consumers spend proportionally more on discretionary goods than services ( $\beta = 0.08, t(204) = 7.67, p < .001$ ). Thus, the shift in individual preferences observed in the lab is mirrored in macro-level market data.

Our research indicates that consumers facing financial constraints are more likely to choose material purchases over experiential purchases when making discretionary spending decisions. It appears this shift is driven by a belief that material goods will provide longer lasting benefits—even though prior research suggests that long-term happiness is better served by investing in experiences.

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### ***The Effect of Default Units on Budgets Estimates***

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Consumers are often called upon to estimate budgets. Naturally, the estimates can be provided in different units. For example, a consumer may spontaneously consider what she spends in a typical week, but her financial advisor may ask her to estimate her

spending in a typical month. It is well established that judgments and decisions can be influenced by the unit in which quantitative information is expressed (e.g., Ülkümen and Thomas, 2013; Zhang and Schwarz, 2012). While this unit effect has attracted a large amount of attention, the specific notion of default units has received sparse attention. In the present research, we focus on default units (i.e., the unit of time that a consumer typically uses for planning—weeks, or months), and we investigate how being asked to make predictions in a non-default unit influences a consumer's budget estimates.

Unlike previous research that defined default units as attribute-specific (e.g. television width is measured in inches), we note that default units can vary with individual preference. For example, when considering their budgets, some consumers may prefer to use the unit of a week while others may prefer a month. Thus, our primary interest is to explore the effect of idiosyncratic default units. Our theoretical framework rests on the proposition that lack of familiarity with a task increases cognitive load (e.g., Block, Hancock and Zakay, 2010). Based on this finding, we propose that making estimates in a less familiar, non-default unit (versus default unit) would increase the cognitive load when making budget estimates.

### Study 1

One hundred ninety-eight participants were asked to estimate their budgets in their randomly assigned unit: a week or a month. To assess their idiosyncratic default unit for planning budgets, we had the participants indicate which time frame they usually use to plan their budget by selecting one of the three options: weekly, monthly, or other. Finally, we asked participants about their annual income, saving/investment, and general budgeting style.

We categorized the participants into default unit condition ( $N = 85$ ) if their idiosyncratic default unit was consistent with the experimentally assigned estimation unit and into non-default unit condition ( $N = 94$ ) if their idiosyncratic default unit was inconsistent with the experimentally assigned estimation unit. Our results show that participants in a default unit condition reported larger budgets ( $M = \$1,525.3$ ) than participants in a non-default unit condition ( $M = \$1,074$ ),  $t = 2.076$ ,  $p = .039$ ,  $d = 0.305$ . Respondents did not differ by condition in total income, saving/investment, budgeting style, or other demographic factors.

### Study 2

The aim of the second study was to replicate the results in Study 1 and explore evidence that estimating in a non-default unit demands greater level of cognitive load. Two hundred fourteen participants were randomly assigned to estimate their budgets for either next week or month. Next, participants responded to four questions that assessed cognitive load: they indicated the level of effort, difficulty, confidence and certainty they experienced while providing their budget estimate on a 7-point Likert scale.

As in Study 1, participants in non-default unit condition ( $N = 88$ ) reported smaller budgets ( $M = \$874.18$ ) than participants in default unit condition ( $N = 122$ ) did ( $M = \$1,260.23$ ),  $t = 2.628$ ,  $p = .009$ ,  $d = 0.365$ , replicating the finding from Study 1. Moreover, participants who were assigned to make estimates in their non-default unit experienced greater cognitive load than those participants who made estimates in their default unit. More specifically, there was a high correlation among the four items measuring cognitive load ( $\alpha = .756$ ), so these items were combined to create an index of cognitive load. Compared to participants in default unit condition ( $M_{\text{non-default}} = 3.17$ ), those in non-default unit condition ( $M_{\text{default}} = 2.61$ ) experienced greater cognitive load when providing budget estimates,  $t = -3.378$ ,  $p = .001$ ,  $d = 0.474$ .

### Discussion

In this research, we find that using non-default units (versus default units) leads to smaller budget estimates. In terms of theoretical significance, our research suggests the importance of default unit which is highly likely to influence consumers' judgment. Although previous research has shown that using default units (versus non-default units) alters product evaluation (Lembregts and Pandelaere, 2013) and estimation of physical quantities (Sun, 2012), it does not capture the nature of idiosyncrasy in the use of different default units when consumers make estimates. Our findings suggest that using an unfamiliar unit could be detrimental to consumers' financial

well-being. It was shown that being forced to use a non-default unit leads to smaller budget estimates. It is well established that, consumers have a tendency to underestimate their future spending (Peetz and Buehler 2009, Ülkümen, Thomas, and Morwitz 2008). If consumers already underestimate their budgets when making estimates using their default unit, then being asked to use non-default units could exacerbate this downward bias. Alternatively, a consumer who considers her budget as a motivational target rather than a realistic spending estimate, could strategically use a non-default unit to plan her budget when she needs to tighten her belt.

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### ***Managing Debt and Managing Each Other: Debt Management Decisions in Interpersonal Contexts***

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Given the current economic climate, understanding how consumers make financial decisions is perhaps more important now than ever before (Lynch 2011). The vast majority of work in this area has focused on how individual consumers process information and make decisions. However, outside the lab, many important financial decisions are subject to social influence and are made within the context of relationships (e.g., between spouses, roommates, and business partners; Simpson, Griskevicius, and Rothman 2012). Moreover, the outcomes of such decisions can be important determinants of relationship satisfaction (e.g., Dew 2008). Our work attempts to paint a more externally valid picture of financial decision-making in the real world, by examining how pairs of individuals jointly navigate important financial decisions.

One financial context in which individuals and pairs may diverge is debt management. Prior work suggests that when individuals are faced with multiple debts, they tend to focus on repaying the smallest debt first, rather than the debt with the highest interest rate, a phenomenon known as debt account aversion (Amar et al. 2011). We conducted a follow-up study to examine the motives underlying debt account aversion. Specifically, we presented individual participants with a scenario in which they could either completely repay a low-balance debt with a low interest rate (APR) or partially repay a high-balance debt with a high APR. We asked participants what they would actually do in such a situation, what they rationally should do, or what they should do to maximize their happiness. We found that participants' actual and happiness-maximizing preferences both favored paying off the small debt, whereas rational preferences favored chipping away at the high-balance, high-APR debt. The results suggest that individuals understand that, economically, they should focus on interest rates, but that pleasure associated with eliminating debts is difficult to resist.

The group dynamics literature offers competing predictions as to whether jointly making decisions will help or hinder performance in a debt management context. On one hand, people may find it difficult to justify and defend their desire to pursue the financially suboptimal strategy of closing small debts (cf. Lerner and Tetlock 1999). Thus, the accountability inherent in joint decision-making may encourage more financially optimal debt repayment behavior. On the other hand, in an attempt to maintain interpersonal harmony, pairs may focus their discussion on attributes that are easier to understand (e.g., number of debts) and attempt to reach agreement on how to manage those attributes. In addition, prior works suggests that interpersonal deliberation among like-minded people can amplify existing preferences (e.g., Schkade, Sunstein, and Hastie 2007). Thus, if most people naturally prefer to focus on closing small debts (Amar et al. 2011), joint decision-making may make this preference even more pronounced.

To examine the influence of an interpersonal context on debt management decisions, we conducted an experiment in which (previously unacquainted) participants were randomly assigned to complete a debt management game individually or in pairs. In the game (Amar et al. 2011), participants are initially saddled with six debts varying in size and interest rate. Critically, the larger debts tend to have larger interest rates, meaning participants must avoid the temptation to close small debts in order to perform well. The

game lasts 25 “years” (rounds), and participants receive annual salaries they must use to repay one or more of the debts. Participants were paid based on their total amount of debt at the end of the game.

In addition to our individual versus pair manipulation, we also manipulated whether participants could earn up to \$0.75 (low incentive condition) or \$7.50 (high incentive condition) based on their final amount of debt. Accountability to others and heightened incentives may both deepen deliberation and thus encourage financially optimal behavior. Thus, pairs may be less sensitive to the incentive manipulation. Manipulation checks confirmed that the incentive manipulation worked as intended (e.g., individuals and pairs in the high incentive condition spent significantly more time on the task).

We observed a significant interaction between the incentive level and pairing manipulations. When incentives were low, individuals and pairs concluded the game with similar final amounts of debt. However, when incentives were high, individuals performed significantly better than pairs (i.e., had significantly lower final debt). Surprisingly, increasing incentives for optimal behavior helped individuals, but hurt pairs.

To better understand the dynamics within highly incentivized pairs, we compared actual pairs to a reference population not subjected to interpersonal influence (cf. Ariely and Levav 2000). Specifically, we took all individual-level outcomes (in the high incentive condition) and repeatedly randomly paired them to form a control sample of pairs. To determine the final debt in the simulated (control) pairs, we used one of three rules (final debt equals the minimum amount of debt by either individual, the average amount of debt, or the maximum amount of debt). We found that actual pairs were virtually indistinguishable from simulated pairs that implemented the maximum debt by either individual. The results suggest that, in actual pairs, the partner with the least optimal preferences essentially “wins.”

Finally, to better understand whether the results among highly incentivized pairs were specifically driven by one-on-one interaction, or were generalizable to other types of social interactions, we added sessions in which groups of three previously unacquainted participants either played the game under low or high incentives. The pattern among groups was virtually identical to the pattern among pairs.

Our work challenges the generalizability of debt management research conducted among individuals. High stakes improve the optimality of individual debt management decisions, but reduce the optimality of joint decisions. Analysis of measures collected after the experiment suggested that highly incentivized pairs and groups were particularly motivated to “go along to get along.” If participants who advocate closing debts are more passionate about their beliefs than participants who advocate focusing on interest rates, this (combined with heightened affiliative motives) could help to explain why highly incentivized pairs and groups struggle. We are currently conducting follow-up work to better understand why participants with suboptimal preferences are particularly influential in highly incentivized pairs and groups.

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## ***1.5 Individual Papers: Getting Personal About Consumption: Identity Signals and Identity Threats***

**Room:** ESCORIAL

**Chair:** Hristina Dzhogleva, University of Pittsburgh, USA\*

## *A Little Bit Softer Now: The Paradoxical Effect of Loud Conspicuous Identity Signaling to Strangers versus Friends*

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Consumers often use products and brands to signal aspects of their selves to others (Belk 1988; Berger and Heath 2007; Escalas and Bettman 2005; Han, Nunes, and Dreze 2010). The motivations for such signaling behaviors include affiliation with social groups (Escalas and Bettman 2003), differentiation from undesirable identities (Berger and Heath 2008; White and Dahl 2007), communicating status (Berger and Ward 2010; Han et al. 2010; Nelissen and Meijers 2011), compensation (Rucker and Galinsky 2008, 2009), and self-enhancement (Sundie et al. 2011). While we know a lot about what drives signaling from the sender's (i.e., display) perspective, we know relatively less about the role the audience (i.e., perception) side of the signaling communication process. Specifically our research addresses two questions: 1) how does audience familiarity affect both consumers' likelihood of conspicuous signaling and the effectiveness of it? 2) how does audience familiarity affect the perception of the signal?

Past research suggests that signaling is more likely when identities are incomplete. For instance, Braun and Wicklund (1989) show that first year college students report owning more university-displaying articles of clothing than fourth year students and argue this occurs because freshmen lack a stable university identity. Building on this identity completion theory, we predict that consumers will be more likely to display signaling behaviors in the presence of strangers than friends because identities are more incomplete with strangers. Furthermore, because an individual's identity is more complete with friends, signaling to them may feel more inauthentic and as a result be less effective. Therefore, we also predict that conspicuous signaling behavior will lead to increased feelings of the trait among the sender in the presence of strangers, but not friends, and that authenticity will mediate this effect.

Beyond the effect of audience on likelihood and internal effectiveness of conspicuous signaling activity, audience familiarity may also affect interpretation of these acts. Research suggests that friends, relative to strangers, are more positively evaluated and trusted (Turner et al. 1987). Since conspicuous signaling can be a method of signaling desirable characteristics and/or status, strangers may interpret a conspicuous act as a threat. These threats may then be translated into general negativity and general distrust of the signaler (Stephan and Stephan 2000). To protect their self-worth, strangers may subconsciously protect themselves and diminish the message's influence by interpreting a stranger's act as inauthentic (Campbell and Sedikides 1999; Ferraro, Kirmani, and Matherly 2013). Therefore, we predict that the intended signal will be ineffective in changing strangers' perceptions. Specifically, strangers will perceive the signaler as having less of the trait being signaled when the signal is loud and conspicuous and that authenticity will mediate this effect.

In study 1 participants imagined they were attending a mixer with either friends or strangers. They indicated their preference for conspicuous signaling of an ideal brand they had named previously using measures from past research on preferences for visible over nonvisible logos (Rucker and Galinsky 2009). They also made a choice between a shirt displaying a small brand logo and a shirt displaying a large brand logo. Participants indicated a greater preference for conspicuous signaling in the presence of strangers than friends ( $M_{\text{strangers}} = 6.58$  vs.  $M_{\text{friends}} = 3.73$ ;  $F(1, 35) = 7.29$ ,  $p < .02$ ). They were also more likely to choose the shirt with the large logo in the presences of strangers than friends (25% vs. 0%; Fisher's  $p < .05$ ).

In study 2 we tested the effectiveness of conspicuous signaling in the presence of friends versus strangers. Participants imagined they were decorating their office for a job in which they would work with their friends or strangers. They were asked to draw an award plaque that would hang on their wall. Then we measured participants' perceptions of their own authenticity and intelligence. When participants imagined they would be working with strangers, the larger they drew the award the smarter they felt ( $b = 0.06$ ,  $t(85) = 2.04$ ,  $p < .05$ ). This pattern did not emerge when participants imagined they would be working with friends ( $b = -.03$ ,  $t(85) = 1.14$ ,  $p > .25$ ). Using bootstrapping mediation analysis we found that the interaction of audience with award size predicting intelligence was mediated by participants' feelings of authenticity (95% CI =  $-.0835$ ,  $-.0081$ ).

In study 3 participants were randomly assigned to one of four conditions. All participants saw a picture of a Rolex watch. Half the participants imagined that either a friend or a stranger showed them their new watch (conspicuous signaling condition) while the other half of the participants imagined that they happened to notice the watch (inconspicuous signaling condition). Participants then completed measures of the friend's/stranger's power (powerful, elite, influential, wealthy, respected), as well as authenticity (authentic, genuine, sincere). Participants rated a stranger as less powerful in the conspicuous signaling condition compared to the inconspicuous signaling condition ( $M_{\text{conspicuous}} = 3.36$  vs.  $M_{\text{inconspicuous}} = 4.30$ ;  $F(1, 68) = 5.76$ ,  $p < .02$ ). This result did not emerge in the friend condition ( $M_{\text{conspicuous}} = 4.15$  vs.  $M_{\text{inconspicuous}} = 4.07$ ;  $F(1, 68) = .04$ ,  $p > .85$ ). Furthermore, participants rated a stranger who conspicuously signaled as less powerful than a friend who conspicuously signaled ( $F(1, 68) = 4.10$ ,  $p < .05$ ). Using bootstrapping mediation analysis we found that the interaction of audience with signal strength predicting perceptions of power was mediated by perceptions of authenticity (95% CI = .2992, 1.5874).

Combined, the results of three studies suggest that while consumers may be more likely to conspicuously signal with products and brands in the presence of strangers the message being sent with the signal is not being received by the strangers. In fact, the louder the signal the less strangers believe that the sender actually possesses the trait being signaled. Because signalers believe that are enhancing their identity in the minds on an unfamiliar audience, however, conspicuous signals actually enhance the signalers' own beliefs that they possess such traits. In summary, we discover a paradox of signaling such that while consumers are able to convince themselves that they possess certain traits by signaling these traits with products and brands, they are unsuccessful at convincing the audience for which the signal was intended.

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### ***Strategies to Cope with Social Identity Threats: Defending the Self without Sabotaging Self-Control***

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Past research suggests that coping with social identity threats impairs subsequent self-control (Inzlicht and Kang 2010). Although the detrimental effects of threat coping on self-control have been documented, little is known about the various coping strategies individuals use, and if they might differentially impact self-control. An interesting question, then, is whether certain strategies might be less harmful to self-control than others or even allow consumers to successfully repair the self without undermining their self-control?

The objective of the present research is to compare two strategies for coping with social identity threats, determine which is less detrimental to self-control, and provide insights as to why this difference occurs. The first strategy (*superior self-aspects*) involves "comparing the in-group to the out-group on some new dimension" on which the in-group is better (Tajfel and Turner 1986). In practical terms, this implies that the consumer downplays the threatened self-aspect and instead accentuates other positive self-aspects on which they are superior to the contrasting out-group. The second strategy involves "changing the out-group with which the in-group is compared" to avoid using a higher-status out-group as a comparison point, and instead use an out-group that performs *worse* on the threatened identity dimension (Tajfel and Turner 1986). In essence, this strategy (*inferior others*) suggests that consumers remain focused on the poor-performance dimension, but selectively think about other groups that perform *even worse* on that dimension.

We anticipate that while the two strategies will be equally effective for coping with social identity threats, the *superior self-aspects* strategy will be less detrimental to self-control than the *inferior others* one. We propose that accessibility is the mechanism underlying

the effect. The identity threat activates individuals' self-knowledge, making dimensions of the self (both the threatened and non-threatened aspects) more accessible for use in further processing (Carver 1975; Macrae et al. 1998). Consequently, the *superior self-aspects* strategy, which involves emphasizing alternative identity dimensions, does not require self-regulatory resources to enact because it maintains the focus on the activated self-knowledge. In contrast, the *inferior others* strategy, which involves focusing on alternative comparison groups, shifts thoughts from the active self-knowledge to the relatively inactive others-knowledge. This shift consumes self-regulatory resources (Ellis and Ashbrook 1989), leading individuals using the *inferior others* strategy to exhibit poorer self-control.

We test our predictions in one field study and seven experiments. Select studies are described in greater detail. In the field study, we took advantage of a naturally-occurring social identity threat and conducted the study following two painful losses of the local NFL team (Team X). We recruited fans at a cafeteria and asked them to complete a survey about the loss of their favorite team. Participants were randomly assigned to one of the two strategies and were asked to complete five sentences beginning with phrases designed to manipulate the *superior self-aspects* (*inferior others*) strategy use: "Yesterday Team X made more mistakes than Team Y, but Team X were still better than Team Y at... (but at least they did not mess up as badly as...)". Participants then made their purchases and provided their receipts. We used the grams of fat in participants' purchases as a measure of their self-control. Participants who used the *inferior others* strategy purchased foods with higher fat content than those who used the *superior-self aspects* strategy ( $p=.03$ ). We note that these results were replicated in Experiment 1 with a threat to participants' business student identity; individuals using the former strategy consumed more M&Ms than those using the latter ( $p = .03$ ).

In Experiment 2 we embedded both the social identity threat and strategy prompts in advertising stimuli. Participants completed two ostensibly unrelated tasks. First, respondents provided feedback about one of two ads. Both ads contained the social identity threat: "People say football fans are more obnoxious, loud, and annoying than baseball fans." Furthermore, each ad cued the use of *superior self-aspects* (*inferior others*) strategy: "But c'mon! We know that there are plenty of positive sides to football fans too (...there are plenty of fans that are cruder than you)...Just think of a few of those: 1...2...3..." Then, participants were asked to rate the appeal of healthy and unhealthy snacks and indicate their snack choice. Participants exposed to the *inferior others* advertisement found the unhealthy snacks more appealing ( $p=.01$ ) and were more likely to select an unhealthy snack ( $p=.06$ ) than those who saw the *superior self-aspects* advertisement.

Experiment 3 provides evidence for the proposed accessibility mechanism using a moderation-of-process design, i.e. a 2 (*superior self-aspects*, *inferior others*) x 2 (Accessibility: self, others) between-subjects design. First, the accessibility of the self/others was manipulated with a procedure from Gardner et al. (1999): participants in the self-accessibility and others-accessibility conditions read a paragraph and counted the first-person pronouns ("I") or other-people pronouns ("they") respectively. Then, participants (business students) read an article that represented the social identity threat and discussed how business students perform worse academically than engineering students. As in the field study, the strategy use was manipulated using sentence prompts. Finally, respondents were presented with the self-control scenario and indicated their likelihood of purchasing an attractive item beyond their budget. A significant interaction of the accessibility and coping strategy conditions emerged ( $p=.01$ ). In the self-accessibility condition, our previous results replicated: individuals using the *superior self-aspects* strategy were less likely to indulge than those relying on the *inferior others* strategy ( $p=.02$ ). However, when others-related concepts were made accessible, there was no difference between the two strategies ( $p = .18$ ) and the negative impact of the *inferior others* strategy was significantly reduced relative to the self-accessibility condition ( $p = .01$ ). In subsequent studies we rule out mood and self-affirmation as alternative explanations and show that the two strategies are equally effective at repairing the threatened self.

Our work contributes new insights to both the self-regulation and social identity literatures, and offers important practical implications for consumer wellbeing. More specifically, we show that consumers should be careful in selecting strategies for coping with social identity threat and highlight that some strategies can repair self-worth without sabotaging consumers' self-control.

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***You Broke Our Contract!: Social Exclusion Differentially Influences Independent and Interdependent Consumers' Social Identity Goal Pursuit***

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The present work examines how social exclusion (vs. inclusion) influences the relation between self-construal and consumers' social identity goal pursuit. Previous research suggests that interdependents value relationships and belongingness, and dislike being isolated from their groups (e.g., Markus and Kitayama 1991; Kim and Markman 2006). Other research suggests that excluded individuals sometimes pursue social identity goals more vigorously to reconnect with others (Maner et al. 2007; Mead et al. 2011). If so, interdependents would be expected to intensify the pursuit of social identity goals following social exclusion (vs. inclusion).

Contrary to this intuitive hypothesis, we propose that social exclusion (vs. inclusion) leads interdependents to discard the pursuit of social identity goals. As a result, interdependents are less likely to engage in impression management and are less motivated to expend time, money, and effort in search of publicly (but not privately) consumed products. This pattern is not expected among independents. We base these predictions on consumers' belief in a social contract, due to which they comply with societal norms with the expectation of rewards in return.

Social contract theory delineates the relation between citizens and society (Mayer and Beltz, 1998). The theory postulates that people who behave according to the rules specified in the social contract (e.g., being socially appropriate) are provided certain benefits in exchange by society (Mayer and Beltz, 1998). Research suggests that interdependent people have a greater expectation to be included by close others than independent people (Miller et al. 1990; Triandis 1998). Hence, we propose that interdependent (vs. independent) consumers will more readily view being excluded by close others as a breach of social contract. Consequently, when excluded (vs. included), interdependent consumers are less motivated to continue upholding their side of the social contract (i.e., pursue social identity goals like impression management).

Four studies using a variety of operationalizations of all key variables (cultural self-construal, social exclusion, social identity goal pursuit) provide robust support for our hypotheses. Specifically, in the inclusion (but not exclusion) condition, interdependence was associated with the tendency to engage in impression management and the amount participants were willing to pay, the distance they were willing to travel, and the time they were willing to spend searching for publicly consumed products. In contrast, independence was not associated with these tendencies in both the inclusion and exclusion conditions (Studies 1 to 4). Hence, our findings suggest that social exclusion profoundly influences interdependent consumers' pursuit of social identity goals. Specifically, interdependent consumers are less motivated to pursue their social identity goals when excluded (vs. included) by close others. In contrast, independent consumers' social identity goal pursuit is not affected by social exclusion.

In addition, we found support for the mediating role of social contract in the interactive effect of social exclusion and self-construal on social identity goal pursuit, both by measuring social contract (Study 2) and by manipulating it (Study 3). Finally, because a social contract is an implicit agreement between a person and others in society, we theorized and found that it will affect interdependents' behavior when it has implications for how they are viewed by others (i.e., in public settings). However, when the behavior cannot be viewed by others, we did not expect and did not find social contract to influence interdependents' tendency to pursue social identity goals (Study 4).

This paper makes a number of contributions. First, we offer important qualifications to previous research which has robustly demonstrated self-construal differences in social identity goal pursuit. We conceptually replicate the general findings of Lalwani, Shavitt, and Johnson (2006) and Lalwani (2009) that interdependents are more likely to pursue social identity goals than are independents, but only when they perceive that others adhere to the social contract. When interdependents perceive that the social contract is violated (e.g., when they are socially excluded by close friends and others), they discard the pursuit of social identity goals. Second, our results dispel the notion that, when excluded, interdependent consumers more vigorously pursue social identity goals to reconnect with others. Instead, we find that exclusion causes interdependents to abandon their desire to be socially appropriate. In so doing, we shed unique insights on the mindset of the interdependent consumer, and on the extent to which they are willing to pursue their social goals. Third, we introduce social contract theory to consumer research, and contribute to that theory by unveiling how social exclusion can cause consumers to view a social contract to be breached. Fourth, while some previous research shows that excluded individuals may engage in withdrawal and avoidance behaviors (Predmore and Williams 1983; Tice et al. 2002; Williams et al. 2000), the downstream consequences of such behaviors are less clear. We identify an important consequence of exclusion, namely decreased social identity goal pursuit, and shed light on the mechanisms underlying the behavior, as well as on its implications.

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### ***When Dress Does Not Impress: The Negative Effects of Using Luxury Goods***

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The desire for status is a fundamental human need and a potent source of motivation for many individuals (Winter et al., 1998). Having high status is not only emotionally and psychologically satisfying (Zhou et al., 2009), it can also make people more socially attractive (Belk et al., 1982; Henrich & Gil-White, 2001). One of the ways people signal their status is by consuming products associated with wealth and exclusivity (Drèze & Nunes, 2009; Thompson & Haytko, 1997). Research has shown that men are more likely to choose luxury goods when mating motives are activated, presumably because these goods indicate their possession of economic resources (Griskevicius et al., 2007; Sundie et al., 2010). Similarly, women sometimes purchase luxury goods in order to enhance their status among members of the same sex (Dunn & Searle, 2010). While the link between luxury goods consumption and positive impressions has been shown in previous research, less work has considered when such goods might make people *less* socially attractive. The current paper examines the research question of whether an individual who displays multiple (vs. few or no) luxury products will result in negative impressions of that individual.

We also examine whether negative impressions associated with luxury users are due to inferences perceivers make about the underlying motives of these individuals (Frimer et al., 2011). Specifically, we propose a person who possesses multiple luxury products is more likely to be perceived as being motivated by agentic (e.g., social recognition) rather than communion (e.g., helping others) life goals (Abele & Wojciszke, 2007; Cislak & Wojciszke, 2008). An implication is that negative impressions of the luxury user could be mitigated if he is portrayed as someone who also cares for communion goals.

Finally, we investigate whether activating different life goals among *perceivers* of a luxury user also influences their impressions of that individual. While activating communion (vs. agentic) goals in the perceiver could make him/her evaluate the luxury user more negatively if such primes accentuated the contrast between themselves and the agentic orientation, perceivers may also evaluate the luxury user *less* negatively in order to elevate their self-views (Cwir et al., 2011).

Study 1 employed a one-factor (number of luxury items: none vs. one vs. multiple luxury items) between-participants design. Participants were first shown a photo of a casually dressed male, and the number of luxury items was manipulated by the number of luxury (e.g., Gucci) versus mid-range brands (e.g., Gap) in his wardrobe. Participants then rated him on a number of traits, including likability. Results showed that participants in the multiple luxury condition liked him less than the one and no luxury conditions. Likability between the one and no luxury conditions was nonsignificant. Hence, contrary to the common belief that displays of luxury goods improve social attractiveness, it can have the opposite effect. The next studies delve into the underlying mechanisms of this effect.

Study 2a employed a one-factor (number of luxury items: none vs. one vs. multiple) between-participants design. Manipulation was the same as study 1. After viewing the photo, participants indicated the extent to which they believed the person valued goals such as “gaining social recognition,” and “helping others” (Schwartz, 1992). Results showed that participants in the multiple luxury condition rated him as valuing agentic-oriented goals more than the no luxury condition. The person with one luxury was also perceived as valuing agentic goals more than someone without luxury goods. The multiple luxury condition perceived the person as valuing communion goals less than the other two conditions. Study 2b examined the implication of these perceived life goals on people’s impressions of the multiple luxury user.

Study 2b employed a 3 (number of luxury items: none vs. one vs. multiple) x 2 (life goal: communion vs. agentic) between-participants design. Manipulation of the number of luxury items was the same as before. Life goal of the person was manipulated by the description attached to his photo. The *agentic* condition described this person’s life goal as working for a financial institution on Wall Street so he can be successful. The *communion* condition described this person as working for the UN so he can help impoverished individuals. Participant then rated him on likability, and a significant interaction effect was found. Among participants in the multiple luxury condition, those in the communion condition liked him more than the agentic condition. Likability was equal among those in the multiple luxury/communion, no luxury/communion, and one luxury conditions. These results suggest that the profligate luxury user who values communion life goals does not receive the same negative evaluation from perceivers.

Study 3 employed a one-factor (prime: communion vs. agentic vs. control) between-participants design. Participants either imagined that their mentor at their new job encouraged them to form social relationships with their colleagues (vs. climb the social ladder and promote their status in the company). Participants in the control condition did not imagine any scenarios. Following the manipulation, participants viewed the photo of a person wearing multiple luxury items, and formed their impressions. Results showed that participants in the communion condition liked the luxury user more than the agentic and control conditions. Hence, study 3 showed that the effect of goal orientation on evaluations of a profligate luxury user occurs not only when the individual is portrayed as valuing different goals, but also when a perceiver is primed to think about pursuing these goals.

While past research showed people’s positive impressions of those who project status through the ownership of luxury goods, little research has considered whether luxury users might also be perceived negatively under certain circumstances. The current research potentially has important theoretical and practical implications because one of the reasons why the luxury brand industry is lucrative because consumers believe that “more is better” when it comes to luxury goods. However, the current work suggests that “less” may in fact be better than “more” if an individual wishes to use the display of luxury goods to form positive impressions of him/herself. Importantly, we demonstrated a number of factors can offset these negative impressions.

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## **1.6 Individual Papers: The Moral Consumers: Understanding Motivations for Prosocial Behavior**

**Room: MICHELANGELO**

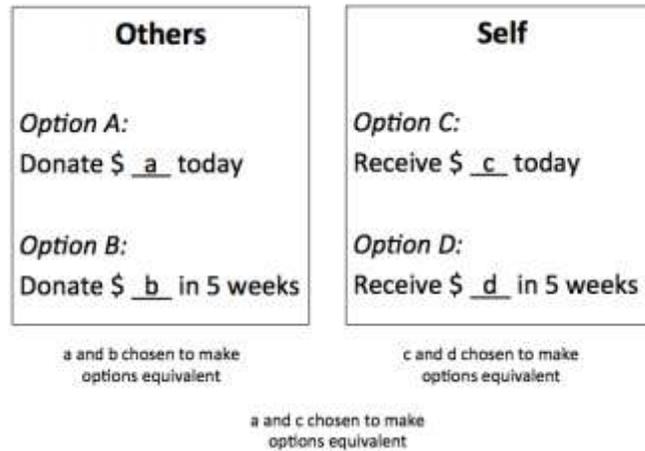
**Chair:** Kirk Kristofferson, University of British Columbia, Canada\*

*Altruistic Patience: A Bias Towards Larger Later Options in Charitable Giving*

Sachin Banker, Princeton University, USA\*

People commonly make decisions involving difficult temptations and tradeoffs that have both immediate and future consequences for their own well-being. These choices also frequently have ramifications for others and can thus involve tradeoffs between immediate and future consequences that are not directly experienced by the decision maker. Donors make decisions between giving to those in immediate need and funding longer-term projects; policy makers impact their constituents by responding to immediate concerns and also supporting larger efforts for reform; even friends face the perennial gift-giving problem in picking either short-lived novelties or necessities that will last. There exist a wide array of settings where a large component of the benefits of a choice are those conferred to others, and while people certainly take into consideration the welfare of others when making decisions (Camerer and Thaler 1995), little is known about how people evaluate intertemporal tradeoffs when the consequences are not directly experienced by the decision maker. Understanding exactly how people think about and discount the benefits that others receive at future points in time is thus a critical question that is the focus of this work.

Study 1 first aims to test whether people exhibit a choice bias when making intertemporal tradeoff decisions that involve donations towards causes that affect others compared to decisions that involve their own payoffs. In order to test for a bias, participants are faced with choice options that are designed to be equally attractive under the null that there is no bias. Choice of immediate options with a frequency greater than chance suggests that people exhibit a bias towards impatience while choice of delayed options with a frequency greater than chance suggests that people exhibit a bias towards patience. Study 1A presents such a choice involving donations and Study 1B presents a similar equivalence-point choice involving own bonuses. All participants answered a series of three matching questions to construct a choice between options that would be equally attractive by design. After eliciting matching points, participants made a choice between these two subjective present-value matched options, with one option being a smaller donation made today and the other option being a larger donation made later. Choices on this question were thus able to provide a sensitive measure of bias towards patience or impatience when making choices where the consequences were not directly experienced. Behavior in the choice task suggests that participants have a bias towards larger and later options when making donation decisions, despite the fact that the options were constructed to be equally desirable. While 24% of participants did indeed indicate that the donation options were equally attractive, the remaining population reported a strict preference for one of the options. Among the 76% of participants that reported a strict preference, 71% chose the larger donation amount that would be given in five weeks while 29% chose the smaller donation that would be given today (see Figure 1). A Wilcoxon signed rank test indicates that this proportion of choices is significantly different from the 50% level that would be suggested by indifference (mean = .71, SD = .45,  $T(75) = 616$ ,  $p < .01$ ). No bias is observed in Study 1B where people make choices over their own bonuses. Study 2 extends this finding with a series of choices that are actually constructed so that immediate options should be preferred; in fact when decisions involve donations, a bias towards patience is still observed.



**Figure 1.** Design of choices in Study 1: all options are constructed to be equally attractive.

Study 3 identifies how estimates of individual discount rates for donations towards others differ compared to those estimated on involving bonus payoffs. Participants complete a standard time preference choice task and choices are then fit to a constant-sensitivity discounting model (Ebert and Prelec 2007) to provide insight into how time sensitivity changes when making decisions that confer benefits not directly experienced by the decision maker. All participants completed two different discounting tasks to allow for a within-subject comparison. One task involved bonus payoffs that would be delivered to the participant and one task involved donations that would be made on behalf of the participant. The donation task referred to contributions that would be made towards the American Red Cross Disaster Relief Fund and all participants were given information about the efforts of the organization prior to the task. Model parameters were estimated independently for each participant and each task by maximum likelihood. This produced discount rate and time sensitivity estimates for each setting: where payoffs were own bonuses and where payoffs were those delivered to others through donations. Results suggest that while discount rates appear to remain relatively stable across self-payoff and donation contexts, time sensitivity changes markedly. Discount rates were marginally lower when making decisions involving bonuses compared to when making donation decisions ( $a_{self} = .44$  versus  $a_{other} = .50$ ,  $t(199) = 1.66$ ,  $p = .10$ ) while time sensitivity decreased significantly when making donation decisions ( $b_{self} = 1.57$  versus  $b_{other} = .87$ ,  $t(199) = 3.67$ ,  $p < .01$ ). This implies that preferences over donations are less likely to change when offered at different points in time relative to preferences over one's own payoffs, which appear to be highly influenced by time delay. These findings are consistent with evidence illustrating that the opportunity costs that others give up tend to be underestimated (Frederick 2012).

The studies presented here establish that people exhibit a bias towards patience when making intertemporal choices that involve conferring benefits to others through donations. I find that people are more willing to wait for larger rewards that are given to others than they are willing to wait for comparable rewards that they receive themselves and this bias appears to result from the fact that people are less sensitive to time delays when others experience them.

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***Mi Casa es Su Casa - But only if You are Interesting Enough. Understanding Motives and Benefits of Sharing among Strangers in CouchSurfing***

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Felicitas Morhart, University of Lausanne

Kocher Bruno, University of Lausanne

The idea of sharing one's home with a stranger seems far from luring to most of us. And yet roughly 5.5 million members in more than 100,000 cities worldwide ("CouchSurfing.org - Statistics") are registered on the hospitality platform CouchSurfing.org. The website's downright objective is to connect travelers with locals willing to share their homes with people they have never met before. Yet despite the popularity of CouchSurfing, very little is actually known about the consumers' motives in engaging in sharing as an alternative mode of consumption. The few empirical investigations that deal with sharing have analyzed phenomena that, although labeled "car- or bikesharing"- constitute cases of pseudo-sharing rather than true sharing (Bardhi and Eckhart 2012; Lamberton and Rose 2012). CouchSurfing however comes close to Belk's (forthcoming) recently introduced definition of "true sharing" that he distinguishes from pseudo-sharing through feelings of community, absence of profit motives and missing expectations of (concrete) reciprocity. Although the possibility of such true sharing among strangers has been theoretically acknowledged (Belk forthcoming), the available studies of true sharing in the consumer literature are focused on explaining true sharing in intimate relationships such as family bonds and close friendships (Belk and Llamas 2012; Furby 1978; Price 1975). Theory on sharing as alternative mode of consumption is hence missing explanations and motives for true sharing among strangers (Botsman and Rogers 2010; Sacks 2011).

We address this gap in the literature. More specifically, we study what motivates consumers participating in CouchSurfing to share their homes with individuals they have never met before and might never meet again.

With regards to the explorative character of our research, we chose a multi-rich qualitative approach including in-depth interviews, participant observation and the analysis of web contents (CouchSurfing profiles, blog entries, forum discussions, media articles). Our total sample comprises 36 CouchSurfing hosts and surfers aged 20-37 from Europe and the Americas. The interviews lasted from 30 to 150 minutes and our interpretation followed a hermeneutic approach (Thompson and Haytko 1997). Field notes and online data were used as sources of triangulation (Mays and Pope 1995).

Building on Ariely and Norton's (2009) notion of conceptual consumption, we suggest that the main motivation behind true sharing on CouchSurfing lays in its contribution to identity-construction and self-enhancement. The idea of conceptual consumption proposes that individuals consume mental concepts rather than concrete goods or services. Concretely, the data reveal two main areas of self-enhancement stemming from such conceptual consumption. Mainly for the hosts, the pro-social character of hosting can be seen as a source of conceptual utility in that it signals being a good person to the self and others (Ariely and Norton 2009). Secondly, the personalities, life stories, cultural affiliation but also skills and knowledge of the CouchSurfing partners provide a powerful source for identity construction. Those are, at least temporarily, incorporated into the extended self and in this sense foster self-growth. We thus suggest that CouchSurfers (non-consciously) instrumentalize their sharing partners. Examples of such conceptual consumption of others are the cultural learning that CouchSurfers oftentimes refer to or the notion of "travelling without leaving the house" that is a common added value reported by hosts. This explains the strict selection process taking place – CouchSurfing partners have been found to be mainly selected according to their specific attractiveness for the respective companion.

The "physical consumption" (Ariely and Norton 2009) part of Couchsurfing, namely the free accommodation, is by far not as prominently stressed as the search for social relationships who provide the conceptual utility. CouchSurfing hosts therefore do not see themselves as "givers" in the dyadic exchanges: While from a purely physical consumption perspective, the host sharing his/her place might indeed be perceived as giver, adding the perspective of conceptual consumption (Ariely and Norton 2009) makes clear that the true added value of CouchSurfing goes far beyond free hospitality. This finding is in stark contrast to the car-sharing platform studied by Bardhi and Eckhart (2012) and supports the distinctions between true- and pseudo sharing in consumer behavior (Belk forthcoming). Yet although sharing on CouchSurfing mainly serves as a means to achieving social connections and can thus be seen as case of true sharing, the conceptual consumption of others differentiates it from sharing within the family. Up to now, existing literature on true sharing assumed social connections as an end in themselves (Belk 2010; Price 1975). Our results, however, indicate

that the social relationships created through sharing can also be aimed at supporting identity construction and provide a reasonable motive for sharing with strangers.

Particular about the conceptual consumption of others that takes place in CouchSurfing is that self-centered goal-pursuits and pro-social behaviors appear to be intermingled. Although sharing in CouchSurfing clearly does serve concrete self-serving objectives, we find that in this context, this does not necessarily need to be a win-lose game. Rather, the design of the consumption experience and the nature of the conceptual consumption make it hard to benefit from participating in CouchSurfing without providing benefits to others. The main benefits CouchSurfers reported stemmed clearly from the cooperation with their fellow surfers: Self-growth, hedonic enjoyment of joint activities, experiences of meaningfulness and even friendships are products inseparably linked to mutual involvements.

Our research contributes to the recent discussion about sharing in that it provides novel insights about true sharing among strangers as an alternative mode of consumption. In differentiation to the recently investigated cases of pseudo-sharing (Bardhi and Eckhart 2012; Lamberton and Rose 2012), participation in CouchSurfing is widely driven by a self-directed need for identity-construction which can only be achieved through other-directed behavior. Concretely, we provide evidence for a “conceptual consumption of others” that is aimed at creating, shaping and enhancing one’s own identity. Although this implies a certain degree of instrumentalization of others, we find that it is accepted by the sharing partners due to the mutual benefits that are created for self and others.

These insights help to comprehend the motives behind sharing with strangers and contribute to a better understanding of cognate phenomena within the rising “sharing economy”.

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***The Nature of Slacktivism: How the Social Observability of an Initial Act of Token Support Impacts Subsequent Prosocial Action***

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Katherine White, University of British Columbia, Canada

John Peloza, Florida State University

Consumers have multiple avenues available to them to engage in small forms of support for a cause (e.g., signing a petition, wearing a bracelet; liking a Facebook page). However, critics suggest that campaigns encouraging these ‘token’ gestures may lead to slacktivism (Morozov 2009). We define slacktivism as a willingness to perform a relatively costless, token display of support for a cause, with an accompanying lack of willingness to subsequently devote significant effort to enact meaningful change. We refer to these small behaviors in support of the cause as *token support* because they allow consumers to show their support with little cost. We contrast token support with *meaningful support*, or contributions that require significant cost or effort that make tangible contributions to the cause (e.g., donating money; volunteering time). The current research explores the conditions under which an initial token act of support for a cause increases subsequent meaningful contributions.

Past research offers competing predictions for how an initial act of token support impacts subsequent meaningful support. One perspective is supported by research finding that prior prosocial behavior gives people “license” to subsequently engage in *less* moral or helpful actions (Khan and Dhar 2006). This literature predicts that providing token support for a cause leads to *decreased* subsequent meaningful support. Conversely, work on self-consistency predicts that once individuals have engaged in a particular behavior, they will be *more* likely to engage in congruent behaviors in the future (Aronson 1968), due to motivation to maintain consistency between past and future actions (Freedman and Fraser 1966). This literature predicts that providing token support will

lead to *increased* subsequent meaningful support. We propose a framework to reconcile these competing predictions and to outline when initial token support for a cause does or does not increase subsequent meaningful contributions.

We propose that when token support is high in social observability (i.e., public), people will be less likely to engage in subsequent meaningful contributions to the cause than when the token support is low in social observability (i.e., private). When the initial support situation is high in social observability, impression-management motives become activated (Leary and Kowalsky 1990). Consumers can satisfy these motives by engaging in a publicly observable token act of support, thus reducing the motivation to contribute when a second request for meaningful support is made. Conversely, when token support is low in observability, consumers will be focused on the private self. Under private conditions, the desire to maintain consistency with one's own values and behaviors will be salient (Bem 1972). Thus, after engaging in a private (vs. public) token support, consumers will be more likely to act consistently with previous behavior and be *more* inclined to provide meaningful support.

Study 1, involved a field experiment at a large Canadian university that used the acceptance of a poppy pin as token support for Remembrance Day. As participants approached the student union building, they were asked to accept a free poppy from a research assistant either publicly (displayed on jacket) or privately (in envelope). Upon entering the building, participants received a more meaningful request of donating money to war veterans. Participants providing private token support donated significantly more money than those providing public or no token support.

Study 2 tested our framework in a controlled setting. Upon arrival, impression-management motives were measured (White and Peloza 2009). Next, under the guise of providing feedback for local charities, participants provided token support by signing a public (on board at front of room) or private (private ballot) petition. After providing token support, impression-management motives were measured again. In addition, participants completed measures of consistency motivation (Cialdini, Trost and Newsom 1995). At the end of the session, participants received the meaningful request of volunteering. Replicating study 1, participants providing private token support agreed to volunteer significantly more than participants providing public or no token support. Importantly, public, but not private, token supporters showed a significant decrease in impression management motivation, leading to lower agreement with the volunteer request. Conversely, private (vs. public) token supporters expressed higher consistency motivation, leading to increased likelihood of agreeing to volunteer.

Study 3 sought to mitigate slacktivism after engaging in token support (joining a Facebook group) by focusing participants on the (mis)alignment of values between self and cause. Participants logged into their personal Facebook accounts and joined one of two charitable organization (S2) Facebook groups. Participants were informed that the group was either public (all friends could see) or private (no friends could see). Participants then read a newspaper article about recent ambiguous activities undertaken by the organization and wrote about how their values were aligned (misaligned) with those of the cause. At the end of the session, participants received a volunteer request (S2). When public token supporters focused on the alignment of values between self and cause, the tendency to refrain from providing meaningful subsequent support was mitigated.

Study 4 identified a boundary condition for the effects—connection to the cause, (Bhattacharya and Sen 2003), and extended our findings to for-profit organizations. A field study was conducted in a large metropolitan city using the local NHL hockey team as the organization. Individuals were intercepted by a research assistant who offered either a pin (public) or fridge magnet (private) of the team logo as token support. Upon acceptance, participants reported how connected they felt to the organization (0-10 scale). A few minutes later, the larger request of completing a survey for the team was made. Among individuals less connected to the cause, we replicate previous studies (Pri > Pub). However, we reverse the pattern among highly connected individuals.

Taken together, our results show that people engaging in public as opposed to private token support for a cause, are *less* likely to engage in subsequent meaningful support. This has implications for marketers wishing to encourage token support. Publicly providing

token support for a cause may not necessarily increase support for the cause, unless the consumer feels highly connected to the cause or is led to think about value-alignment with the cause.

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### ***Narcissistic Goodness: How Mental Simulation Type Affects Charitable Intentions***

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With greater online connectivity, social media is increasingly becoming a vehicle to boost the effectiveness of charity campaigns. For example, after decades of staying unchanged, the number of organ donors increased by 21 times in a single day of using a social media based campaign (Cameron et al. 2013). On the other hand, social media has also been linked to increasingly narcissistic behavior due to an enhanced focus on self-promotion (Panek, Nardis and Konrath 2013). Theory from personality research suggests that narcissistic personalities are self-oriented and generally lack interest in caring, perspective-taking or communion (Buffardi and Campbell 2008). This incongruity between the effects of social media usage prompts our question – how does individual level narcissism interact with different types of social media appeals (that often revolve around victims with little personal relevance to the individual) to affect charitable intentions?

We are guided by the intuition that the type of mental simulation elicited by a social media charitable appeal would affect high (vs. low) narcissism individuals differently. This proposition is supported by prior research on mental simulation (Waytz and Mitchell 2011). Waytze and Mitchell suggest that mental simulation may be of two types: (a) self-projection and (b) mirroring. Self-projection involves imagining oneself in the same situation as another person and predicting one's own thoughts and feelings in that hypothetical scenario. In contrast, mirroring involves vicariously experiencing another person's mental state (without putting oneself in the situation). Based on the fundamental self-oriented narcissistic characteristics, we expect high-narcissism individuals to resonate with donation appeals more when they are asked to self-project (vs. mirror). This is because of their stronger (and more positive) focus on oneself. However, low-narcissism individuals should show no significant difference since, by definition, they empathize more with others (Buffardi and Campbell 2008).

Experiment 1 was a computer-based laboratory study in which mental simulation type (self-projection/ mirroring) was manipulated experimentally. All participants saw a screen describing a Syrian refugee child's situation in Jordan. Subsequently, half the participants were asked to place themselves in the child's situation and write a story about it. The other half (mirroring group) were asked to imagine the refugee child's situation and write a story about his/her circumstance. Following the story writing task, participants viewed a Facebook posting of a charity organization requesting financial support for the victims. They were then asked to rate their donation intention on two 7 point scales ( $\alpha = .92$ ). Narcissism was measured for all participants later via the NPI-16 (Ames, Rose, and Anderson 2006). For analysis we used a median split of the NPI scores. We observed a significant two-way interaction ( $F(1, 125) = 4.01, p < .05$ ) and in support of our conjecture, high-NPI individuals demonstrated greater donation intentions with self-projection (vs. mirroring) appeals ( $M_{\text{self-highNP}} = 5.15, M_{\text{mirror-highNP}} = 4.45, p < .04$ ) but there was no difference across appeal type for low-NPI individuals ( $M_{\text{self-lowNP}} = 4.48, M_{\text{mirror-lowNP}} = 4.7, p > .2$ ). Interestingly, the high-NPI/self-projection cell reported the strongest donation intentions of all groups. This result provides initial evidence that greater narcissism may, with the appropriate appeal type, lead to greater donation intentions.

Experiment 2 focuses upon the process by experimentally manipulating ease of self-projection. We undertake this by varying the type of target in the donation appeal, i.e., a human vs. non-human victim. Since high-narcissism individuals are more self-oriented and find

it difficult to engage in perspective-taking, we expect self-projection to be less effective when the appeal is for a non-human victim (as opposed to a human victim where it is easier to project oneself). In contrast, mirroring – vicariously experiencing another’s circumstance by imagining it – may help such individuals to better understand the victim’s circumstance as compared to trying to imagine themselves in it. Thus, high narcissism donors will be more willing to help a non-human victim with a mirroring (vs. self-projecting) appeal. However, with a human victim, as in Experiment 1, high narcissism donors should show greater willingness to donate with a self-projection (vs. mirroring) appeal. Low narcissism individuals should not demonstrate any differences on account of appeal type or victim type.

In a lab experiment (N=150), we showed participants a scenario involving either endangered polar bears (non-human victims) or Syrian refugee children (human victims); the rest of the procedure remained similar. Participant’s willingness to donate (\$) formed our dependent measure. A three-way ANOVA revealed a significant three-way interaction ( $F(1, 138) = 14.32, p < .001$ ) in support of our expectations. Further, the NPI x simulation-type two-way interaction were also significant for both the polar bear (non- human) ( $F(1, 69) = 7.89, p < .01$ ) and Syrian refugee child (human) conditions ( $F(1, 65) = 4.17, p < .05$ ) in the respective directions expected. Specifically, high narcissism individuals showed higher willingness to donate for non-human victims with mirroring (vs. self-projection) ( $M_{\text{highNPI-self}} = \$1.82, M_{\text{highNPI-mirror}} = \$25.93, p < .02$ ) but higher willingness to donate for human victims with self- projection (vs. mirroring) ( $M_{\text{highNPI-self}} = \$26.58, M_{\text{highNPI-mirror}} = \$13.01, p < .02$ ). There were no differences for low narcissism individuals across conditions ( $p > .2$ ). These results demonstrate that self-projection (vs. mirroring) may be more effective for higher narcissism individuals but only when self-projection is easy (i.e., with human victims).

In this research, we identify a process for better aligning charitable appeals to trait differences in narcissism. Theoretically, we uncover clear differences between two types of mental simulation – self-projection and mirroring – in the context of charitable giving. To the best of our knowledge, the current research is the first to identify and outline conditions when different types of mental simulation interact with trait differences in narcissism to affect donation outcomes. Substantively, this research contributes to developing more effective charitable appeals by taking into account individual differences in narcissism and different types of mental simulation.

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**BREAK**

**9:30 am – 9:45 am**

**BALLROOM FOYER**

**SESSION 2**

**9:45 am - 11:00 am**

**2.1 Symposium: Crowds Made Wiser: Four Factors That Can Limit Crowd Wisdom and What To Do About Them**

**Room: BALMORAL**

**Chair:** Nadav Klein, University of Chicago, USA

*The Wisdom of Small Crowds*

Albert Mannes, Carnegie Mellon University, USA

Jack Soll, Duke University, USA\*

Rick Larrick, Duke University, USA

A manager at a consumer products company opens her *Wall Street Journal* one morning and finds the forecasts for several economic indicators made by a distinguished panel of roughly 50 macroeconomists. She also learns that one economist in particular, Mr. X, was the most accurate forecaster of these indicators over the past year. Because this company bases many strategic decisions on beliefs about future economic conditions, she considers her choice thoughtfully: Does she rely on the advice of the apparent expert, Mr. X, or on some form of the panel's collective assessment about the future?

We first discuss the manager's decision from a prescriptive standpoint. How should someone confronted with a set of diverse and perhaps conflicting opinions use them to make the best judgment possible? As benchmarks, we consider two classic methods. First, the decision maker can *chase the expert* by guessing which forecaster is more accurate and going with that person's opinion. A second option is to average all the forecasts, to benefit from the crowd's wisdom. Averaging is effective when the estimates of different forecasters *bracket* the correct answer—some being too high and others too low—such that errors tend cancel out when averaged. In general, averaging outperforms chasing the expert when the bracketing is high, when the dispersion in forecasting skills across judges is low, and when the most skilled forecasters are difficult to identify a priori (Soll & Larrick, 2009).

Although there have been many demonstrations of the “wisdom of the crowd,” (e.g., Surowiecki, 2004), averaging the whole crowd performs relatively poorly in situations where an easily-identified expert is much more accurate than the average judge. Thus, although the whole crowd strategy substantially outperforms chasing the expert in many situations, there are some situations in which the opposite is true. We propose a new alternative that we call the small-crowd strategy. This strategy involves ranking the judges based on an available cue to expertise, and then averaging the opinions of approximately the top five individuals. In our studies of strategy performance, we use accuracy on past judgment trials as the cue to expertise. For example, economists can be ranked based on their forecasting performance over the past five quarters.

We use both simulated and archival data to demonstrate that the small crowd strategy is both effective and robust across a wide range of judgment environments (defined by dispersion in skill across judges, amount of bracketing, and the validity of the cues to expertise). The archival data includes fifty datasets of forecasts from professional economists on variables such as GDP and unemployment (available from the Philadelphia Fed), and also forty datasets from psychology studies in which participants provided estimates for general knowledge questions (e.g., “What is the distance in miles between Miami and Detroit?”). This analysis led to the following major conclusions:

1. The small-crowd strategy is both effective and robust across situations. In some judgment environments it is the best strategy, and when it is not the best strategy it often comes close to the accuracy of the best. The success of the small crowd strategy can be attributed to the fact that it achieves most of the benefits of aggregation (which has diminishing marginal returns with respect to the number of judges) while including a subset of judges that tend to be above average in skill.
2. The ideal size for a small crowd is about five judges. This number of judges is ideal in terms of both accuracy and minimizing variability in performance across environments. Surprisingly, this result is not very sensitive to the size of the whole crowd (we looked at crowd sizes between 25 and 200 members).
3. When judges are ranked based on recent performance, between 3 and 7 past judgment trials are enough to successfully implement the small crowd strategy. This can be explained by considering the two extreme cases of dispersion in expertise. When dispersion is high (judges differ greatly in their forecasting ability), it takes only a small number of observations to

identify some good judges and eliminate the poor ones. When dispersion is low, more data would be needed for an accurate ranking, but it is largely irrelevant because an aggregate of any five judges can be expected to perform well.

In addition to demonstrating that small crowds are effective and robust, we also looked at the willingness of people to use the small crowd strategy. Past research shows that people are skeptical of averaging the whole crowd, and tend to favor chasing the expert (Larrick & Soll, 2006). In part this is due to a misunderstanding—unless the concept of bracketing is made very explicit, people tend to believe that averaging will match the accuracy of the average judge. However, some of the skepticism is valid, because real-world crowds often do have high dispersion in expertise, and in such cases people are right to worry about the impact of very poor judges, especially if they have a reasonable idea about which judges are better and which are worse. We find that when given the option of a small crowd strategy, people evaluate it highly and also use the option when it is available. However, when people choose their own crowd size, they tend to select just two or three judges, and would have benefited from adding a few more. They appear to apply this strategy when they are not confident that they are able to identify the single best performer.

In summary, small crowds are accurate and robust across judgment environments. Across judgment environments, the benchmark strategies are on average less accurate and not nearly as robust. People like the small crowd strategy, although when given the opportunity to use it they select small crowds that are a bit too small.

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### ***The Importance of the Raw Idea in Innovation: Testing the Sow's Ear Hypothesis***

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This paper explores how important the quality of the raw idea is in determining success in innovation. A data set for studying this question would require, at a minimum, raw ideas, usually text descriptions and visual depictions; measures of the goodness, or quality, of the raw ideas; and measures of success, ideally market outcomes. We develop such a data set around the products of the community-driven product development company Quirky. Quirky runs weekly tournaments via its website, selects the best raw ideas, and leads a product development effort supported by the Quirky community. The successfully developed ideas are sold in an online store on the site. The products are consumer household goods for different rooms of the house; there are kitchen gadgets, electronics accessories, and household storage solutions, to name a few categories. Due to the community orientation of the site, it is very transparent. The raw ideas are available on the site, and the sales figures for each product are updated as orders come in. We augment the data available on the Quirky website with measures of idea quality: purchase intent responses from a consumer panel and expert ratings of the ideas. We had several hundred consumers from an online consumer panel (purchased from the vendor Qualtrics) answer a standard purchase intent question. We recruited seven experts, each with at least fifteen years of experience in designing, developing, or commercializing consumer products. The experts all have experience in multiple product categories over the course of their career, with great overlap in the set of categories in our data set. Experts were asked to rate the ideas on a scale of 0 to 10, based on anticipated units sold. The question to the experts was phrased in terms of units sold to make it comparable to the consumer survey.

In our first round of data collection from the Quirky site, from March 2011 to November 2011, we had 101 products. Based on reviewer requests, we updated the product set (to 160 products total) and the sales figures in a second round, from December 2012 to March 2013. In the first round, we found that the consumers' purchase intent responses were a statistically significant predictor of outcomes such as sales rates, unit sold, and revenue, while the experts' ratings were not predictive. None of the seven experts was predictive, and neither was the average. With the updated information from the second round, we again collected purchase intent

responses, on the whole set of 160 products. We did not go back to our experts for another round of ratings. (This choice was governed by two considerations. First, unlike the consumer panel, which is managed by a vendor from which we can purchase respondents, the experts are specific individuals who had already expended considerable time and effort for our study. Second, given the null results from the first round, asking for more work from them did not seem like a promising use of their time and goodwill.) With the most updated sales information, both the experts' ratings and the consumers' purchase intent responses are statistically significant predictors of outcomes. The amount of variance explained by these quality measures is low in both cases (4-8%, depending on the controls), but the impact on outcomes is large, at approximately 50% of sales rates for a one-standard-deviation-better idea.

We were surprised at the comparability of the effects of experts and consumers in predicting outcomes in the second round, given the superiority of consumers in the first round. Delving deeper, we see that in fact, the consumers still were a superior source of prediction. First, the predictive power of consumers' responses was robust across different dependent variables such as units sold and projected units, while the experts were not. Second, when restricting the sample of products to only those from the first round (i.e., the set on which we have the experts' ratings), the consumers' responses were better predictors. However, we had nearly three-hundred consumers rate each idea, but only seven experts. A natural question to ask is, "How big a set of consumers do we need to generate equivalent predictive power to our seven experts?" To identify the expert-equivalent sample size, we pull repeated subsamples from the consumer respondents, for different consumer sample sizes (i.e., the number of consumers that rated each idea). We find that samples of four consumers, on average, explain about the same amount of variance in outcomes as our seven experts. And once we get to samples of twenty consumers, not only is the predictive power greater than that of experts, but the coefficient on the consumers' responses is nearly always significant.

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### ***Can Groups Catch a Liar? Group Discussion Outperforms the Majority Rule in Lie Detection, But Not in Truth Detection***

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It is particularly important to be able to detect deceit in a world where a significant share of consumer-relevant content such as product and service reviews is user-generated and not verified for accuracy. Regrettably, detecting deceit is notoriously difficult. Accuracy rates in experimental studies of lie detection are only slightly above chance (e.g. Bond and DePaulo 2006). The difficulty of detecting lies has led researchers to develop costly training programs that have proved largely ineffective (e.g., Bull 2004). In contrast, we investigate a simpler method that is routinely employed in the legal system: using groups rather than individuals to detect lies.

Groups might detect deception better than individuals for three reasons. First, because individuals have some skill in distinguishing truths from lies, statistically aggregating individual judgments could increase accuracy (a "wisdom of crowds" effect; Larrick, Mannes, and Soll 2011). Second, individuals show a reliable "truth bias," assuming others are being truthful unless given cause for suspicion (Bond and DePaulo 2006). If groups are less trusting than individuals (Wildschut et al. 2003), then they could detect lies more frequently because they guess that someone is lying more often.

Finally, group deliberation could increase accuracy by providing useful information that individuals lack otherwise (Franz and Larson 2002). This predicts that group discussion alters how individuals evaluate a given statement to increase accuracy.

We conducted 3 experiments to test whether groups can detect lies more accurately than individuals, and whether this group advantage comes from increased skill or reduced bias. We compared individual judgments to 2 types of groups: "Statistical" Groups are created

by aggregating independent judgments via the majority rule (a typical “wisdom of crowds” method); and “real” groups are created via group discussion, which creates interdependence among individual judgments.

We first created stimuli by video-recording participants who were instructed to answer low-stakes questions by telling the truth or lying, creating a bank from which we randomly drew videos for our experiments.

In Experiment 1 ( $N=180$ ), we compared individual judgments to real groups and statistical groups. Every session was conducted in groups of three. Participants were randomly assigned to the Discussion Condition, in which they discussed each video and rendered a group judgment, or the No Discussion Condition, in which they provided independent judgments without talking with one another. We randomly selected videos from our bank to serve as stimuli.

In terms of overall accuracy, real groups were more accurate ( $M=61.7\%$ ) than individuals, ( $M=53.6\%$ ),  $t(118)=2.32$ ,  $p=.02$ . This advantage was asymmetric, as real groups detected lies better than individuals ( $M_{real\ groups}=63.2\%$  vs.  $M_{individuals}=51.2\%$ ),  $t(118)=2.66$ ,  $p<.01$ . Individuals and real groups did not differ in accuracy in detecting truths ( $M_{real\ groups}=61.2\%$  vs.  $M_{individuals}=57.0\%$ ),  $t(118)=.86$ ,  $p=.39$ . Moreover, individuals revealed a response bias to guess “truth,” whereas real groups did not (this occurred in all of our experiments). Signal detection analysis confirms all of these results.

We created statistical groups by aggregating the judgments of each group of 3 individuals who sat in a room together in the No Discussion condition, and determining the group’s judgment via the majority rule. Three-person statistical groups performed worse than real groups, both overall ( $M=53.3\%$ ),  $t(29)=2.52$ ,  $p<.02$  and in detecting lies ( $M=50.7\%$ ),  $t(29)=3.44$ ,  $p<.01$ . We were also able to create statistical groups of larger sizes through computer simulations (comprising of 5, 7, 11, or 15 individual judgments). All of these simulated statistical groups were less accurate than real groups in detecting lies. Like the individual judgments that comprised them, all statistical groups also exhibited a response bias to guess “truth.” Thus, group discussion led to higher accuracy in detecting lies than the aggregation of individual judgments.

Experiments 2 ( $N=351$ ) was a direct replication of Experiment 1 using different stimuli from our video bank and doubling the sample size, ensuring that our findings are not stimuli-dependent. Experiment 2 replicated all of the major results from Experiment 1. Real groups were again more accurate ( $M=60.3\%$ ,  $SD=16.1\%$ ) than were individuals ( $M=53.6\%$ ,  $SD=15.7\%$ ),  $t(233)=2.83$ ,  $p=.005$ , with real groups detecting lies ( $M=56.6\%$ ,  $SD=21.9\%$ ) more accurately than individuals ( $M=46.4\%$ ,  $SD=21.6\%$ ),  $t(233)=3.09$ ,  $p=.002$ , but not detecting truths more accurately ( $M=64.1\%$ ,  $SD=21.8\%$ ) than individuals ( $M=60.7\%$ ,  $SD=21.9\%$ ),  $t(233)=1.04$ ,  $p=.30$ .

Similarly to Experiment 1, “statistical” groups did not improve lie detection compared to individuals, and performed worse than real groups.

Experiment 3 ( $N=183$ ) examined two possibilities regarding the psychological process by which group discussion increases accuracy. First, group discussion could identify the most accurate individual within a group, increasing accuracy through a *sorting* mechanism. Second, group discussion may elicit conjectures and observations about the target that provide the information needed to make an accurate assessment, increasing accuracy through *synergistic* mechanism by exposing individuals to each other’s preliminary points of view.

The critical difference between sorting and synergy is that individual judgments are formed *before* discussion on the sorting account and discussion then identifies the best judge, whereas individual judgments are formed *during* discussion on the synergy account and discussion itself creates a more accurate judgment. Experiment 3 therefore asked participants to make judgments both as a group *and* individually for each target, manipulating the order in which they did so. The sorting mechanism predicts that making individual judgments first will not affect the subsequent group advantage in lie detection, whereas the synergy mechanism predicts that forming

an individual judgment first will disable the group advantage because accuracy comes from the additional information acquired *while* forming a group opinion.

The results revealed that whichever judgment participants made first affected the judgment participants made second. Real groups' accuracy in detecting lies suffered when individual judgments were first ( $M_{\text{real-groups second}}=51.2\%$  vs.  $M_{\text{real-groups first}}=59.7\%$ ),  $t(130)=2.40$ ,  $p=.02$ , suggesting that making individual judgments first disabled the group advantage in lie detection. These results support the synergistic mechanism, suggesting that group discussion systemically altered individual judgments.

We conclude that group discussion can improve accuracy in detecting lies compared to individual judgments and statistical groups. The findings are significant because of the dearth of methods that can improve accuracy in this difficult task (Bull 2004).

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### ***Elephants Weigh More Than . . . Elephants: Reliance on Shared Intuitions Produces Prediction Momentum***

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People often must decide whether some target quantity is greater or less than some referent (e.g., Will Amazon.com's stock price [the target] be greater or less than its current stock price [the referent] one year from today?).

Decisions of this type start with an intuition, which is based on a spontaneous evaluation of the target and referent. When one does not immediately evaluate a referent as high or low (i.e., whenever the referent is plausible), intuition will effectively ignore it, offering a gut recommendation that is based solely on a simple evaluation of the target. For example, one is likely to have an intuition to buy stock in Amazon.com because one immediately evaluates Amazon.com as high (e.g., Amazon.com is a good company) but does not immediately evaluate the stock price as high or low. Because such non-diagnostic intuitions are often confidently held, and not recognized to be non-diagnostic, they tend to drive choices.

This process means that people's intuitions, and subsequent choices, are often insensitive to differences among plausible quantities. For example, people's intuitions are likely to suggest that Amazon.com's stock price will exceed *any value* that immediately seems plausible.

When a population has the same intuition, this process can generate prediction momentum. In one study, I asked 50 participants to predict quantities (e.g., inches of rainfall in Seattle, the percentage of Republicans who vote for Obama). I used their median prediction as a 'price' for a subsequent set of 50 participants. For example, the median estimate of Seattle rainfall was 30 inches in the first 'round' of the study, and so, in the second round, a different set of participants were asked to consider whether more or less than 30 inches of rain would fall in Seattle and to then generate an estimate. I then used the median estimate in this second round as the 'price' for the third round, and so on, all the way up to seven rounds. I found that estimates of intuitively large quantities (Seattle rainfall) significantly increased across rounds, whereas estimates of intuitively small quantities significantly decreased across rounds. For example, the median estimates of Seattle rainfall for each round were (in inches): 30, 42.5, 53.5, 57.5, 55, 63, and 75. This occurs because when people are faced with an over/under decision (e.g., Is the rainfall in Seattle going to be greater or less than X inches?), their confidently held intuition (it rains a lot in Seattle) suggests the same answer (larger) for all plausible values of X.

The second study finds the same effect for people's predictions of stock market prices. Participants in this study predicted the January 1, 2014 stock price for eight companies. In the first round, 50 participants indicated whether the future stock price would be greater or

less than the current stock price, and then estimated what the stock price would be. In the second round, participants were told the current stock price but were asked to indicate whether the future stock price would be greater or less than the median prediction generated in the previous round. This procedure was repeated for a total of seven rounds. I found that stock price predictions of intuitively well-performing companies (e.g., [Amazon.com](http://Amazon.com)) significantly increased across rounds, whereas estimates of intuitively poorly-performing companies (AOL) significantly decreased across rounds. For example, the median estimates of [Amazon.com](http://Amazon.com)'s 2014 stock price were: \$203, \$220, \$230, \$220, \$235, \$250, and \$255.

The momentum effects observed here cannot be parsimoniously explained by another theory. First, they cannot be explained by under-reaction to news (Barberis, Schliefer, & Vishny, 1998), because participants were not exposed to news during this procedure. For example, they were not exposed to news suggesting that Seattle is wetter than they previously thought. Second, they cannot be explained by people using price increases as an indication of further price increases (Hong & Stein, 1999), because participants did not even know that prices changed between rounds. Third, although some aspects of this paradigm resemble that used by anchoring researchers, anchoring theories cannot explain these findings. Theories of anchoring predict only that estimates will be tethered to anchors; they do not predict biases in the *direction* of adjustment from anchors. Finally, evaluability theory (Hsee & Zhang, 2010) also cannot account for these results. According to evaluability theory, some quantities are difficult to evaluate as “high” or “low” in isolation, and thus people are likely to give them insufficient weight when making decisions. For example, most people cannot, without context, evaluate whether 20,000 dictionary entries is high or low, and so do not give this attribute much weight when evaluating a single dictionary (Hsee, 2000). But the effects observed here do not require that the quantities themselves be difficult to evaluate; they merely require that, upon automatic reflection, the quantity seems plausible. In fact, quantities may seem plausible, and momentum effects will emerge, even when quantities are easy to evaluate in isolation.

The momentum effects shown here resemble momentum effects that arise in financial markets. Over periods of 3-12 months, stock price increases tend to be followed by subsequent stock price increases (Jegadeesh & Titman, 2001). There are two predominant psychological explanations for these effects (Barberis & Thaler, 2003; Jegadeesh & Titman, 2001). One suggests that investors are slow to react to new information, and thus small initial price changes are followed by subsequent changes in the same direction. Another suggests that people take cues from price changes: Observing a stock price increase makes investors more confident in the stock, leading them to believe that it will increase even more. Although these accounts are plausible and probably contribute to momentum effects in financial markets, this paper suggests the additional possibility that such effects may arise from a reliance on shared intuitions.

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## ***2.2 Individual Papers: Frames and Primes: Novel Insights into Judgment and Decision-Making***

**Room: SANDINGHAM**

**Chair:** Theresa F. Kelly, University of Pennsylvania, USA\*

### ***Why and When Does Question Specificity Affect Prediction Quality?***

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Joseph P. Simmons, University of Pennsylvania, USA

Yoon et al. (2013, Psychological Science) recently found that people are less accurate at predicting a general outcome (e.g., Who will win a baseball game?) when the question is framed as a specific prediction (“What will the final score be?”) than when the question is framed as a more general prediction (“Who will win the game?”), a phenomenon they call the *prediction specificity effect*. They also show that this effect is mediated by people underweighting their overall impressions of the teams—called *global considerations*—when making specific predictions.

We extend Yoon et al.’s (2013) research by investigating several unanswered questions and providing evidence for an alternative mechanism. First, we show that specific predictions worsen prediction quality, rather than general predictions improving prediction quality. Prior research has only shown a difference between general and specific predictions, and cannot explain which framing drives the effect. We also show that making specific predictions that are unrelated to the general outcome harm prediction quality, indicating that the prediction specificity effect is not a matter of how the general prediction is framed, but rather part of a broader phenomenon where thinking about information that is not predictive for the outcome adds noise to the prediction process. Further, we find no differences global considerations between general and specific prediction conditions in our studies.

Consistent with the idea that specific predictions add noise to the prediction task, we find that the effect disappears when predicting outcomes that are either extremely unpredictable (equivalent to a coin flip) or extremely predictable (known with near certainty), and only emerges in situations where there is some signal of the better choice but still a fair amount of uncertainty. Finally, we identify conditions where specific predictions might actually improve prediction quality.

In Study 1 (N=508) we examined whether thinking specifically makes predictions worse or whether thinking generally makes prediction better. To do this, we added a third “Winner+Score” condition in which participants were asked to predict both the winning team and the final score for each of 39 MLB games. Our dependent measure was *prediction quality*, defined as the percentage of better teams predicted to win, with the “better team” determined by a large, well-calibrated betting market.

Predictions in the Winner+Score condition (M=68.5%) were significantly worse than in the Winner condition (M=72.3%) ( $p < .0001$ ), but did not differ significantly from the Score condition (M=67.0%), indicating that making Score predictions harms general prediction quality and not vice versa.

In Study 2 (N=631), we investigated whether making predictions about other features of the game – even those not directly related to the general outcome (i.e., who wins the game) – harms prediction quality. If so, this would indicate that specific predictions worsen predictions because they cause people to consider information that is not relevant to who wins the game, adding noise to their predictions.

Participants predicted the outcomes of 45 upcoming MLB games and were randomly assigned to one of four conditions: “Winner”, where they only predicted the winning team for each game, “Score+Winner”, where they predicted the winning team and final score, “Hits+Winner”, where they predicted the winning team and number of hits each team would make, and “Runs+Winner”, where they predicted the winning team and total number of runs scored during each game. The latter two conditions provide a test for whether thinking about information irrelevant to the general outcome affects prediction quality because the number of hits each team makes and the total number of runs are not directly related to who wins the game.

Predictions were significantly better in the “Winner” condition than in each of the other three conditions (Winner=71.4%, Score=67.3%, Hits=67.0%, Runs=67.9%;  $ps < .01$ ); however, prediction quality did not significantly differ among the three non-Winner conditions. Thus, we found evidence that the effect is not driven by how predictions are framed, but rather by the fact that specific predictions lead people to consider information that is not predictive for the general outcome.

In both Studies 1 and 2, we found no evidence that the effect of prediction condition on prediction quality was mediated by global considerations. However, the results of Study 2 indicate that specific predictions make predictions noisier. If making specific predictions adds noise to the prediction task, we would expect the effect to vary with how predictable each game is. For example, if a game is extremely unpredictable (equivalent to a coin flip), adding noise around the prediction would not significantly affect the proportion of participants choosing one team versus another. On the other hand, if a game is extremely predictable (known with near certainty), then adding noise around the prediction should not shift participants from choosing the certain victor to choosing the certain loser in a binary choice task. The prediction specificity effect should only emerge for games where there is some signal of which team is better, but still a lot of uncertainty around which team will win.

This pattern results was confirmed in OLS regression analysis of 210 baseball games that varied in predictability, where “predictability” was defined as the market probability that the better team would win. The prediction specificity effect emerges most strongly for games of intermediate predictability and diminishes towards extreme unpredictability and extreme predictability ( $\beta_{\text{predictability}}=6.59$ ,  $\beta_{\text{predictability}^2}=-5.1$ ,  $ps<.01$ ).

If Score predictions cause people to make fewer global considerations (which are correlated with prediction quality) as Yoon et al. claim, then Score predictions should always harm prediction quality. However, if Score predictions add noise to the prediction task by causing people to consider distracting non-diagnostic information, then specific predictions should only harm prediction quality when Winner predictions are better than chance. However, if participants predict the better team to win less than 50% of the time in the Winner condition, adding noise will still move prediction quality closer to 50%, apparently improving prediction quality.

In a subset of 54 games where less than 50% of participants in the Winner condition chose the better teams to win, we find that the prediction specificity effect disappears and directionally reverses (Winner condition  $M=32.9\%$ , Score condition  $M=33.4\%$ , ns).

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### ***The Cloud That Rains Information: Accessibility on the Internet Impacts How Consumers Process Marketplace Information***

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Over the last several years, people’s cognitive burden has been eased with pervasive access to information via the Internet or “the cloud.” Research is beginning to examine how such ease of access to online information impacts cognitive processing. Research finds, for example, that when people expect trivia (e.g., dates of historical events) to be accessible online, they exhibit poorer encoding of these facts (Sparrow, Liu, and Wegner 2011). However, little is known about how the phenomenological feeling of being able to easily access information online impacts consumer information processing and subsequent purchase decisions. This research demonstrates that when consumers encounter a cue that marketplace information is easily accessible on the Internet, their processing style becomes relatively more bottom-up (less top-down), and this, in turn, affects their judgments.

The cognitive burden imposed by a decision-making environment can impact information processing and decisions (Swait and Adamowicz 2001; Rottenstreich, Sood, and Brenner 2007). Generally, when individuals learn information with an anticipated cognitive burden, they employ more top-down (vs. bottom-up) processing of the information (Boswell and Foster 1916). For instance, cognitively burdened consumers would be less likely to use an effortful, deductive process (e.g., memorizing and calculating products’ attributes) and instead would rely more on their affective reactions when judging products (Kahneman and Frederick 2002). These

days, consumers often encounter one or more cues that marketplace information is accessible online; in-store signage (e.g., QR codes, weblinks) and salespeople may highlight the Internet's informational support for purchase decisions. We contend that these 'cues of the cloud' reduce consumers' anticipated cognitive burden when processing information. Further, these cues improve consumers' cognitive confidence—their belief in their ability to access information for use in decision-making. This, in turn, leads to a relatively more bottom-up processing style.

We examine two implications of cues of the cloud for consumers' immediate judgments. First, when consumers believe that information about a target is easily accessible on the Internet, details about the target that are relatively difficult to process should have an enhanced impact on judgments. According to our framework, cues of the cloud trigger a shift to a more bottom-up processing style that enables consumers to attend to and incorporate these details in judgments. Second, research suggests that top-down (bottom-up) processing exacerbates primacy effects (recency effects) in learning sequential information (Bhargave and Montgomery 2013; Eyal et al. 2010). Therefore, we predict that when consumers form a judgment based on information presented sequentially, cues of the cloud should enhance recency effects and reduce primacy effects in the judgment.

Study 1 showed that a cue of the cloud moderates whether consumers react positively to difficult-to-process information about a product. Participants read favorable information about a wine that included either only easy-to-process features or also with difficult-to-process details about these features. In another between-subjects manipulation, the information could be accessed on the winery's website, or it was only known by the winery staff. Participants rated how much information they felt they were provided and completed a measure of cognitive confidence. The dependent measure, purchase intent for the wine, had a three-way interaction between information type, online cue, and perceived information amount ( $F(1,138)=4.16, p=.04$ ). Higher perceived information amount was associated with higher purchase intent ( $F(1,138)=8.96, p<.01$ ). However, for participants presented difficult-to-process details about the features, this only held in the online-cue condition, and not in the condition in which participants did not have a feeling that the information was accessible online. We also found that cognitive confidence mediated this effect.

Study 2 demonstrated that a cue of the cloud moderates consumers' judgments of a sequence of information. Prior to reading five items from a restaurant's menu, participants were told either that the information will only be available to read once, or that the information is always available on the restaurant's website. In another between-subjects manipulation, the menu items' prices were increasing or decreasing over the sequence. Ratings of the restaurant's prices revealed a price order by online-cue interaction ( $F(1,159)=6.21, p=.01$ ). In the online condition, the restaurant was perceived to have higher prices with increasing versus decreasing price order ( $M_{increasing}=5.98$  vs.  $M_{decreasing}=5.0$ ;  $p<.01$ ), consistent with a recency effect and bottom-up processing. With the not-available-online instruction, there was no effect of ordering on perceived prices.

In study 3, participants read five paragraph-long consumer movie reviews. In the control condition, participants were simply told to read the reviews. In the online condition, participants were also told that these reviews are available on a movie review website. Next, reviews were presented in either an improving or declining order of positivity/negativity. We found a two-way interaction between the manipulations on attitudes toward the movie ( $F(1,113)=4.94, p=.03$ ). In the control condition, ratings were higher with a declining versus improving order ( $M_{declining}=4.48$  vs.  $M_{improving}=3.63$ ;  $p<.01$ ), consistent with a primacy effect and top-down processing. In the online condition, there was no effect of ordering on ratings .

Study 4 showed that a cue of the cloud only has an impact for consumers who are accustomed to relying on the Internet in the manner evoked by the cue. More specifically, a cue for mobile Internet access only affected processing style for consumers who own Internet-enabled smartphones. Participants read a story about a tourist who receives detailed advice on a landmark from locals. In the online prime condition, the tourist can access the same information on his smartphone during his trip. In the offline prime condition, he does not have access to his smartphone during the trip. After reading this story, participants responded to the 25-item Behavioral Identification Form (BIF); higher (lower) classifications on this form reflect top-down (bottom-up) processing (Vallacher and Wegner

1980). We found a two-way interaction between smartphone ownership and the story prime on BIF classifications ( $F(1,103)=4.26$ ,  $p=.04$ ). For owners of Internet-enabled smartphones, the offline (vs. online) story primed more high-level classifications ( $M_{offline}=16.29$  vs.  $M_{online}=12.09$ ;  $p<.01$ ). In contrast, for non-owners, there was no effect of the story prime on classifications.

This research shows that the perception of access to information via the Internet changes the way consumers think. Contrary to findings in the domain of encoding of trivial facts (Sparrow et al. 2011), online access can actually embolden consumers to focus on the details of useful marketplace information.

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### ***Stumbled Upon: Impact of Framing as Expected versus Unexpected on Product Evaluations***

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Consumers often discover unexpected uses of a product, that is, they stumble upon benefits of a product that are neither marketed by the company nor expected by the common users. In fact, searching for the ‘unexpected uses of ...’ online could generate numerous such interesting cases. One important characteristic about such experience of unexpected discovery is that it creates buzz and conversations amongst consumers (Derbaix and Vahamme, 2003). While marketers respond to such conversations with whatever strategy they deem the best (e.g., repositioning or silence), no scientific endeavor has been made in trying to understand how this impacts consumers.

Despite in a different context, some related work on unexpectedness has shown that unexpectedness functions as an emotional amplifier; that is, unexpected gain feels better than expected gain (Elster 1998; Kahneman and Miller 1986; Mellers et al. 1997). This stream of research *suggests* that consumers who discovered unexpected product feature first-handedly are likely to feel better than consumers who lack such experience. However, we still do not know how conversations triggered by such experience impacts consumers who lack the actual experience of unexpectedness, *prior to* the product purchase. Based on prior research, we argue that framing a product feature as unexpected (serendipitous discovery) as compared to expected (intentional development) triggers more intensified positive feeling toward the product, consequently leading to more positive product evaluation when one relies on affect. Moreover, we demonstrate that the positive impact of *vicarious* unexpectedness on product evaluation is not a general enhanced mood effect, but a process in which consumers use affect as information *where* affect is deemed relevant by showing a strikingly specific impact of unexpectedness on evaluations that are affective (e.g., desire measured by willingness-to-pay) but not on evaluations that are cognitive (e.g, perceived effectiveness).

In the first two studies, in order to test our main hypothesis which proposes that framing product feature as unexpected can lead to more positive product evaluations when one relies on affect, we created two stimuli in a fashion that were likely to induce consumers to engage with them affectively (by including graphics and hedonic words). In Study 1A, participants in the expected condition saw a consumer review on vitamin-c drink mix that was both developed and found to be effective in boosting energy and brightening skin tone, whereas participants in the unexpected condition saw a vitamin-c drink mix that was developed and found effective in boosting the energy level, but the product unexpectedly brightened skin tone. Afterwards, they indicated their willingness-to-pay(WTP) for the product and perceived effectiveness of the product. As expected, participants who viewed an unexpected product were willing to pay significantly more ( $M=10.61$ ) for the product than participants who viewed an expected product ( $M=7.89$ ;  $F(1,76)=5.43$ ,  $p=.02$ ). Also, consistent with our prediction, unexpectedness impacted only the affective evaluation, not the cognitive evaluation; that is, perceived

effectiveness of the product did not differ between the two conditions ( $F < 1$ ). In Study1B, we replicated our results using a different stimulus—shampoo print advertisement—and obtained the same findings.

In next three studies, we provide a stronger support for our argument by directly manipulating the mode of processing while using a plain-toned text instead of using affect-rich stimuli. Specifically, we predict to see the positive impact of unexpectedness on product evaluations observed in first two studies to be attenuated when decision context evokes cognition (e.g., primed with calculative mindset or under utilitarian consumption goal). In Study2, the mode of processing was manipulated using an ostensibly unrelated priming task (adapted from Hsee and Rottenstreich, 2004) prior to reading a description of a new dietary supplement that was both developed and found effective in sleep-aid and reducing body fat (expected) or a new dietary supplement that was both developed and found effective in sleep-aid, and unexpectedly in reducing body fat (unexpected). As predicted, participants in the affective-processing prime condition were willing to pay significantly more for the unexpected supplement ( $M = 22.42$ ) than the expected supplement ( $M = 13.83$ ;  $F(1, 161) = 5.45$ ,  $p = .02$ ), but such difference was not observed for participants in the calculative-processing prime condition.

In Study3, we provide a further support for our conceptualization by manipulating the mode of processing differently. Prior research suggests that consumers engage in affective processing when they have a hedonic consumption goal as compared to when they have a utilitarian consumption goal (Pham, 1998). This logic formed the basis of the current study. Participants were asked to imagine that they were looking for a sunscreen to use during a family vacation (hedonic goal) or a business trip (utilitarian goal). All participants then read a description of a sunscreen that was either developed and found to be effective in protecting skin from wrinkle-causing UVA rays and make skin look even-toned (expected) or a sunscreen that was developed and found to be effective in protecting skin from wrinkle-causing UVA rays, but unexpectedly found effective in making skin look even-toned. As predicted, participants with a hedonic goal were willing to pay significantly more for the sunscreen when one of the benefits was framed as unexpected ( $M = 10.92$ ) versus when both the benefits were framed as expected ( $M = 7.89$ ;  $F(1, 96) = 7.65$ ,  $p = .007$ ). No such corresponding difference was found for those in the utilitarian goal condition. Furthermore, no such positive effect of unexpectedness was found for perceived effectiveness of the product (All  $F_s < 1$ ).

In the last study, we replicate the findings from previous studies that positive impact of unexpectedness is only for affective measure but not for cognitive measure, by manipulating the dimension of measure (affective versus cognitive) as a between-subject factor rather than within-subject factor as in the previous studies, providing a stronger support for our argument. In sum, findings from this research show that *framing* a certain feature of a product as unexpected can lead to positive evaluation of a product when the information is processed affectively and the dimension of evaluation is affective.

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### ***Exposure to High Mastery and Perceived Self-Efficacy***

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Simona Botti, London Business School, UK

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Sometimes we are exposed to other people performing difficult activities with high levels of mastery. In such situations, the performer has perfect control over the activity, and every element of the execution flows naturally and apparently effortlessly. We hypothesize and test in a series of experiments that observing masterful performances of others at difficult activities will increase one's perceptions of self-efficacy at those same activities.

In general, people are not accurate at predicting their own ability and are susceptible to systematic errors at this type of task (Billeter et al., 2011). Projection biases (Loewenstein et al., 2003), self-enhancement motives (DeNisi & Shaw, 1977), or excessive focus on one's own vs. others' abilities (Kruger & Dunning, 1999) may keep people from forming accurate predictions. The lack of accuracy at evaluating personal skills and at predicting individual performance suggests that contextual information, such as the performance of a third person, may affect people's predictions. Indeed, observing the performances of others is a source of information used to judge self-efficacy, that is, one's perceived ability to perform an activity (Bandura, 1977; Gist & Mitchell, 1993).

Research on contrast effect would predict that exposure to an expert mastering an activity negatively affects one's perceived ability to successfully perform the same activity, because the expert's superior ability becomes a new standard of comparison against which personal ability is compared (Herr et al., 1983; Sherif & Hovland, 1961). Therefore, one's ability will be judged as lower than if it were assessed without being exposed to the high mastery of the expert. In addition, research on social comparisons would expect that exposure to high mastery makes other people's ability more salient, thus reducing the focus on one's own ability that is typical for many self-assessments (Kruger, 1999). Such increased salience of others' ability could mitigate the better-than-average effect (i.e., the tendency to judge ourselves as better than others at relatively easy activities) or exacerbate the worse-than-average effect (i.e., the tendency to judge ourselves as worse than others at relatively difficult activities), thus resulting in diminished self-assessments.

However, we posit that exposure to an expert mastering an activity may have a positive effect on one's perceived ability to perform that activity. By definition, mastery involves high control over the activity performed (White, 1959; Csikszentmihalyi, 1990; Kubovy, 1999). The high level of control exhibited by the performer confers an apparent ease to the activity, which may be interpreted as actual ease (Song & Schwarz, 2008). More in general, seeing others perform challenging activities without adverse consequences can generate expectations in observers that they too will improve if they intensify and persist in their efforts (Bandura & Barab, 1973). These findings have been attributed to the powerful motivational effects of individuals' need for control (deCharms, 1968; Rotter, 1966). Research has shown that a sense of competence and mastery over one's own environment leads to perception of personal control (Bandura, 1989; White, 1959), and that individuals tend to seek control (Brehm, 1966), even in trivial or illusory forms (Langer, 1975).

We hypothesize that observing a performance conducted with high mastery allows to vicariously satisfy one's need for control. The exertion of control apparent in the high mastery performance may transfer to the observers, and trigger the belief that they would also be able to exert that same level of control on the activity. As a consequence, such vicarious control would raise observers' expectations on their own ability to perform the activity, resulting in inflated assessments. We also hypothesize that this effect will be stronger for individuals that are more similar to the expert performer being observed, because such similarity would increase the personal relevance of vicariously derived information (Kazdin, 1974; Schunk, 1989).

Study 1 shows that exposure to the masterful performance of a fairly complex yoga pose positively affects participants' assessment of their own ability to perform the same pose. Participants exposed to the masterful performance reported higher ability to perform the pose than participants just exposed to the instructions and a picture of the pose.

Study 2 manipulates the level of mastery of the performance of the same yoga pose (high vs. low) and measures its effects on participants' predicted ability to perform the same pose. We also measured to what extent participants felt in control while watching the performance, and, as a potentially alternative mediator, the perceived difficulty of the pose. Participants exposed to the high-mastery performance evaluated themselves as more likely to be able to perform the yoga pose than participants exposed to the low-mastery performance. In addition, perceived control mediated the effect of exposure to mastery on predicted ability, but the perceived difficulty of the pose did not.

Study 3 tests whether the dissimilarity between the observed expert and the self prevents the occurrence of the effect of exposure to mastery. Participants were first asked whether they watched the London 2012 100m men Olympic final (i.e., a highly masterful sport performance). Then, they indicated in how many seconds they thought they could run 100m, our measure of predicted ability. Finally, as a measure of their similarity to the Olympian athletes, participants reported their level of fitness. A significant interaction between exposure to mastery and level of fitness revealed that the effect of exposure to mastery was significant for high-fitness participants but not for low-fitness participants, signaling that the similarity between the performer and the observer moderates the effect of exposure to mastery on perceived self-efficacy.

Our results demonstrate that exposure to mastery results in enhanced self-efficacy, as individuals exposed to a highly masterful performance overestimate their own ability to perform the same activity. This effect appears to be due to the experience of a form of vicarious control while observing the masterful performance. Supporting the proposed explanation, this effect is moderated by the similarity between the individual and the actor. These results provide initial evidence on the conditions under which exposure to expert performance may enhance intentions to perform activities or purchase products that require skills and practice in order to be appropriately used (Thompson et al., 2005; Murray & Haubl, 2007; Burson, 2007).

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## **2.3 Symposium: And Now for Something Completely Different: The Meaning of Life**

**Room:** WINDSOR

**Chair:** Morgan Ward, Southern Methodist University, USA

Kathleen Vohs, University of Minnesota

**Discussion Leader:** L.J. Shrum, HEC Paris

### ***Searching for Meaning in a Secondhand Store: How Consumption of Vintage Products Offers Personal Meaning***

Morgan Ward, Southern Methodist University, USA\*

Kathleen Vohs, University of Minnesota, USA

The question of what meaning is, how it is cultivated and what role it plays in people's lives has been examined by religious leaders, philosophers, sociologists and psychologists for centuries. In simple terms, meaning is relation. That is, meaning links people to the things that lie beyond the self -- the people, places, and things that surround them. According to the meaning maintenance model (MMM), in order for meaning to emerge, these connections must tie these things together in expected and predictable ways (Heine et al 2006). Moreover, when these links fail or are threatened, it is often perceived as a threat to self. Since humans find it problematic to be robbed of meaning, when they are confronted with meaninglessness or when their meaning frameworks are disrupted, they urgently seek to regain meaning. What is more, these efforts need not be directed at the specific domain of meaning that has been jeopardized; individuals often react to meaning threat by bolstering other meaning frameworks that remain intact.

In this research, we examine how individuals make consumption decisions after being confronted with the threat of meaninglessness. Specifically, we observe whether after a meaning threat, consumers have more positive attitudes about vintage products which are steeped in the cultural meanings of the past. Vintage products are items that were made and/or consumed in a bygone era (generally more than 50 years old). They are distinct from their modern counterparts as their origin in an earlier time period imbues them with the meanings and associations of the time in which they were created, thus enabling those who consume such products to have access

to these meanings. Indeed, Hillier (1981) characterizes collecting vintage items as an attempt at "conjuring up the past," based on the hope that "a particular antique has absorbed something of an earlier time, something which we may be able to distil from it."

In sum, we predict that after a meaning threat, consumers prefer vintage products because of the meaning they house and offer to the individual. However, we contend that not all vintage products will be equally successful in offering meaning to consumers; vintage products which are more self-relevant are likely to be more effective in conferring meaning than those that are less self-relevant. In three studies we examine the prediction that after facing a threat to personal meaning, individuals will be more likely to choose self-relevant (vs. non-self-relevant) vintage (vs. modern) products.

In Study 1, we conducted a 2 (meaning: threat vs. affirm) x 2 (self-relevance of product: low vs. high) study in which we varied meaning using a meaning threat. We randomly assigned participants to a meaning threat (versus affirm) condition; in the threat condition they were told to list 12 (threat condition) and in the affirm condition, 2 things in their lives that provided them meaning. Next, participants were asked to look at 4 vintage /modern product dyads that varied in identity relevance. Each dyad possessed two items that were nearly identical to each other in color and camera angle but clearly differed insofar as one was vintage and the other was the modern version of the same product. The product categories included were pre-tested to vary in self-relevance so that 2 of the items were highly self-relevant (Mercedes convertible, Nike sneakers) and 2 were low in self-relevance (postcard of NYC skyline, formal writing pen). Participants were then instructed to choose which of the items they would choose if they were interested in purchasing an item in this product category. As predicted, we find that when participants' meaning was threatened, they were more likely to choose the participants were more likely to choose the vintage product when they were considering a self-relevant (vs. non-self-relevant) product category ( $F(1, 92) = 8.05, p < .005$ ). The simple effects confirm that those in the threat condition were more likely to choose a vintage product than a modern product.

We replicated this finding in Study 2, in which we manipulated the meaning threat by conducting a word search task in which participants looked for words that primed a meaning (meaningful, purpose) vs. meaningless (e.g. senseless, empty) and present identical product dyads as in Study 1 ( $F(1, 104) = 4.80, p < .03$ )

Finally, in Study 3, we isolate what drives individuals who lack meaning towards vintage products. The last study answers the question of why meaning-threatened individuals are inclined toward vintage products. To answer this question we conducted a 2 (meaning: threat vs. affirm) x 2 (meaning signal: present vs. absent) x 2 (self-relevance of product: low vs. high) experiment in which we threatened participants' meaning via the word search task (Study 2). Next, participants imagined shopping in a vintage store and encountered the vintage product they see in front of them. Participants were either presented with a product that is accompanied with a signal that it possessed meaning (vs. no meaning). We varied the associated meaning by indicating that the product either possessed a 'past' or does not. For instance, participants who considered the Mercedes were told, "Imagine you are walking through a vintage car lot and encounter this 1979 vintage Mercedes. The sticker on the car gives you no other details (vs. tells you many details about the car including that it has been driven about 1200 miles as well as where the car was purchased, who owned it and some of the events the car was driven to)." The data reveals a three-way interaction such that individuals who experienced a meaning threat (vs. affirm) prefer meaning-laden (vs. non-meaning-laden) vintage products when the products are self-relevant. This effect is mitigated when they are not threatened ( $F(1, 363) = 3.80, p < .05$ ).

Our studies demonstrate way that consumers manage threats to their personal meaning by choosing vintage items. For this reason, identity-relevant products appear to be more effective in offering such meaning. We hypothesize that the reason that vintage products are appealing is because these items are imbued the idealized images and meanings from the past.

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## *The Unexpressed Self: The Impact of Restricting Freedom of Speech on Brand Preferences*

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The desire to self-express stems from one of the most basic human needs—the need to be accepted and valued by others (Baumeister and Leary 1995; Fiske 2010; Maslow 1970). Despite the fundamental nature of self-expression, individuals are not always free to express their values, opinions, and beliefs. Limits on freedom of speech can be caused by a variety of factors, such as government regulations, social status, and cultural norms (Gross and Levenson 1993). The ability to self-express can even be suppressed by a variety of accidental factors, such as not being able to communicate because one has a sore throat, no access to a phone, or a temporarily disrupted Internet connection. The ubiquity of possible impediments to self-expression raises the question of how restricting individuals' ability to express values, opinions, and beliefs influences their subsequent behaviors.

Existing research has shown that suppressing freedom of speech is likely to produce various negative consequences, such as perceptions of injustice (Stevens 1992), religious conflicts (Fetner 2008), and oppositional social movements (Andersen 2006; Polletta 2004). However, most extant research examines the impact of restrictions of freedom of speech within the same social and political domains in which the restriction occurred. The question of whether and how restricting freedom of speech impacts behaviors beyond social and political domains to the consumption domain has not been investigated. For example, does curbing individuals' ability to comment on the president or current events impact brand preferences?

Some prior research suggests that restricting individuals' freedom of speech on social and political issues should not affect their brand preferences because the two domains are not directly related—a prediction consistent with the notion that many fundamental needs are by nature non-compensatory and, if not satisfied, are unlikely to be compensated for by other means in other domains (Knowles et al. 2010; Maslow 1970). For example, it has been shown that when the need for autonomy and freedom of choice is threatened, people tend to engage in the very behavior that is restricted, or react in the same domain that is restricted (Brehm 1966; Brehm and Brehm 1981).

Moreover, even if restricted freedom of speech could impact behaviors beyond social and political domains to the consumption domain, it could well lead to more restricted self-expressive behaviors in the consumption domain. This prediction is consistent with past research on inaction mindset, which suggests that restrictions are likely to decrease individuals' tendency to engage in various activities across domains (Albarracín et al. 2008). For example, Noguchi, Albarracín, and Handley (in press) demonstrated that participants primed with a general inaction mindset were less likely to vote in an upcoming election and volunteer their own time to lobby for a proposed university policy.

In contrast, this research shows for the first time that restricting freedom of speech by denying an individual's ability to express opinions, values, or beliefs in political, social, or cultural domains can have a significant impact on brand preferences, and that this impact tends to enhance the value consumers place on self-expressive brands. This argument implies, for example, that curbing individuals' ability to freely express their opinions about the performance of the president, freely comment on current events, and freely select their mode of dress can increase their subsequent preference for Nike shoes, BMW cars, JanSport backpacks, and Louis Vuitton bags. We base this argument on the notion that individuals' need for self-expression is compensatory in nature and that consumers tend to offset a lack of freedom of speech in one domain by seeking opportunities to express in other domains.

We test this prediction in a series of five empirical studies. Experiment 1 documents that restricting freedom of speech regarding a timely political event increases consumers' preferences for self-expressive brands compared to when they are able to self-express. In

this experiment, we used an event that was likely to encourage individuals to share their views. Accordingly, the experiment was conducted just a few hours after Osama bin Laden's death was announced on national TV on May 2, 2011. Half of the participants were allowed to comment on this event while the other half were not able to. Then all participants were asked to evaluate brands across five categories. The results indicated that participants who were not able to comment on the political event showed stronger preferences for self-expressive brands than those who were able to comment (64.8 vs. 56.3, on a 100 point scale;  $F(1,61) = 3.16, p < .05$ ). Experiment 2 further shows that restricting freedom of speech even in relatively mundane domains (celebrities, countries, universities, pop stars, and pets) strengthens consumer preferences for self-expressive brands compared to a no expression baseline condition (58.2 vs. 49.6, on a 100 point scale;  $F(1, 205) = 15.03, p < .01$ ).

Experiment 3 examines the compensatory nature of the self-expressive need as the underlying mechanism of the findings in experiments 1 and 2. In this experiment, we first restricted the opportunity of half the participants to comment on President Obama's performance. Next, we offered half of the restricted participants the opportunity to express through self-expressive brands. Later, we asked all participants to write an essay on Obama's performance. The results showed that, although overall restricted participants wrote more about Obama than non-restricted participants (290.52 vs. 185.04, characters used to express an opinion about the president;  $F(1, 197) = 16.05, p < .01$ ), those who had the opportunity to express through self-expressive brands wrote significantly less than those who did not have the opportunity to express through brands (173.95 vs. 367.56;  $F(1, 197) = 17.07, p < .01$ ).

To further show the role of the self-expressive need, experiment 4 demonstrates that restricting freedom of speech increases consumers' valuation of self-expressive lifestyle brands (\$385.07 vs. \$182.84;  $F(1, 223) = 10.79, p < .01$ ), but not their valuation of functional brands (\$7.19 vs. \$6.70;  $F(1, 223) < 1, p > .9$ ). Experiment 5 demonstrates that restricting freedom of speech increases valuation of self-relevant brands for consumers with a high need for self-expression (\$73.33 vs. \$43.83;  $F(1, 198) = 7.77, p < .01$ ) but not for consumers with a low need for self-expression (\$23.96 vs. \$45.17;  $F(1, 198) = 1.70, p > .9$ ).

The present research contributes to the literature on brand value, compensatory consumption, and freedom of speech. In addition, it offers guidance to marketing managers regarding brand position and advertising to attract unexpressed consumers.

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### ***Connecting with Celebrities: The Therapeutic Function of Celebrity Endorsement***

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With the rise of social media and reality television, some refer to our times as the social era of celebrity (adly.com). We propose that consumers appropriate brand symbolism from celebrities to construct and communicate their self-concepts and that consumers with compromised identities look to celebrities to a greater extent than those with less insecurity. Our research shows that consumers whose self-esteem is threatened (study 1), who have low levels of social complexity (study 2), and who are experiencing life stress (study 3) are more affected by celebrity endorsement than those without compromised identities. Furthermore, we propose that this process is mediated by parasocial relationships that consumers form with celebrities; we assert that consumers with compromised identities are more likely to have one-sided relationships with celebrities, which in turn, renders celebrity endorsement more powerful.

McCracken (1986) asserts that brand meaning originates in the culturally constituted world, moving into goods via the fashion system, word of mouth, reference groups, and, importantly for our purposes, celebrities. A celebrity endorser provides a bundle of cultural

meanings that may be associated with the brands s/he endorses. Meaning moves to consumers as they construct their identities through brand choices based on congruency between brand meaning and desired self-image. Additionally, source congruence, that is, the match between the celebrity's image and the brand's image, is an important influence on brand beliefs and attitudes under conditions of high involvement/elaboration (Kirmani & Shiv 1998).

In our research, we examine the therapeutic function of celebrity as a source of meaning in modern consumer culture. We propose that celebrities play the role of modern heroes, helping people to make sense of their lives and to form connections with others (Campbell [1949] 2008). Although this may be true for society in general, it is particularly relevant for individuals with compromised identities. When consumers have a compromised identity, they are motivated to repair it (Leary et al. 1995). We argue that these vulnerable consumers are more likely to look to modern heroes (celebrities) to make sense of who they are and their role in society. While looking to celebrities for meaning, compromised consumers may develop one-sided, or parasocial, relationships with celebrities. The false sense of intimacy associated with parasocial relationships renders celebrity endorsement more powerful.

Our assertion that consumers with compromised identities seek meaning from celebrities is supported by research regarding why some people become more obsessive about celebrities. Some social psychological analyses link celebrity worship with shyness, loneliness, lack of cognitive flexibility, fantasy proneness, and substandard mental health (e.g., Maltby et al. 2006). A compromised identity also may lead to obsession with celebrities, enabling such individuals to establish an identity and sense of fulfillment. Part of that obsession may include forming a parasocial, or one-sided, relationship with the celebrity. In this research tradition, celebrities have a therapeutic function; people look to celebrities for intimacy and to repair their compromised identity. Thus, we expect to find that consumers with greater active self-concept concerns will be more likely to look to celebrities for meaning in the consumption domain, augmenting the effects of celebrity endorsement.

In a series of studies, we have found that a compromised identity enhances the influence of celebrity endorsement on self-brand connections using a number of operationalizations for identity concerns. In study 1, our manipulation threatened consumers' self-esteem. Participants whose self-esteem had been threatened formed connections to brands that were endorsed by celebrities that they aspired to be like. They also rejected brands that were endorsed by celebrities with images that did not match their desired self-image. Participants whose self-esteem was not threatened did not form differential self-brand connections based on celebrity aspiration level.

Study 2 examined a second source of compromised identity, social complexity, defined as joining and maintaining membership in diverse groups. By providing social support, social complexity provides a buffering effect against stress and loneliness and enhances personal and collective self-esteem. In this study, we found that consumers who were not socially complex looked to celebrities for meaning more than consumers who had highly complex social networks. This effect was augmented by source congruence (the celebrity image matches the brand image, Kirmani & Shiv 1998) and consumer congruence (the consumer's self-image matches the brand image – in this study, athletic watches).

In study 3, we examined yet a third vulnerability for consumers' personal identity: life stressors. As people deal with loss of a spouse, a job, or go through other periods of stress, they are often in a transitional or liminal state regarding their self-identity. Here, we found that consumers whose identities are compromised by dealing with stress in their lives look to celebrities for meaning more than consumers who have fewer life stressors. This effect is also augmented by source congruence and consumer congruence (in this study – a Syrah wine).

Finally, we have recently completed a fourth study exploring whether parasocial relationships mediate the relationship between compromised identities and celebrity endorsements on connections to brands. In this study, we measured a number of potential identity concerns (loneliness, life stressors, etc.), had participants identify favorite celebrities, and measured parasocial relationships

with a target celebrity from their list. Then, under the guise of pretesting an advertising campaign, we asked participants to rate their response to the target celebrity endorsing a new moisturizer. We are currently analyzing the results of this study and will present them at SCP.

In sum, our studies show celebrity performs a therapeutic function for consumers in our culture, with consumers with compromised identities being more likely to look to celebrity endorsers as a source of meaning. We find this effect whether we threaten self-esteem, measure social complexity, or measure the number of life stressors present in consumers' lives. In all cases, the effect of celebrity endorsement on self-brand connections is stronger compared to consumers who do not have similarly compromised identities. We propose that this relationship is mediated by the degree to which consumers with compromised identities have formed a parasocial relationship with the celebrity endorser.

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## ***2.4 Individual Papers: Self-Control in Everyday Consumer Experiences***

**Room:** ESCORIAL

**Chair:** Scott Davis, Texas A&M University, USA\*

### ***The Big Cost of Small Problems: Consumer Inaction Traps and Product Malfunctions***

Neil Brigden, Miami University, USA\*

Gerald Häubl, University of Alberta, Canada

#### Review Abstract

We propose that smaller product malfunctions can create an inaction trap for consumers whereby the malfunctions go unaddressed, and the consumers suffer a disproportionate negative impact on consumption experience. This trap is made possible because of an inclination to initially defer a decision over addressing a smaller malfunction and a tendency to view subsequent opportunities to address the malfunction as less attractive than those that were initially foregone.

#### Choice Deferral

When confronted with a minor product malfunction that does not dramatically impair product performance, consumers are more likely to defer the decision over whether to address the malfunction because there is more uncertainty about whether addressing or enduring the malfunction is optimal. Decisions can be deferred or avoided for a variety of reasons, including anticipated regret, the difficulty of making a choice, or the costs of taking action (Anderson, 2003; Dhar & Nowlis, 1999; Dhar, 1996, 1997; Greenleaf & Lehmann, 1995). Deferring decisions may facilitate a better decision at a later time and conserves effort (Ritov & Baron, 1992). However, in the case of addressing product malfunctions, deferral presents an important risk in that the benefit gained from addressing the malfunction decreases as the number of remaining usage occasions or the amount of remaining usage time diminishes. Thus, any deferral may be a missed opportunity in that subsequent opportunities to address the malfunction are, all else equal, inferior.

#### Inaction Inertia

When related choices are made in sequence, current options may be compared to previously available options even though, normatively, the latter are irrelevant to the current choice. Inaction inertia is the decreased likelihood of taking an attractive course of action when a similar and superior course of action has been previously foregone (Tykocinski, Pittman, & Tuttle, 1995). This finding

has been replicated by several research teams in a variety of domains (Arkes, Kung, & Hutzler, 2002; Butler & Highhouse, 2000; Kumar, 2004; Tykocinski, Israel, & Pittman, 2004; Tykocinski & Pittman, 1998; van Putten, Zeelenberg, & van Dijk, 2007; Van Putten, Zeelenberg, & Van Dijk, 2009; Zeelenberg, Nijstad, van Putten, & van Dijk, 2006). This effect distinct from related work on escalation of commitment through action such as the sunk cost effect (Arkes & Blumer, 1985; Cunha, Jr & Caldieraro, 2009), or the foot-in-the-door effect (Freedman & Fraser, 1966), in that it describes the inertial effect of a failure to take action on subsequent opportunities for action.

We propose that while initial inaction is due to decision deferral, continuing to not address a product malfunction at subsequent opportunities is driven by inaction inertia. If a malfunction would be worth addressing at a later point in time, then logically it would have been even better to address it at the earliest opportunity. An earlier intervention would increase the benefit derived as more usage time or usage occasions would still be in the future and thus subject to the improved performance that the intervention brings. Thus, the initial decision to not address the malfunction can be thought of as a missed opportunity, and subsequent opportunities to address the malfunction – although potentially still attractive – will be comparatively inferior.

### Experiments and Results

This theory was tested in a series of four experiments in which participants had a consumption experience in which a malfunction was present, and they had the opportunity to address the malfunction for some cost. Participants' decisions and reported enjoyment were measured. Although participants who experienced a smaller malfunction found the malfunction less disruptive, they enjoyed the experience less because they did not address the malfunction or addressed it later in the experience. Consistent with the theory that later opportunities were devalued, participants did not report regretting their failure to address the smaller malfunction, nor did they plan to respond differently if faced with similar conditions.

We use a series of manipulations focused on the opportunity to address the malfunction to demonstrate why the observed behavior cannot be explained using plausible alternative accounts based on melioration (Herrnstein, Loewenstein, Prelec, & Vaughan, 1993; Herrnstein & Vaughan, 1980), temporal discounting (Frederick, Loewenstein, & O'Donoghue, 2002), consumer lock-in (Zauberman, 2003), an emotional immune response (Gilbert, Lieberman, Morewedge, & Wilson, 2004), or affective forecasting (Wilson & Gilbert, 2003). We find that although participants are more likely to endure a smaller (rather than larger) malfunction and suffer lower enjoyment because of it when the opportunity to address the malfunction is always available, this effect goes away when the opportunity to address the malfunction is absent at the beginning of the experience. Under these conditions, there is no reason to devalue the opportunities to address that exist later in the experience and therefore, no difference in the likelihood of addressing the malfunction, or enjoyment of the experience.

Building off prior research showing that inaction inertia hinges on the similarity between the previously foregone opportunities and those that are subsequently considered (van Putten et al., 2007), we show that participants are freed from the inaction trap when the means used to address the malfunction changes. When participants initially have the option to address the malfunction by completing an effortful task, but later can address the malfunction using a different, but equally effortful task, the comparability of the opportunities, and therefore inaction inertia, is reduced. We also find that maximizers tend to make a choice earlier in the experience and stick with it and are thus less influenced by the task change manipulation.

### Discussion

Our findings demonstrate that malfunction magnitude has a dual effect on consumption experience. More severe malfunctions directly reduce the pleasure associated with consumption to a greater degree, but they also indirectly improve consumption experiences by reducing decision deferral and inaction inertia; two factors that prolong malfunctions.

We conjecture that consumers reflexively refrain from addressing smaller problems immediately so that they do not spend all their

time addressing problems rather than enjoying consumption experiences. However, despite the well known self-help advice to not “sweat the small stuff” (Carlson, 1997), our findings suggest that consumers might be paying too little attention to minor problems, allowing these problems to persist too long, and suffering disproportionately from them as a result.

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### ***Online vs. offline grocery shopping: virtual virtues and vivid vices***

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In a traditional grocery shop, store atmospherics may instantly engender affective responses (e.g., Beatty & Ferrel, 1998; Koufaris, 2002). The ability to feel, smell, taste, hear, and perceive food products all contribute to evoking affective responses (Spies, Hesse, & Loesch, 1997). Conversely, sensory information is less accessible in an online shopping environment as consumers perceive the products on a computer display. Following the media richness theory of Daft & Lengel (1984), the online shopping environment would be perceived as lean, while the traditional shopping environment would be perceived as rich as it contains more affective characteristics (Walther, 1992). Even though online shopping evolved remarkably in the past years, the online shopping experience cannot be compared to the traditional shopping experience as online shopping occurs indirect and computer-mediated (Heeter, 2000). According to the affective cognitive model of Shiv and Fedorikhin (1999), a real product presentation likely evokes an affective based decision and the impact of affect on choice decisions decreases when a symbolic (e.g., a photograph) rather than a real product presentation was used. Additionally, van Noort (2008) showed that online consumers experience less extreme (positive and negative) affective responses compared to offline consumers, due to the lack of physical presence of products in an online environment.

Given that vice foods (e.g., a brownie) are associated with more intense affect compared to virtues (e.g., an apple) which are associated with less intense affect (Dhar & Wertenbroch, 2000), we propose and demonstrate in three studies that the shopping environment (online vs. offline) plays an important role in the food choices consumers make: consumers are more prone to the temptation of a vice and thus spend relatively more on vices in a traditional shopping environment compared to an online shopping environment.

In a first study, 90 undergraduates (50 men;  $M_{Age} = 21.94$ ,  $SD = 1.44$ ) were either asked to do their grocery shopping via an online webshop or in a physical lab store; participants were told to spend a maximum of 40 euros. Both the online webshop and the lab store were specifically designed for the purpose of the study and contained only food products. As such, we could keep all products and prices the same in the online and offline setting. To classify the food products into vices and virtues, we used the classification of Milkman, Rogers, and Bazerman (2009)<sup>1 2</sup>. We find that the amount of money participants spent on vices relative to the total amount spent differs for both shopping tasks. A one-way ANOVA shows that participants relatively spent more on vices in the lab store ( $M = 14.28\%$ ,  $SD = 4.65\%$ ) compared to the online webshop ( $M = 9.06\%$ ,  $SD = 3.06\%$ ),  $F(1, 88) = 12.15$ ,  $p = .02$ , providing initial evidence for our hypothesis.

In a second study, we set up a within-subjects design in collaboration with a large European retailer. In total, 363 consumers (257 women;  $M_{Age} = 42.05$ ,  $SD = 14.24$ ) were approached at the entrance of the retail store and invited to participate in our study. In a first

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<sup>1</sup> The same classification is also used in study 2 and study 3.

<sup>2</sup> In Study 1, we used 135 products of which 57 vices and 78 virtues.

phase, they were directed to a computer and were asked to order the groceries they intended to buy in the brick-and-mortar store, online via the retailer's website. Next, they were led to believe that this was the end of the study and were given a numbered voucher that they could exchange for a goody bag after their store visit. The number of the voucher was identical to the online order number. In a second phase, when participants exchanged their voucher, they were asked to hand over their cash receipt. The number on the voucher was copied on this receipt to link the online order and the offline purchases. A paired samples t-test confirms the results of Study 1 and shows that the relative amount of money spent on vices was higher when respondents shopped in the offline store ( $M = 6.09\%$ ,  $SD = 4.68\%$ ) compared to when they ordered their groceries online ( $M = 4.43\%$ ,  $SD = 3.55\%$ ),  $t(362) = 1.95$ ,  $p < .001$ ).

In a third study, we use a unique dataset from a large European retailer to compare the share of vices bought by shoppers who exclusively buy in the retailer's brick-and-mortar stores (offline only), shoppers who only buy via the retailer's webshop (online only), and mixed shoppers (i.e., shopping in the retailer's online and offline stores). The sample consists of all purchases made by 170,860 customers in the retailer's online and offline stores between January 2013 and April 2013 and can be decomposed in 95.89% pure offline shoppers, 1.67% pure online shoppers and 2.44% mixed shoppers. The products were classified in vices and virtues in the same way as before and a variable reflecting the relative value spent on vices for each shopping trip (i.e., amount spent on vices divided by the total amount spent) was created. A one-way ANOVA shows that those who only shop offline spend relatively more on vices ( $M = 9.29\%$ ,  $SD = 8.38\%$ ) compared to those who only shop online ( $M = 4.82\%$ ,  $SD = 3.45\%$ ,  $F(1, 166\ 662) = 1569.40$ ,  $p < .001$ ). Additionally, a paired samples t-test shows that mixed shoppers spend relatively more on vices when they buy their groceries in a traditional store ( $M = 7.99\%$ ,  $SD = 5.45\%$ ) compared to when they buy their groceries via the online website ( $M = 4.91\%$ ,  $SD = 3.25\%$ ,  $t(4195) = 33.68$ ,  $p < .001$ ).

To summarize, the three studies provide converging evidence for the fact that consumers spend more on vices in a traditional store compared to an online environment. While study 1 is purely experimental, study 2 is a field experiment and study 3 uses a unique dataset. In future studies, the underlying reasons for why this difference occurs will be investigated.

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### ***Anticipating Variety Reduces Satiation from a Current Experience***

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There are many factors that influence our enjoyment and satiation from a current experience. Among them we have, the initial utility we derive from it (Coombs and Avrunin 1977), the objective quantity that we have (Mook and Votaw 1992), the rate at which we consume it (Galak, Kruger and Loewenstein 2013; Nelson and Meyvis 2008; Nelson et al. 2009), how much variety it contains (Rolls et al. 1984), or merely how we remember it (Rozin et al, 1998) or categorize it (Redden 2008). Finding ways to delay satiation is instrumental to our happiness (Raghunathan and Irwin 2001) because when this phenomenon takes place, consumers stop enjoying their favorite stimuli as much as they did before and need to consume better ones in order to just maintain a desired level of enjoyment (Brickman and Campbell 1971). Despite its importance for wellbeing, just a few ways in which satiation can be reduced have been documented in the literature (e.g. Redden 2008).

The current research looks at a new factor that can affect satiation from a current experience, such as anticipating consuming variety in a given domain. Frequently, in our everyday lives, we find ourselves in situations where our future consumption in a given category is likely set due to decisions we have made for ourselves, or simply because the circumstances have attached us to a particular set of

conditions. For example, we choose to buy vacation packages, time shares, or season tickets for extended periods of time, lease vehicles to contracts for a set number of months or years, acquire annual country club or gym memberships, or simply buy our favorite flavor of yogurt in bulk at the local Costco. Alternatively, there are situations such as moving to a particular city for work, where we may find ourselves committed to a specific set of entertainment or dining options. What both of these cases have in common is that consumers know what their future consumption in a specific domain will be. Needless to say, we encounter this type of conditions on a regular basis, so it would be useful to learn more about what their effect is on the enjoyment of a related present experience. This research has the objective to help answer this question.

We look at cases where consumers face or elect a current experience in a given domain and are able to anticipate what their prospective future consumption on that category is. We demonstrate that in such cases people will satiate slower in the present if the prospective future episode contains variety. We also provide evidence that this effect is due to consumers' increased savoring of the current experience - potentially caused by their anticipation of a different episode in the future - and to anticipatory thoughts related to the upcoming event (Loewenstein 1987).

We tested this effect in a series of studies in which subjects rated their enjoyment of different sets of jelly beans as they repeatedly consumed them. Study 1 tested the core prediction as participants satiated less from the consumption of jelly beans when they were made believe that they could have a more varied consumption opportunity in the future. The setup employed for this experiment served as a proxy for situations where consumers are attached to a particular set of consumption options due to external circumstances, such as the options available in the city in which they live. Study 2 replicated the effect in a design where instead of externally establishing what the future consumption scenario is we determined it by asking participants about their individual preferences. This setup emulated circumstances in which participant's future consumption is entirely determined by their own choices. Moreover, this experiment demonstrated the moderating role of time distance on this effect. It shows that the effect will be stronger in cases where the future consumption opportunity will take place in a few days as opposed to in several months. Lastly, study 3 provided evidence in favor of savoring of the present and thoughts about the future as the underlying mechanisms through the use of mediational analyses. Moreover, this experiment demonstrated that the effect is domain specific and does not extend to future, varied experiences in general (e.g. anticipating listening to our favorite song), even if they are higher in valence.

In conclusion, these findings contribute to our understanding of the phenomenon of satiation in meaningful ways, as prior research had not looked at the effect that such a relevant factor at the theoretical and practical level, such as anticipating future consumption, may have on satiation from a current experience. This work also aims to motivate the study of other influences that the anticipation of an upcoming experience may have on our enjoyment and satiation from a current, related episode.

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### ***The Backfire Effect of Emphasizing Goal Importance for People with Low Self-Control***

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As goal-driven creatures, humans tend to put their best effort into endeavors that they deem as important—at least that is what prior research would suggest. Prior studies indicate that consumers allocate more self-regulatory resources to achieving subjectively important goals (Carver 2004; Köpetz et al. 2011). Our findings support these assertions for individuals with high self-control but not those low in self-control. Individuals chronically low in self-control tend to make goal-incongruent decisions when conflicting goals

are more important. We examine the key interaction between goal importance and self-control across four studies and provide evidence of the underlying processes related to desire and self-efficacy.

In study 1, participants assessed the importance of a decision involving a tempting purchase and then were asked in a projective purchase scenario (adapted from Dholakia et al. 2006), to “imagine that you are at one of your favorite stores and you see a nice jacket on sale that you didn’t plan to buy.” The likelihood of buying the jacket was our dependent variable of situational self-control. We then asked participants to complete the short-form self-control scale (Tangney et al. 2004) and indicate gender.

To test our prediction, we ran a regression analysis using self-control, importance rating, and their interaction as predictors of the likelihood to purchase. The self-control  $\times$  importance interaction was significant ( $F(1, 227) = 6.81, p < .01$ ; see figure 1). We analyzed effects for low and high self-control at one SD below and above the self-control mean. Individuals with lower self-control indicated a higher likelihood of purchasing the jacket ( $\beta = 0.46, t = 3.76, p < 0.001$ ) when importance was greater versus lesser. These findings provide preliminary evidence of our hypothesized backfire effect as those with lower self-control were significantly more likely to purchase the jacket in our scenario when the decision was viewed as more personally important versus less important.

In study 2, we introduced the situational importance of goals by manipulating importance in the personal finance domain by asking participants to rank a set of goals from most (1) to least (5) important. “Managing one’s finances carefully” was included in both conditions. We set up the manipulation to contrast the financial goal from other goals, suggesting the financial goal as relatively more or less important. Participants next read a projective self-control purchase involving an attractive jacket similar to that used in study 1. We then collected the purchase likelihood, self-control measure, and participant gender.

We ran an ANCOVA analysis on the likelihood to purchase the jacket, using self-control, importance condition, and the interaction of the two as predictors. We included gender as a covariate participants assumed the role of a female ( $\beta = 11.37, t = 2.37, p < .02$ ). As we expected, the predicted interaction between self-control and importance was significant ( $F(1,154) = 4.66, p < .04$ ; see figure 2). We decomposed the interaction using a spotlight analysis on the low (-1 SD) and high (+1 SD) self-control groups and found that greater goal importance significantly increases the likelihood to purchase for individuals with lower self-control relative to lesser goal importance ( $\beta = 14.12, t = 2.16, p < .04$ ).

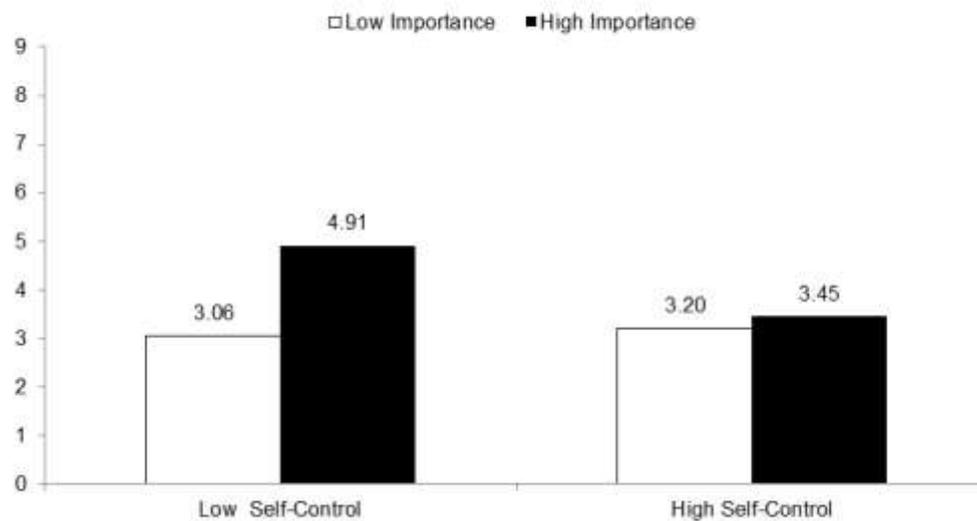
We examined the underlying process by testing measured desire as a mediator. We applied the bootstrapping technique (Preacher and Hayes 2008) and found a significant effect of domain importance and trait self-control using the proposed desire mediator as a dependent variable ( $\beta = -0.66, t = -2.35, p < 0.02$ ). The moderated mediation linking importance to desire, as moderated by self-control, and desire to purchase likelihood was significant and entirely above zero for low self-control ( $\beta = 4.18, 95\%$  bias-corrected bootstrap CI: 2.70, 18.62). The results from the mediation analysis suggest a forbidden fruit account of self-control. In study 3, we probe the backfire effect in greater depth by introducing preference strength. We predict that while highly attractive products tempt individuals at both low and high levels of self-control, moderately attractive products are more tempting only to those with lower self-control. As in study 2, participants ranked a personal finance goal against relatively unimportant or important goals. Participants next read a scenario similar to the one in study 2 but showing their most preferred or 4th most preferred product. The interaction between self-control and importance was significant for purchase likelihood of the fourth-favorite item ( $F(1, 133) = 3.94, p < .05$ ; see figure 3) but not for the favorite item. This finding suggests differential behavior for people with low and high self-control particularly when a temptation is more moderately preferred. For those with lower self-control, greater importance of the finance domain significantly increased purchase likelihood ( $\beta = 17.04, t = 3.11, p < 0.01$ ) relative to the low importance condition.

In study 4 we more directly test the role of self-efficacy in driving the effect of importance on self-control related decision making. Specifically, we use a mediation by moderation approach (Spencer, Zanna, and Fong 2005) by manipulating both self-efficacy and goal importance in a series of different ads. An importance  $\times$  self-efficacy  $\times$  continuous self-control ANCOVA was significant ( $F(1,$

152) = 5.00,  $p < 0.03$ ; see figure 4). We decomposed the three-way interaction by performing spotlight analyses at  $\pm 1$  SD on the self-control mean separately for the high and low importance conditions. We assessed the effects of self-efficacy on purchase likelihood. When importance is high, individuals with lower self-control are more likely to purchase the jacket when self-efficacy is lower ( $\beta = 20.21$ ,  $t = 2.03$ ,  $p < .05$ ). This result supports our prediction that diminished self-efficacy will impede people with low self-control from achieving highly important goals.

Our findings advance the understanding of consumer goal-striving behavior. Trait self-control influences whether assigning high importance to a self-regulatory domain motivates or deters goal-congruent choices. When a person struggles with a self-control goal, although it may seem intuitive to emphasize the importance of the goal, our research suggests that this can instead backfire for those low in self-control.

FIGURE 1  
MEAN LIKELIHOOD TO PURCHASE IN STUDY 1



NOTE. — All figures were created from analyses using continuous scores on the self-control measure. Self-control scores were graphed at 1 SD above and below the mean to represent high and low scores on the self-control measure (per procedures recommended in Aiken and West [1991]).

FIGURE 2  
MEAN LIKELIHOOD TO PURCHASE IN STUDY 2

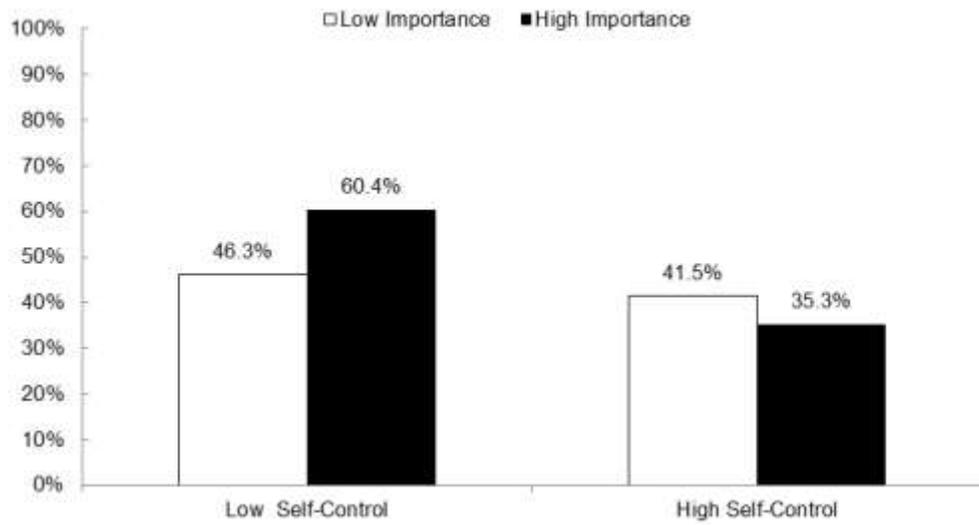


FIGURE 3  
MEAN LIKELIHOOD TO PURCHASE IN STUDY 3

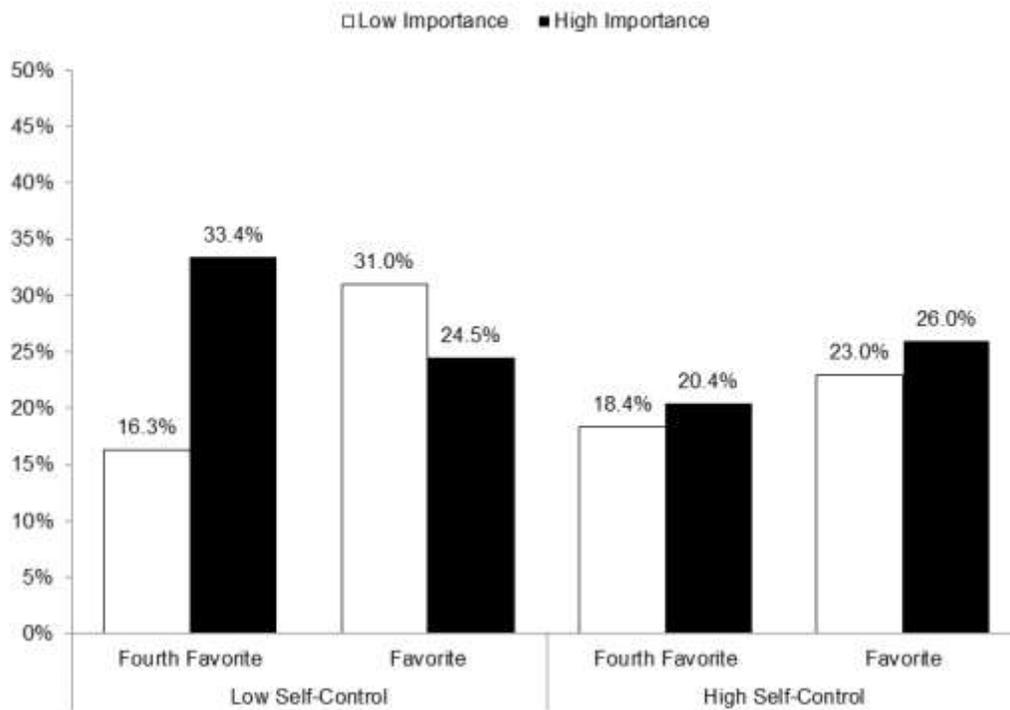
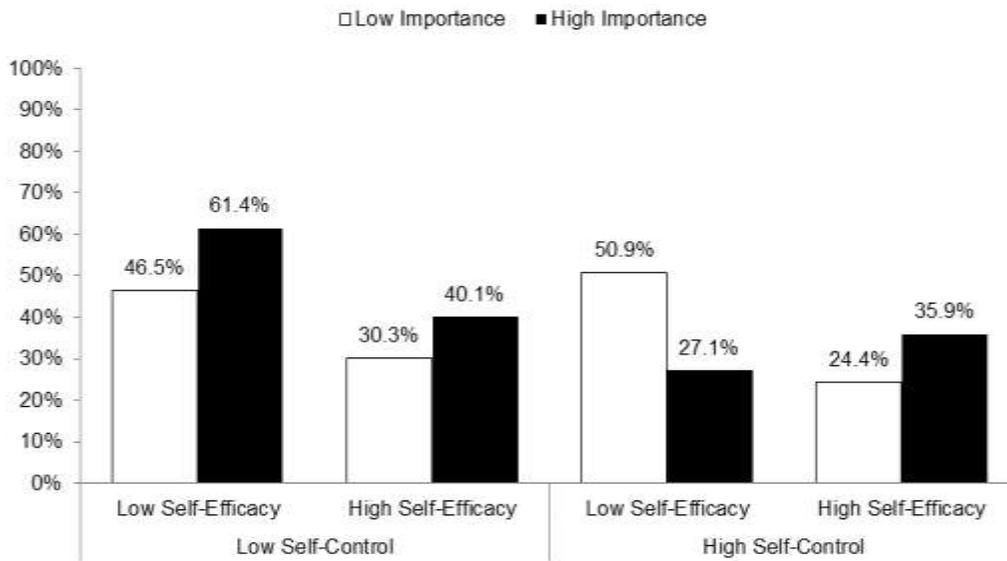


FIGURE 4  
MEAN LIKELIHOOD TO PURCHASE IN STUDY 4



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## 2.5 Individual Papers: Not All “Others” Are the Same: Relationship Type in Social Influence

**Room: ALHAMBRA**

**Chair:** Brent McFerran, Simon Fraser University, Canada and University of Michigan, USA\*

### *Missing the Bandwagon: When Non-Normative Information Wields Influence*

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Across many situations and contexts, we know that exposure to the behaviors of large groups of individuals plays a powerful role in suggesting social norms and prompting compliance, consistent with the traditional “bandwagon effect.” (Aarts and Dijksterhuis 2003; Cialdini 2009; Cialdini, Kallgren, and Reno 1990; Hogg and Terry 2001). By contrast, despite calls for attention, little is known about the potential influential power of minority behaviors (Moscovici 1976, 1980). In the present research, we question whether information on what a minority of consumers have done (i.e., non-normative information) may be as influential as information on what a majority of consumers have done (i.e., normative information).

In particular, we explore the role of consumers’ susceptibility to interpersonal influence (SII, Bearden, Netemeyer, and Teel 1989; McGuire 1968) in determining sensitivity to normative versus non-normative information. Three experiments demonstrate that as SII increases, consumers show less differentiation in their response to normative versus non-normative information; thus, for high SII

individuals, non-normative information can be just as influential as normative information. Further, we show that this effect is driven by a failure of high SII individuals to pay attention to whether information about others' behavior is normative or non-normative.

In study 1, participants viewed a web page for a set of headphones including a picture, a list of features, and a consumer review advising purchase. In the normative information condition, participants saw that 82 of 104 individuals viewing the product purchased the headphones. In the non-normative information condition, participants saw that four of 104 individuals viewing the product purchased the headphones. After reviewing the headphones, participants indicated their likelihood of purchase on a scale from 0 "Very Unlikely" to 100 "Very Likely." Upon completing approximately 10 minutes of filler tasks, they then completed the SII measure, which was indexed for analysis ( $\alpha = .90$ ).

We found a significant interaction between normative cue and consumer SII ( $F(1, 44) = 4.23, p < .05, \beta = 5.99$ ). A floodlight analysis (Hayes and Matthes 2009) revealed that individuals scoring below an average value of 3.65 on the seven-point SII scale were more likely to purchase the headphones in the normative information condition compared to the non-normative information condition. By contrast, normative cues did not generate different levels of compliance among higher SII individuals (individuals scoring above 3.65 on the SII measure).

Study 2 replicated this effect using a conjoint task in which individuals evaluated 27 cars varying on three dimensions (price, performance, labor standards of manufacturer). Before rating the cars, participants viewed a recommendation from a friend. In the normative information condition, the friend informed participants that most people take manufacturer labor practices into account when considering a vehicle. In the non-normative information condition, the friend informed participants that most people do not take labor practices into account when purchasing a vehicle. In both conditions the friend advised considering labor practices as an important factor in the decision. The dependent variable was the conjoint weight for the labor practice dimension.

We again found a significant interaction between normative cue and consumer SII ( $F(1, 72) = 4.42, p < .05, \beta = 0.16$ ). Low SII individuals (below 2.96 on the SII scale) weighted labor practices more heavily when receiving normative vs. non-normative information. However, normative cues did not affect high SII individuals' weighting of labor practice in their evaluations of the vehicles.

Study 3 tested whether the failure of high SII individuals to differentially weight normative and non-normative information was attributable to attentional differences. Participants imagined shopping in a store and viewed a public service announcement (PSA) advising them to consider recycled content when purchasing facial tissues. The consensus manipulation was similar to the one used in Study 2 (most people consider recycled content vs. only 25% of consumers consider recycled content). Further, we manipulated the presence of an attentional cue. In the attentional cue-present condition, participants read that good decision makers consider all information when making a decision. In the attentional cue-absent condition this reminder was withheld. Participants then viewed a box of tissues made from 100% recycled paper available for purchase. Our dependent measure asked how likely participants would be to continue searching for a different tissue on a scale from 0 "Very Unlikely" to 100 "Very Likely." Higher intention to continue searching indicates lower compliance with the recommendation in the PSA.

Results revealed a significant three-way interaction among the normative cue condition, attentional cue condition, and SII ( $F(1, 120) = 8.46, p < .01, \beta = 6.49$ ). In the attentional cue-absent condition, the interaction between normative cue and SII replicated studies 1 and 2's results; low SII participants were less likely to keep searching when they saw normative vs. non-normative information. And again, higher SII participants were equally likely to keep searching regardless of normative cue condition. However, when an attentional cue was present, higher SII participants (above an average value of 3.12) differentiated between messages, showing higher compliance when the message was normative rather than non-normative.

Study 4 used a broad-scale correlational approach to isolate characteristics associated with SII that might be either targetable based on external characteristics or identified based on behavioral or psychographic information. Results indicate that low SII individuals tend to be older, married, and female, while high SII is observed among young, single males, suggesting that marketers can use these findings to predict or develop communications that will be maximally effective for specific segments.

This work extends prior theory that established high SII individuals' tendency to emulate others (Bearden et al. 1989), fit in, and avoid attention (Batra, Homer, and Kahle 2001; Wooten and Reed II 2004), arguing that the drive of high SII individuals to do so may override certain aspects of information processing. From a practical perspective, results suggest that with high SII individuals firms do not need to devote marketing efforts to building a majority bandwagon. Theoretically, our findings qualify prior theories that suggest that non-normative appeals should be generally ineffective when compared to normative appeals.

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### ***The Entourage Effect***

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Status and social hierarchies are ubiquitous in human societies. In marketing, status is commonly signalled by brand names, but it can also be endowed by loyalty program rewards, where certain customers receive a disproportionate share of a firm's attention or resources. This preferential treatment can take for example the form of dedicated check-in lines, special discounts, and exclusive lounges for profitable/loyal customers – perks that are designed to make these individuals feel special. While research has examined the implications of consumers receiving versus not receiving preferential treatment (i.e., VIPs vs. non-VIPs), many of these preferential treatment programs allow VIPs to share their special benefits with one or more guests (i.e., an entourage). Does the presence of an entourage impact a VIP's felt status during preferential treatment? The purpose of the present research is to empirically test for an "entourage effect", which we define as an increase in a VIP's felt status during preferential treatment due to the presence of accompanying guests.

The effect of adding guests on a VIP's felt status is not apparent from past literature. On the one hand, guests potentially add to the *total* number of consumers receiving special treatment; thus, the overall scarcity of benefits bestowed on the VIP are reduced. This should reduce felt status (e.g., Bourdieu, 1986; Brock, 1968; Cialdini, 2001; Lynn, 1989; Podolny, 2005; Sharma & Alter, 2012; Verhallen, 1982). As well, Sheepers (2009) shows that high status group members are threatened when group boundaries (such as those separating VIPs from non-VIPs) are perceived to be less stable, meaning that a VIP cannot be singled out from his or her entourage. Finally, when someone receives special treatment due to simply knowing the "right" person, it denigrates the status associated with the treatment for those who rightfully earned it.

On the other hand, the presence of an entourage may actually increase a VIP's felt status. For centuries, accumulating slaves, servants, or trophy wives was a signal of one's social stature. Social comparison theory also suggests that the presence of an entourage may provide a VIP with a relative advantage (over those VIPs who do not possess one) and this in turn might enhance his/her felt status. As well, having an entourage could increase a VIP's feelings of connectedness with others, as high levels of social connection and high status have long been linked in sociology (e.g., Bonacich, 1987; Bourdieu, 1986; Burt, 1997, 2010; Blau, 1964; Granovetter, 1973, 1983; Podolny, 2005; Putnam 1995).

Given that a clear prediction regarding the impact of an entourage on a VIP's felt status is not readily apparent based on previous research, we presented subjects with four different situations, which varied in entourage size but held constant the share of the total available preferential treatment the VIP had:

- a. You have one ticket, so you go by yourself, and there are 4 additional attendees
- b. You have two tickets, so you bring one guest, and there are 8 additional attendees
- c. You have six tickets, so you bring five guests, and there are 24 additional attendees
- d. You have twenty tickets, so you bring nineteen guests, and there are 80 additional attendees

A scarcity account would suggest everyone should select option A; however, given this scenario and choice set, 69% of respondents chose a different option.

We extended this finding in Study 1, which was a field study at a professional football game. We rented a luxury suite and invited regular patrons up to the suite for a quarter. If a patron indicated that s/he had a friend(s) with whom s/he was attending the game, the guest(s) were admitted to the luxury suite as well. Results showed that those who brought an entourage experienced higher felt status from the experience than those who did not, and also that the larger one's entourage, the greater the status they felt.

Given study 1's results are correlational, the remaining studies used experimental methods and scenarios. Study 2 was a football scenario where entourage (yes/no) was crossed with preferential treatment (yes or no), the latter of which was manipulated by having participants seated in either a luxury suite or in the endzone. Results showed participants felt higher status with an entourage, but only when experiencing preferential treatment. A follow-up study also found that the entourage effect held with consumers who had experience with VIP status.

Study 3 manipulated whether the entourage was physically present with the VIP during preferential treatment, either by sitting in the luxury suite with them, or in a different but identical suite in another part of the stadium. The effect only held when the VIP was seated with the entourage, showing that a mere gifting of resources to others is not driving the effect.

Studies 4 and 5 sought to examine the process. We changed the context to a dinner with a political figure. In study 4, we also included a condition where the VIP was attending with other VIPs (i.e., solo, with an entourage, or with other VIPs). We measured several potential mediators, including the belief that the entourage felt indebtedness to him/her, social connectedness, and the belief that one was more visible. Results revealed the effect only held when the others were members of one's entourage, and were mediated by heightened feelings of social connection with this group. Study 5 confirmed our process account by manipulating feelings of connection directly, and showed when disconnection was induced, even with an entourage, the effect was attenuated. Study 6 compares first and third-person accounts, and shows that while the entourage effect holds for oneself, outsiders tend not to endow additional status upon those with an entourage.

In sum, our research suggests that consumers feel more status from being able to share preferential treatment alongside their guests, even if it means the rewards bestowed on them are made more widely-available.

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### *Is Variety the Spice of Love?*

Jordan Etkin, Duke University, USA\*

Relationship partners do many things together. They eat dinner, watch television, discuss their days, and potentially even take art classes or travel. Different couples, however, vary in the variety of joint-activities they engage in. Some couples tend to do relatively similar activities; watching different TV shows on consecutive nights or eating slightly different dinners. Other couples tend to do relatively dissimilar or varied activities; watching TV one night, going out to dinner the following night, and playing tennis the next. Spending time together is positively correlated with relationship quality (Kilbourne, Howell, & England, 1990; Kingston & Nock, 1987; Orden & Bradburn, 1968; Orthner, 1975), but might the *variety* of activities couples do together matter, and if so, how?

We suggest that the impact of activity-variety on relationship investment depends critically on where partners see themselves in the course of their relationship. Socio-emotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999; Carstensen, Gross, & Fun, 1997) suggests that how much time people see ahead of them (i.e., future time abundance) varies over the life course. Perceptions of future time abundance, in turn, impact what people value. When people see lots of time ahead of them, for instance, they value feeling excited, whereas when they see little time ahead, they value feeling calm (Mogilner, Aaker, & Kamvar, 2012; Mogilner, Kamvar, & Aaker, 2011).

Perceptions of future time abundance should also vary in romantic relationships. Couples who think they are in early stages of a committed relationship should see much time ahead, whereas people who think they are in later stages should see less time ahead (relative to time passed). We suggest that these differences will affect the emotions people value. When partners perceive their relationship as relatively new, or short, they should value excitement in the relationship, but partners who perceive their relationship as more established, or long, should value stability in the relationship.

These differences in valuation, in turn, should shape how similar versus varied joint-activities impact motivation and satisfaction with the relationship. Variety, by definition, is associated with stimulation and change (Berlyne, 1970; Khan, 1995; Raju, 1980). Consequently, we predict that varied joint-activities should make a relationship feel more exciting. Similar joint-activities, in contrast, should increase feelings of stability by reinforcing a sense of routine. Thus, engaging in varied activities should increase relationship investment when partners perceive the relationship to be in its early stages, whereas similar joint-activities should increase relationship investment when a relationship seems to be in its later stages.

Four experiments support these predictions. Across studies we assess the impact of joint-activity variety on relationship investment, including expenditures of time, energy, and money in the relationship. In experiment 1, we manipulated perceptions of relationship duration (i.e., make it seem short vs. long) and asked them to list three similar or three different activities done with their partner in the past week. They then reported how much money they would spend treating their partner to dinner. Results suggest that participants made to see their relationship as short were willing to spend more on dinner after listing varied (vs. similar) joint-activities ( $M_{\text{varied}} = \$180.00$ ,  $M_{\text{sim}} = \$111.25$ ;  $F(69) = 6.57$ ,  $p < .05$ ). Participants made to see their relationship as long, in contrast, were willing to spend more on dinner after listing similar (vs. varied) joint-activities ( $M_{\text{sim}} = \$161.00$ ;  $M_{\text{varied}} = \$111.18$ ;  $F(69) = 3.57$ ,  $p = .06$ ).

Experiment 2 replicated this basic interaction, manipulating joint-activity variety in a more controlled way and measuring how likely participants were to avoid an attractive member of the opposite sex. Results are consistent with experiment 1, demonstrating that varied (similar) joint-activities increase relationship investment when relationships seem short (long).

Experiment 3 tested the proposed process driving these effects. We found joint-activity variety increased relationship investment by increasing feelings of excitement when relationships seemed short (95% CI: .08 to .98), but not long (95% CI: -.92 to .14). In contrast, joint-activity variety decreased relationship investment by decreasing feelings of stability when relationships seemed long (95% CI: -.50 to -.04), but not short (95% CI: -.05 to .35). These results support our predictions that when relationships seem short (long), engaging in more varied (similar) joint-activities increases relationship investment by enhancing feelings of excitement (stability).

Our final experiment tested whether these findings extend to the field. Particularly for heterosexual men, giving flowers to one's partner is a standard way of showing caring and devotion. We stopped men walking in a large downtown metropolitan area and gave them a survey that manipulated relationship duration and joint-activity variety. Then, as thanks, we gave them the opportunity to pick up a free rose (from a flower shop a few blocks away) to give to their significant other. We tracked whether participants redeemed the rose. Results support our predictions. In the short duration condition, more men picked up the rose after listing different joint-activities ( $M_{\text{diff}} = 14.3\%$ ,  $M_{\text{sim}} = 2.9\%$ ;  $\chi^2 = 2.67$ ,  $p = .10$ ). In contrast, in the long duration condition, more men picked up the rose after listing similar joint-activities ( $M_{\text{sim}} = 17.6\%$ ,  $M_{\text{diff}} = 8.1\%$ ;  $\chi^2 = 3.98$ ,  $p < .05$ ).

Maintaining good romantic relationships is an important part of life. Indeed, satisfying relationships are crucial for both physical and psychological health (Baumeister & Leary, 1995). While popular wisdom suggests that people should incorporate more variety into their relationships, our findings indicate that this may not always be the best approach. Doing varied joint-activities seems to be particularly, if not uniquely beneficial early on in relationships. Later in relationships, or in cases where people see their relationship as long, doing similar joint-activities should be more beneficial.

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### ***Leaders or Followers? The Relationship between Social Status, Conformity, and Communication Patterns in Online Social Networks***

Edith Shalev, Technion, Israel\*

Hadas Eiges, Technion, Israel

Social networking sites (SNSs; e.g., Facebook) have become immensely popular and marketers are trying to understand how consumers influence each other on this platform. Research has extensively examined *who influences* others on SNSs (Goldenberg et al. 2009; Nair, Manchanda, and Bhatia 2010), but has largely overlooked the complementary key question of *who is influenced* by others (Watts and Dodds 2007; Berger 2012). For example, who is prone to conform to the popular opinion on a topical controversy? Our research focuses on a fundamental determinant of susceptibility to influence, namely social status, and investigates its manifestations and behavioral correlates in SNSs.

The “influentials hypothesis” (Watts and Dodds 2007; Keller and Berry 2003) identifies two distinct populations within social networks: a small subset of influentials, or leaders, and a larger crowd of followers (Van den Bulte and Joshi 2007). Research further associated “followers” with low (Iyengar Van den Bulte and Valente, 2011) or medium (Iyengar, Han and Gupta 2009; Phillips and Zuckerman 2001) social status, and “influentials” with high-status (Goldenberg et al. 2009). However, herein we posit that high-status individuals may be more likely to “follow” and adhere to group norms than low-status members. This may be because high-status members assign greater importance to social relationships than low-status members (Bernheim 1994). As such, they appreciate the role of conformity and openness to social influence in building and sustaining relationships (Deutsch and Gerard 1955; Kelman 1961), and adhere to social norms.

The current research examines the relationship between social status and susceptibility to group influence in SNSs. Using an innovative methodology, it makes several contributions. *Foremost*, we continuously tracked actual behavior of members in SNSs for two weeks. We set-up designated SNSs for undergraduate students, that looked and felt like Facebook. Participating students were assigned to SNSs with their friends and acquaintances and freely interacted for two weeks, while we monitored their connections and activities. *Second*, we employed multiple status metrics. This was done to ensure a valid and thorough measurement of social status and to understand the role of metric type in our domain. Past research has shown that different status measures can yield different

outcomes (Iyengar et al. 2011). In particular, self-reported measures diverge from external measures such as ‘degree centrality’ – the number of connections an individual has within his network. To this end, we measured ‘self-report’ status, ‘other-report’ status and ‘degree centrality’ for each participant. To facilitate comparability between the self- and the other-report measures, participants rated themselves and each of the other members using the same scale. Utilizing multiple status metrics enabled us to examine how these measures correlate and compare their associations with susceptibility to influence and with online communication patterns. *Third*, our susceptibility to influence measure focuses on attitudes and opinions rather than on product adoption. We posted a single-question opinion poll in each SNS, once every other day, and asked participants to publicly respond to it. For each poll, we calculated the difference between a participant’s opinion rating and the average rating of the participant's SNS. Smaller deviations from the group mean indicate greater conformity. *Fourth*, we employed intimate, strongly-tied, social networks. Such SNSs are critical for understanding opinion leadership, yet are underrepresented in extant research. The size of the SNSs was designed to facilitate acquaintance between members and allow more reliable rating of all SNS members’ status. *Finally*, to ensure reproducibility of results, in face of the limited size of each individual SNS, we recruited multiple SNSs; 175 participants were assigned to 14 SNSs ranging from 6 to 40 members<sup>3</sup>.

In line with Iyengar et al. (2011), we find that different social status measures assign high-status to different SNS members. While ‘other-report’ and ‘degree centrality’ are positively associated ( $r = .51, p < .01$ ), ‘other-report’ and ‘self-report’ are not correlated ( $r = .07, p = .41$ ), and ‘degree centrality’ and ‘self-report’ are weakly correlated ( $r = .17, p = .03$ ).

Given the divergence between self-reported and external status scores, it is not surprising that the findings about susceptibility to influence were metric-dependent. The ‘other-report’ status measure was negatively correlated with deviation from the group opinion ( $r = -.27, p < .01$ ), suggesting that high-status holders display greater conformity to the group opinion than low-status holders. An alternative explanation for this conclusion may posit that the group followed the opinion of its high-status holders, which would suggest that high-status holders are leaders, and not followers. However, the order in which SNS members responded to the opinion polls was unrelated to any of the social status measures, thereby ruling out this possibility. A similar, yet weaker association between conformity and status was obtained using ‘degree centrality’ ( $r = -.17, p = .02$ ). In contrast, with ‘self-report’, status and conformity were uncorrelated ( $r = .07, p = .38$ ). We did not find evidence for a non-linear relationships between conformity and any of our social status measures.

Our interpersonal communication data lend some support to the speculation that high-status individuals tend to conform due to high social awareness. An examination of participants’ online activities revealed that high-status members are more active, comment on a larger number of other members' status updates, ask more questions, use emoticons more frequently, and exhibit a higher ratio of interactive to passive behaviors. Notably, compared to the ‘self-report’ measure, ‘other-report’ status and ‘degree centrality’ were better able to differentiate between high- and low-status members based on their communication patterns.

In conclusion, using external status measures, we find that high-status members are more likely than low-status members to follow group norms. This effect is related to the greater sociability and active communication patterns in SNSs of high-status holders.

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<sup>3</sup> The size of each SNS was randomly determined and unbeknownst to participants prior to its launch; this ensured that SNSs did not differ in the extent to which their members were sociable. For example, the average number of FB friends that participants had was similar across SNSs.

## **2.6 Conversations: New Directions in Cognitive Science**

**Room:** MICHELANGELO

**Discussion Leader:** Stijn van Osselaer, Cornell

Cait Lamberton, Pittsburgh

Andrew Perkins, IVEY

### **BREAK**

**11:00 am – 11:15 am**

**BALLROOM FOYER**

### **PLENARY SESSION 1 – Paul Rozin, University of Pennsylvania**

**11:15 am – 12:15 pm**

**TRIANON**

### **LUNCHEON AND PRESIDENTIAL ADDRESS**

**12:30 pm – 2:00 pm**

**VERSAILLES**

### **SESSION 3**

**2:15 PM - 3:30 PM**

## **3.1 Symposium: New Directions in Hedonic Adaptation for Consumer Well-Being**

**Room:** BALMORAL

**Chair:** Kelly Kiyoon Lee, Washington University in St. Louis, USA

### ***Love it Longer: Sentimental Value Slows Hedonic Adaptation***

Yang Yang, Carnegie Mellon University, USA\*

Jeff Galak, Carnegie Mellon University, USA

One of the ultimate goals that consumers pursue is to maximize their happiness (Russell, 2012). Although any improvement in acquisition and consumption may increase the level of happiness, the increased happiness may not persist. One reason for this is hedonic adaptation, defined as a decrease in hedonic response to a stimulus over time (Frederick & Loewenstein, 1999; Helson, 1964).

An important question posed to consumer researchers is – how can we slow unwanted hedonic adaptation? Recent research has greatly advanced our understanding of hedonic adaptation by examining how product or experience features influence hedonic adaptation (Bar-Anan, Wilson, & Gilbert, 2009; Carter & Gilovich, 2010, 2012; Galak, Kruger, & Loewenstein, 2013; Kurtz, Wilson, & Gilbert, 2007; Nelson & Meyvis, 2008; Nicolao, Irwin, & Goodman, 2009; Redden, 2008; Temple et al., 2008; Van Boven & Gilovich, 2003; Wilson et al., 2005).

All of this work, however, makes the assumption that the sole inputs to hedonic adaptation are the product features. We suggest, instead, that the happiness a consumer derives from a product is a function of at least two components: feature-related utility and sentimental value. We define sentimental value as the value added to the feature-related utility of a product which is associated with

valuable personal memories relating to the source of the product. For example, a product can have sentimental value because it belonged to or was used by a family member, because it was received as a gift from a person one loves, or because it is a token that represents a particular life event (e.g., a souvenir from a vacation).

In four studies, we demonstrate that sentimental value slows hedonic adaptation and examine the process underlying the effect. Study 1 is an initial demonstration of the slowing effect of sentimental value on adaptation. Participants listed either all gifts they received or all purchases they made during a Christmas holiday season, and indicated happiness with each item across two time periods, shortly after acquisition and 45 days later. We found that gifts were more sentimentally valuable than their purchased counterparts. Consumers adapted to gifts more slowly than to purchases. That is, participants who were asked to indicate the gifts that they received were more likely to still have those gifts 45 days later, be happier with them, and demand a higher WTA than participants who were asked to indicate the objects that they purchased. Importantly, this is true controlling for the types of objects reported. Finally, all of these effects were mediated by the degree of sentimental value reported for each item.

In Study 2, we controlled for the item in question and experimentally manipulated the sentimental value of items in the lab. Study 2 consisted of two parts spaced approximately three months apart. During the first part, in thanks for completing a short task, participants received a gift either from the experimenter (i.e., the low-sentimental value condition) or from their romantic partner (i.e., the high-sentimental value condition). Specifically, participants in the low-sentimental value condition were told: “Thank you for your participation. You also get a reward.” Each male participant was then given a calendar toy and each female participant was given a man-made grass toy. In contrast, participants in the high-sentimental value condition were told: “Thank you for your participation. You also get an opportunity to choose between two gifts.” The gifts were placed inside opaque boxes labeled “for myself” and “for my partner” and participants could not see inside the boxes. To ensure that participants in both conditions received the same item, male participants in the high-sentimental value condition always had the calendar toy in the box labeled “for myself” and the grass toy in the box labeled “for my partner,” and female participants had the opposite. In this way, when both participants chose to have their partners receive the gift, men would always receive the calendar toy and women would always receive the grass toy, just like participants in the low-sentimental value condition. Next, if both participants chose to give the gift to their partner, the experimenter asked them to both, simultaneously, walk to the middle of the room to exchange gifts. Finally, participants indicated their happiness with the gift across two time periods, shortly after acquisition and 3 months later. Twenty-six out of 28 couples who were in the high-sentimental value condition, chose to give the gift to their partner. Results showed that gifts received from participants’ partners had a higher sentimental value than gifts received from the experimenter. Participants adapted to gifts received from their partners more slowly than to gifts received from the experimenter. Also, participants demanded a higher selling price for the gifts from their partners than for the rewards from the experimenter.

Studies 3 and 4 are designed to understand why sentimental value slows hedonic adaptation. In Study 3, participants were asked to recall a good they received in the previous year which has either lots or little sentimental value to them, listed all the thoughts they had when thinking of the object, and indicated their happiness with the item at the moment they got it and now. Participants’ thoughts were then coded into two categories: thoughts related to the item itself (e.g., appearance, function, specifications, price, and how they feel about the item itself), and thoughts related to aspects other than the item itself (e.g., memories induced by the product, and how they feel about those memories). We found that the nature of participants’ thoughts mediated the effect of sentimental value on the decrease in hedonic reaction, suggesting that people adapt to high-sentimental goods more slowly than to low-sentimental goods because they focus on aspects other than the products themselves. Following the same paradigm, Study 4 further demonstrates that whereas feature-related utility decreases for all products with time, sentimental value does not. Consumers adapt more slowly when products are highly sentimentally valuable because the sentiment acts as a buffer against the effect of the decrement in feature-related utility on hedonic adaptation.

## *Jimmy Choo vs. Nike: Experienced Adaptation for Hedonic vs. Utilitarian Products*

Kelly Kiyeeon Lee, Washington University in St. Louis, USA\*

Cynthia E. Cryder, Washington University in St. Louis, USA

Stephen M. Nowlis, Washington University in St. Louis, USA

Humans are highly sensitive to changes in their environment, but over time, tend to adapt to them. Events such as a romantic breakup can be experienced intensely at first, but diminish in influence more quickly than anticipated (Gilbert et al. 1998). At a perceptual level, initial changes in brightness or temperature are quite noticeable, yet can become a new normal as adaptive processes kick in. Such adaptation has been theorized to be advantageous from the perspective that if negative events persist, they are likely unchangeable and therefore are unworthy of additional attention or effort. Similarly, if positive events persist, they are unlikely to disappear and thus energy may be better directed towards new opportunities (Frederick & Loewenstein, 1999). The pervasive tendency for humans to become less affected by changing circumstances has led scholars to conclude that adaptation to “new products and changing circumstances is a ubiquitous feature of human psychology” (Wang, Novemsky, & Dhar, 2009).

In this paper, we investigate whether adaptation is indeed a ubiquitous feature of changing circumstances, or whether such adaptation is relegated to particular contexts. Specifically, in the domain of consumer experience, we test whether consumers adapt uniformly to hedonic and utilitarian products. Hedonic products are more emotionally relevant and therefore likely to capture attention at the time of purchase, prompting great expectations of what these products can offer. Utilitarian products, in contrast, are less likely to inspire such high hopes. We propose, therefore, that because consumers have greater emotional expectations for consuming hedonic products, consumers will exhibit a steeper rate of adaptation to hedonic relative to utilitarian products.

We first conducted a pilot study testing consumers’ lay beliefs about adaptation to hedonic versus utilitarian products. Participants were asked to predict how much they would want a particular product both *prior to their purchase* and *6 months after their purchase*. For hedonic products, MP3 players (males) and fun dress shoes (females) were used whereas for utilitarian products, printers (males) and practical shoes (females) were used. Results showed that participants predicted the same rate of decrease in wanting from pre-purchase to post-purchase for both hedonic and utilitarian products.

In Study 1, we tested whether consumers’ lay belief about adaptation would hold for products that they actually have consumed over time. Participants were asked to rate how much they wanted an MP3 player (hedonic product) or a printer (utilitarian product) that they had bought, rating their wanting both *prior to the purchase* (pre-purchase) and *at the time of completing the survey* (post-purchase). Participants showed a greater decline in wanting over time with MP3 players ( $M_{\text{pre-purchase}} = 5.93$  vs.  $M_{\text{post-purchase}} = 3.91$ ;  $F(1, 67) = 935.82$ ,  $p < .001$ ) than with printers ( $M_{\text{pre-purchase}} = 5.24$  vs.  $M_{\text{post-purchase}} = 4.29$ ;  $F(1, 71) = 865.87$ ,  $p < .001$ ). This finding suggests that contrary to participants’ lay belief, consumers exhibit greater adaptation to hedonic than to utilitarian products.

In Study 2, we tested whether the observed adaptation effect in the hedonic condition could be attributed to measuring participants’ wanting at two points at time. Making the passage of time salient has been shown to prompt predictions of adaptation, when they otherwise would not occur (Wang et al., 2009). To address this possibility, we asked some participants to indicate their wanting of a hedonic product (expensive shoes) *only after purchase* without indicating pre-wanting (*post-purchase* condition) and compared this post-wanting with the post-wanting rated by other participants who indicated *both pre-wanting and post-wanting* (*pre- and post-purchase* condition). Participants’ post-wanting did not differ between the pre- and post-purchase condition ( $M = 4.46$ ) and the post-purchase condition ( $M = 4.22$ ;  $t(102) = .69$ ,  $p = .49$ ). Consistent with previous findings, participants in the pre- and post-purchase condition exhibited a significant decline in wanting over time ( $M_{\text{pre-purchase}} = 5.52$  vs.  $M_{\text{post-purchase}} = 4.46$ ;  $F(1, 53) = 21.14$ ,  $p < .001$ ). These results suggest that the adaptation observed to hedonic products is not simply an artifact of making time progression salient.

The purpose of Study 3 was to investigate how hedonic adaptation influences consumers' regret from their purchases. Participants were asked to rate both their pre-wanting and post-wanting for either a hedonic or utilitarian product. In this study, we used a new operationalization of hedonic versus utilitarian items: expensive shoes in the hedonic condition and inexpensive shoes in the utilitarian condition. Pre-tests confirmed that expensive shoes are considered significantly and substantially more hedonic than inexpensive shoes and inexpensive shoes are considered significantly more utilitarian than expensive shoes. After indicating wanting, participants rated their purchase on financial wisdom scales: "To what extent would you say this purchase is money well-spent?" and "To what extent do you think the money spent on this purchase would have been better spent on something else—some other type of purchase that would have made you happier?" (Van Boven & Gilovich, 2003). Consistent with the findings in Study 1, participants showed a greater decline in wanting ( $M_{\text{difference}} = 1.71$ ) for expensive rather than inexpensive shoes ( $M_{\text{difference}} = 0.93$ ;  $t(55) = 2.00, p = .05$ ). Importantly, the greater adaptation to expensive shoes (vs. inexpensive shoes) was associated with greater regret for their spending. Participants indicated that inexpensive shoes purchases ( $M = 7.49$ ) represent money better spent compared with expensive shoes purchases ( $M = 6.69$ ;  $t(61) = -2.29, p < .05$ ). Participants were also more inclined to say that the money spent on expensive shoes ( $M = 3.93$ ) could have been better spent elsewhere compared to the money spent on inexpensive shoes ( $M = 2.87$ ;  $t(61) = 2.54, p < .05$ ).

Taken together, the current research offers a new moderator for hedonic adaptation as well as illustrating a negative consequence of consumer spending.

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### ***Favorites Fall Faster: Greater Liking leads to Greater Satiation***

Alexander DePaoli, Stanford University, USA\*

Uzma Khan, Stanford University

Satiation is the process by which we get tired of good things (Coombs & Avrunin, 1977; Redden, 2008) or by which the intensity of our experience decreases with time (Frederick & Loewenstein, 1999). Naturally, no one wants good things to go bad, so determining how this process works is of great interest to both marketing researchers and practitioners.

In the current research, we investigate the role of initial product liking (i.e., how much a consumer likes a product at the beginning of a consumption experience), and its impact on satiation. Ex-ante, any relationship is not clear. An obvious possibility is that higher initial liking might reduce satiation due to a persistence of greater utility. However, consumers may also satiate to more liked products more quickly: some evidence suggests that highly liked stimuli elicit stronger activation in the brain's reward circuits, and this greater activation may possibly lead to greater depletion within a discrete consumption period (e.g., Small, Jones-Gotman, Dagher, 2003; Critchley & Rolls, 1996; Matsumoto & Hikosaka, 2009).

In four studies, we test this relationship between initial liking and rate of satiation, and find evidence that for initially more liked products, participants satiate at a much faster rate than for initially less liked products.

In Study 1, participants were presented with one of two Monet paintings pretested such that our population significantly preferred one over the other ( $p < .0001$ ). Consistent with existing procedures (e.g., Redden, 2008; Galak, Redden, & Kruger, 2009), participants viewed either the More-Liked or the Less-Liked painting, and rated their liking of the image (on an unmarked 100-point scale) over 10 periods. The results indicate that participants did indeed initially prefer the More-Liked image ( $M = 71.6, SD = 20.9$ ) over the Less-Liked image ( $M = 42.4, SD = 27.4$ ;  $p < .0001$ ). More interestingly, participants viewing the More-Liked image satiated at a faster rate (i.e., their slope was steeper) than did participants viewing the Less-Liked image ( $B = -3.74, p < .01$ ). Furthermore, participants

across both conditions who initially liked their image more satiated more quickly ( $B = -0.24, p < .001$ ), suggesting that individual preferences are also predictive of rate.

Study 2 demonstrates that this effect also occurs when initial preferences are experimentally manipulated. Past research suggests that having a choice influences outcome satisfaction (e.g., Iyengar & Lepper, 2000; Botti & McGill, 2011), so we manipulated initial liking using choice. All participants viewed the same image, but they were either told they could choose the stimulus they would view, or that it would be randomly assigned to them. This choice manipulation produced a significant difference in initial liking ( $M_{\text{choice}} = 27.42, SD = 46.56$  vs.  $M_{\text{no-choice}} = 46.64, SD = 31.91; p < .03$ ). In turn, high initial liking again predicted a faster rate of satiation ( $B = -0.04, p < .01$ ). The choice manipulation did not directly predict the rate of satiation ( $B = .16, ns$ ), but the difference it produced in initial liking did, thus the results were an effect of higher initial liking, not an effect of "choice."

Because this process hinges on "liking," which is an affective evaluation, we predicted that we would only observe the effect for hedonic (i.e. affect-rich) rather than utilitarian products (Khan, Wertenbroch, & Dhar, 2004). This idea not only allows us to test an important boundary of the effect, but also provides insight into the process of satiation itself, e.g. that it is perhaps not a result of cognitive fatigue or perceptual adaptation, but rather an affective process of response peak and attenuation (e.g., Brickman, Coates, & Janoff-Bulman, 1978).

Study 3 builds on the notion that products often have both hedonic and utilitarian features (e.g. Alba & Williams, 2013). We predicted higher liking would lead to faster satiation to hedonic features and not to utilitarian features. Participants listened to a ringtone, and were asked to rate either their enjoyment (hedonic feature) or the effectiveness (utilitarian feature) of the ringtone over 10 periods. Enjoyment ratings fell significantly from  $M = 57.90$  ( $sd = 24.75$ ) to  $M = 32.71$  ( $sd = 26.53; t(117) = 5.38, p < .001$ ), whereas Effectiveness ratings only fell marginally from  $M = 66.26$  ( $sd = 22.52$ ) to  $M = 58.18$  ( $sd = 28.97; t(111) = 1.70, p = .09$ ). Moreover, initial ratings were not predictive of decay in ratings of Effectiveness ( $B = -0.02, p = .21$ ), but were highly predictive of the rate of decay (i.e., satiation) in Enjoyment, such that higher ratings led to faster satiation ( $B = -0.08, p < .0001$ ).

Study 3 demonstrated that initial rating predicts satiation rate when considering hedonic but not utilitarian features of a ringtone. Study 4 sought to build on this by framing the ringtone itself either as more hedonic or as more utilitarian, and then asking participants to simply "rate the ringtone." Thus, instead of two different scales (Effectiveness vs. Enjoyment), this study framed the product as hedonic or utilitarian, and used one general rating system. Consistent with Study 3, higher initial rating resulted in faster satiation for a ringtone framed as hedonic ( $B = -0.03, p < .05$ ), but had no effect on satiation in the utilitarian condition ( $B = -0.01, p = .20$ ). Besides demonstrating the difference between hedonic and utilitarian, Studies 3 and 4 also rule out the possibility that our results are due to some artifact of the rating scale (i.e. a floor effect) as we do not observe the effect for utilitarian measures or products.

Besides being theoretically important to the growing satiation literature, our findings offer substantive insights for both consumers and marketing practitioners. The effect suggests that hedonic consumption experiences that are too well liked may cause faster disengagement, or even disadoption, as consumers become satiated. Thus, for consumers looking to maximize the prolonged enjoyment of their own hedonic consumption, or marketers trying to retain consumers over the long term, it might be advisable to opt for goods or experiences that are liked, but that are perhaps not the very favorite.

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## **3.2 Individual Papers: From Top to Bottom: The Meanings and Consequences of Spatial Position**

**Room: SANDINGHAM**

**Chair:** David Luna, Baruch College, USA\*

### ***Boosting promotional effectiveness with thoughtful product displays***

Marco Bertini, London Business School, UK

Ana Valenzuela, Baruch College, USA and Universitat Pompeu Fabra, Spain\*

Mitja Pirc, A.T. Kearney

Options available to consumers are typically displayed in a two-dimensional “canvas.” Prior research has shown that there is indeed a difference in consumers’ reactions to displays in which products are oriented vertically or horizontally (Valenzuela and Raghurir, 2009). However, despite the importance of shelf placement in retailers’ and consumers’ decisions, consumer psychologists have paid little attention to the issue of product placement in retail shelf space (but see Chandon, Hutchinson, Bradlow and Young, 2009; Drèze, Hoch, and Purk, 1994). This paper adds to the literature by showing that firms can improve the effectiveness of promotional campaigns by managing the orientation of product displays. Key to our theory is the distinction between goods with a high hedonic or utilitarian content. We identify that any orientation, vertical or horizontal, boosts the sales lift of a good that is primarily hedonic, while only vertical orientation is desirable when the discounted good is mostly utilitarian in nature.

Furthermore, we propose that product display orientation, horizontal or vertical, influences decisions through two different mechanisms: fluency and congruity (Hsee and Rottenstreich 2004). Fluency is linked to the psychological cost of the decision making process. Research has argued that the experience of difficulty accompanying a decision process may influence consumers’ evaluation of the decision outcome (Novemsky, Dhar, Schwarz and Simonson 2007). If consumer decision-making is fluent, i.e. effortless, the positive experience that accompanies the process of choosing becomes an input to the evaluation of the choice itself making choice more likely. We believe that the mere existence of order in a display of choice options will enhance fluency as consumers find it easier to access information before processing and making a decision. Congruity, on the other hand, is related to the feeling that the obtained information is right. The literature shows that when consumers find schema-consistent information they tend to use simple heuristics or prior beliefs instead of engaging in more systematic processing (Sujan, Bettman and Sujan, 1986). For example, a possible simple heuristic is that identified by Inman, McAlister and Hoyer (1990): consumers believe that products placed at the end of the aisle are always a good deal, even when they are not.

This paper investigates whether product display orientation effects are different for products with high hedonic and utilitarian content (Dhar and Wertenbroch 2000). Consumers deciding on hedonic goods are expected to be processing more affectively and, thus, may favor perceptual inputs in their decision-making such as the feeling of fluency. If an ordered display by itself is able to enhance feelings of fluency, we would expect display order (independent of its orientation) to enhance sales and, thus, the size of the promotional lift. On the other hand, when consumers buy utilitarian goods, they tend to process information more analytically, and cognitive determinants such as congruency may become relevant. In this context, we expect that only display order which is consistent with consumer shelf schemas would lead to a larger promotional lift. The literature supports consumers are most aware of the vertical shelf schema, which accounts for “top-bottom” or vertical order (Valenzuela, Raghurir and Mittakakis 2011). We test this pattern of effects using an in-store field experiment and then explore the proposed underlying mechanism using a controlled lab experiment.

A field experiment tested the hypothesized pattern of effects. It was run at a large European grocery retailer. The retailer allowed us to run an end of aisle promotion with 58 SKUs from a regular assortment of 17 product categories. The retailer chose 10 test stores together with 10 control stores to enable comparison of stores of similar type, size, traffic, location and presence of competitors. The field test was implemented as regular promotional activity and the orientation of the products on the promotional display represented a tree-factor condition: random, horizontal or vertical (Figure 1). We measured quantities sold in the pre-promotion period, during promotion period and after promotion period. All three periods had equal lengths of 13 days. All the SKUs were on promotion in each of the periods. Analysis corresponds to the variable Promotional Lift: ratio of the quantity sold during the promotional period and the quantity sold before the promotional period. Prior to the field test we pretested consumers' perceptions of the extent of hedonic and utilitarian content of the 17 different categories. Product type variable was defined as (Hedonic – Utilitarian) ratings and named HU. We also controlled for the effect of other promotional mix elements.

Figure 1: Orientation conditions, from left to right: vertical, horizontal, random



We performed three spotlight analyses exploring the difference in promotional lift in the three order conditions and the two product types: more hedonic (mean centered HU + one standard deviation) and less hedonic goods (mean centered HU – one standard deviation). Results revealed that utilitarian products (-1 SD) enjoyed a larger promotional lift when displays were ordered vertically than horizontally or randomly ( $M_{vertical}= 3.04$ ,  $M_{horizontal}= 2.16$ ,  $M_{random}= 2.40$ ). On the other hand, in the case of hedonic products (+1 SD) both vertical and horizontally ordered displays provide larger promotional lifts than random displays ( $M_{vertical}= 3.73$ ,  $M_{horizontal}= 3.50$ ,  $M_{random}= 2.87$ ). We performed a nested regression providing simultaneous test for all the proposed patterns of results and controlling for additional variables influencing promotional lift (Table 1). In sum, results of the in-store field experiment provide support for: Hedonic goods have higher promotional lift compared to utilitarian. Vertical orientation increases promotion lift for both hedonic and utilitarian goods. Horizontal orientation increases promotional lift only for hedonic goods. These effects persist in the presence of control variables of promotional expenditure.

Table 1: Nested regression analysis with dependent variable Promotion lift

	<b>Coefficients</b>	<b>P-value</b>										
Intercept	2,71	0,00	2,49	0,00	2,49	0,00	1,93	0,00	1,85	0,00	1,89	0,00
Mean centered HU	0,29	0,00	0,28	0,00	0,23	0,00	0,19	0,00	0,11	0,07	0,15	0,01
Horizontal Contrast Coded			0,12	0,54	0,12	0,53	0,13	0,49	0,11	0,57	0,10	0,57
Vertical Contrast Coded			0,77	0,00	0,77	0,00	0,78	0,00	0,76	0,00	0,75	0,00
HU X Horizontal CC					0,22	0,02	0,22	0,02	0,21	0,02	0,21	0,02
HU X Vertical CC					0,00	0,97	-0,01	0,95	0,00	0,97	0,00	0,99
Regular price							0,01	0,69	0,00	0,88	-0,02	0,47
Discount							-3,24	0,00	-3,14	0,00	-3,32	0,00
TV advertising									1,77	0,00	2,54	0,00
HU X TV advertising											-0,42	0,00
Multiple R	0,24		0,28		0,29		0,31		0,37		0,38	
Adjusted R Square	0,06		0,07		0,08		0,09		0,13		0,14	
Significance F	0,00		0,00		0,00		0,00		0,00		0,00	

Next, we run a controlled experiment to unveil the underlying mechanism behind the effect: a 2 (mind set: emotional/ rational) x 3 (order: random, horizontal or vertical) between subjects design. The affective mindset manipulation followed Hsee and Rottenstreich

(2004). Once primed with either an affective or cognitive mind set, respondents were presented with a supermarket shopping scenario. Participants were asked to imagine that they were doing their regular grocery shopping when they encountered a promotional end-of-isle display. Each participant was shown an image of a 6 x 6 display holding 6 different brands of energy drinks (this category has a dual classification as both utilitarian and hedonic) allegedly on promotion. Focusing our DV on purchase intentions towards the most popular brand, Red Bull, we find support for the idea that horizontal order only helps when consumers make decisions based on their gut, while vertical order always helps compared to random order.

Overall, when decisions involve hedonic goods, consumers process more affectively. Any ordered display despite its orientation generates fluency, which enhances promotional sales. On the other hand, when the decision involves utilitarian goods, consumers process more analytically and, as a consequence, congruity matters. In that case, it is only the more prevalent vertical orientation that enhances promotional sales. This research contributes to the literature on visual information processing and on contexts effects influencing judgment and decision making (e.g. Kamenica 2008). Managerial implications resulting from this research are important and relevant both in online and offline retail stores.

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### ***Climbing the Ladder: Effects of Embodied Power Goals Can Be Culturally Specific***

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Vertical height is one of the prominent dimensions associated with power across many cultures (e.g., Schwartz, Tesser, & Powell, 1982). From ancient temples to modern buildings, greater power is often represented with greater height or vertical position. Our everyday language also contains many metaphorical expressions that suggest that power is deeply embodied in vertical space (such as "falling" as a metaphor for failing and "climbing the ladder" meaning gaining power and prestige; Lakoff & Johnson, 1980). Indeed, compelling empirical evidence indicates that people automatically associate power with "up" and a lack of power with "down" (Giessner & Schubert, 2007; Schubert, 2005).

We hypothesized that downward (vs. upward) movement would be experienced as a power threat, and people would be motivated to compensate by trying to regain power. More importantly, we predicted that how people respond to this embodied experience would vary by cultural factors. What power actually means to people varies by culture, and in particular, people or cultural groups who tend to have a vertical individualistic orientation (VI; e.g., Anglo-Americans) strive to become distinguished and to acquire status via competition (Triandis & Gelfand, 1998). For them, power tends to be about maintaining and promoting their individual status (Torelli & Shavitt, 2010 2011). Accordingly, we suggest that status-seeking outcomes as compensatory reactions to power loss can be triggered by embodied experiences of power loss (moving downward), but only for those people whose cultural orientation associates power with status (i.e., vertical individualists).

In our prior work (Koo, Wong, & Shavitt, 2011), we found that regardless of cultural orientation, virtual experience of downward (vs. upward) movement heightened concerns about power, as shown by measuring participants' implicit power motivation (using the multi-motive grid or MMG; Sokolowski, Schmalt, Langens, & Puca, 2000). Also, we assessed willingness to pay for high-status (and status-neutral) products to measure compensatory reactions to power loss. We found that the impact of movement direction on the desire to acquire high-status goods was moderated by one's VI level. People high in VI orientation were willing to pay more for status

goods after experiencing downward (vs. upward) movement. However, among those low in VI, as expected, escalator direction did not impact willingness to pay for status products.

### The Present Study

Following up the prior study, we conducted a larger-scale study with more participants, extending the findings to another status-seeking outcome – the preference for conspicuous logos and labels. Participants (N = 202) imagined arriving at an office building for a job interview. In the context of this scenario, they were shown either a 90 sec video clip of an escalator going upward or downward and were asked to imagine themselves on the escalator going to the interview. Those in the control condition instead watched three still pictures of buildings for 30 seconds each. Next, compensatory power reactions were measured using a conspicuous consumption scale (Rucker & Galinsky, 2009), on which participants rated to what extent they preferred conspicuous brand logos/labels on high-end clothing.

Cultural orientation was measured using a validated scale (Triandis & Gelfand, 1998) of horizontal and vertical individualism and collectivism. Our focus is on the moderating role of vertical individualism, measured by four items ( $\alpha = .83$ ): “It is important that I do my job better than others”, “Winning is everything”, “Competition is the law of nature”, and “When another person does better than I do, I get tense and aroused.”

As predicted, a significant interaction emerged between movement direction and VI orientation,  $\beta = -.22$ ,  $t = -2.21$ ,  $p = .03$ . Those high in VI preferred conspicuous consumption more after watching the video moving downward (vs. upward),  $\beta = .44$ ,  $t = 2.34$ ,  $p = .03$ . No overall difference between the two movement conditions was found,  $\beta = -.23$ ,  $t = -1.27$ ,  $p = .21$ . The difference between a downward and control condition ( $\beta = .23$ ,  $t = .97$ ,  $p = .34$ ), or between an upward and control condition ( $\beta = -.22$ ,  $t = -.92$ ,  $p = .37$ ) was not significant for those high in VI. These analyses suggest that, as expected, movement in vertical space had a greater impact on participants who are high in VI, and therefore tend to view power in terms of personal status, than it did on those low in VI. Those high in VI presumably compensated for their sense of power loss by seeking conspicuous brand logos and labels.

### Conclusions and Implications

Across studies, it appears that movement through vertical space can trigger a sense of power loss that, in turn, triggers compensatory consumption in an effort to regain power. This effect is moderated by cultural orientation, such that vertical individualists, who tend to view power in terms of personal status, showed greater status-seeking outcomes after virtually experiencing downward (vs. upward) movement.

This has important implications conceptually and managerially. For marketers in retail settings, predictions can be made about consumer responses to vertical movement through stores, as a function of ethnicity or other cultural categories. Recommendations can also be made to optimize product display on specific floors or shelf positions. Future field studies in the marketplace could examine the effect of actual movement through vertical space and its consequences on consumer purchase behaviors.

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### *Top or bottom of screen? vertical position as a representation of rationality and emotionality*

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When connoting whether a person acted rationally in a situation or if he gave in to his emotions, we often invoke the concept of verticality. Thus, we say things like, “he couldn’t rise above his emotions,” “the discussion fell to the emotional level,” “we had a high-level intellectual discussion.” In this research, we explore if these metaphors are just linguistic figures of speech or if they are conceptual metaphors linked to bodily sensations. In case they are indeed embodied conceptual metaphors, we then examine their downstream effects on consumer behavior.

Lakoff & Johnson (1980) argue that some abstract concepts are conceived only because we connect them with concrete sensory experiences (such as “hot,” “cold,” “up,” and “down”). Without such connection, concepts would lack reference to the physical world and they would be more difficult to elaborate and communicate. Several studies provide evidence that people need sensory-based metaphors to understand abstract concepts (for reviews, see Meier et al., 2012). We explore the metaphorical link of rationality with “up” and emotions with “down” and its effect on consumer behavior through four studies:

In study 1, we sought to determine whether people implicitly associate “up” and “down” with rationality and emotions, respectively, through the use of an Implicit Association Test (IAT; Greenwald et al., 1998). The IAT results show that participants were faster at categorizing rational-related words when they were paired with “up”-related words and emotional-related words when they were paired with “down”-related words, rather than when these pairings were reversed. Study 1 mapped the basic association between rational-emotional and “up”-“down.”

In study 2, we tested if people themselves position rational objects high and emotional objects low. We asked 46 subjects to place two sections of a website (Music and Science) onto an empty screen. In a pretest, Music had been connected with emotionality and Science with rationality (other website sections considered were Entertainment, Food, Style, Art, Technology, Culture, Business, and News). A second pre-test showed that neither Music nor Science had any conscious association with “up” and “down” and they did not differ in terms of positive/negative valence. In the main study, participants were told that they would be evaluating a website. Next, each participant was randomly assigned to view one of two sections: “Science” or “Music.” The name of the section was presented in the middle of a computer screen. Then, they were asked to think of the empty screen as a possible website, and to click with the computer mouse in a position where they would place the section. Results show a significant difference in placement, with “Science” being placed higher than the “Music” session.

Study 3 shows that the position of an object (“up” or “down”) gets linked with rationality/emotionality, i.e., people give to an object an interpretation that matches its position. For this study, we created a variation of the Affect Misattribution Procedure (Payne et al., 2005; Murphy & Zajonc, 1993). Each subject (N: 30) was asked to evaluate 5 pictograms, one by one, in a random order. Each pictogram was shown for 1,000 milliseconds. After that, each subject was asked to respond as quickly as possible if that pictogram was more likely to be a Chinese brand name for a statistical website or for a dating website. The position (top/bottom) of the pictogram was a significant predictor of subject’s decision – subjects were more likely to think the pictogram was for a statistical (dating) website when it placed on top (bottom) of the screen.

Study 4 tested another implication of the “rational is up and emotional is down” connection – placement of political slogans. The study used a 2 (rational/emotional political slogan) X 2 (“up”/“down”) between-subject design. Subjects rated either a rational or an emotional political slogan, which was placed either on the upper or on the lower part of the screen. As DVs, we measured the intention to vote and the slogan appeal. We found support for a moderated mediation model for which the match/mismatch between the emotional/rational claim and the vertical position moderates the effect of the claim on the slogan appeal, which affects intention to vote.

To summarize, our first study revealed that people implicitly associate rationality and emotions with “up” and “down,” respectively. Our second study shows people’s tendency to recreate the match in physical space. Our third study shows that people interpret

ambiguous information (pictograms) in a way that matches the spatial position. Finally, our fourth study shows that the match between the rational-emotional leaning of a slogan and its placement affects its impact on the voting public.

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### ***When Up Brings You Down: The Effect of Simulated Vertical Movement on Motivation and Performance***

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Advertisements often evoke images of vertical movements, with scenes of people moving upward or downward (e.g., taking an elevator). We suggest that, in addition to the intended message, ads that prompt the simulation of vertical movements might have unexpected consequences on self-worth and consumer behavior.

Previous embodied cognition research suggests that “up” is associated with positivity, whereas down is associated with negativity (Meier, Hauser, Robinson, Friesen, & Schjeldahl, 2007; Meier & Robinson, 2004; Schubert, 2005). This aforementioned work, however, does not clarify the behavioral consequences of simulated vertical movements.

Drawing on Lakoff’s (1980) work, we hypothesize that imagining oneself moving up can result in positive self-worth through the UP IS MORE metaphor (Lakoff & Johnson, 1980). Further, since quantity is often associated with better, as suggested by the metaphorical association MORE IS BETTER (Lakoff & Johnson, 1980), an object or person that moves up should be associated with more value. Hence, simulating upward movements should increase judgments of self-worth. Conversely, simulating downward movements should lead to the inverse effect.

Because of people’s desire to maintain the integrity of the self (Steele, 1988), momentary changes to self-worth are likely to have motivational consequences (Crocker, Brook, Niiya, & Villacorta, 2006). Drops in self-worth might lead to compensatory motives aimed at restoring a positive self-view (Sivanathan & Pettit, 2010). To do so, people can intensify efforts toward subsequent ego-relevant tasks where success and failure have repercussions for one’s sense of worth (Brunstein & Gollwitzer, 1996). Boosting self-worth through the simulation of upward movements might have the opposite effect. In fact, “artificially” boosted self-esteem can reduce efforts toward ego-relevant tasks and hamper subsequent performance (Baumeister, Campbell, Krueger, & Vohs, 2003; Rhodewalt & Davison, 1986; Tice, 1991).

Hence, we suggest that the simulation of vertical movements has counterintuitive effects on behavior—that is, imaging upward (downward) movements boosts (reduces) self-worth, thus hampering (enhancing) motivation (i.e., effort) and performance on ego-relevant tasks. This hypothesis is tested in five studies, two of which are reported in some detail below.

Results from Study 1 suggest that simulating upward (relative to downward) vertical movements reduces effort toward ego-relevant tasks, and that this effect is reversed when participants are given an opportunity to self-affirm. Studies 2-3 show that imagining moving upward, for example riding an elevator or taking off in an airplane, negatively impacts cognitive performance.

In Study 4, participants who reported being fluent English readers and not being currently studying for a standardized test (e.g., GMAT, GRE, SAT), completed three supposedly unrelated tasks where they: i) listened to an audio recording that prompted them to imagine taking an elevator ride either 20 floors up or 20 floors down, ii) reported two measures of self-worth, and iii) were given 5 minutes to solve as many SAT/GMAT-like problems as possible. A pretest showed that solving SAT/GMAT problems is an

ego-relevant task. To correct for random guessing, we applied the standard correction for guessing (Diamond & Evans, 1973) to the number of correct answers (i.e., 1 point for correct answers, 0 for non-answers, and a penalty for incorrect answers). Self-reported effort was then measured with two questions. To control for exogenous variables that may influence performance, we included the following covariates in all the analyses reported below: Gender, positive emotions, self-reported GPA, and self-assessment of math skills (measured before the elevator scenario).

Results show that imagining moving upward hindered performance. A joint significance test (Taylor, MacKinnon, & Tein, 2008) confirmed a three-path mediation model (movement → self-worth → effort → performance). This procedure entails estimating three regression models. In model 1, self-worth was regressed onto direction of movement along with the covariates. Results from model 1 show that imagining moving upward enhanced self-worth. In model 2, effort was regressed onto self-worth, direction of movement and the covariates. Results from model 2 show a negative association between self-worth and effort. In model 3, scores were regressed into effort, self-worth, direction of movement and the covariates. Results from model 3 show a positive association between the self-reported measure of effort and the score on the SAT/GMAT-like problems. Evidence for three-path mediation was provided by the significance of the three beta coefficients discussed in models 1 to 3 (Taylor et al., 2008). In addition, the 95% CI of the indirect effect of the three-path mediation model did not include zero, indicating statistical significance at  $p < .05$  (Hayes, 2012).

Study 5 tested the effect of vertical movement on consumer behavior using an objective measure of effort. Previous research shows that securing “good deals” can make consumers feel smart and competent (Schindler, 1998), hence making it an ego-relevant task, as confirmed by a manipulation check. For this reason, we expect that imagining upward movements (relative to downward movements) reduces the effort spent on securing good product deals and, consequently, the chance of actually getting those deals. Participants read one of the two elevator scenarios adapted from Study 4 and after a filler task chose, among four possible options with different overall cost, the best phone plan deal (i.e., most convenient plan) given specific plans details (e.g., cost per minute, cost per message) and communication needs (e.g., call time, messages). The time spent to select a plan was used as a measure of effort. Participants who imagined moving upward worked less on getting the best deal and were less likely to get the good deal. A mediation analysis suggested that effort mediated the probability of getting a good deal.

Two main contributions emerge: First, we consider a specific sensory-motor experience of verticality (i.e., movement) and examine its effects on motivation and performance. Second, we present counterintuitive results showing that the behavioral consequences of moving up can be negative—we show that “up” is not always good for consumers. Consider consumers exposed to an ad showing an airplane taking off. These consumers may mentally simulate upward movements and hence become less motivated to succeed on a variety of ego-relevant tasks, such as successfully processing information-rich brand materials, or decoding complex pricing schemes.

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### **3.3 Symposium: Identity Threats and Consumption: Causes, Cures, and Costs**

**Room: WINDSOR**

**Chair:** Nicole Coleman, University of Pittsburgh, USA

*That's Not How I Should Feel: Emotion Profile-Inconsistent Emotions as Identity Threats*

Nicole Coleman, University of Pittsburgh, USA\*

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Individuals possess identities— group level self-labels which can activate beliefs, attitudes, emotions, and behaviors providing behavioral guidance and reinforcing identity ownership (Tajfel and Turner 1986; Reed et al. 2012). Research shows that consumers prefer and consume more of identity-consistent brands and products (Ahuvia 2005; McFerran et al. 2009; Bolton and Reed 2004; Reed 2004; Shavitt and Nelson 2000). Recently researchers have investigated what happens when a consumer's identity is questioned or threatened. Undermining a consumer's belief in her identity performance encourages consumption to reinforce the threatened attribute (Gao, Wheeler, and Shiv 2009), as well as preferences for products that demonstrate possession of that attribute (Rucker and Galinsky 2008). Thus, when a consumer experiences an identity threat, she may engage in behaviors to “compensate” for the perceived lack of identity enactment; employing self-verification.

We examine a new source of identity threats: experiencing an emotion that is inconsistent with the emotion profile of that identity. Social identities contain identity-relevant emotion profiles; consumers will engage in processes of emotion regulation to seek out or enhance consistent emotions while avoiding or reducing inconsistent emotions (Coleman and Williams 2013). In this research, we argue that experiencing identity-inconsistent emotions undermines identity enactment, creating a threat. We demonstrate that, compared to consumers experiencing emotion profile-consistent emotions, experiencing identity-inconsistent emotions creates greater preference for (Studies 1, 2) and consumption of (Study 3) identity-consistent products. Additionally, when consumers self-affirm (White and Argo 2009), “buffering” against the threat, these effects are attenuated (Study 2). Across 3 studies, we see effects consistent with the proposition that emotion profile-inconsistency is threatening to a consumer's identity, prompting compensatory self-verification behaviors.

Using a 3 identity (athlete, volunteer, control) by 2 emotion (anger, sadness) design, we leveraged the athlete-anger and volunteer-sadness emotion profiles in Study 1 (Coleman and Williams 2013). Participants completed a writing task, to activate their athlete or volunteer identities (Reed 2004). Participants' emotions were manipulated via facial/bodily feedback (Duclos et al. 2007), generating anger or sadness. Finally, participants evaluated pairs of products; each included an identity-relevant (e.g., Adidas t-shirt, United Way hat) and identity-neutral (e.g., sunglasses) product. Relative preference for identity-relevant products measured self-verification (White, Argo, and Sengupta 2012). A significant interaction between identity and emotion ( $F(2, 218) = 6.175, p < .05$ ) on evaluations of the athlete-relevant products emerged; when athletes experienced the emotion profile-inconsistent emotion of sadness, they had greater preference for athletic products than when they experienced anger ( $p = .034$ ). Similarly volunteers experiencing emotion profile-inconsistent anger had greater preference for volunteerism products than those experiencing the consistent emotion of sadness ( $F(2, 218) = 2.973, p < .05$ ; contrast  $p = .046$ ). A replicate of this study that manipulated emotions via a 3-minute soundtrack of angry or sad music revealed identical patterns of results.

Study 2 examines whether self-affirmation (asserting personal values) will protect individuals when experiencing identity-inconsistent emotions. The study was a 2 self-affirmation (yes, no) by 3 identity (athlete, volunteer, control) by 2 emotion (anger, sadness) design, where identity and emotion were activated as in Study 1A. Prior to the identity prime, self-affirmation condition participants wrote about values (Shrira and Martin 2005). For athlete-relevant products, a marginally significant three-way interaction was found ( $F(2, 153) = 2.574, p = .080$ ), such that in the no self-affirmation condition, the emotion profile-inconsistent emotion effects replicated; athletes experiencing sadness had a significantly greater preference for athletic products than those experiencing anger ( $p = .001$ ). However, those individuals who had self-affirmed prior to the emotion manipulation, revealed no difference in preferences for athletic products regardless of experienced emotion ( $p = .86$ ).

The final study examines the implications of identity-inconsistent emotions as a threat with actual consumption, using a 3 identity (athlete, volunteer, control) by 2 emotions (anger, sadness) by 2 water brands (H2Help, H2Sport) design. Participants' identities were activated with the writing task, then they experienced both the emotion induction (watching a 4-minute film clip pretested to elicit anger or sadness) and the consumption opportunity. During the film, they could freely drink an 8-ounce bottle of water, labeled H2Help (volunteer brand) or H2Sport (athlete brand). Water consumed (grams) was the dependent variable. The predicted three-way

interaction of identity, emotion, and brand ( $F(2, 280) = 3.107, p = .046$ ) emerged. Athlete identity participants who viewed the identity-inconsistent sad clip consumed more of the athletic water (H2Sport) than the volunteer water (H2Help;  $F(1, 280) = 18.176, p < .0001$ ). When they watched the identity-consistent angry clip, this disappears; they drank equal amounts of athlete and volunteer water ( $F(1, 280) = 1.107, p > .25$ ). Further, those with an athlete identity and given H2Sport consumed significantly more when experiencing sadness than anger ( $F(1, 280) = 4.400, p < .05$ ). These results indicate athletes consumed more identity-consistent (H2Sport) water when experiencing an identity threat: viewing the sad clip.

Similarly, participants with a volunteer identity also strategically consumed water to compensate for an emotion profile-induced identity threat. Those who saw the (inconsistent) angry clip consumed more of the volunteer-oriented (H2Help) water than athletic water ( $F(1, 280) = 10.537, p < .001$ ). In contrast, when they viewed the identity-consistent (sad) clip, there was no difference in their consumption ( $F(1, 280) = .084, p > .75$ ). Those with a volunteer identity given H2Help drank more when experiencing anger than sadness ( $F(1, 280) = 7.057, p < .01$ ). Within the control identity conditions, there were no differences in consumption of the water based on either emotion or brand (all  $p > .2$ ).

Across 3 studies, with different emotion manipulations, two identities, and measures of preferences and actual consumption, we find consistent evidence that experiencing an emotion that is inconsistent with a salient identity's emotion profile can be a source of identity threat. This research demonstrates that emotion profile-inconsistency is threatening to a consumer's identity, prompting compensatory self-verification behaviors. Just as with negative group stereotypes (Steele & Aronson 1995), doubting possession of an identity-associated trait (Gao, Wheeler, and Shiv 2009), or making unflattering cross-group comparisons (White & Argo 2009), emotions too can undermine identity-performance and incite compensatory consumption.

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### ***Being Mean to Keep 'Em Keen: Retail Rejection Increases Aspiring Consumers' Desire for the Rejecting Brand***

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Consumers often feel intimidated by unfriendly sales staff at luxury retailers and cite this as a reason they avoid shopping in these venues. Indeed, a former employee of Yves Saint Laurent admits that sales people size up a customer by looking at his watch and his shoes and 'if the accessories are not expensive, the customer is not worth the effort of even a simple hello' (Wilson 2009). However, as luxury sales have declined in recent years, retailers endeavor to become approachable in an effort to attract new consumers and increase sales (Odell 2009).

Yet, contrary to conventional wisdom that a welcoming sales staff will attract consumers, we demonstrate that rejecting consumers may actually enhance retailers' appeal to some consumers. The extant research supports this conjecture: individuals who have been rejected have been found to endeavor to ingratiate themselves with the rejecter (Romero-Caynas et al. 2010). Indeed, when aspects of the self-concept are threatened, people become more materialistic (Chang and Arkin 2002), are subsequently more likely to acquire objects that make a good impression on the rejecting party (Meade et al. 2010) and bolster the threatened self (Rucker and Galinsky 2008)

Building on the prior research on social rejection, we contend that people differentially respond to rejection. Individuals' sense of who they currently are and who they want to be is largely dependent on and reinforced by the groups they belong to. While one's actual self is fairly stable, one's ideal self is less certain and thus more vulnerable to threat (Swann 1983). Consequently, our prediction is

that when we an individual is rejected by a brand that is relevant to his/her ideal (vs. actual) self, s/he is likely to increase (decrease) his/her assessments of the brand and willingness to consume in ways that enable him/her to re-affiliate (disassociate) with the rejecting brand. Luxury brands are a domain that consumers are likely turn to when they are seeking affirmation and self-expression and as such, provide an excellent context to examine our hypotheses.

In the first study we investigate how consumers' self-concepts affect their brand assessments and desire to purchase from brands to which they aspire but feel rejected by. In a 2 (brand: Gucci vs. Louis Vuitton) x 2 (salesperson behavior: rejecting vs. neutral greeting) experiment, participants first indicate their level of identification with and degree to which they aspire toward the brand. Next, they read a scenario describing a hypothetical shopping experience in which they are directed to some clothing items in a store by a rejecting (vs. neutral) salesperson. Lastly, participants answered questions about their brand perceptions and desire to buy and wear the clothing from the brand.

We examined how the rejecting (vs. control) salesperson affected participants' assessments of the products from that brand. We observe a self-concept X salesperson behavior interaction ( $F(1, 100) = 4.78, p < .03$ ) indicating that when consumers who possess ideal vs. (actual) identities relative to the brand, are rejected (vs. control) by the brand representative, they evaluate the products sold by the brand more positively. The results show that not all rejection causes consumers to ingratiate via consumption but rather these behaviors are most likely when the rejection is threatening to the individual's tenuous ideal self. In the next study, we further investigate how self-control affects consumers' responses to rejection by manipulating their self-concept rather than measuring it.

In our second study we controlled self-views by priming participants' ideal vs. actual identity with a sentence rearranging task. Next, participants completed an ostensibly unrelated study using the same scenario as the prior study and answered the same questions. We replicated the self-concept x salesperson behavior interaction ( $F(1, 121) = 4.28, p < .05$ ) indicating that when consumers who aspire toward (versus identify with) the brand, are rejected by (vs. have a neutral interaction) with the brand representative, they evaluate the products sold by the brand more positively.

In study 3, we created a situation that mimics the experience of rejection in a retail environment. Participants participated in a 2 (brand: Gucci vs. Louis Vuitton) x 2 (salesperson behavior: rejecting vs. neutral) x 2 (prime self-concept: ideal vs. actual identity) x 2 (pre-experimental self-verification: self-verify vs. control) "product assessment study" in which participants interacted with a brand representative. Prior to the study half of the participants participated in a fashion knowledge tool (vs. neutral questions) enabling participants to express their fashion expertise enabling them to preemptively self-verify their fashion identity. Next, half of the participants were primed with an ideal vs. actual identity prime (see study 2). Finally, participants interacted with brand representatives who followed either a rejecting or neutral script. In rejecting conditions brand representatives appeared skeptical of the participant's knowledge of the brand, and disapproving of her appearance (versus neutral). Participants then rated bags from the brand on the same variables from prior studies.

The data reveal a salesperson behavior x prime self-concept x pre-experimental self-verification interaction ( $F(2, 172) = 6.61, p < .01$ ) indicating that consumers who aspire towards (vs. feel affiliated with) the brand and have not (vs. have) been allowed to self-verify prior to interacting with a rejecting (vs. control) brand representative evaluate the products sold by the brand more positively.

The findings from three studies show that retailer rejection may drive consumers to prefer products that enable them to ingratiate themselves to the rejecting group when the group is one which they aspire to belong. However, these effects can be mitigated if they are able to self-verify prior to rejection.

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## *Failure to Compensate: When Does Cross-Domain Compensation Really Reduce Identity Threats?*

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People frequently face failures and self-threats in their lives, such as negative feedback at work, rejection in a romantic relationship, and frustrated goals or aspirations. Past research has suggested that these threats can hurt people's self-integrity—their sense of themselves as good, virtuous, successful, and able to control important life outcomes (Steele 1988). Moreover, research has proposed that when individuals' self-integrity is threatened, they will experience dissonance and be motivated to find a way to compensate for the discrepancy created by self-threats. For example, Gao, Wheeler, and Shiv (2009) have shown that when individuals' intelligence is threatened, they are subsequently more likely to choose intelligent products, such as pen rather than chocolates. Similarly, Rucker and Galinsky (2008) have shown that when individuals are in a low power status, they prefer to choose high status products than low status products. Stone et al. (1997) have also shown that when individuals feel hypocritical about safe-sex, these individuals are more likely to choose to purchase condoms rather than to donate to the homeless.

Besides seeking means that directly compensate for the discrepancy created by threats (referred to as “within-domain compensation”), research has shown that cross-domain compensation can be an effective way to compensate for self-threats (Tesser 2000). As Sherman and Cohen (2006) explain in their review paper on self-affirmation, “people compensate for failures in one aspect of their lives by emphasizing successes in other domains”. For example, when a woman loses her job, her feeling of self-worth is likely to be threatened. To boost her feeling of self-worth, she could find a new job (within-domain compensation) or self-affirm that she is a great mother (cross-domain compensation).

Why does cross-domain compensation work? Why might a woman's self-affirmations about her parenting skills make her feel better about losing her job? It has been proposed that cross-domain compensation enhances a person's general self-worth, which creates a “buffer” that protects people from threats from other domains (Steele 1988). It has also been proposed that this buffer reduces the perceived discrepancy in the threatened domain (Hull 1999; Simon et al. 1995) or “eliminate the effect of specific self-threats” (Steele 1988). To demonstrate that compensation in one domain can eliminate threats in another, researchers have measured the extent to which individuals are willing to accept threatening messages in the threatened domain. For example, if a smoker is threatened by information about the impact of smoking on health, and if he is then allowed to self-affirm in a different domain of his life (for example, his professional success), his subsequent willingness to agree with stop-smoking messages has been viewed as an indicator that the smoking threat has been reduced.

In this research, we provide evidence to suggest that even when self-threats are not effectively compensated by cross-domain compensation, individuals can still show an increased message acceptance. That is to say, an increased acceptance of threatening messages does not necessarily indicate a decreased self-discrepancy. We further show that this increased message acceptance could be driven by a positive mood generated by cross-domain compensation.

In study 1, participants were randomly assigned to one of three conditions: threat-only, threat-compensation, and no-threat. Participants in both the threat-only and threat-compensation conditions engaged in a procedure that threatened their moral identity (i.e., admitting to online piracy behavior). Later, threat-compensation participants wrote an essay to self-affirm their competence. Lastly, all participants evaluated advertisements and expressed agreement with anti-piracy messages. Results showed that threat-only participants showed greater preference for moral advertisements than those in the no-threat condition ( $p < 0.05$ ), consistent with past research on within-domain compensation. Contrary to what previous self-affirmation research might predict, the preference for moral advertisements for those in the threat-compensation condition was not significantly different from that in the threat-only condition ( $p = 0.81$ ). This result indicated that participants' threatened moral identity was not effectively compensated by cross-domain

self-affirmation. However, relative to participants in the threat-only condition, participants were more willing to accept threatening messages in the no-threat condition (5.6 vs. 4.57;  $t(92) = 3.02$ ,  $p < .005$ ), and in the threat-compensation condition (5.56 vs. 4.57;  $t(87) = 2.67$ ,  $p < .01$ ). This result raises a paradox that why individuals become more accepting of threatening messages when they still have discrepancy in their threatened identity.

Study 2 investigated the underlying mechanism for this increased message acceptance. In this study, we replicated our finding that cross-domain compensation increased willingness to accept threatening messages, but did not reduce self-discrepancy. We also showed that cross-domain compensation improved respondents' mood, which mediated the effect of cross-domain compensation on message acceptance. Further supporting our claim that improved mood can enhance message acceptance, we showed in this study that simply thinking about a sunny day (which is not related to self-affirmation or compensation) also enhanced message acceptance.

In Study 3, we demonstrated conditions under which cross-domain compensation was effective vs. ineffective in reducing self-discrepancy. Moreover, we showed that even when cross-domain compensation was ineffective, it could still increase message acceptance. Specifically, participants received a threat to one of five life values (family, honesty/kindness, competency, spontaneity, and physical attractiveness), then they received an essay writing task designed to self-affirm one of those five life values. We found that the cross-domain compensation effectively reduced self-discrepancy only when the threat was to the least important value and the compensation was to the most important value. However, even when the cross-domain compensation did not effectively reduce discrepancy, it still increased participants' mood which, in turn increased their message acceptance.

The findings from these three experiments provide convergent evidence that even when self-threats are not effectively compensated by cross-domain compensation, individuals can still show an increased message acceptance. This increased message acceptance could be driven by a positive mood generated by cross-domain compensation not necessarily caused by a reduced discrepancy.

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### ***Not All Compensatory Strategies Are Created Equal: Behavioral Consequences of Within- vs. Across-Domain Compensation***

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Consumers often face challenges and setbacks that threaten their sense of self. Such experiences can create a discrepancy between how consumers actually view themselves and how they desire to view themselves (Higgins 1987). This discrepancy can in turn trigger an aversive psychological state that consumers seek to resolve. Ample research suggests that consumption provides one vehicle by which consumers try to offset self-threats (Rucker and Galinsky 2013; Wicklund and Gollwitzer 1981).

Research suggests that after experiencing a threat consumers might seek products that represent success and accomplishment in the domain of the threat, or in a domain unrelated to the threat. We term the first approach within-domain compensation, as consumers seek to associate themselves with products or brands that signal accomplishment and success within the domain of the threat (Gao, Wheeler and Shiv 2009; Levav and Zhu 2009; Rucker and Galinsky 2008; Stone et al. 1997). For example, Kim and Rucker (2012) found that after receiving negative feedback about their intelligence (vs. not), people were willing to pay more for a product that signaled intelligence. The second approach could be thought of as across-domain compensation, as consumers seek to associate themselves with products or brands that heighten an alternative important aspect of the self, unrelated to the threat (Ferraro, Shiv and

Bettman 2005; Steele 1988; Stone et al. 1997). To illustrate, Stone et al. (1997) found that after getting feedback that highlighted their hypocritical behavior of practicing unsafe sex (vs. not), participants were more likely to donate money to a charity organization for homeless people in an effort to boost their views as altruistic and generous individuals.

Despite within- versus across-domain compensation being two fundamentally different strategies by which consumers can regulate self-threats, the downstream consequences of each of them have thus far not been systematically explored. In this research, we address this issue by exploring the implications of both within- and across-domain compensation for subsequent self-control. Self-control is the process of overriding one's impulses to attain desired goals, such as performing well academically or avoiding tempting but unhealthy food (Baumeister et al. 1998; for review see Hagger et al. 2010). Our hypothesis is that within-domain compensation may undermine subsequent self-control compared to across-domain compensation. We suggest that this occurs because within-domain compensation reminds consumers of the self-threat, keeping it accessible in memory. And, when a self-threat is accessible in memory, it unwisely draws cognitive resources, undermining subsequent self-control (Brunstein and Gollwitzer 1996; Mikulincer 1989). We tested these predictions in three experiments.

Experiment 1. Experiment 1 demonstrated that within-domain compensation undermined self-control relative to across-domain compensation. Participants were threatened either in the competence domain or in the sociability domain using an episodic priming task. Next, participants were given the opportunity to compensate by thinking about a possession of theirs that either boosts their competence or their sociability. Thus, the same compensation was, depending on the self-threat, either within-domain or across-domain. Finally, we assessed self-control by measuring participants' ability to resist chocolate candies. Because only people who like eating chocolate candies have to exert self-control to restrain their consumption, we measured how much each person likes eating the candies. Consistent with our predictions, the results revealed that among participants who liked eating candies, those who compensated within-domain ate more candies than those who compensated across-domain, regardless of the domain of the threat. In contrast among people who did not like eating candies, threat and compensation did not affect candy consumption.

Experiment 2. Experiment 2 provided evidence for the underlying process, by showing that within-domain compensation keeps the threat more accessible in memory compared to across-domain compensation. Participants were first administered a self-threat in the competence domain using an episodic priming task. Half of the participants were then given the opportunity to compensate within-domain by choosing among three competence-related products, while the other half was given the opportunity to compensate across-domain by choosing among three sociability-related products. Finally, we assessed accessibility of the self-threat by measuring how fast participants responded to words either related or unrelated to the threat. Consistent with our theorizing, participants who engaged in within-domain compensation were faster in responding to words related to the threat than to unrelated words, while there was no difference in responding among participants who engaged in across-domain compensation. These results provide evidence for the threat accessibility account.

Experiment 3. The final experiment explored an important boundary condition of the effect by manipulating the framing of the self-control task. Specifically, we reasoned that if within-domain compensation keeps the threat accessible, then those who engage in within-domain compensation should be more motivated to engage in a subsequent activity designed to resolve that threat. Participants were first administered a self-threat in the competence domain, followed by an opportunity to compensate either within-domain or across-domain (as in experiment 1). Then, they engaged in a self-control task that involved solving arithmetic problems. For half of the participants the self-control task was framed as unrelated to the threat (as in experiment 1). For the other half the self-control task was framed as a way to signal competence (i.e. related to the threat). Consistent with our predictions, participants who had first engaged in within-domain compensation solved more arithmetic problems when the task was framed in a threat-relevant (vs. irrelevant) way. However, those who had first engaged in across-domain compensation solved the same amount of problems regardless of the framing used.

As a whole, this research provides a first attempt to systematically examine the consequences of engaging in distinct compensatory strategies. The findings suggest that engaging in within-domain compensation may undermine subsequent self-control and motivate consumers to engage in additional compensatory behavior relative to across-domain compensation. The implications of this research for the broader topic of compensatory consumption and consumer well-being are discussed.

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### **3.4 Individual Papers: Doing vs. Having: What's Unique about Experiential and Material Consumption**

**Room: ESCORIAL**

**Chair: Amit Kumar, Cornell University, USA\***

#### ***Verbal Sharing: An Explanation for Why Experiences Make Us Happier than Do Objects***

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Recently, the relation between purchases and happiness has received increased attention (Flatow, 2009; Pelletier, 2009). A common finding is that experiential purchases (e.g., visiting a museum) advance more happiness than do material purchases (e.g., a new watch) (Van Boven and Gilovich, 2003). A question that deserves further attention, however, is: What mechanism(s) underlies such effect?

Aiming to address this mediation question, we drew on the verbal sharing literature to propose that 1) people share about their experiences more than about their material objects, and 2) sharing advances happiness. Together, these two propositions comprise our mediation model, according to which sharing mediates the effect of purchase type (material vs. experiential) on happiness.

Supporting our first proposition, research shows that individuals form more favorable impressions of people associated with experiential (vs. material) purchases, and enjoy having conversations about experiential (vs. material) purchases more (Van Boven, Campbell, and Gilovich, 2010). Supporting our second proposition, the literature suggests several ways that sharing increases happiness. For example, sharing daily positive events leads the teller to experience greater positive affect and personal well-being (Gable et al., 2004), and leads to relationship well-being (Gable et al., 2006). Hence, we expect that people share more about their experiential (vs. material) purchases and that sharing leads to greater happiness.

To test our model, we employed three different manipulations across five experiments. In experiment 1, 95 participants recalled and wrote about either a material or an experiential purchase they had previously made. Following, they answered, on 7-point scales, questions related to happiness (e.g., When you think about this purchase, how happy does it make you?) and sharing (e.g., I would want to share with others the details of my object/experience). We conducted four regressions and a bootstrap test of mediation with SPSS Macro from Preacher and Hayes (2008) and found initial evidence supporting the mediating role of sharing ( $\beta=.18$ ,  $CI(95\%)=.02, .33$ ).

Experiment 2 tested whether the superiority of experiential purchases was restricted to socially-consumed purchases. It involved 124 participants. We employed a between-participants design and manipulated both purchase type and whether the purchase had been consumed solo or socially. Results showed significant sharing mediation in both the social ( $\beta=.27$ ,  $CI(95\%)=.04, .70$ ) and solo

conditions ( $\beta=.32$ ,  $CI(95\%)=.10, .72$ ). Moreover, a moderated-mediation analysis indicated that the sharing mediation is not qualified by the solo versus social dimension ( $\beta=.27$ ,  $CI(95\%)=-.53, 1.10$ ).

Experiment 3's goal was to address potential arguments related to intrinsic differences in the purchases participants recalled in experiments 1 and 2. We employed a framing manipulation in which the purchase (BBQ grill) was held constant and participants were encouraged to frame it in material versus experiential terms. Next, participants answered questions on sharing and happiness. Results of our mediation analyses replicated the previous experiments' ( $\beta=.51$ ,  $CI(95\%)=.05, 1.28$ ), suggesting that the mere framing of a purchase in experiential (vs. material) terms leads to more sharing and, consequently, higher levels of happiness.

In experiment 4, we investigated how sharing and happiness are affected by encouragement to share. To encourage sharing, we adopted a cuing manipulation in which half of the 81 participants were cued with sharing-related verbs (e.g., tell, communicate) whereas the other half were cued with unrelated verbs (e.g., grow, sleep). Next, participants recalled and wrote about a material or an experiential purchase, and answered questions on sharing and happiness.

Of note, since people appear naturally inclined to share about experiential but not material purchases (experiments 1-3), the effect of the cuing manipulation should predominate among material purchase participants. Therefore, we expected to find a moderated-mediation effect, in which the sharing mediation would be present in the unrelated cued condition but would be eliminated in the sharing cued condition (due to the increased sharing of material purchase participants, only).

The data support our predictions. Precisely, we found a moderated-mediation effect ( $CI(95\%)=.22, .71$ ). As expected, the sharing mediation is present in the unrelated cued condition ( $CI(95\%)=.16, .1.06$ ), replicating experiments 1-3. It, however, is eliminated in the sharing cued condition ( $CI(95\%)=-.64, .36$ ), resulting from the increased sharing of material purchase participants. Interestingly, when participants share equally highly about material and experiential purchases (i.e., in the sharing cued condition), they report equally high levels of happiness. This indicates that material and experiential purchases are, in fact, equally able to advance happiness, as long as people share about them equally.

Finally, experiment 5 engaged participants in the actual behavior of sharing. We used a 2(purchase type: material vs. experiential) x 2(share about: purchase vs. unrelated topic) between-participants design. One hundred and ninety-four participants were randomly paired (pairs of a teller and a listener) and instructed about the sharing activity. In general, tellers (listeners) were informed that they would share (listen) about a topic and that they should interact as if they were talking with (listening to) a friend. That topic was either a purchase tellers had just recalled and written about (experimental condition) or the process of getting their clothes washed (control condition). We expected happiness to increase when participants shared about the purchase but not when they shared about the unrelated topic. Because all participants shared for equal amounts of time, we expected happiness levels of material and experiential participants to be equivalent (reflecting experiment 5's result).

Results are consistent with our expectations. Precisely, participants who shared about the purchase report significantly higher happiness ( $M_{purchase}=6.78$  vs.  $M_{unrelated}=6.40$ ,  $F(1, 93)=4.00$ ,  $p=.048$ ). Insignificant results are found for the direct effect of purchase type and for the interaction effect of purchase type by shared topic.

Based on these five experiments, the following picture emerges: Experiential purchases are better than material purchases at advancing happiness (replicating Van Boven and Gilovich, 2003), and sharing mediates that effect. To our knowledge, this is the first research in marketing that examines the role of sharing in advancing consumer happiness. Moreover, these findings illustrate how important post-consumption events are for happiness. This is especially relevant given previous evidence suggesting that

pre-consumption states (e.g., a sense of anticipation), but not post-consumption ones, are effective in generating happiness (Nawijn et al., 2010).

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### ***Questioning the “I” in Experience: Experiential Purchases Foster Social Connection***

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Research on experiential and material purchases (that is, money spent on doing versus having; Van Boven & Gilovich, 2003) has focused on the benefits of experiential consumption in terms of consumer satisfaction and the underlying mechanisms that produce this difference. Here, we present another downstream consequence of spending money on experiences as compared to possessions: fostering social connection. Such effects are important because of the human tendency for the need to belong (Baumeister & Leary, 1995).

In Study 1 (N = 98), we investigated whether consumers feel more connected to someone who has made the same experiential purchase as they have than to someone who has made the same material purchase. While people may feel some kinship with those who make the same purchases they do, we set out to determine whether this was especially true for experiential purchases. Participants listed a significant experiential or material purchase and then thought about another person who had made the same purchase as they had. We then asked how similar they would feel to this person and how much kinship they would feel toward the person initially. As expected, participants reported that they would feel more similar to someone who had made the same experiential purchase as they had, unequal variances  $t(82.22) = 3.90, p < 0.001$ . They also reported that they would feel more initial kinship toward the person who had purchased the same experience, unequal variances  $t(86.90) = 3.61, p < 0.001$ . Knowing that another person has made the same experiential purchase thus appears to have notable social benefits: it creates a level of closeness and kinship that shared material purchases can't match.

In Study 2 (N = 97), we extended these findings in two ways. Instead of having participants think about another person who had made the same purchase, they thought of someone who had made a similar, but “upgraded” purchase. We also added another dependent measure, one of longer-term kinship. Again, participants indicated that they would feel more similar to the other person in the experiential condition,  $t(95) = 2.47, p < 0.02$ , and that they would feel more initial kinship toward the other person,  $t(95) = 2.03, p < 0.05$ . Learning about someone who had made a similar, but better experiential purchase resulted in greater feelings of long-term kinship as well, unequal variances  $t(87.90) = 2.44, p < 0.02$ . It seems, then, that even when a notable difference between oneself and another person making a similar purchase is made salient, experiential purchases foster more of a sense of social connection than possessions. Knowing that another person has a better version of what you have can be off-putting and can create a sense of social distance. The results of this study, however, indicate that this is less likely to be true when it comes to experiential purchases. When it comes to being “outdone” on a similar experiential purchase, the similarities appear to be more prominent or more important than the differences.

Study 3 (N = 197) examined peoples' more general feelings of connection that are aroused by the types of purchases they make (i.e. not just toward someone who has made a similar purchase). Because we asked about their sense of connection to other people in general, we thought that the predicted effect might be less strong than those documented in the aforementioned studies, and so we doubled our sample size. After participants thought about either experiential or material purchases, they filled out the Social

Connectedness Scale (Lee & Robbins, 1995). In line with our hypothesis, participants reported higher levels of social connection when they reflected on their experiential purchases,  $t(195) = 2.05, p < 0.05$ .

When people feel connected to others, they may want to partake in other social activities and further their sense of connection. After thinking about one type of purchase or the other, participants in Study 4 ( $N = 80$ ) indicated their relative preference for a variety of activities, some social and some not, adapted from Vohs, Mead, and Goode (2006). Participants were given a series of nine pairs of activities and asked which they would prefer if offered a choice between them. In each pair, one activity was inherently social (e.g. “hanging out at a café with a friend”) and the other was not (e.g. “reading a favorite book alone”). Giving consumers an opportunity to think about their experiential purchases made the social activities more appealing,  $t(78) = 2.07, p < 0.05$ . Because we found a significant difference in purchase price between experiential and material purchases in this study, it is important to note that this difference in preference for social activities remains significant in an ANCOVA controlling for (log-transformed) average purchase price,  $F(1, 77) = 6.87, p = 0.01$ . While the previous studies showed that consumers feel more connected to others after thinking about their experiential purchases, this experiment demonstrated that there may be behavioral consequences that stem from this feeling. Experiences not only connect us to other people; they also provide a rich store of memories of such connection to draw on and revisit, and these memories may feed the inclination to engage even more in such activities.

By inspiring people to seek out the company of others, experiential purchases are likely to have benefits beyond the purchase itself. But do the secondary benefits of such purchases apply only to the experiencer, or do they flow outward to the reach of others as well, perhaps causing us to treat others better? In Study 5 ( $N = 48$ ), participants were asked to recall an experiential or material purchase and then assigned the role of allocator in a dictator game. Previous research (Charness & Gneezy, 2008) has found that as social distance decreases, allocators in the dictator game become more generous to receivers and keep a smaller portion of the endowment for themselves. As predicted, thinking about an experiential purchase led participants to be more generous than those led to think about a material purchase, unequal variances  $t(40.46) = 2.27, p < 0.03$ .

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### ***How does the Endowment Effect Differ between Experience and Material Products?***

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Endowment effect is the classical finding that a seller’s minimum price to give up a product (WTA) is greater than a buyer’s maximum price to pay (WTP) for the product (Thaler 1980). It is considered as a manifestation of loss aversion (Kahneman and Tversky 1979; Tversky and Kahneman 1991). The sense of loss increases with mere ownership and length of ownership (Strahilevitz and Loewenstein 1998; Wolf, Arkes, and Muhanna 2005). Most past research on endowment effect focused on material products –typical categories were mugs, pens, and candies (for a review, see Horowitz and McConnell 2002). While a few studies assessed the endowment effect using experience products (e.g. Adamowicz et al., 1993; Carmon and Ariely, 2000), no study has explicitly compared the endowment effect for experience and material products. We believe the endowment effect could be different using experience and material products. Understanding this difference could give marketers insight into better pricing experience products.

Experience and material purchases differ in many aspects. Experience purchases are “made with the primary intention of acquiring a life experience: an event or series of events that one lives through”, whereas material products are “tangible objects, kept in one’s possession” (Van Boven and Gilovich 2003). Past research has shown experience purchases are more satisfying, less comparative and more central to self-concept than material purchases (Van Boven and Gilovich 2003, Carter and Gilovich 2010, Cater and Gilovich

2012). Furthermore, material purchases are more likely to generate regret of action, whereas experience purchases are more likely to generate regret of inaction (Rosenzweig and Gilovich 2012). In this paper we show one more difference between experience and material purchases: the endowment effect is greater for experience purchases than material purchases. We also show the underlying mechanism for this effect: experience is richer in mental imagery than material purchases.

Our focus on the difference in the endowment effect between experience and material products is motivated by the research on different perspectives between sellers and buyers (Carmon and Ariely 2000; Van Boven, Dunning, and Loewenstein 2000). Buyers tend to focus on money, and thus buying prices are heavily influenced by reference prices. Sellers tend to focus on the product, and selling prices are heavily influenced by benefits of possessing the product. Based on this, buyers should not value experience and material products differently, because there is no difference in the money they forgo. Sellers, however, may value experience more than material products because experience products elicit more mental imagery and are thus more painful to be parted with.

We contribute to both the endowment effect literature, by demonstrating the endowment effect is greater for experience products than material products, and the experience products literature, by introducing richness of mental imagery as a difference between experience and material product.

In study 1 we demonstrated the basic effect. Study 1 was a 2 (experience vs. material) x 2 (seller vs. buyer) between-subjects design. 255 participants were recruited from Amazon Mechanical Turk to fill out a survey. The survey was consisted of three categories: talk vs. book, concert ticket vs. DVD collection, and movie ticket vs. poster. For the former two categories, participants were asked to think about an author or a band for which they were a great fan. For the movie vs. poster category, they were asked to think about the movie "The Lord of the Rings". The order for the categories was counter-balanced. For each pair, the price was given and the price was the same for experience and material products. Participants in the seller condition indicated the minimum price they were willing to accept (WTA), while participants in the buyer condition indicated the maximum price they were willing to pay (WTP). We created a score "price ratio", which was defined as participant's valuation divided by market price. The data pattern for the three categories was the same so we averaged data across categories. An ANOVA with price ratio as the dependent variable and product type, role, and their interactions as independent variables, reveals a significant main effect of product type ( $F(1,254)=20.30, p<.0001$ ), a significant main effect of role ( $F(1, 254)=60.83, p<.0001$ ) and a significant interaction between product type and role ( $F(1, 254)=4.23, p<.04$ ). In the material product condition, the endowment effect was present, with sellers stating higher price ratios than buyers ( $M_{sell} = 1.57$  vs.  $M_{buy} = 1.03; t(254) = 4.11, p<.0001$ ). The endowment effect was present and greater in the experience product condition ( $M_{sell} = 2.18$  vs.  $M_{buy} = 1.26; t(254) = 6.87, p<.0001$ ).

In study 2 we find mental imagery mediates the effect for selling prices but not for buying prices. This study followed the same 2 x 2 between-subjects design and the same procedure as study 1 with the following modification. After participants indicated their WTP/WTA, they were then asked to answer three 7-point items (anchored 1 =not likely, 7 =extremely likely) that capture mental imagery ("I could easily picture the experience [product]", "I could picture myself in the scene [with the product]", and "I was mentally involved in the experience [product]",  $\alpha=0.85$ ). The basic effect in study 1 was replicated. Furthermore, when mental imagery was added to the model as a mediator, the two-way interaction between product type and role became insignificant ( $F(1,388)=1.60, p=.11$ ). To test the underlying mechanisms, a moderated mediation analysis was conducted (Muller, Judd, and Yzerbyt 2005; Preacher, Rucker, and Hayes 2007). A bootstrap with 5,000 draws was administered to examine the conditional indirect effects (Hayes 2012, model 8). As expected, mental imagery mediated the relationship between price and product type for sellers (95% CI: 0.05, 0.20) but not for buyers (95% CI: -.08, .05).

If mental imagery is the mechanism, we would expect encouraging participants to form mental images to change the endowment effect. Because experience products are richer in mental imagery in nature, we propose encouraging participants to do mental simulation will increase the endowment effect more for experience products than for material products. In study 3, we manipulated

mental simulation by asking participants to imagine what the experience [material] product will be like and rate their anticipatory satisfaction for the experience [material] product on three 1–7 scales anchored on dissatisfied/satisfied, unhappy/happy, and feel bad/feel good (adapted from Shiv & Huber 2000).

A mixed design ANOVA with price ratio (participant's valuation divided by market price) as the dependent measure and product type, role, mental simulation, and their interactions as independent variables, revealed a significant three-way interaction ( $F(1, 701)=6.85$ ,  $p=0.009$ ). The significant three-way interaction was such that the difference in endowment effect between experience products and material products was exacerbated when we encouraged participants to form mental images of products.

For experience products, we found a significant interaction between mental simulation (MS) and role ( $F(1, 701) = 9.51$ ,  $p = .002$ ). Mental simulation significantly increased selling prices for experience products (Mno MS = 2.75 vs. MMS = 4.23;  $F(1, 701) = 4.23$ ,  $p < .0001$ ), but not buying prices for experience products (Mno MS = 1.29 vs. MMS = 1.27;  $F(1, 701) = 0.05$ ,  $p = 0.96$ ). For material products, the interaction between mental simulation and role was not significant ( $F(1, 701) = 0.12$ ,  $p = 0.72$ ). Mental simulation did not have a significant effect on either selling prices or buying prices for material products (for sellers, Mno MS = 1.99 vs. MMS = 2.04;  $F(1, 701) = 0.27$ ,  $p = 0.79$ ; for buyers, Mno MS = 0.94 vs. MMS = 0.98;  $F(1, 701) = 0.23$ ,  $p = 0.82$ ). The results from study 3 demonstrate that mental imagery plays a moderating role in the endowment effect by affecting selling prices. This provides further support for mental imagery as the mechanism.

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### ***Material Words: How Sharing Material and Experiential Purchases with Others Influences Self-Esteem***

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Consumers frequently share word of mouth (WOM) about various types of purchases, and WOM strongly influences consumers and firms (Chevalier & Mayzlin, 2006). Yet there remains a lack of research on the mechanics of WOM—in particular, on its linguistic content. Recent work has demonstrated that specific content—for example, emotion words (Yin, Bond & Zhang, 2013), figurative language (Kronrod & Danziger, 2013), or explaining language (Moore, 2012)—can influence product evaluations (Moore 2012), perceived review helpfulness (Yin et al., 2013), and product choice (Kronrod & Danziger, 2013).

Building on this work, the current paper focuses on explaining language in WOM and its impact on a novel variable: consumers' self-esteem. We combine work on language and material versus experiential purchases to examine how sharing WOM about different purchases in different ways influences consumers' self-esteem.

Since purchases form a core part of the consumers' extended self (Belk, 1988; James, 1890), they influence self-esteem (Banister & Hogg, 2004). In a WOM context, we suggest that self-esteem should be influenced by whether the purchase shared is material or experiential. Prior work has established differences between these types of purchases—for example, experiential purchases make individuals happier (Van Boven & Gilovich, 2003), particularly positive ones (Nicolao, Irwin, & Goodman, 2009). Importantly, however, purchase type influences not only the purchaser, but other consumers, who stigmatize and judge individuals who make material purchases (Van Boven, Campbell, & Gilovich, 2010). Thus, we consider purchase type and valence, and examine how consumers' self-esteem is impacted by sharing WOM about these purchases using different language.

We predict that self-esteem may be damaged by sharing WOM about purchases for which consumers fear they will be stigmatized (Van Boven et al., 2010)—in particular, consumers may fear judgement for sharing positive material and negative experiential

purchases, but may feel safe from judgment for sharing negative material and positive experiential purchases. Consumers may feel that they are unlikely to be judged for negative material purchases that were not enjoyable and did not “work out”, so self-esteem should not be influenced by sharing these, regardless of language use. Similarly, consumers may feel that they are unlikely to be judged for positive experiential purchases that were enjoyable and enabled personal growth, so self-esteem should not be influenced by sharing, regardless of language use.

In contrast, for positive material purchases, individuals may fear being judged for enjoying or acquiring a good; for negative experiential purchases, individuals may fear being judged for an experience which did not work out or was not fulfilling. Thus, sharing WOM about these experiences may decrease self-esteem. However, we expect language use to moderate this effect. We predict that explaining or justifying purchases should help individuals avoid feeling judged (Lerner & Tetlock, 1999).

Thus, if consumers share positive material and negative experiential purchases using explaining language, their self-esteem should not be influenced; if they share these purchases without using explaining language, their self-esteem should decrease. We test these predictions in 3 studies.

Study 1 focused on material purchases. Undergraduates participated in a 2 (audience: salient/not) by 2 (valence: positive/negative) by 3 (writing: control/explain/non-explain) design. They recalled an appropriate purchase, using instructions from prior literature (Van Boven et al., 2010), and then wrote a review of their purchase. In the audience salient condition, participants were informed that their review would be shared with another participant. In the not salient condition, participants were informed that their review would be stored anonymously. Control participants wrote only one or two words about their purchase, while explain and non-explain participants completed a fill-in-the-blank sentences review (Moore, 2012). In the explain condition, half of the ten sentences contained explaining clauses (e.g., “I would \_\_\_ recommend this product to others, because \_\_\_.”); the non-explain condition had similar sentences but no explanation. After writing their review, participants completed the social subscale of the State Self-Esteem Scale (e.g., “I am worried about whether I am regarded as a success or failure,” Heatherton & Polivy, 1991). Participants also completed the short form of the Material Values Scale (Richins, 2004); this was used as a covariate.

Study 1 results supported our predictions. Self-esteem decreased only in the audience salient conditions (when judgement was expected), and only when individuals wrote about their positive material purchase without explaining it. Individuals who wrote about their positive material purchase but explained it had self-esteem equal to the control condition.

In study 2, we investigated how self-esteem was influenced by explaining (or not) material and experiential purchases, holding audience salience constant—all participants were informed that their review would be shared with another participant. We also measured global self-esteem (Rosenberg, 1965) several weeks prior to the study; this was used as a covariate. For the study, undergraduates participated in a 2 (type: material/experiential) by 2 (valence: positive/negative) by 3 (writing: control/explain/no explain) between-subjects design. The study proceeded similarly to study 1, except for the type of purchases recalled; state self-esteem and materialism were measured after writing. Results indicated that for positive experiential and negative material purchases, self-esteem was not influenced by writing. However, for negative experiential and positive material purchases, compared to control, writing without explaining decreased self-esteem, while writing with explaining did not.

In study 3, we tested natural language use. Individuals wrote about positive or negative material or experiential purchases freehand; all were told their writing would be shared. We measured causal word use (e.g., because; using Linguistic Inquiry and Word Count; Pennebaker et al., 2007). We found that individuals explained negative material purchases more than any other type of purchase. While this is consistent with prior work (Wong & Weiner, 1981; Lerner & Tetlock, 1999; Van Boven et al., 2010), it suggests that consumers do not naturally share WOM in a way that protects their self-esteem.

In sum, though they do not do so naturally, if consumers explain their positive material or negative experiential purchases when sharing WOM, they can overcome the negative impact of sharing on their self-esteem. Future work could identify moderators that encourage consumers to share in ways that are self-protective, or could test whether negative audience judgments are mitigated if explaining language is used in WOM about material and experiential purchases.

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### **3.5 Individual Papers: Money, Power, and Control**

**Room: ALHAMBRA**

**Chair:** Emily Garbinsky, Stanford University, USA\*

#### ***What Voting Begets: Unintended Consequences of Direct Democratic Empowerment***

Tami Kim, Harvard Business School, USA\*

Leslie John, Harvard Business School, USA

Todd Rogers, Harvard Kennedy School, USA

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Gone are the days of managers acting as sole decision-makers in strategic choices. Whether it is creating advertisements or forming mission statements, managers are increasingly outsourcing decisions to both internal and external stakeholders (i.e., employees and customers). While delegation of agency is often a strategic move to dodge responsibility for potential missteps or avoid being perceived as lacking transparency (Bowen and Lawler 1992), shared decision-making also allows companies to induce positive effects by empowering those who participate. In workplace settings, for instance, empowering employees leads to higher job satisfaction and performance (Kirkman 1999; Spreitzer 1995). Similarly, research on consumer empowerment points to the benefits of involving consumers (Fuchs, Prandelli, and Schreier 2010; Prahalad and Ramaswamy 2004; Wind and Rangaswamy 2001). In contrast, we explore the possible negative consequences of such empowerment, examining how opening the Pandora's box of empowerment can prove problematic when companies wish to close the lid and revert to making their own decisions.

Our research focuses on three consequences of allowing stakeholders to vote. First, we explore whether allowing people to vote leads to higher voting demand on subsequent decisions, even when the "vote giver" may no longer desire such input. Indeed, research in political science shows that political participation (including voting) engenders future participation (Finkel 1978; Putnam 2000). As in the previous literature, we expected stakeholders to be satisfied when empowered; in addition, however, we expected empowerment to lead to stakeholders' feeling entitled to continue voting. Second, we examine whether stakeholders who are allowed to vote on one issue and then have the vote taken away are more upset than those who are not allowed to vote on the first issue and then given the vote: while in each case stakeholders will have voted once, we suggest that having the vote taken away is so aversive that stakeholders are as dissatisfied as those who never get to vote. Finally, we explore whether all voting is good voting. In particular, we explore the case in which the issues are repeatedly trivial, such that voters would be happier if the firm just made the decision for them.

Study 1 tests the idea that once empowered to vote, people will express the desire to vote more in the future. Participants ( $N=106$ ) acted as consumers of a breakfast products company called Cereal Central. The study employed one between-subjects manipulation, where participants either voted six times on company-related issues, or were simply told about the choices the company was considering. They were then given a list of ten company issues and were asked whether each should be put up to a vote. As predicted,

voting begets more voting: those in the vote condition indicated that they wanted to vote for more issues ( $M=2.98$ ) than those in the no vote condition ( $M=2.43$ ),  $t(104)=2.32$ ,  $p<.05$ .

Study 2 explored whether voting and then having the vote taken away can be worse than not voting and then being given the vote – and even as bad as never being able to vote at all. In a 2 (vote vs. no vote on the first issue) x 2 (vote vs. no vote on the second issue) between-subjects design, participants ( $N=243$ ) acted as employees of a local firm whose management team decides to let employees vote or not vote on each of two company-related issues (revising bonus scheme and promotion policies). A 2x2 ANOVA revealed no significant effect of voting on the first issue on satisfaction,  $F(1, 239)=1.80$ ,  $p=.18$ , but a significant main effect of being able to vote on the second issue,  $F(1, 239)=78.37$ ,  $p<.001$ , such that participants who could vote the second time were more satisfied ( $M=4.00$ ) than those who could not ( $M=2.79$ ). Most importantly, we observed the predicted interaction,  $F(1, 239)=7.65$ ,  $p<.001$ ). Follow-up tests indicated that participants who did not vote the first time and were given a chance to vote for the second issue reported significantly higher satisfaction ( $M=4.29$ ) than those who voted both times ( $M=3.72$ );  $t(122)=3.32$ ,  $p=.001$ : being given the vote feels better than having had the vote all along. In contrast, once empowered to vote, having that ability taken away for the second issue made people feel less satisfied ( $M=2.89$ ) than those who did not vote and then voted ( $M=4.29$ ),  $t(122)=7.96$ ,  $p<.001$ , despite the fact that in both cases participants voted once. Indeed, having the vote taken away made participants feel as dissatisfied as if they had never gotten to vote at all ( $M=2.69$ ),  $t(117)=.90$ ,  $p=.34$ .

Finally, Study 3 explored whether empowerment can backfire when stakeholders are repeatedly asked to vote on issues that they deem trivial. Using the same workplace paradigm from Study 2, participants ( $N=480$ ) were randomly assigned to one condition of a 2 (the first issue is important vs. trivial) x 2 (the second issue is important vs. trivial) x 2 (vote vs. no vote on the second issue) between-subjects design. An ANOVA revealed that being able to vote the second time significantly increases people's level of satisfaction overall,  $F(1,472)=33.44$ ,  $p<.001$ . This main effect, however, was qualified by the predicted three-way interaction,  $F(1, 472)=53.12$ ,  $p<.001$ ). In contrast to all other conditions – in which being disempowered on the second issue led to decreased satisfaction – employees who considered trivial issues at both times were actually more satisfied when the vote was taken away on the second issue ( $M=4.05$ ) than those “empowered” to keep voting on trivial matters ( $M=2.84$ ),  $t(121)=7.73$ ,  $p<.01$ .

These results suggest that while empowering stakeholders by giving them the vote generally increases satisfaction, such empowerment can come with downstream costs: stakeholders demanding to vote in the future (Study 1), stakeholders becoming angry when the vote is taken away (Study 2), and stakeholders becoming irritated when repeatedly forced to vote on issues about which they do not care (Study 3). Our results offer insight into how voting as the means to shared decision-making processes can be an effective tool of empowerment across different kinds of stakeholders – from customers to employees to citizens – but only when used the right way.

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### ***Effects of Resource Uncertainty on Perceptions of Control and Impulsivity***

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Acquisition of resources is vital for any individual's survival and well-being. Failure to successfully harness resources from the environment is a threat and is therefore undesirable. However, consistent access to resources is not a trivial task because availability of resources has been irregular since the dawn of human evolution (Chakravarthy & Booth, 2004). Even the modern life is rife with inconsistencies in resource availability. Not only does the economy continue to be characterized by periods of boom and bust, but

there is a considerable inequality among people for access to resources at any given time. So, how does resource uncertainty affect consumers' everyday lives and their control beliefs? For example, do they feel that they are in charge of their lives during such threats or do they feel that they are helpless? Might these beliefs drive their financial behaviors?

Drawing on life history theory, recent work indicates that resource uncertainty cues lead people to respond in divergent ways as a function of their childhood environments (Griskevicius et al., 2013). In the present work, we add to this growing body of work by investigating the effects of uncertainty on people's perceptions of control. We hypothesize and provide evidence that uncertainty associated with resource acquisition leads individuals from relatively poorer childhood backgrounds to feel that they have *less* personal control. Consequently, this psychological sense of decreased control facilitates preference for smaller sooner rewards and lower task persistence.

Conversely, we show that the same uncertainty cues lead individuals from relatively wealthier childhoods to feel that they have *more* personal control. This psychological sense of increased control facilitates their preference for larger later rewards and greater task persistence.

We conducted four experiments, including a behavioral study to test our hypotheses. In Study 1, we examined our basic prediction that resource uncertainty cues produce different effects on people's control beliefs depending on their childhood backgrounds and not their current economic conditions. We experimentally manipulated uncertainty by having participants view a series of photos successfully used in previous research (Hill et al., 2012). In the control condition, participants viewed a series of images depicting objects commonly found in an office. We then examined their sense of control using a state version of an established measure (Lachman and Weaver, 1998). Results revealed that for people who had relatively wealthier childhoods, economic uncertainty *increased* their sense of personal control. In contrast, among individuals who had relatively poorer childhoods, economic uncertainty *decreased* their sense of personal control. Importantly, these beliefs did not vary as function of respondents' current economic conditions.

Study 2 sought to conceptually replicate and extend the findings from the first study. If uncertainty alters only one's personal sense of control, as predicted by our model, then uncertainty should produce different patterns for personal and non-personal sense of control. We tested this possibility in Study 2. Participants read a news article either about the recent economic recession or a control article. Next, they responded to a six item measure of personal sense of control and a six item measure of others' sense of control adapted from a validated scale (Dew & Xiao, 2011). Study 2 conceptually replicated the very specific finding from Study 1. In addition, Study 2 showed that this effect is specific to people's *personal* sense of control rather than their more general perceptions about everyone's level of control.

In Study 3, we aimed to show that perceptions of personal control mediate the relation between resource uncertainty and impulsive financial behavior. Resource uncertainty was manipulated using the procedure as in Study 1. Next, sense of control was measured using the same items as in Study 1. Finally, financial impulsivity was assessed using a set of randomly presented lotteries (Green & Myerson, 2004). Results indicated continued support for our initial predictions. Resource uncertainty cues led individuals from relatively poorer backgrounds to feel a diminished sense of control, whereas the same cues led individuals from relatively wealthier backgrounds to feel an enhanced sense of control. Furthermore, our mediated moderation analyses revealed that the influence of resource uncertainty cues on people's impulsive behavior indeed seems to be mediated by their personal sense of control.

Finally, based on prior work on perceptions of control and persistence (Bandura, 1989), we show that resource uncertainty altered the amount of effort people were willing to expend on a challenging task. Past research has found that when people perceive that they have low personal control, they tend to withdraw and become passive (Skinner, 1996). Therefore, we hypothesized that under conditions of resource uncertainty, those who feel a loss of control should not be willing to persist on a task at hand. Resource

uncertainty was manipulated using an episodic recall task (Sharma and Alter, 2012). Persistence was assessed by the total time participants spent on attempting an unsolvable task (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Results revealed that people who were raised in poorer environments persisted significantly less under resource uncertainty cues as compared to the neutral condition.

In summary, the current research substantially extends previous work on the effects of resource uncertainty on people's psychologies and behaviors. We not only show that uncertainty cues produce divergent control beliefs in people as a function of their childhood environments, but we also show that these beliefs drive their real-world behaviors. These findings have important implications for public policy interventions that wish to improve the future life conditions among the ones that are the most susceptible to the effects of resource uncertainty. Our findings suggest that infusing a sense of personal control among such individuals may help in reducing impulsive financial behaviors, and may encourage them to persist more, which could lead to greater benefits in real-world arenas such as education and professional work.

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### ***How Power Affects Saving***

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Americans save too little (Bertrand, Mullainathan and Shafir 2006). Although there has been much research examining ways to increase savings rates, insight into the motivations for why people save have been largely unexplored. For instance, people save money to maintain their current financial situation or they save for a status-related purchase. What determines whether people are more motivated to save for one reason versus the other? Power has been associated with both the desire to maintain one's current state and the desire to acquire status-related products. We thus examine when and why feelings of power versus powerlessness differentially affect the amount of money that people are willing to save.

**Experiment 1: The Effect of Power on Saving.** The objective was to examine whether manipulating power affects saving. Participants were made to feel powerful or powerless by writing about a past experience (Galinsky et al. 2003) whereas those in the control condition did not complete any writing task. All participants then imagined that they had just received \$100 and indicated how much of this money they would save. The results showed a significant effect of power on saving,  $F(2, 138) = 5.17, p < .01$ . Participants feeling powerful saved a larger portion of their \$100 ( $M = 71.20$ ) than participants feeling powerless ( $M = 48.73$ ),  $t(138) = 2.97, p < .01$ , and controls ( $M = 51.69$ ),  $t(138) = 2.52, p = .01$ .<sup>4</sup>

**Experiment 2: The Motivation for Saving Among the Powerful and Powerless.** The objective was to examine why feeling powerful increases the amount that people are willing to save by manipulating the purpose for saving: save for the future, save to spend, or control. As power is defined as asymmetric control over resources (Magee and Galinsky 2008), and powerful individuals want to keep their current state (Maner et al. 2007), we hypothesize that power motivates individuals to accumulate resources (i.e. money) that enable them to maintain power. As the most common reason to save is to accumulate money for the future (Kramer 2013), we hypothesize that powerful participants will save more than powerless participants in the save for future and control conditions, but not in the save to spend condition. Past research has shown, conversely, that feeling powerless fosters the need to

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<sup>4</sup> Note that we replicate the basic effect utilizing a more subtle manipulation of power (i.e., power poses).

engage in compensatory consumption by purchasing high-status products (Rucker and Galinsky 2008). Thus we hypothesize that when the purpose of saving is to spend money on a status-related product, those that feel powerless will save more than those that feel powerful.

In this study (and study 3), individuals indicated their income and stated how much of this they intend to save. There was a significant interaction between power and purpose of saving on percent saved,  $F(2, 202) = 13.29, p < .001$ . When the purpose of saving was to keep money for the future, participants in the high power condition were willing to save a larger percentage of their income ( $M = .34$ ) than participants in the low power condition ( $M = .20$ ),  $t(202) = 2.66, p < .01$ . Similarly, when the purpose of saving was not explicitly stated (control), participants in the high power condition were willing to save a larger percentage of their income ( $M = .42$ ) than participants in the low power condition ( $M = .14$ ),  $t(202) = 4.97, p < .001$ . There was no significant difference between the save for future and control condition. However, when the purpose of saving was to spend money on a status-related product, participants in the low power condition were willing to save a larger percentage of their income ( $M = .23$ ) than participants in the high power condition ( $M = .13$ ),  $t(202) = 1.95, p = .05$ .

**Experiment 3: The Moderation of Money as a Means to Maintain Power.** We argue that feeling powerful increases saving because money functions as a means to maintain power. Accordingly, we predict that the effect disappears if we prime participants to equate power with an alternative resource (knowledge). Participants were then made to feel powerful or powerless. We predict that in the control condition, we will replicate our effect that high power participants will save more than low power participants. However, when participants are primed to equate power with knowledge, we expect no difference in saving among high power and low power participants.

Results showed a significant interaction between power and association on percent saved,  $F(1, 174) = 4.41, p = .04$ . In the control condition, high power participants were willing to save a larger percentage of their income ( $M = .33$ ) than low power participants ( $M = .21$ ),  $t(174) = 2.98, p < .01$ . When power was equated with knowledge, there was no difference in percentage saved among high power ( $M = .24$ ) and low power participants ( $M = .25$ ),  $t(174) = .09, p = .93$ .

To examine the mechanism, agreement with the statements “I want my current situation to stay the way that it is” and “I want to continue feeling the way I feel now” were averaged to create a maintenance index ( $\alpha = .91$ ). A moderated mediation analysis revealed a mediating role of the desire to maintain power on saving for those in the control condition, but not for those in the knowledge means power condition.

Together, these results show that power increases saving. We demonstrate that this effect is explained by the motivation to accumulate money in two ways. First, we show that powerful people only save more money when the motivation is to accumulate it, but not when the intention is to spend it. Second, we show that if money can no longer aid in maintaining power, the effect of power on saving disappears. We hope to contribute to existing research on power by showing that power not only influences spending, but also drives one’s decision to keep money.

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### ***Power, Self-Interest, and Financial Risk Taking***

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How much does the powerful risk to have more power? This research shows that the answer depends on one's focus on the self versus others. Often described as individuals' ability to control resources of their own and others without social interference, power has been shown to affect how much people spend on status related items (Rucker and Galinsky 2008) and gifts (Rucker, Dubois, and Galinsky 2011). In the present research, I investigate an alternative channel through which social power can influence consumers' welfare, namely financial risk taking.

People often face risky monetary decisions such as investing in the stock market, choosing a retirement plan, buying a lottery ticket, or making a bet in a gamble. These decisions, in turn, have important implications for their wealth. Yet, little is known how one's social relations influence his or her financial risk taking. Levav and Argo (2010), for instance, document that an interpersonal touch can influence individuals' propensity to make risky financial decisions through altering their sense of security. In this study, I focus on the link between financial risk taking and a more prevalent social force that generally has negative connotations, i.e., social power. This is an important topic to examine because individuals are often assigned to powerful and powerless positions in their daily lives and because many household financial decisions entail risk.

I propose that possessing power versus lacking it increases financial risk taking among agentic individuals, whereas this effect is not observed among communal individuals. As originally coined by Bakan (1966), the term agency refers to a tendency to reflect on one's individuality and emphasizes the self and its separation from other organisms, while term communion refers to the merging of an individual in a larger organism and social connections with others. In particular, I argue that agentic individuals experiencing a state of power take greater financial risk because amassing wealth can enable them to expand the boundaries of their power. On the other hand, taking risk to enhance personal wealth and command greater control is inconsistent with communal values such as cooperation and harmony. I built this theorizing on Chen et al.'s (2001) relationship-orientation based conceptualization of power's effects, which proposes that self-focused individuals associate social power with the pursuit of self-interest, whereas other-focused individuals refrain from doing so.

Study 1 employs a 2 (power: high vs. low) x 2 (orientation: agency vs. communion) between-subjects design. Power was manipulated using an episodic priming task adapted from Galinsky et al. (2003) and agency-communion orientation was measured. Following previous research (e.g., Kurt et al. 2011), I created a measure to assess relative agency orientation, "ACDIF", by subtracting each respondent's communion score from his/her agency score. Participants were asked to imagine that they were given \$100 and told that they could participate in a 50-50 gamble in which they could win an additional \$100 or lose \$10, \$20, ..., or \$100. They indicated whether they would accept each of these offers. Among the offers accepted by a participant, the highest amount s/he is willing to risk to earn additional \$100 is the dependent variable. As predicted, there is a significant interaction between power and ACDIF. Post-hoc analysis reveals that the slope for high ACDIF (i.e., agentic) participants is positive and significant, indicating that the experience of power increases agentic individuals' tendency to take financial risk. However, the slope for low ACDIF (i.e., communal) participants is negative and insignificant. The next study tests the underlying mechanism for this effect. Specifically, I argue that high power leads agentic individuals to take more financial risk when self-benefit obtained from the risky decision is high (versus low).

Study 2 employs a 2 (power: high vs. low) x 2 (orientation: agency vs. communion) x 2 (self benefit: high vs. low) between-subjects design. Power and self-benefit were manipulated, whereas agency-communion orientation was measured. Participants were asked to imagine that they have participated in a charity event where they can play "Odd-Even?", which is a game of chance based on correctly guessing whether the winning number is odd or even, and that they have \$100 to bet. Participants assigned to the high (low) self-benefit condition were told that they can keep 75% (25%) of their winnings, whereas 25% (75%) of their winnings are automatically donated to the charity. There is a significant three-way interaction among power, self-benefit, and ACDIF. More important, the slope for high ACDIF and high self-benefit is positive and significant, suggesting that agentic individuals with high power make riskier financial decisions only when the benefit they obtain from a risky decision is high. In contrast, they take less risk

when self-benefit is low. Further, having power versus lacking it does not have any impact on the financial risk taking of communal individuals regardless of the level of self-benefit.

Study 3 tests the underlying process via mediation analysis and employs a 2 (power: high vs. low) x 2 (orientation: agency vs. communion) between-subjects design. Participants were asked to imagine that they would allocate their \$5,000 between a stock fund and a bond fund. Again, there is a significant interaction between power and ACDIF. As expected, agentic individuals with high power take more risk and invest a higher percentage in the stock fund. More important, this effect is mediated by the extent to which participants associate power with the pursuit of self-interest measured using a four-item scale (e.g., "Power should be used to benefit the self").

Overall, this research demonstrates the asymmetric impact of social power on financial risk taking of self- and other-focused individuals. The documented findings extend primarily the field's understanding of the role of power in consumer behavior and the effect of social relations on financial risk taking behavior, as well as the link between agency-communion orientation and monetary decisions.

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### **3.6 Conversations: Goal Pursuit**

**Room: MICHELANGELO**

**Discussion Leader:** Juliano Laran, Miami

Keith Wilcox, Columbia

Amy Dalton, Hong Kong

**BREAK**

**3:30 pm – 3:45 pm**

**BALLROOM FOYER**

**SESSION 4**

**3:45 PM - 5:00PM**

### **4.1 Symposium: Consumer hands make light work: How procedural involvement changes judgments and decisions in the consumption process**

**Room: BALMORAL**

**Chair:** Linda Hagen, University of Michigan, USA

#### ***Preference Expression Modalities***

Anne Klesse, Tilburg University, The Netherlands\*

Jonathan Levav, Stanford University, USA

Caroline Goukens, Maastricht University, The Netherlands

The marketplace affords consumers different procedures and modalities to express their preference. Consumers can, for instance, express their preferences by pushing a button (e.g., at a vending machine) or by vocally stating it (e.g., at the drive in). Normatively these modes of expression should not yield different choices, as there is nothing about the option (or the consumer) that differs as a function of expression mode.

Although it is well-established that people's preferences are constructed in the process of elicitation (Slovic and Lichtenstein 1968, Tversky, Slovic, and Kahneman 1990), to our knowledge no studies have tested the effect of preference expression modalities on people's choices.

We argue that the modality utilized to make a choice influences consumers' preference for indulgent versus healthy alternatives. We compare two modalities commonly utilized in the marketplace: vocal elicitation (i.e., speaking) and non-vocal elicitation modalities (e.g., pushing a button). There are a number of factors that could lead the preferences elicited in these different modalities to differ. First, speech may be more automatic or intuitive, whereas pressing a button that corresponds to a preferred item—as we test in our studies—may not. Second, existing research suggests that speaking may trigger a different type of processing than non-vocal elicitation modalities. While speech is directly connected to emotionality (Pavlenko 2002), pushing a button at a vending machine, for instance, requires translation of one's choice (e.g., Snickers) into another medium (e.g., button B4) and, hence, might reduce emotional resonance. We suggest that speaking prompts individuals to be consistent with their preferences, and thus fosters more indulgent choices. We test this prediction in the context of food consumption decisions that require tradeoffs between short-term and long-term considerations—unhealthy snacks versus healthy snacks.

In study 1 (N = 60), participants chose between regular and low-fat ice cream and expressed their choice either by using the computer mouse or by stating it vocally into a microphone that was connected to voice recognition software. A logistic regression revealed that participants who expressed their choice vocally were marginally more likely to choose the regular ice cream.

In study 2 (N = 80), a field study conducted in a restaurant, a waitress approached all guests and invited them to participate in a dessert tasting. Participants either indicated their choice of dessert (fruit or chocolate stick) by saying it or by pushing a button in front of each dessert. Participants who expressed their choice vocally were significantly more likely to choose the chocolate stick.

In study 3 (N = 101), we tested the hypothesis that expressing one's choice vocally fosters more indulgent choices utilizing a less obvious choice task. Participants chose a snack from a vending machine containing different snacks (e.g., apples, carrots, Snickers, and potato chips). An ANOVA revealed that participants who expressed their choice vocally chose snacks significantly higher in calorie content than participants who expressed their choice non-vocally.

In study 4 (N = 147), we tested our argumentation that speaking increases participants' likelihood to choose an option that they desire and, hence, results in choices higher in calorie content. Participants ranked twelve snacks according to how much they like them. One week later, participants chose a snack from the vending machine (stocked with the snacks that they had ranked according to their preferences). An ANOVA revealed that participants who expressed their choice vocally chose snacks significantly higher in calorie content than those who pushed the button. This effect was mediated by participants' tendency to stick to their preference ranking. Participants who expressed their choice vocally chose a snack ranked higher than participants who expressed their choice non-vocally. Importantly, the effect of modality on indulging was moderated by participants' general preference for unhealthy food. Only participants who generally like unhealthy food choose more indulgent options when expressing their choice vocally.

In study 5 (N = 100), another study in the restaurant, we manipulated the language in which people made their selections. Existing research on bilingualism reveals that speaking in an unfamiliar language is less strongly linked with emotionality than speaking in one's mother tongue. The set-up was similar to study 2, but utilized three conditions: speaking in a familiar language or an unfamiliar

language or pushing a button. Guests chose between an indulgent (chocolate mousse) and a healthy dessert (fruit salad). We conducted a binary logistic regression to explore the influence of modality on the choice of dessert. The result reveals a significant main effect for speaking in the familiar language, but no effect in the unfamiliar language condition. Participants speaking in a familiar language were more likely to choose the indulgent alternative than participants pushing the button. Participants speaking in an unfamiliar language were not more likely to indulge than participants pushing the button.

This research is the first to compare the effect of two preference elicitation modalities (i.e., vocal versus non-vocal elicitation) on consumer choices. It suggests that the extensively studied notion of contextual influence on consumer decisions can be extended to preference modalities as well.

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### ***Less Choosing, More Doing! Desire for Choice is Eliminated by Procedural Control in the Consumption Process***

Linda Hagen, University of Michigan, USA\*

A sense of control is essential to humans. Manipulating things in the environment is an infant's first step to self-awareness (Furby 1978) and mastering challenges through agentic behavior is key to feelings of competence (de Charms 1968; White 1959). Feeling in control is associated with virtually all aspects of wellbeing, from happiness to health (Lachman and Weaver 1998; Larson 1989), and one of the most robust psychological phenomena is people's striving for a sense of control (de Charms 1986). Consumer research shows how important control is for customer satisfaction. People like actively partaking in product assembly because it addresses their need for control (Norton, Mochon, and Ariely 2012). Other research hints that choosing may also provide consumers with control: When perceiving little control, people are motivated to make multiple distinct product choice (Levav and Zhu 2009), and it has been posited that being offered more choice options—that is, a larger assortment—can function as a substitute for power and, more broadly, control (Inesi et al. 2011).

I explicitly test the idea that the widely acknowledged consumer preference for large assortments (Arnold, Oum, and Tigert 1983; Chernev 2003, 2006, 2008; Iyengar and Lepper 2000; McAlister and Pessemier 1982) is driven by a desire to feel in control. In turn, I predict and find that giving consumers control in a more immediate way—by giving them procedural control through greater behavioral involvement—eliminates the preference for larger assortments of choice options.

Study 1, a pilot, first tested whether large assortments uniformly enhance perceptions of control. Participants recruited on campus read about a juice bar where they would either have high or low procedural control (operating the juice press versus watching a clerk operate the juice press) and were offered a small or large assortment of fruits to be juiced (3 versus 15). Then they reported how much influence they would have, how responsible they would be, and to what degree the experience would be under their control. These items formed an index of *Perceived Control* ( $\alpha = .87$ ). Lastly, they rated how much choice they felt they had. People perceived more choice when given a large assortment compared to a small assortment. However, this enhanced perception of choice did not directly translate into perceptions of control. Within the high procedural control condition, people offered large assortments felt no more in control than people offered a small assortment. These results provide initial evidence that under high procedural control, larger assortments do not enhance perceived control.

Study 2 expanded upon these initial results and extended to downstream consequences—offer attractiveness. Participants recruited through Amazon's MTurk (Paolacci, Chandler, and Ipeirotis 2010) imagined a consumption experience at an ice cream parlor that involved high or low procedural control (topping one's ice cream versus merely being served) and a small or large assortment of

toppings (3 versus 15, not further specified). Next, they rated the attractiveness of the ice cream parlor. Afterwards, as in study 1, they responded to the *Perceived Control* items ( $\alpha = .85$ ) and rated how much choice they felt they had. Additionally, to ensure that this generic choice question tapped into perceptions of choice options, people rated how many options the assortment contained as well as how many decisions they would make at the ice cream parlor. For perceptions of choice, as expected, there was a main effect of assortment size: People perceived more choice when given a large (versus small) assortment. This was driven by perceptions of the breadth of options in the assortment rather than of increased decision-making. For perceptions of control, as expected, there was a main effect of procedural control: People perceived more control given high (versus low) procedural control. There was also a main effect of assortment size: Respondents perceived more control given a large (versus small) assortment. Importantly, this main effect was qualified by an interaction with procedural control. Specifically, only under low procedural control did a large assortment enhance perceived control; under high procedural control, people perceived equal control regardless of assortment size. For attractiveness, results were analogous to those found for perceived control. Only under low procedural control did a large assortment enhance attractiveness; under high procedural control, people found small and large topping assortments equally attractive. Indeed, perceived control mediated the interactive effect of assortment size and procedural control on attractiveness.

Study 3 tested the extension of these findings in a context where exerting high procedural control is effortful and potentially risky. Participants recruited via MTurk considered going to a Korean restaurant where they would either have high or low procedural control (Korean BBQ, i.e., personally grilling, versus standard, i.e., merely being served) and a small or large assortment of meats to choose from. Then they responded to the same focal dependent measures as in study 2. For perceptions of choice and control, results conceptually replicated study 2. For restaurant attractiveness, there was a main effect of procedural control: In this scenario, people found it less attractive to have high (versus low) procedural control. Nonetheless, once more, under low procedural control, a large assortment enhanced restaurant attractiveness; under high procedural control, people found small and large assortments equally attractive. These results corroborate evidence that the impact of large assortments stems from an associated sense of control. Further, it affirms that if control is conferred otherwise—through procedural control—the effect of having more choice options within large assortments is obliterated.

Contributing to the literature on personal control generally and the emerging field of co-production and Do-It-Yourself products specifically, procedural control may be a more powerful conveyor of a sense of personal control than breadth of choice is. Adding to research on assortments, process evidence suggests that perceived control is an underlying driver of assortment attractiveness. Further, although having procedural control renders assortment size irrelevant for perceptions of control and thus attractiveness, the effect of greater perceived control need not always be positive: Even in pleasant consumption contexts, people sometimes dislike exerting procedural control.

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### ***Surfacing the Submerged State: Operational Transparency in Government Services***

Ryan Buell, Harvard Business School, USA\*

Michael I. Norton, Harvard Business School, USA

According to the Pew Research Center for the People and the Press, Americans' trust in government is near historic lows and frustration with government performance is approaching record highs (Dimock, Doherty, and Kohut 2013). One explanation for this trend is that many voters may be unaware of the services provided by the government, and in turn, how those services affect their lives. While government transparency is typically focused on our elected officials as a means of ethical oversight, our findings

indicate that transparency into a different facet of government—the operational processes that deliver service—may improve constituent sentiment.

In this paper, we present the results of an experiment in which Boston voters interacted with a website that visualizes the service requests submitted by members of the public, and the City's efforts to address them. Some participants observed a simple count of new, open, and recently closed service requests, while others used an interactive map to visualize these requests, with details and images of the work being performed. Our results suggest that when there is operational transparency into the services government—that is, when citizens have means to gain insight into ongoing operational processes that government employees are engaging in to fix potholes, repair street lamps, and clean graffiti—people express more positive attitudes toward the government and increased support for expansion of government programs.

Government transparency in the United States, promoted by a free press, is primarily trained on elected officials, and is used as a means of oversight to help solve the classical principal-agent problem (Prat 2006). However, despite efforts to promote transparency at the top, far less of an emphasis has been placed on transparency at the bottom—on the actual delivery of government services. In the absence of such transparency, the extant literature suggests that constituent awareness of and appreciation for the services government provides may suffer.

Consistent with this view, research suggests that Americans lack a general awareness of the services provided by government. For example, in a well-cited recent study, when pollsters asked 1,258 people whether they ever used a government social program, the majority said they had not. Yet, when asked later about the usage of 21 separate government programs and policies, the vast majority reported using one or more (Koch and Mettler 2012). The authors argue that the main source of this discrepancy arises from a collection of federal programs and policies that incent and subsidize the activities of individuals and corporations to act on behalf of ordinary citizens (Mettler 2010). As a consequence of this mediation, the outcomes of these programs and policies may not be attributed to the government—a pattern that has been dubbed *the Submerged State* (Mettler 2011). When service delivery is obscured from the customer's view, the provider must be particularly diligent in order to promote an awareness of the value it creates (Neely, Mcfarlane, and Visnjic 2011).

When service production instead occurs in the presence of customers, they may be able observe aspects of the delivery process that improve their perceptions of the outcome and the provider. For example, merely observing that one devoted time to the delivery of a service can increase the perceptions of outcome quality (Chinander and Schweitzer 2003; Kruger, Wirtz, Van Boven, and Altermatt 2004). When the process is perceived to be effortful, customers report higher levels of satisfaction (Mohr and Bitner 1995), as well as feelings of reciprocity and gratitude (Morales 2005). Consistently, the perception that a firm exerts higher costs, as when exerting more effort, leads consumers to perceive that higher prices are fair (Kahneman, Knetsch, and Thaler 1986).

While efficiency, security and public safety considerations may, in some cases, inhibit the direct observation of government service processes, research suggests that the consumers of services need not be co-located with service production in order to enjoy the benefits of transparency. For example, when websites provide a visual representation of the work being engaged in on a customer's behalf, customers report higher perceptions of service value, increased satisfaction with the provider, and increased intended loyalty (Buell and Norton 2011). It is this type of transparency that we believe is imminently feasible for many government organizations. The creation of Open311 standards and the emergence of application programming interfaces that give developers access to troves of data on government services present exciting opportunities to increase transparency through technology. Indeed, our research suggests that leveraging technology to show citizens the work that government is engaging in on their behalf increases feelings of positivity towards government and support for increasing government programs.

This research also makes several contributions to the theory on operational transparency. While prior works have demonstrated the positive effects of operational transparency on organizational sentiment, this is the first study that demonstrates that transparency need not be synchronous. Prior research has shown, for example, that providing an ex-post account of the inputs dedicated to the delivery of a service improves *outcome* perceptions (Chinander and Schweitzer 2003), but to our knowledge, this is the first study to demonstrate that asynchronous operational transparency can improve *organizational* perceptions. Additionally, while perceptions of effort have been shown to have generally positive effects on evaluations (Morales 2005), the extant work on operational transparency has only documented the benefits of transparency for the direct recipient of the transparent process. Our results also suggest that operational transparency may be used to improve sentiment more generally. Finally, this work highlights an important new boundary condition of operational transparency. In particular, our experimental design enables us to separately evaluate the effect of showing what the organization is doing from what the organization could be, but isn't. When operational transparency reveals the work that government is doing, it improves positivity towards government and support for government programs. When in addition, it reveals the growing queue of tasks the government has not yet accomplished, it is no more helpful on these dimensions than not being transparent.

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### ***Rituals Enhance Consumption***

Kathleen Vohs, University of Minnesota, USA

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Francesca Gino, Harvard Business School, USA

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Rituals mark many life events, big and small. From the sequences of activities around Thanksgiving dinner to the activities involved in opening a bottle of wine, people use systematized sequences of behaviors in order to signify an event, and quite often those are consumption experiences. We hypothesized that one reason that rituals can enhance the consumption experience is that they heighten involvement in the act of consumption. Four experiments tested and found support for this hypothesis.

In experiment 1, participants tasted a chocolate bar, before which they either performed or did not perform a ritual. In the ritual condition, participants were told that, "Before a consumption experience, people often engage in simple rituals (e.g., when opening a bottle of wine at a restaurant). Please follow these specific steps in unwrapping the chocolate: 1. Without unwrapping the chocolate bar, break it in half. 2. Unwrap one half of the chocolate bar and eat it. 3. Then, unwrap the other half and eat it." In the no-ritual condition, participants were told that, "Before you taste the chocolate, please spend a couple of minutes relaxing." We measured how much they savored the chocolate, as surreptitiously measured by duration spent consuming it. We also measured how much participants reported enjoying the chocolate, and how potent its taste was perceived. We predicted and found that participants in the ritual condition spent longer eating the chocolate (i.e., savored it more), found the chocolate's taste to be more potent, and enjoyed the chocolate more than participants in the non-ritual condition.

Experiment 2 compared ritualistic behaviors involving systematic movements to a control condition where participants engage in similar movements that are random and therefore not systematic. Second, the experiment included a break between the ritual and consumption. A delay between goal cues and the opportunity to enact goal-directed behavior potentiates the ensuing behavior. We therefore expected that the break should stimulate the drive to consume which should further heighten rituals' effects. Third, we measured both anticipated enjoyment before consumption and actual enjoyment. Finally, we altered what participants consumed from the sublime (chocolate) to the mundane: carrots. Experiment 2 had a 2 (ritual vs. random gestures) by 2 (delay vs. no delay) between-subjects design. Participants were provided with three bags of carrots and were asked to test one carrot from each bag.

Participants in the ritual condition performed an identical set of gestures and movements before they tasted each of the carrots. Their ritual comprised behaviors such as using their knuckles to rap on the desk, taking deep breaths, and closing their eyes for a moment. Participants in the random-gestures condition, in contrast, performed gestures that were similarly elaborate but differed from one carrot to the next. The procedure diverged for the no-delay and delay conditions at the point after participants had performed the third set of gestures but had not yet eaten the third carrot. Participants in the no-delay condition next reported their anticipated enjoyment of the third carrot. Next, they tasted a carrot from the third bag and reported their enjoyment. In the delay condition, after participants performed the third set of gestures, they were told that they would not eat the third carrot immediately but instead would complete an unrelated study. They rated their anticipated enjoyment of the third carrot, answered questionnaires as part of an unrelated study, and finally ate the third carrot and rated their enjoyment of it. Results confirmed our prediction that participants in the ritual/delay condition reported higher anticipated and actual experience enjoyment than did participants in the other three conditions.

The primary goal in experiment 3 was to manipulate involvement to test our contention that personal involvement is a key driver of the enhancing effects of rituals. Experiment 3 tested whether merely seeing a ritual performed is enough to enhance consumption. Experiment 3 also included a measure of mood to examine whether engaging in rituals influences emotional state during the consumption experience. In the self-ritual condition, participants were given a series of steps that formed the ritual of making a glass of lemonade. They were told to pour half of a packet of lemonade powder and half a glass of water into a glass, then to stir the mixture, and then wait for 30 seconds. After 30 seconds, they were told to pour the remainder of the lemonade mix and water into the glass, stir, and wait for 30 seconds. In the other-ritual condition, participants observed the experimenter perform the same steps as described above. The results demonstrated that rituals before consumption increase the potency of the consumption experience when performed by the individual who is about to consume rather than another person. We also ruled out mood as a driver, as there were no differences in positive or negative affect as a function of condition.

We designed a last study to further examine the role of intrinsic interest as the process of the observed effects. The study used the same product and procedure as in experiment 1. Participants were informed that they would be asked to taste a chocolate bar. As in experiment 1, we measured enjoyment and willingness to pay for the chocolate. In addition, we included measures of intrinsic interests. The results showed that participants in the ritual condition enjoyed the chocolate more and were willing to pay more for the chocolate, replicating experiment 1. Moreover, we found evidence for mediation through intrinsic interests for both enjoyment ratings and time spent savoring as dependent measures.

In summary, this work provides robust evidence that performing ritualized behaviors prior to consumption enhances the consumption experience. People who were randomly assigned to perform a ritual enjoyed that which they consumed more so than others. Meditational evidence suggested that intrinsic interest is driving this effect. This work will be of interest to scholars who study motivated behavior, savoring, or satiation. Because rituals are a lubricant for consumption, this work also has implications for interventions.

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## ***4.2 Individual Papers: The Role of Inferences and Expectations in Consumer Behavior***

**Room:** SANDINGHAM

**Chair:** Scott S. Roeder, University of California Berkeley, USA\*

### ***The Name-Control Effect in Consumer Judgment and Decision Making***

James M. Leonhardt, New Mexico State University\*

Marketing involves people and products, and people and products have names. In addition to being associated with semantic information stored in memory (Collins and Loftus 1975; Kasof 1993), names may affect judgment via the metacognitive experience of processing fluency brought on by the act of information processing (Alter and Oppenheimer 2009). Some names are more difficult to pronounce or process than others (e.g., Mr. Tomba vs. Mr. Nghidi). Names that are easy to process or fluent may give rise to the experience of processing fluency, while names that are difficult to process or disfluent may give rise to the experience of processing disfluency. Such name fluency has been found to affect consumer preference for people and products (Alter and Oppenheimer 2006; Laham, Koval, and Alter 2012), judgments of familiarity (Laham et al. 2012), and perceptions of risk (Song and Schwarz 2009). Laham et al. (2012) found that people with fluent surnames were evaluated more favorably than people with disfluent surnames; Alter and Oppenheimer (2006) found that initial public offerings with fluent ticker symbols outperformed those with disfluent ticker symbols; and Song and Schwarz (2009) found ostensible food additives and amusement park rides were perceived as less risky when their names were fluent rather than disfluent.

The present research adds to this growing body of literature on name fluency by asking: How might the fluency of a name affect the perception of control over the bearer of the name? Incidental factors are known to influence the perception of control--the belief that an agent has the ability to alter a given stimulus or outcome (Skinner 1996). Of particular interest, is work initiated by Ellen Langer (1975) finding that the perception of familiarity can enhance the perception of control, even when control is entirely illusory. This is of interest because processing fluency has been found to enhance the perception of familiarity, even when familiarity is entirely illusory (Whittlesea 1993). Such evidence supports the possibility of a name-control effect: that fluently named stimuli (e.g., other people, consumer products) are perceived as more familiar, and as a result easier to control than disfluently named stimuli. Four experimental studies were conducted to test for the presence and the possible process mechanism underlying such an effect. First evidence for a name-control effect came from study 1, where processing fluency (vs. disfluency) was found to increase the perception of control. In this study, people with fluent names (e.g., Mr. Tomba) were more likely to be solicited by salespeople and were perceived as being easier to control than people with disfluent names (e.g., Mr. Nghidi). In study 2, the perception of familiarity was found to mediate the relationship between processing fluency and the perception of control. In this study, products, that require skill to operate, were perceived as more familiar, and as a result easier to control when their names were fluent (e.g., Calcut), rather than disfluent (e.g., Caiusi). In study 3, the name-control effect was found to persist when control was perceived as both desirable and undesirable. In this study, ostensible political candidates with fluent (vs. disfluent) names were evaluated as being easier to control by both the voting public (desirable control) and lobbyists (undesirable control). Finally, in study 4, the name-control effect was found to influence judgments that are based on the perception of control independent of the valence of fluency-elicited affect. In this study, consumers attributed greater blame towards firms following product harm crises when the crises were described as having resulted from faulty products with fluent rather than disfluent names. In addition, this relationship between processing fluency and the attribution of blame was mediated by the perception of control.

These studies support a name-control effect and suggest the effect is not the direct result of fluency-elicited affect, but rather is the result of a naïve belief that infers familiarity from the experience of processing fluency. As in previous studies (Langer 1975), this perception of familiarity then goes on to positively affect the perception of control. This process explanation is supported by the present research finding that the name-control effect is 1) mediated by the perception of familiarity, 2) persists when control is both desirable and undesirable, and 3) judgments based on this effect are not necessarily congruent, in valence, with fluency-elicited affect. This process explanation supports research suggesting that fluency's effect on judgment is often dependent on the naïve theory used to interpret the metacognitive experience of information processing (Deval et al. 2012; Schwarz 2004; 2010). This trend can be seen as part of a larger effort to incorporate experiential processing which is fast and associative into traditional expected value based models of judgment and decision making (Kahneman 2003). Often, judgments are made with limited information or involvement (Gigerenzer

2008) and, in such cases, cognitive heuristics or shortcuts allow for fast and efficient processing. The name-control effect suggests that processing fluency is used as an informational cue or heuristic when assessing the controllability of a stimulus. Simply put, what is easy to process is inferred as easy to control.

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### ***Boomerang Effects of Low Price Discounts: How Low Price Discounts Affect Purchase Intentions and Behaviors***

Fengyan Cai, Shanghai Jiao Tong University, China\*

Rajesh Bagchi, Virginia Tech, USA

#### **Conceptualization**

We examine when offering low-price (vs. no) discounts lowers purchase intentions. Our explanation for this behavior is rooted in deal-induced price consciousness and savings expectations. In many instances—such as when purchasing mundane, nonessential, inexpensive products—price is not focal. In such circumstances, offering a low price discount has two consequences. First, it draws attention to price. This increases price consciousness, leading to an overweighting of price, which we call deal-induced price consciousness. Indeed, information that draws attention has greater weight in decision making (Bagchi & Davis, 2012; Keller & Block, 1997). Second, consumers automatically expect greater savings when a promotion is offered (Inman, McAlister, & Hoyer, 1992). Because savings are small (e.g., \$.25) from a low-price discount (e.g., 10% off) when small packages are purchased (e.g., 5 disposable dinner plates for \$2.50), savings expectations of deal-induced price-conscious consumers are disconfirmed, which lowers purchase intentions.

However, savings expectations are not disconfirmed with larger packages (e.g., 50 Plates for \$25), as even a low-price discount (10%) elicits considerable savings (\$.25). Therefore, we expect the boomerang effects to persist with small but not larger packages. To demonstrate that the boomerang effect is driven by deal-induced price consciousness, we also show how focusing on other aspects of the deal attenuates these effects and finally, examine how deal-induced price consciousness relates to chronic price consciousness. We test these effects in three studies.

#### **Empirical Methodology and Results**

In study 1, participants were considering purchasing disposable (paper) dinner plates. We manipulated package size (small: 5 plates; large: 50 plates) and discount (no, 10%) between subjects. In the no-discount (10%) conditions, price was \$2.50 (\$2.25) for the small packages and \$25 (\$22.50) for the large packages. We measured purchase likelihood. An ANOVA with purchase likelihood elicited a package x discount interaction ( $F(1, 110) = 14.57, p < .002$ ; see Table 1). In the small package conditions, purchase likelihoods were higher with no (vs. 10%) discount ( $F(1, 110) = 9.43, p < .005$ ). However, for the large package, discount increased purchase likelihoods ( $F(1, 110) = 5.59, p < .05$ ). Perceived quality did not drive these results.

In the next study we show that these deal-induced price consciousness effects disappear when consumers are asked to consider other factors and evaluate all attributes thoroughly. Tetlock & Boettger (1989) show that accountability concerns (be evaluated by others) lead to more thorough consideration of all attributes. We use a real purchase scenario (participants made actual purchases): participants in the small (large) package conditions were considering buying 1 can (5 cans) of skittles priced at ¥4.5 (¥22.5) undiscounted; in the low-price discount (10%) condition, the price was ¥4.05 (¥20.25). We also manipulated if the experimenter would evaluate all responses carefully and discuss responses with participants (high accountability) or not (low accountability). Thus, we used a 2 package (small, large) x 2 discount (yes, no) x accountability (high, low) between-subjects design.

A significant package x discount x accountability interaction emerged ( $Wald \chi^2 = 5.64, p < .05$ ; see Table 2). The two-way contrast interaction of package x discount was significant when accountability was low ( $Wald \chi^2 = 8.27, p < .01$ ), but not when accountability was high ( $Wald \chi^2 = .09, p > .75$ ). When accountability was low, participants were less likely to buy the small package (1 can) with a 10% discount (19%) versus no discount (43%;  $Wald \chi^2 = 3.55, p < .06$ ); conversely, participants were more likely to buy the larger package with a 10% discount (27%) versus no discount (3%;  $Wald \chi^2 = 5.01, p < .05$ ). Additionally, price-importance mediated the effects of package size and discount on choice when accountability was low, but not when it was high. Overall, study 2 demonstrates that these deal-induced price consciousness effects are not chronic; when accountability was high, consumers no longer displayed price consciousness.

Next we delve deeper into the relationship between deal-induced and chronic price consciousness. If the boomerang effect of low price discounts is caused by deal-induced price consciousness, then these effects should only occur for people who are not chronically price conscious. Those who are chronically price conscious will pay attention to price irrespective of whether a deal is on offer or not and for these consumers boomerang effects should disappear. We again use a real purchase scenario: purchase of skittles. The manipulations were identical to study 2 but we did not manipulate accountability. Instead we measured price consciousness. Thus, we used a 2 package (small, large) x 2 discount (yes, no) between-subjects design. A Spotlight analysis showed that when price consciousness was one standard deviation below the mean, the boomerang effects replicated. Specifically, with smaller packages, discount had a significant negative impact on purchase ( $simple slope = -.54, t = -4.62, p < .001$ ), indicating that fewer participants chose to buy the small package when there was a low (vs. no) discount. With larger packages, discount had a significant positive effect on purchase ( $simple slope = .26, t = 3.11, p < .01$ ), suggesting that discount increases purchase incidences. In contrast, there was no region of significance when price consciousness was one standard deviation above the mean; the package size x discount interaction was not significant when consumers are highly price conscious (small package:  $simple slope = 0.08, t = .72, p > .45$ ; large package:  $simple slope = -.07, t = -.75, p > .45$ ).

## Discussion

This paper contributes to extant literature in two ways. First, although the negative effect of promotions has drawn significant attention in literature, much of this research investigates how promotions increase price sensitivity and hurt brand image/brand equity in the longer term (Mela, Gupta, & Lehmann, 1997; Jedidi, Mela, & Gupta, 1999; Pauwels, Hanssens, & Siddarth, 2002). Our findings suggest that price discounts might hurt product sales even in the short term. Second, we propose and demonstrate a new mechanism by which price discounts hurt product sales in the short term; offering a low-price discount increases deal-induced price consciousness.

**Table 1: Purchase Likelihood, Deal Attractiveness as Function of Package Size and Discount  
(Study 1)**

DV 1: Purchase Likelihood		
	Small Package	Large Package
10% discount	3.80	4.07
No discount	5.12	2.96
Mean difference	-1.32	1.11
Sig.	$P < .005$	$P < .05$
DV 2: Deal Attractiveness		
	Small Package	Large Package
10% discount	3.50	3.67
No discount	4.31	2.65
Mean difference	-.81	1.02
Sig.	$p < .05$	$p < .05$

**Table 2: Proportion of Buying, Price Importance as Function of Size, Discount, and Accountability  
(Study 2)**

DV1: Proportion of Buying				
	Low Accountability		High Accountability	
	Small Package	Large Package	Small Package	Large Package
10% discount	19%	27%	18%	17%
No discount	43%	3%	14%	17%
Mean difference	-24%	24%	4%	0
Sig.	$p < .06$	$p < .05$	$p > .45$	$p > .45$
DV2: Price Importance (1 = Price is more important, 7 = Quality is more important)				
	Low Accountability		High Accountability	
	Small Package	Large Package	Small Package	Large Package
10% discount	4.27	4.87	3.64	4.66
No discount	5.27	4.30	3.95	5.06
Mean difference	-1	.57	-.31	-.4
Sig.	$p < .05$	$p > .13$	$p > .25$	$p > .25$

## *Contaminating Retrospective Enjoyment*

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In telling others about their experiences, people sometimes learn that others have had the exact same experience as the self. In this research, we examine how learning of others' parallel experiences (that others have had the same experience as the self) may alter one's retrospective enjoyment for one's own experience.

For example: Imagine that you have just returned from an exciting vacation in the Middle East, eager to share photos of the experience with friends. You are especially keen to share the pictures that you took of your trip to Petra, an ancient historical landmark. You took some stunning photos of the archaeological artifacts and sights from your hike through the Jordanian mountain range. Excitedly, you upload these pictures to Facebook, where most of your friends tend to share their experiences with one another, and await your friends' comments. Later, when you return to check for responses to your post, you discover a comment from one of your friends: "Awesome, I've been there too!"

Would the awareness that others have experienced the same as you affect how much you enjoy your own experience in retrospect? On the one hand, the knowledge that a friend has experienced something similar to you could conceivably increase how special the experience seems, now armed with the knowledge that you have something in common. On the other, one could argue that learning of such similarity cheapens the experience, perhaps in light of optimal distinctiveness—A need for differentiation in relationships (Brewer, 1991). It may also be the case that experiences hold social value that is tied to the rarity of the experience relative to the experiences of one's social group—perhaps akin to an experiential "gold standard." We constructed the following experiments to investigate our hypothesis that the discovery of parallel experiences can lead to a decrease in retrospective enjoyment.

In experiment 1, participants in an online subject pool reported that they expect retrospective enjoyment of an event to decrease when it is learned that a friend has had the same experience. If Calvin, the fictitious subject of study 1's vignette, learned that his friend had stood at the same place and taken the same photo, participants reported that Calvin would then enjoy the experience less than before having acquired such knowledge, and that he would see his experience as vastly less enjoyable, less meaningful, less special, and less positive overall.

In a follow-up study, we removed a layer of abstraction and directly asked participants to recall veritable experiences. Results showed that participants expect their enjoyment of this recalled experience to be corrupted by the awareness of someone else's parallel experience. What's more, the effect seemed only to emerge when participants imagined themselves sharing the experience on Facebook rather than at a cocktail party. All potential moderators failed to produce any differences, i.e. the effect of parallel experience on enjoyment remained robust through all attempts at moderation.

Finally, Experiment 3 suggests that the effects from Experiments 1 and 2 may depend on the parallel experience occurring before their (i.e. participants') own, but also that this effect is moderated by participant levels of existential isolation. If one is low in existential isolation, meaning that they feel that others generally share their experience, a parallel experience corrupts. If however one feels that they are alone in their experiences and generally misunderstood (high EI), their experiences are not susceptible to contamination by the awareness of a parallel experience.

When we find out that someone has experienced the same as us—that someone has had a parallel experience—we can react in one of two ways. First, we may react positively to the knowledge that someone else, having had the same experience, understands us. Or, in contrast, we may react negatively, feeling like others have co-opted us, especially when we feel that we mostly share the same

world-view as others. The effect of this contamination appears to be washed out, however, when one feels that they are generally alone in their experiences. Put another way: We share our experiences to share a part of who we are or who we see ourselves to be. If we see ourselves as being alone in the world or that others do not generally experience the same things as us, we are mostly immune to the knowledge that others have parallel experiences. When we don't feel alone in our experiences, however—when we feel that we that others react similarly to ourselves to their environment, we may feel threatened by the knowledge that others can co-opt us by doing something before us.

In sum, this first foray into consumer judgments about one's own and others' experiences broadly demonstrates that the perceived enjoyment of an event is dynamic or malleable, rather than static.

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### ***Are Hurricanes with Feminine Names Deadlier Than Hurricanes With Masculine Names?***

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Do people judge hurricanes in the context of gender-based expectations elicited by their names? If so, how would this affect risk perceptions and decisions to take protective action? Assessments of risk from threats in the environment are influenced not only by relevant factors such as objective indicators of risk and personal knowledge (Lindell and Perry 2012) but also by irrelevant factors such as affect or feeling (Lowenstein et al. 2001; Slovic et al. 2004). We address the possibility that a natural disaster can, merely by being symbolically associated with a given gender through its name, be judged in ways congruent with the corresponding gender roles and gender stereotypic beliefs (Basow 1982; Deaux and Major 1987; Steele and Aronson 1995). Men are more often inferred to be strong, competent and aggressive whereas women are more often inferred to be weak, warm and nurturing (Pleck 1995). We extend this line of reasoning to hypothesize that the anticipated severity of a hurricane with a masculine name (e.g., Marco) may be greater than that of a hurricane with a feminine name (e.g., Dolly). In turn, this may affect the protective actions that people take. A hurricane with a feminine versus masculine name may lead to less protective action and greater fatalities.

To test this hypothesis, we first used archival data on actual fatalities caused by hurricanes in the United States (1950-2012). Ninety-four Atlantic Hurricanes have made landfall in the United States since 1950. After excluding outliers, nine independent coders who were blind to the hypothesis rated the masculinity versus femininity of historical hurricane names using two items (e.g., 1 = very masculine, 11 = very feminine). This data provided the basis to compute a masculinity-femininity index (MFI). We analyzed death tolls as a function of each storm's minimum pressure, maximum speed, normalized property damage (Pielke et al. 2008) and MFI, controlling for years elapsed since occurrence. A series of negative binomial regression analyses (Cameron and Trivedi 1998; Hilbe 2011) were hierarchically performed to investigate effects of perceived masculinity or femininity of hurricanes (MFI), minimum pressure, maximum wind, normalized damage, and interaction among them on the number of deaths while controlling for elapsed years.

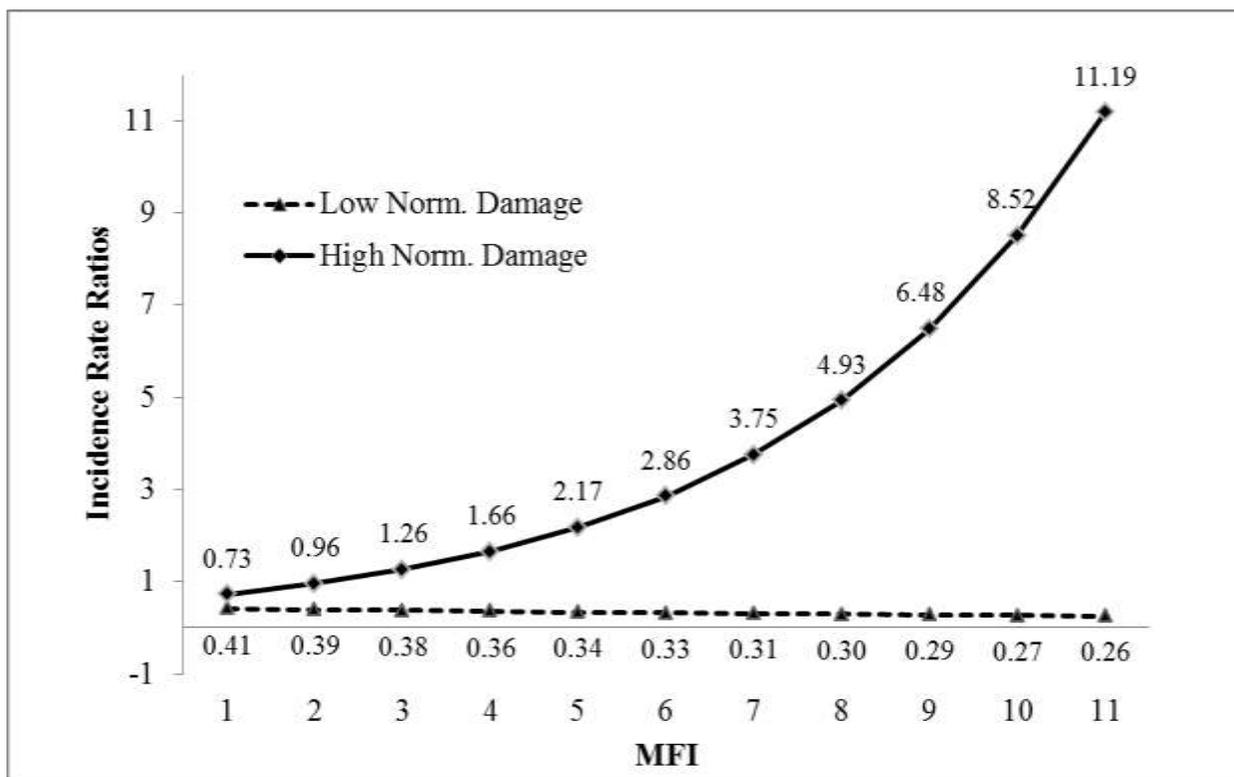
TABLE 1  
STATISTICAL SUMMARY OF ARCHIVAL STUDY

Outcome variable: Total Deaths			
Predictor	Model 1	Model 2	Model 3
Min. Pressure	-.067***	-0.029*	- 0.078***
Max. Wind	-.032**	-0.015	- 0.035
Years	.034**	0.009	0.001
Norm. Damage	--	0.001***	0.0001
MFI	--	0.033	-7.067*
MFI × Min. Pressure	--	--	.007*
MFI × Max. Wind	--	--	.003
MFI × Norm. Damage	--	--	0.0001***
Goodness of Fit (Pearson Chi-Square/df)	3.99	1.89	1.32
Likelihood Ratio Chi-Square	41.63***	86.80***	98.65***

*Note.* – (1) \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\*  $p < .001$ . (2) Goodness of Fit (Pearson Chi-Square/df) is better when closer to 1 as below 1 means under-dispersion whereas above 1 means over-dispersion. (3) Likelihood Ratio Chi-Square is an omnibus Test of the model (bigger is better). (4) If “Likelihood Ratio Chi-Square” increases and Goodness of Fit (Pearson Chi-Square/df) gets closer to 1, it could be concluded that the model is improved.

There were significant interactions between MFI and minimum pressure ( $b = .007, p < .05$ ) and between MFI and normalized damage ( $b = .0001, p < .001$ ) in model 3 (see table 1). When compared to model 1 and 2, both the overall omnibus test with likelihood ratio chi-square [ $\chi^2 = 98.65, p < .001$ ] and the model fit (Pearson Chi-Square/df = 1.32) were improved, suggesting that a significant portion of the variance was explained by the two significant interactions. For storms that are less damaging, death rates are relatively low and decisions to take protective measures are less predictive of death toll. However, for severe storms where protective action would have the greatest potential to save lives, the femininity of a hurricane’s name predicted its death toll. In other words, hurricanes with feminine names led to greater fatalities than those with masculine names.

FIGURE 1  
 INCIDENCE RATE RATIOS FOR FATALITIES AS A FUNCTION OF MASCULINITY-FEMINITY INDEX AND  
 NORMALIZED DAMAGE (ARCHIVAL STUDY)



Note. – All IRRs are estimated in comparison to the reference group (moderate-damage group).

To probe the nature of interaction, we factored normalized damage into three categories (low, moderate, high damage) and actual interactions for each group were estimated by obtaining the incidence rate ratios (IRR) of interactions at each unit of MFI (see figure 1). Compared to the reference group (moderate damage), IRR was a function of MFI for hurricanes in the high-damage group, but not for those in the low-damage group. In other words, a substantial increase in deaths was positively associated with an increase in the perceived femininity of hurricanes only if hurricanes caused relatively greater damage. Specifically, at the value of MFI 3 (high masculinity), hurricanes in the high-damage group are estimated to cause 26% more deaths (IRR = 1.26) whereas hurricanes in the low-damage group are estimated to cause 59% fewer deaths (IRR = 0.41) when compared to those in the reference group (moderate-damage). At the value of MFI 9 (high femininity), hurricanes in the high-damage group are estimated to cause 648% more deaths (IRR = 6.48) whereas hurricanes in the low-damage group are estimated to cause 71% fewer deaths (IRR = 0.29).

TABLE 2  
SUMMARIES OF LABORATORY EXPERIMENTS

	Dependent variable	Male	Female	t or F statistics, p-values and effect sizes
Experiment 1 (N = 42; 420 observations)	Predicted intensity (e.g., 1 = not at all, 7 = very strong)	five male hurricanes	five female hurricanes	
		4.012 (1.303)	3.519 (1.395)	t (416.05) = 3.741, $p < .001$ , $d = 0.365$
Experiment 2 (N = 108)	Predicted Intensity (e.g., 1 = not at all, 7 = very strong)	Hurricane Alexander	Hurricane Alexandra	Hurricane (Control)
		4.764 (1.160)	4.069(1.412)	4.048 (1.227)
Experiment 3 (N = 142)	Evacuation decision (e.g., 1 = evacuate immediately, 7 = stay home)	Hurricane Christopher	Hurricane Christina	
		2.343 (1.085)	2.939 (1.538)	
Experiment 4 (N = 100)	Intentions to follow a voluntary evacuation order (e.g., 1 = certainly will follow, 7 = certainly will not follow)	Hurricane Danny	Hurricane Kate	
		2.160 (1.344)	2.900 (1.658)	

Note. – Numbers in parentheses are standard deviations.

We conducted a series of experiments to provide converging evidence that perceived vulnerability to hurricanes is affected by the masculinity-femininity of their names. This is reflected by differences in predicted intensity (experiment 1 and 2), delay until evacuation decision (experiment 3), and intention to follow an evacuation order (experiment 4). As shown in table 2, hurricanes with masculine names were predicted to be more intense than those with feminine names (experiment 1) or than a hurricane with a feminine name or an unnamed hurricane (experiment 2). In addition, participants made a more delayed evacuation decision when a hurricane with a feminine name (Hurricane Christina) approached than when a hurricane with a masculine name (Hurricane Christopher) did (experiment 3). They were less likely to follow a voluntary evacuation order in the face of a hurricane with a feminine name (Hurricane Kate) than in the face of a hurricane with a masculine name (Hurricane Danny) (experiment 4). Taken together, these results suggest that individuals assess their vulnerability to hurricanes and take actions based not only on objective indicators of hurricane severity but also on the “gender” of the hurricanes. In turn, they systematically underestimate their vulnerability to hurricanes with more feminine names, avoiding or delaying protective measures.

The findings reported in this paper offer boundary-spanning implications by providing an integrative view on risk perception and gender and extending them to human-nonhuman interactions. Indeed, the effect of gender may be more pervasive than previously thought. Our findings have important implications for policymakers, social marketers, and media practitioners concerning hurricane communication. Pervasive practice of the use of “he” or “she” is evident in the media when communicating about hurricanes and their

risk. Our findings encourage policy-makers to revisit the current naming system and media practitioners to set a new guideline for hurricane communication.

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### **4.3 Symposium: Signaling Self and Social Identity in Consumer Decisions Making**

**Room: WINDSOR**

**Chair:** Minah Jung, University of California Berkeley, USA

Leif Nelson, University of California, Berkeley

#### ***Signaling Virtue: Charitable Behavior under Consumer Elective Pricing***

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Leif Nelson, University of California Berkeley, USA

Ayelet Gneezy, University of California San Diego, USA

Uri Gneezy, University of California San Diego, USA

People want to be seen as kind, fair, and generous, and that goal influences their decision-making. Pay-what-you-want pricing highlights those goals by allowing consumers' to express their social preferences in a diagnostic transaction environment. This paper investigates how the opportunity to signal social identity influences consumer behavior under pay-what-you-want pricing.

In a large field experiment, Gneezy et al. (2012) found that when people pay-what-they-want and a portion of their payment goes to charity, they are less likely to buy, but pay substantially more when they do. The authors attribute this behavior largely to people's identity and self-image concerns. People want to pay a low price, but when a purchase looks like charitable giving, they also want to avoid looking greedy, either by paying a generous amount or simply not purchasing. These behaviors highlight two related questions. First, how important are the relative concerns for self-signaling and social signaling? Second, the logic above contrasts a quantitative concern (finding the right low price) with a qualitative one (feeling like a nice person). If that is correct, then we might expect to see high sensitivity to charitable giving, but low sensitivity to the extent of that giving. In four field experiments we manipulating the presence and magnitude of charitable signals to understand how these forces operate.

In Study 1, we sold gourmet coffee at a farmers' market in California. All participants (N=18,672) saw a sign indicating they can pay-what-they-want for coffee and that 50% of their payment goes to a local charity. Purchasers (N = 406) were randomly assigned to one of four payment conditions as they approached the cashier. To manipulate whether the signal was social, some people were told to pay anonymously (by placing their payment in an envelope and dropping it in a sealed box) whereas others paid the cashier directly. We also manipulated the value of the external signal by placing either a commercial (the coffee vendor's logo) or a charity logo on the coffee cup. Highlighting the value of self-signaling, people paid no more when paying directly than when paying anonymously ( $M_{direct} = \$2.76$  vs.  $M_{anonymous} = \$2.81$ ). People paid more when they saw the charitable logo on the cups than when they saw the commercial logo ( $M_{charitylogo} = \$3.00$  vs.  $M_{coffeeo} = \$2.59$ ).

Perhaps the charitable logo induced higher payments because people were reminded of the substantial proportion of their payment (50%) going to charity? Would the same influence persist if a trivial proportion (e.g. 1%) went to charity? In Study 2 we again investigated the value of the external signal of the product by manipulating the observable logo. In addition, we looked at sensitivity to the scope of the charitable signal by manipulating the amount going to charity. For this field experiment we sold reusable shopping bags in front of an organic grocery in San Francisco. As in Study 1, we manipulated a charitable vs. commercial signal by selling bags

with either the grocery store logo or a local charity logo. We also manipulated what percentage of the payment would go to a local charity (0% vs. 1% vs. 50%). People (N=12,394) who entered the grocery store saw a sign indicating the randomly assigned condition. The bag logo had no effect on either purchase rate or purchase price. There was, however, a significant effect of the percentage going to charity. Replicating Gneezy et al. (2010), people were less likely to buy, but paid more, when a portion of their payment went to charity. Notably, this was true even when only 1% was going to charity; customers were significantly less likely to buy (3.65% vs. 4.94%), but paid more for a bag compared to the strict PWYW condition ( $M_{PWYW} = \$2.43$  vs.  $M_{PWYW + 1\% \text{ to Charity}} = \$1.41$ ). There were no differences in purchase rates between the 1% and 50% conditions, but customers in the 50%-to-charity condition, paid a higher price.

In Study 1 and 2, people approached our shop after seeing a shop sign clearly indicating it was a pay-what-you-want shop and that a portion of their payment went to charity. It is entirely likely therefore that difference in purchase prices is a pure reflection of self-selection. If we remove this selection bias, will people still show sensitivity to the proportion of charitable giving? In Study 3, we returned to the same gourmet coffee vendor as in Study 1. This time, customers (N = 150) did not see a pay-what-you-want sign, but instead, after saying that they wanted coffee, were told that they could find out the price of coffee by drawing a piece of paper out of a box. The box contained three different types of prices: Pay-what-you-want, pay-what-you-want and 10% going to charity or pay-what-you-want and 50% going to charity. We found that when the selection bias was removed, people did not pay more for a small charity proportion (10%) than no charity condition (M=\$2.31 vs. M=\$2.18), but they still paid more when 50% went to charity (M=\$3.23).

Even though a 1% (or 10%) contribution is financially much more similar to 0%, people opt out of purchase at similar rates to the 50% contribution. Their payments show some incomplete sensitivity to the contribution percentage (Study 2 and 3). How sensitive will people be as the proportion increases? In Study 4 we sold reusable shopping bags in front of a traditional supermarket in Oakland, California. People (N=27,285) were randomly assigned to one of five different pay-what-you-want pricing conditions, each reflecting a different percentage going to charity (0% vs. 1% vs. 50% vs. 99% vs. 100%). The first condition is pure pay-what-you-want, the latter is pure charitable giving. Signs clearly indicated the condition (randomized every 50 passersby) outside the store entrance. Again we replicated Gneezy et al. (2010): people purchased less frequently but paid significantly more when they saw the sign with a charitable proportion than when no proportion went to charity. However, the purchase rates and average payments did not differ across the four charity conditions: People were highly sensitive to whether or not a charity was benefiting, but almost entirely insensitive as to whether that benefit was 1% or 100%.

In summary, consumers exhibit varying degrees of sensitivity to social signals under pay-what-you-want pricing. This is observed in how they respond to the types of signal (charitable vs. commercial), the magnitude of the signals, and their payments. People show clear sensitivity to the qualitative social value of a purchase, but much less sensitivity to the quantitative social value of a purchase.

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### ***The Motivating Role of Dissociative Outgroups in Encouraging Sustainable Consumer Behaviors***

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Encouraging individuals to engage in sustainable consumer behaviors is a critical challenge posed to society (OECD 2008; Peattie 2010). To date, research suggests that one promising means of doing this is through the communication that relevant or similar others

are engaging in a desired behavior (e.g., Goldstein et al. 2008; Cialdini, Reno, and Kallgren 1990). In the present research we examine a novel effect wherein dissociative reference groups (i.e., groups with whom an individual is motivated to avoid an association with) can also be utilized to spur positive, sustainable consumer behaviors that are consistent with the actions of the dissociative outgroup.

While past research largely finds that dissociative reference groups lead to an avoidance response on the part of consumers (e.g., White and Dahl 2006; 2007), we propose that when a consumer encounters information highlighting that a dissociative outgroup is performing at a comparatively well level on a positively viewed behavior (e.g., a sustainable consumer behavior), consumers will be more likely to engage in that same behavior. Further, we suggest that this effect will emerge under conditions of high, but not low, self-awareness (when a person is sensitive, or not, to the fact that public aspects of the self can be observed and evaluated by others; Turner and Crisp 2007). We suggest that this arises because such a situation will 1) threaten one's group-image and, 2) heighten the desire to signal a positive view of the group identity to others.

Across four studies we examine how comparative information regarding the actions of a dissociative outgroup can influence sustainable consumer behaviors such as composting (study 1, study 2, study 3), recycling (study 4), and water conservation (study 4 follow up). Results across the studies provide converging evidence that, under certain conditions, communicating information regarding the positive actions of a dissociative outgroup can lead consumers to be more inclined to engage in that same behavior. In study 1, we employ a one factor between-subjects field experiment that manipulated three levels of reference group (dissociative outgroup vs. membership group vs. control) and examined consumer behaviors in a retail coffee shop setting. We find that, under highly public conditions, consumers are more likely to compost when provided information regarding the successful performance of a dissociative outgroup (as opposed to a membership group or no group information;  $\chi^2 = 6.60, p < .05$ ).

In study 2, we examined these effects in a more controlled laboratory setting and employed a 2(public self-awareness: low vs. high) x 2(reference group: dissociative outgroup vs. membership group) between-subjects experimental design. Public self-awareness was manipulated by telling participants that their responses would (high self-awareness) or would not (low self-awareness) be discussed with others. Participants then viewed a press release describing a new composting initiative that manipulated reference group by stating that the membership group (dissociative outgroup) were "the most effective in composting efforts when comparing across groups." Results reveal that when consumers learnt of the positive sustainable actions of a dissociative outgroup they were more likely to engage in a sustainable behavior when public self-awareness was high versus low ( $t(89) = 2.00, p < .05$ ).

In study 3, we draw on affirmation theory (Steele 1988), which proposes that individuals have a desire to protect and maintain self-integrity or self-worth, and that affirmation can occur not only at the individual-level, but also at the group-level (e.g., Derks, Van Laar, and Ellemers 2009). We employ a 2(reference group: dissociative outgroup vs. membership group) x 3(affirmation type: self-affirmation vs. group-affirmation vs. no affirmation) between-subjects design and find that, under conditions of high public self-awareness, when information regarding the comparatively positive performance of a dissociative outgroup was presented, a group affirmation task reduced composting intentions, as compared to a self-affirmation task or a no affirmation task ( $t(112) = 2.27, p < .05$ ). We thus provide evidence that the effects stem from a threat to the group-level, rather than individual-level of the self.

In study 4, we employ a 2(public self-awareness: low vs. high) x 3(reference group: dissociative outgroup vs. membership group vs. neutral outgroup) x 2(behavior type: positive vs. negative) between-subjects design. We show that the effects emerge when the behavior is positive (i.e., recycling), but not negative (i.e., littering) in nature, and when the outgroup is viewed as dissociative rather than neutral. Study 4 also draws on identity signalling literature (Berger and Heath 2007) which highlights how choices can signal particular identities to the social world. As recycling is a positively viewed behavior, we suggest that individuals want to communicate their groups as good social citizens. We therefore demonstrate that group-image concerns (but not other concerns such as individual image concerns, accountability, or competitive concerns) mediate the effects.

The current research makes a novel contribution to the existing literature by demonstrating a counterintuitive effect—making consumers aware of a positive action undertaken by a dissociative outgroup can under certain circumstances make them more likely to engage in that same action. This builds on past research that largely demonstrates avoidance responses to attitudes and behaviors endorsed by members of dissociative outgroups (Berger and Heath 2008; Berger and Rand 2008; Dunn et al. 2012; White and Dahl 2006, 2007). We believe our effects emerge because we examine conditions under which dissociative reference groups perform well on behaviors that are viewed particularly positively in nature, while past work has largely looked at neutral (e.g., White and Dahl 2006; 2007) or negative (e.g., Berger and Rand 2008) behaviors. Further, while past work suggests that associative responses to a counterstereotypical individual can be driven by individual-level responses (Shalev and Morowitz 2012), we demonstrate conditions under which information regarding the behaviors of a dissociative outgroup as a whole can activate a group-level response that drives associative behaviors. Practical implications and future research directions are also discussed for those wishing to spur consumers to engage in positive sustainable actions.

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### ***Want vs. Can: Self-Signaling via Participative Pricing Appeals***

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Participative pricing strategies that allow consumers to set their own prices have grown in popularity in the past years. According to these strategies, consumers can get products or services at the price of their choice, sometimes with the option of not paying at all.

Participative pricing campaigns make use of a wide variety of appeals. For example, although the business model is commonly known as “pay-what-you-want (PWYW),” organizations have also used messages such as “pay-what-you-wish,” “pay-what-you-like,” and “pay-what-you-can”. Organizations’ choices of a particular appeal do not seem to follow specific criteria or to be contingent on the type of product or service offered. In many cases, companies appear to use different appeals interchangeably.

If consumers are not affected by framing, then which appeal is used should not matter, because each should have an economically equivalent outcome. However, research shows that different frames trigger different behaviors. If situational cues affect an individual’s decision-making, shedding light on whether consumers’ behavioral responses also vary as a function of the appeal to which they are exposed is important. This research can contribute to the understanding of the mechanisms that affect social preferences in market interactions and inform marketers on the most appropriate ways to communicate participative pricing campaigns.

Previous research has shown that concerns about fairness and self-signaling affect people’s behavior under PWYW (Gneezy et al., 2012, 2010; Kim et al., 2009). However, the fact that PWYW campaigns do not always succeed and that selfish behaviors sometimes emerge (e.g., Leon et al., 2012) suggests contextual variables moderate these altruistic motives.

To test the effect of framing on choices in such environments, we compare consumers’ responses to PWYW and “pay-what-you-can” (PWYC) appeals. We propose that under participative pricing, both fairness and self-interested considerations are at play, and different appeals can shift people’s mindsets either toward being more self-oriented or more altruistic. People in a self-oriented mindset tend to base their decisions on cost/benefit considerations. People in an altruistic mindset tend to base their decisions on considerations of fairness and generosity. Justifying selfish behaviors would be harder in the latter than in the former, because such behaviors would send a negative signal to the self.

We hypothesize that PWYW appeals to people's "self-interest," whereas PWYC appeals to their "prosocial self," which in turn affects behavior. Our view relates to research on the effects of framing a situation in terms of monetary-marketplace norms or social-relations norms on individuals' behavior (see Fiske, 1992; Heyman & Ariely, 2004), and to the literature on communal versus exchange relationships (Clark & Mills, 1979, 1993).

We conducted two studies to test whether PWYW and PWYC appeals generate different responses in consumers. In a pre-test (N = 120), we examined whether presenting people with PWYW versus PWYC appeals puts individuals in different mindsets. We first presented participants with a hypothetical scenario in which they imagined passing by a stand offering donuts for PWYW (or PWYC), which was followed by measures of participants' exchange versus communal orientation. We find that participants presented with PWYW offers were more likely than those presented with PWYC offers to say the value they received in return (a measure of exchange orientation) would affect their payment decision (M=5.53 vs. M=5.01,  $p=.031$ , Mann-Whitney). However, we did not find a difference in our measure of communal orientation.

Based on this result, we tested whether this difference in mindset affected payment, hypothesizing that PWYW appeals resulted in lower payments than PWYC appeals. In our first experiment (study 1a), we operated a donut stand in a crowded area of a large U.S. university campus, and varied between subjects (N=207) the sign accompanying the offer. In the PWYW condition, the sign read, "Get a Donut, Pay-What-You-Want;" in the PWYC condition, the sign read, "Get a Donut, Pay-What-You-Can." We allowed only one donut per person and switched the sign every 25 to 27 sales. To minimize confounding effects due to the buyer-seller interaction, all sellers were of the same gender and ethnicity and we had each of them perform sales across both conditions.

We found that on average people paid more when offered the donut for PWYC (MPWYC=.821 vs. MPWYW=.638,  $p=.004$ , Mann-Whitney). A regression with dummy variables for each of the different sellers and for participants' gender confirmed the result ( $\beta=.159$ ,  $p=.009$ ) despite the fact that women paid significantly higher amounts. Interestingly, the distribution of prices paid shows the fraction of people who paid small amounts drives this effect. In particular, the distribution of amount paid significantly differs between treatments ( $p=.004$ , Kolmogorov-Smirnov test). In the PWYW treatment, the distribution of amount paid is skewed to the left, with a larger fraction of subjects paying less than \$1 (51% vs. 32%). This finding provides supporting evidence for the hypothesis that a PWYW appeal induces people to self-interested considerations, whereas a PWYC appeal induces people to pay fair prices. The PWYC appeal might have activated self-signaling, making people feel bad about paying less than the appropriate price. In Study 1b, we replicate this finding using the same procedure (N=221). Participants in the PWYC condition consistently paid more than those in the PWYW condition (MPWYC=.80 vs. MPWYW=.65,  $p=.02$ , Mann-Whitney). Interestingly, we did not find a difference in purchase rates (11% for PWYW vs. 12% for PWYC). After payment, we asked each customer to fill out a short anonymous survey. Our results revealed that the PWYW participants viewed themselves as more selfish (on a scale from 1 to 7) than the PWYC participants (MPWYW=3.63 vs MPWYC=3.13,  $p=.04$ ), even when controlling for amount paid and gender.

The present results demonstrate that different participative pricing appeals can affect consumers' responses, and in turn their payment decisions. We are currently planning a second study aimed at testing whether individuals exposed to PWYC appeals are less sensitive to the value of the product they are getting in return than those exposed to PWYW appeals.

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***You Call it 'Self-Exuberance', I Call it 'Bragging': Miscalibration in the Use of Self-Promotion***

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Self-promotion is one of the impression management strategies that individuals use to market themselves and generate a positive impression in others (Jones & Pittman, 1982). Self-promotion—highlighting one's accomplishments, showing off one's possessions or new acquisitions, speaking about one's strengths and positive traits, making internal rather than external attributions for achievements, etc. (Rudman, 1998)—is geared towards enhancing one's status and perceived competence in the eyes of others. However, there are several downsides to such self-promotional strategies, since self-promotion undermines the self-promoter's likability (Godfrey et al., 1986), induces antipathy (Powers & Zuroff, 1988; Schlenker & Leary, 1982), increases perceived arrogance (Schlenker, 1980; Ben-Ze'ev, 1993; Wosinka, Dabul, Whetstone-Dion & Cialdini, 1996) and—if the claims made are discredited—reduces the self-promoter's credibility (Tice, 1991; Tice & Baumeister, 1990; Tice et al., 1995).

Are consumers aware of the potential downsides of self-promotional strategies? In general, people tend to see themselves in a more favorable light than others perceive them (Weinstein 1980; Taylor & Brown 1988; Pronin, 2008). As a consequence, they may well underestimate the extent to which their self-promotional activities are perceived by others as bragging. At the same time, they may be better able to detect self-promotion in others' discourses than in their own, resulting in a self-promotion blind spot.

Study 1 tested whether consumers are aware of their propensity to engage in self-promotion compared to others. Participants ( $N = 301$ ) rated themselves as significantly less prone to bragging than the average person they know ( $t(298) = 8.99, p < .01$ ), and rated the average person they know as significantly less prone to bragging than the average American ( $t(298) = 9.81, p < .01$ ). In a separate study, we tested whether this pattern resulted from a belief that the distribution of braggers is skewed, such that the majority of people are not prone to bragging but a small minority are extremely prone to bragging. Contrary to this explanation, participants believed the distribution of braggers (from extremely humble, somewhat humble, somewhat prone to bragging, to extremely prone to bragging) to be normally distributed (Kolmogorov-Smirnov test  $z = .90, p > .40$ ).

Studies 2 and 3 investigated whether people are subject to a forecasting error when assessing the emotional impact of their self-promotional activities on others. Research on the projection bias has shown that people have difficulties taking in others' perspectives (Dunning, van Boven, & Loewenstein, 2001; van Boven, Loewenstein, & Dunning, 2005), and tend to focus on the self, in part because self-relevant information is more accessible (Ross & Sicoly, 1979). Consumers may engage in self-promotion because they genuinely believe that others will be happy for—and proud of—their accomplishments—not realizing that their self-promotion can also induce annoyance or jealousy in the recipient (Godfrey et al., 1986). In study 2, participants recalled a social interaction in which they engaged in self-promotion or were recipients of someone else's self-promotion, and described their own and the other person's feelings and thoughts. Feelings and thoughts were content analyzed. Participants who recalled their own self-promotion believed recipients to have experienced more positive feelings than they themselves experienced when listening to someone else's self-promotion (38.1% vs. 14.1%,  $\chi^2(1, N = 130) = 9.53, p = .002$ ). At the same time, they believed recipients to have experienced less negative feelings than they themselves experienced when listening to someone else's self-promotion (27.7% vs. 76.9%,  $\chi^2(1, N = 130) = 31.56, p < .001$ ).

Study 3 used the same design as study 2, but—instead of asking participants to list their thoughts and feelings—asked participants ( $N = 57$ ) to rate the emotions experienced by the recipient on 7-point scales. Participants who recalled their own self-promotion believed recipients to be happier for, more proud of, less annoyed by, and less upset by them than recipients of someone else's self-promotion actually were (all  $F_s(1, 55) > 8.0$ , all  $p_s < .01$ ).

Study 4 tested whether this self-promotional forecasting error would translate into actual behavior. Ninety-nine participants (profile writers) were given the instruction to create a personal profile—either to simply describe themselves—or to maximize others' interest in meeting them. They were then asked to predict how other people would evaluate their profile on several rating scales. A separate

sample of 456 participants (profile judges) was asked to evaluate the profiles on the same rating scales. Profile writers—like profile judges—rated profiles as more braggy when profile writers were instructed to maximize interest in others meeting them. Profile writers also believed to be perceived as less braggy than they actually were perceived by judges ( $F(1, 97) = 5.69, p = .02$ ). More importantly, an interaction of instruction and writer/judge's evaluations ( $F(1, 97) = 5.15, p = .03$ ) indicated that profile writers believed they would be evaluated more favorably by others when they tried to maximize others' interest in meeting them ( $F(1, 97) = 4.40, p = .04$ ), while judges did not show any increase in liking of them ( $F(1, 97) = .56, p = .46$ ).

In summary, consumers seem to suffer from a self-promotion blind spot, as they are unaware of the extent to which others perceive them as braggers. They are also subject to a self-promotion forecasting error, as they overestimate the extent to which others feel proud of—and happy for—their accomplishments, while underestimating the extent to which others are annoyed by their self-promotion. This forecasting error impacts actual behavior, as consumers trying to elicit as favorable as possible an image in others engage in more self-promotion that does not lead to greater liking of them, but increases the extent to which they are perceived as bragging.

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#### **4.4 Individual Papers: With a Goal in Mind: Goals Activation, Goal Focus, and Goal Pursuit**

**Room: ESCORIAL**

**Chair:** Chris Summers, Ohio State University, USA\*

##### ***Beating Whom? The Motivational Impact of Goal Focus in Competitive Pursuit***

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Many goal strivings take place in competitive settings, and paying attention to rivalry and competitors' performance is generally expected to elicit increased motivation from players (Deci, Betley, Jahle, Abrams, & Porac, 1981). In the present research, we question if this belief always holds. We propose that in competitive goal pursuit focusing on a competition aspect of the goal would elicit higher motivation before the competition begins (i.e., the “pre-initiation stage”). Once the actual competition is initiated (i.e., the “post-initiation stage”), they are better motivated by focusing on the fixed performance standard to achieve, rather than competitors' progress on the goal.

The goal-setting theory (Locke & Latham, 1990; 2002) and the literature on implementation intentions (Gollwitzer 1993; 1999) give support to our hypothesis in the post-initiation stage. Individuals perform better when pursuing a specific, concrete goal as it facilitates an accurate assessment on goal attainability; people do not benefit from an abstract goal during pursuit as it does not offer an external referent that serves as a source of feedback on their progress (Locke & Latham, 1990). A specific goal, by contrast, provides unequivocal feedback on one's performance, allowing people to easily monitor their progress.

However, we make an opposite prediction in the pre-initiation stage. Before starting the actual competition, the level of goal commitment may not be high enough to ensure individuals' high motivation. Thus, in the pre-initiation stage it is critical to process whether the goal is worth pursuing and establish goal commitment for motivation. The caveat to having a fixed performance standard in this stage is that it lowers an individuals' focus to an implementation level. Moreover, goal desirability would be reduced because

focusing on the fixed performance standard with no reference to the competition misses out on the outcome of pursuit, and therefore, diminishes the value of the goal.

Our first study confirmed our hypothesis. Participants were invited to a competitive puzzle game and were encouraged to outperform other participants. It was designed as 2 goal focus (competition vs. fixed standard) X 2 goal stage (pre- vs. post-initiation), and we assessed participants' motivation by the time they persisted with each of these partially unsolvable puzzles. We found the hypothesized interaction on motivation,  $F(1, 163) = 9.44, p = .00$ : In the pre-initiation stage conditions, participants who aimed to achieve higher scores than competitors (vs. the fixed performance standard) persisted longer in puzzles ( $M = 1729.43$  vs.  $1455.93$ ),  $t(82) = -1.99, p < .05$ . In the post-initiation stage, participants with the focus on the fixed performance standard (vs. rivalry and competition) spent more time in the puzzles ( $M = 1777.83$  vs.  $1455.63$ ),  $t(81) = 2.42, p < .05$ .

Study 2 tested the proposed mechanism on performances. Participants were encouraged to win a competitive anagram quiz by getting more correct answers than their competitors. We again manipulated the goal focus and goal stage as done in Study 1 and assessed participants' performance by the number of correct answers submitted. We found the hypothesized interaction on performance,  $F(1, 168) = 8.45, p = .00$ . In the pre-initiation stage, participants who focused on rivalry and competition (vs. the fixed performance standard) showed higher performances ( $M = 8.00$  vs.  $7.32$ ),  $t(77) = -2.08, p < .05$ . In the post-initiation stage, those who aimed at the fixed performance standard (vs. rivalry) showed better performances ( $M = 7.85$  vs.  $7.11$ ),  $t(90) = 2.10, p < .05$ .

Study 3 aimed to investigate the role of goal desirability and attainability on individuals' motivation and performance. While replicating findings of previous studies, we also explored the dynamic levels of motivation and performance across three different sessions in each of these two goal stages. Participants were invited to the online game competition and were encouraged to play the same game as many times as they wanted across three different sessions in order to get the highest possible score than others. The experimental procedure was identical to the prior studies. This study replicated the hypothesized effects of goal focuses on people's overall level of motivation ( $F(1, 133) = 13.09, p = .00$ ) and performance ( $F(1, 133) = 8.45, p = .00$ ) in each goal stage. Follow-up studies revealed that people felt the higher level of goal attainability and desirability when participants focused on the competition aspect of the goal (vs. performance standard) in the pre-initiation stage,  $t(66) = 2.26, p < .05$ , and the fixed performance standard (vs. the competition aspect) in the post-initiation stage,  $t(67) = 2.87, p < .05$ . As they move towards the following sessions (i.e., from 1 to 2, and 2 to 3) in each goal stage, we found that those who focused on rivalry and competition (vs. the fixed performance standard) in the pre-initiation stage showed higher levels of goal attainability (Stage1:  $t(66) = 3.89$ , Stage2:  $t(66) = 2.18$ , Stage3:  $t(66) = 2.61$ ; all  $ps < .05$ ) and desirability (Stage1:  $t(66) = -3.79$ ; Stage2:  $t(66) = 3.13$ ; Stage3:  $t(66) = 3.62$ ; all  $ps = .00$ ) during pursuit, and the results revealed the identical pattern among those who focused on the performance standard (vs. competition) in the post-initiation stage (Goal Desirability -- Stage1:  $t(67) = 3.76$ , Stage2:  $t(67) = 4.26$ , Stage3:  $t(67) = 4.47$ , all  $ps < .05$ ; Goal Attainability -- Stage1:  $t(67) = 1.97$ , Stage2:  $t(67) = 3.10$ , Stage3:  $t(67) = 2.62$ , all  $ps < .05$ ). The level of goal desirability ( $B = .05, t(133) = 3.89; p = .00$ ) and attainability ( $B = .05, t(133) = 2.87; p = .00$ ) positively explained the level of motivation during pursuit.

In sum, this research is expected to make theoretical contributions by uniting contrasting views on the roles of a competitive mindset in motivation and goal-oriented behaviors. The study findings also convey implications to the marketing practices, especially when consumers' competitive goal-relevant behaviors are involved in their purchase decision making – e.g., their reactions to marketing tactics that encourage consumers to win the limited number of deals or gifts for purchase.

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***Persuasion Mindset: The Effect of Persuasion on the Persuader***

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Consumer-to-consumer information sharing online is increasingly common in today's marketplace. The vast amount of content on review websites (e.g., Yelp, Rotten Tomatoes) suggests that much of what consumers convey about products and experiences is intended to persuade others. While considerable research has examined how consumers are affected by their desire to resist persuasion attempts, surprisingly little is known about processes in which consumers actively attempt to persuade others. Specifically, might consumers form different evaluations of a target product or experience when their goal is persuade others (vs. when their goal is to inform)?

Prior research has shown that communicating with others, or even anticipating the need to publicize one's thoughts, can affect what consumers choose and how they evaluate products (e.g., Lamberton, Naylor, & Haws, 2013; Moore 2012; Simonson & Nowlis, 2000; Schlosser & Shavitt, 2002). One common explanation for this effect is that consumers rationalize their choices by focusing on attributes that seem justifiable to others (as opposed to those they personally value). In essence, prior research suggests that expecting to talk about consumption affects evaluations through a process of pre-emptive conformity.

We extend this prior research to propose that persuasion (as a specific type of communication) affects evaluations through a different process. We draw on the Persuasion Knowledge Model and related work (PKM—Friestad & Wright, 1994; Campbell & Kirmani, 2000) to argue that consumers have a sense (i.e., implicit theory) that confidence is needed to persuade others, particularly when the task is perceived to be difficult. Further, we suggest that consumers know that the extremity of an evaluation can serve as an indication of confidence. Thus, to the extent that consumers feel a greater (implicit) need to signal confidence, we predict that they will strategically make their evaluation of the chosen product more extreme. We propose that this process occurs when consumers enter a mental state that we term the "persuasion mindset" (PM), and we hypothesize that being in this mindset can increase consumers' own susceptibility to influence.

Study 1 tested our hypothesis that a PM leads to more positive evaluations when greater confidence is needed (i.e., when the task is harder) using a 2 (persuasion target: similar or dissimilar other) design. Participants listened to and rated ten songs (1 = "very bad" to 10 = "very good"). Before listening to these songs, all participants were told that they would be writing a persuasive review about the song they liked best, with the goal of persuading either someone who shared their demographic characteristics (similar condition) or someone who differed in terms of gender, age, occupation, etc. (dissimilar condition) to like the song. Pretesting indicated that participants expected a dissimilar other to be more difficult to persuade. The song each participant chose as their favorite song was rated significantly higher in the dissimilar (vs. similar) target condition ( $M_{\text{Dissimilar}} = 8.09$ ,  $M_{\text{Similar}} = 7.57$ ;  $F(1, 173) = 4.71$ ,  $p < .05$ ).

Study 2 tested the hypothesis that consumers in a PM generate more positive evaluations of the target object as a result of increased confidence. The study used a 2 (goal: persuade vs. evaluate) between-subjects design. The procedure was identical to Study 1 with one important difference: participants in the evaluation condition were simply instructed to rate songs (and were not given a persuasion goal). After rating the songs, participants indicated their confidence in that rating. Participants in the PM condition rated their target song higher and reported more confidence (Rating:  $M_{\text{Persuade}} = 8.24$ ,  $M_{\text{Evaluate}} = 7.50$ ;  $F(1, 100) = 4.59$ ,  $p < .05$ ; Confidence:  $M_{\text{Persuade}} = 8.37$ ,  $M_{\text{Evaluate}} = 7.77$ ;  $F(1, 100) = 5.62$ ,  $p < 0.05$ ). Confidence mediated the effect of PM on evaluations: 95% CI [.0484 to .3853].

Study 3 conceptually replicated the results of study 2. The study employed a 2 (task: persuade vs. inform) between-subjects design. All procedures were identical to prior studies, except that participants in the inform condition were asked to "write an informative review to describe the song you choose." Participants in the PM condition rated their chosen song more positively than those in the

inform condition (8.52 vs. 7.04;  $F(1, 96) = 20.64, p < .0001$ ), and also reported more confidence ( $MPersuade = 8.27, MInform = 7.37$ ;  $F(1, 96) = 9.60, p < 0.01$ ). Confidence mediated the effect of PM on ratings: 95% CI [.0016 to .3777].

Study 4 tested our hypothesis that attempting to persuade makes consumers more open to persuasive information from others, and subsequently more persuadable, using a 2 (task: persuade vs. inform) between-subjects design. Persuade condition participants were told that a student group was planning to bring a performer to campus. They were given the chance to “convince the committee who they should bring to campus.” Inform condition participants were asked to “describe your favorite performer.” All participants were then directed to an ostensibly separate study that detailed the efforts of students trying to persuade fellow students to sign a petition to get the university to consider implementing senior comprehensive exams (Petty et al., 1981). The dependent variable was participants’ willingness to add their name to the petition. To test our hypothesis that the PM makes people more susceptible to persuasion because they are open to more information, we asked participants to indicate how likely they were to attend a university forum in which other students would speak about the issue. Analyses (which included liking for the proposal as a covariate) revealed a main effect of PM ( $MPersuade = 4.23, MInform = 3.72$ ;  $b = .26, t(239) = 2.37, p < .05$ ) and proposal liking ( $b = .60, t(239) = 16.79, p < .0001$ ) on willingness to sign the petition. Willingness to attend the forum mediated the effect of the PM on likelihood of signing the petition: 95% CI [.0040 to .2992].

This research offers new insight by suggesting that a consumer entering a consumption situation with the intent of writing a persuasive review about his or her experience will evaluate that experience differently than a consumer who enters the same situation without this explicit goal.

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### ***The Effects of Impulsivity on Perceptions of Prior Consumption***

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Extant research suggests that individuals will give in to indulgence when they perceive sufficient progress toward a regulatory goal (Fishbach and Dhar 2005; Mukhopadhyay, Sengupta, and Ramanathan 2008). For example, if a dieter feels as though she has abstained from eating unhealthy food for a long enough time, she may feel that it is permissible to eat an unhealthy food item. That is, given that sufficient progress toward the dieting goal has been made, the dieter may then switch to pursuing an indulgence goal, licensing herself to eat something tasty but unhealthy (Fishbach and Dhar 2005; Laran 2010)

This body of research assumes that consumers accurately remember past progress toward a goal. However, a large body of research on motivated reasoning (Kunda 1990) demonstrates that people are prone to distort their memories in a motivated manner in order to make themselves feel better about decisions made (Croyle et al. 2006; Mather et al. 2000). In line with such findings, we contend that, when faced with an opportunity to indulge, consumers may be motivated to distort their memories to fabricate progress toward a pertinent self-regulatory goal, allowing themselves to indulge in the present. Further, because such a situation is more likely to arise in the case of competing goals, we predict that those who are high in impulsivity, who chronically have indulgence goals (Ramanathan and Menon 2006) and thus, often experience conflicts between short-term pleasure versus long-term self-regulatory goals (Mukhopadhyay et al. 2008), are more likely to employ such memory distortions than those who are low in impulsivity.

Our first study employed a 2 (impulsivity: low vs. high, measured) X 2 (indulgence opportunity: present vs. absent) between-subjects design. Participants were first asked to imagine themselves in a shopping scenario in which they spent money despite a savings goal.

After filler activity, participants in the indulgence opportunity present condition were told that soon they will be asked to indicate their willingness to purchase a desirable pair of shoes, but first they would need to answer questions about the earlier shopping scenario. In the indulgence opportunity absent condition, participants were merely asked about the previous shopping scenario. Next, participants indicated their perceptions of how much they spent earlier and their willingness to pay for a desirable pair of shoes. The results showed that in terms of WTP, the slope of impulsivity was not significant when the indulgence opportunity was absent, while the slope of impulsivity was significant and positive when the indulgence opportunity was present. Additionally, perceptions of how much was spent in the initial shopping scenario mediated this interaction.

In the second study our aim was to rule out a post-indulgence justification account and provide support for our proposed pre-indulgence goal-conflict process. The study employed a 2 (impulsivity: low vs. high; measured) X 3 (question order: before second opportunity to indulge vs. after second opportunity to indulge vs. indulgence opportunity absent; manipulated) between-subjects design. Participants were first given candies, asked to rate those candies, and completed Puri's (1996) impulsivity scale. After filler activity, all participants were primed with health goals using a sentence completion activity, then faced one of the question order conditions. In the questions after (before) condition, participants were told that they would be receiving M&Ms, but estimated the caloric content of the candies consumed earlier after (before) being presented with the candies. In the indulgence opportunity absent condition, participants were not presented with M&Ms. The results showed that in the questions before condition, as impulsivity increased estimates of the caloric content of the first set of candies decreased. However, impulsivity did not have an effect in either the questions after condition or the indulgence opportunity absent conditions. Additionally, impulsive participants gave lower calorie estimates in the questions before condition versus both the questions after condition and the indulgence opportunity absent condition. The estimates of non-impulsive participants were not significantly influenced by our manipulation. These results support our proposed goal-conflict process and cast doubt upon a dissonance reduction account as memory distortion only occurred in the questions before (but not after) condition.

In the third study, we provide further evidence for our process by delineating whether motivation or cognition drives the effects we observe. To do so a 2 (impulsivity: low vs. high; measured) X 2 (framing of first consumption: non-indulgent vs. indulgent; manipulated) X 2 (dieting tendency: high vs. low; measured) between-subjects design was used. Participants first rated a yogurt covered raisin in a task that was labeled either "Yogurt raisin rating task" or "Candy rating task". After filler activity, participants were told that they would be rating candies a second time, but were first asked to indicate perceived temporal distance between the present and the time that they ate the first snack ("The time between now and the time at which you consumed the snack seems: 1-Like an instant, 7-Like an eternity"). These temporal perceptions served as the dependent variable. Finally, participants completed Puri's (1996) impulsivity scale and the cognitive behavioral dieting scale (Martz, Sturgis, and Gustafson 1996). The results showed that the slope of impulsivity was not significant when the yogurt covered raisins were framed as non-indulgent, while the slope of impulsivity was significant and positive when the yogurt covered raisins were framed as indulgent. Additionally, impulsive participants perceived the first candy consumption as more temporally distant when the yogurt was framed as indulgent versus non-indulgent, non-impulsive participants' time perceptions were not significantly influenced by framing. Finally, in line with our goal-conflict account, the interactive effect of health framing and impulsivity in the case of dieters behaved much like the interactive effect of opportunity to indulge and impulsivity in prior studies in which participants were primed with self-regulatory goals, providing support for the significant role of goal conflict in the effects we observe.

Across three studies we demonstrated that impulsive individuals tend to distort memories of past indulgences when faced with an opportunity to indulge in the present. Our findings suggest that they do so in order to license indulgent behavior.

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## *“Nudging the speed of locomotion” Effect of movement signals on consumers’ walking speed*

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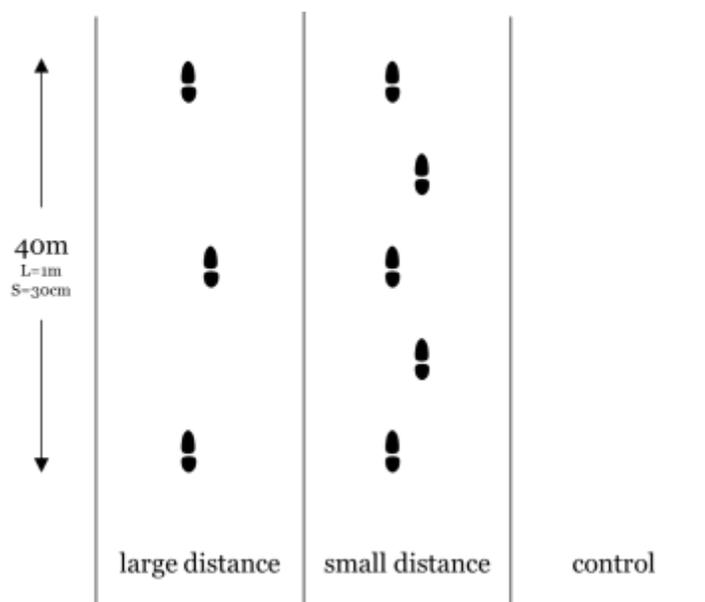
Nico Heuvinck, IESEG School of Management, France\*

Gaby Schellekens, Radboud University Nijmegen, The Netherlands

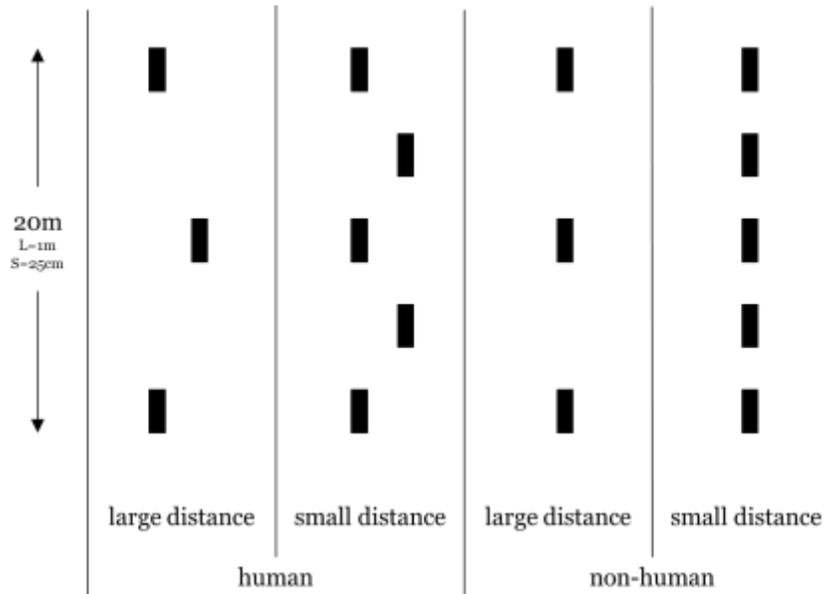
Iris Vermeir, University College Ghent & Ghent University, Belgium

Managing customer traffic flow and in-store shopping movements have received increasing attention lately (e.g. Hui et al. 2009a, 2009b). Arrows or a depicted path on the floor are attempts to guide consumer movement paths. Although managing traffic flow is important, movement signals’ influence on consumers’ walking speed remained unstudied. That is, by varying the distance between signals on a depicted path, marketers could speed up or slow down customers. This research will examine the implicit effects of movement signals on consumers’ walking speed.

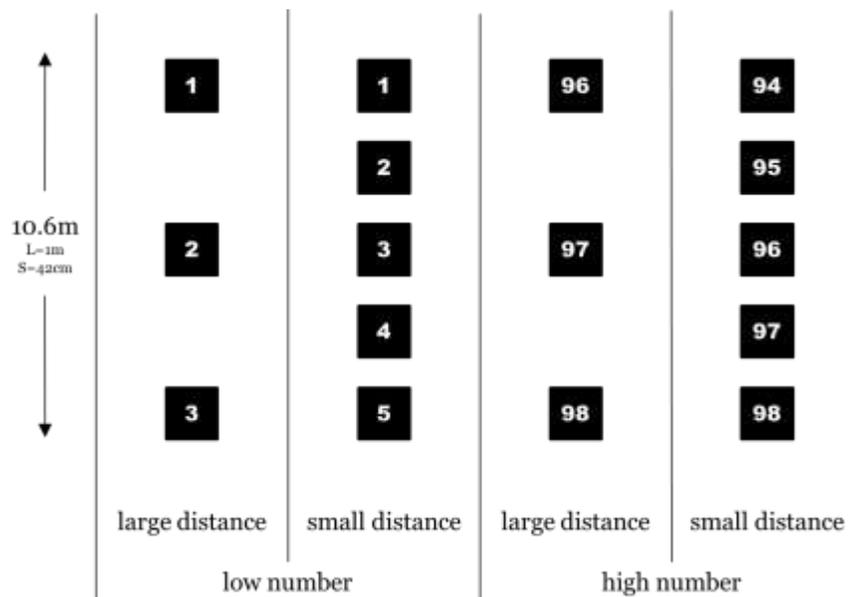
When consumers are exposed to footprints in a path, they may attempt to mimic the indicated steps by placing their feet on the footprints. Mimicry of other’s people behavior is an inborn tendency based on the notion that we simply do what we see (Dijksterhuis et al. 2005). Hence, it is hypothesized that when the distance between movement signals in a depicted path with footprints is larger (vs. smaller), consumers will walk faster. Study 1 uses footprints signals placed on a human walking rhythm partitioning a 40m path. Fifty-nine participants were randomly assigned to one of three conditions: smaller distance (30cm) vs. larger distance (100cm) between footsteps vs. control condition (no footsteps). Participants took part in a study containing two parts each in another room. When changing rooms, participant’s walking time was recorded. Results show that with a larger distance between footprints participants walked faster compared to a smaller distance and compared to the control condition, while the latter two did not differ.



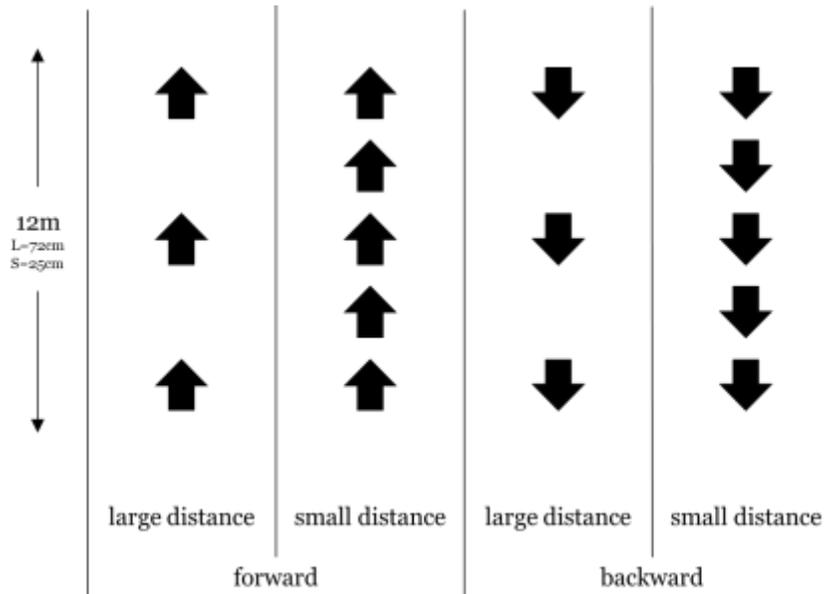
Study 2 (n=122, 20m path) examines whether people mimic an indicated rhythm of movement signals independent of human shape (cf. squares) and walking placement (cf. non-human walking rhythm). The procedure was identical to Study 1 except that walking time and number of footsteps was video-recorded. Results indicate that participants walk slower (vs. faster) when distance between squares are smaller (vs. larger), irrespective of the pattern of the squares. Hence, individuals walk faster when the walking path is partitioned in fewer segments (i.e. larger distance between signals). However, the walking pace increase in the ‘large distance’-condition is not due to participants taking larger/fewer steps. This suggests that the difference in walking speed does not result from a mimicry-like process: the number of steps taken along the path does not depend on the number of signals, nor does it depend on the signals’ pattern (human rhythm vs. row). We contend that the difference in pace can be explained by a goal-gradient account: the end of a path seems closer when it is partitioned in fewer segments demarcated by floor signals.



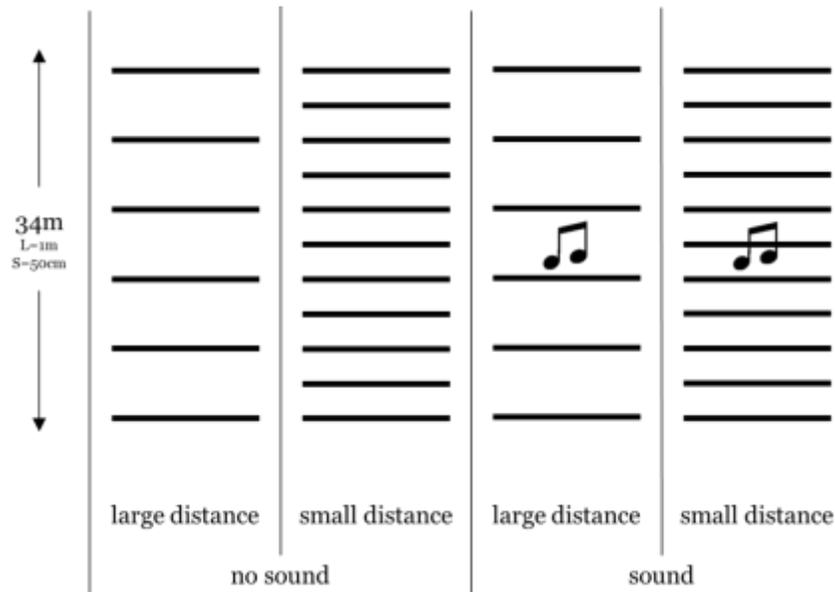
When goal proximity is high, organisms' motivation to approach is high. Hence, people speed up when being closer to a goal (Kivetz et al. 2006; Nunes & Dreze 2006). In a similar vein, a larger (vs. smaller) distance between movement signals could indicate fewer (vs. more) intermediate steps/segments leading to the perception that one is closer to (vs. further from) the goal and, consequently, a faster (vs. slower) walking pace. Study 3 (n=1562, 10.6m path at retailer entrance) explores whether perceived distance to the end of the path moderates the effect of partitioning the path by signals on the floor. Goal proximity was manipulated by including low (e.g. from 12 to 0/close to goal) vs. high (e.g. from 98 to 85/far from goal) descending numbers in the depicting squares. Results support this goal-gradient account: individuals walk faster when a path is partitioned in fewer segments (i.e. large distance between signals), but not when the end of the path is perceived to be distant (i.e. high numbers condition).



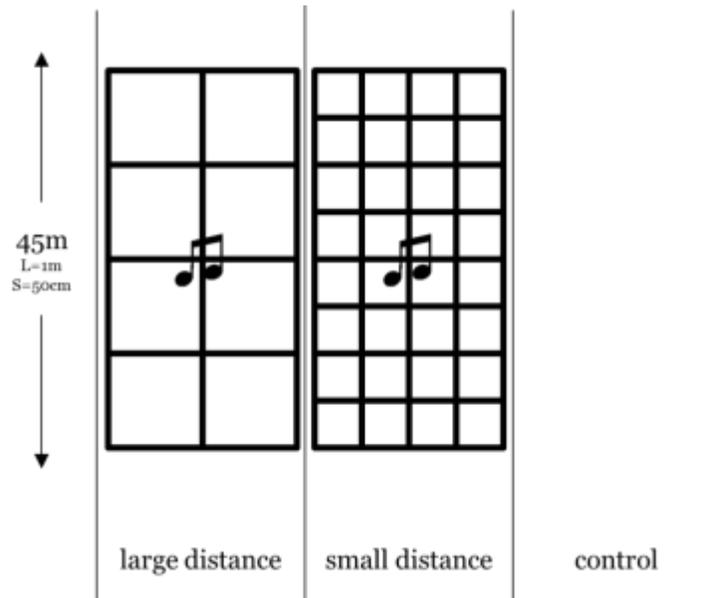
Study 4 (n=956, 12m path at central in-store aisle) manipulated goal presence by the use of forward (presence of a goal) vs. backward arrows (absence of a goal). Consistent with goal-gradient effects, people walk faster when the path is composed of fewer segments (i.e. larger distance between signals), but not when the signals point to an irrelevant goal (i.e. backward arrows). Furthermore, we explored acceleration effects by comparing time measures for the first half of the aisle with the second half. Again consistent with goal-gradient effects, individuals accelerate when they are close to the goal, but only when the signals point to the end of the path (i.e. forward arrows).



Study 5 explores a boundary condition of this path-partitioning effect and tests whether acoustic signals reverse this effect. 174 participants walked with a shopping cart along an inverted U-shape aisle (34m) containing a series of crosswise lines. In the sound condition, a subtle iron wire was placed underneath the lines to produce a rhythmic sound when the shopping cart crossed the lines. Consistent with previous studies, people walk faster when the path is partitioned in fewer segments (i.e. larger distance between lines). Importantly, we show a boundary condition of path-partitioning: the acoustic rhythm produced by the shopping cart rolling over the crosswise lines induces people to walk faster when the path is partitioned in a higher number of segments (i.e. the rate of acoustic signals is higher in the small distance condition). The latter is consistent with literature stating that fast-paced music/sound causes faster walking (Styns et al. 2007) and less time spent in-store (Milliman 1982).



Study 6 explores whether path-partitioning effects go beyond walking pace by letting participants ( $n=104$ ) walk with a shopping cart along a set of aisles (45m) where ten well-known brand advertisements were randomly placed. We created the illusion of 'tiles' in the aisle (iron wire underneath the lines to imitate the sound of walking with a shopping cart on tiles) varying in size. Results show that people not only walk faster (vs. slower) but also have lower (vs. higher) brand recall and recognition in the small (vs. large) 'tiles' condition.



These findings have important implications. As marketers/retailers want to manage traffic flow, they can use larger/smaller distances between movement signals to speed up (e.g. store entrance) or slow down consumers (e.g. high margin products aisle), respectively. This has also implications beyond consumers' walking speed as it affects their attention to pick up visual cues.

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## **4.5 Individual Papers: Spreading the Word: Antecedents and Consequences of Word-of-Mouth Behavior**

**Room:** ALHAMBRA

**Chair:** Zoey Chen, Georgia Tech, USA\*

### ***You Gotta Try it! The Downside of Positive Word of Mouth***

Sarah Moore, University of Alberta, Canada\*

David Alexander, University of St. Thomas, USA

Word of mouth (WOM) is a fundamental process in the marketplace (Katz and Lazarsfeld 1955). Positive WOM can increase consumer attitudes (Bone 1995), switching behavior (Wangenheim and Bayon 2004), and trial and adoption of products (Arndt 1967); negative WOM does the opposite, with attendant consequences for firms (Chevalier and Mayzlin 2006). However, recent work has demonstrated that sharing positive WOM can have unintended negative consequences for the storyteller (Moore 2012). Building on this work, we examine the potential downside of positive WOM (PWOM) from the perspective of the receiver.

We ask whether receiving PWOM can ever be “bad” for consumers, and examine when and why this might be the case. We focus on the context of new products, where WOM is a key driver of diffusion (Arndt 1967; Mahajan, Muller, and Bass 1990), and where consumers might be particularly susceptible to the negative consequences of positive recommendations, given the risk and uncertainty surrounding new products (Herzenstein, Posavac, and Brokus 2007; Hirunyawipada and Paswan 2006).

Prior research shows that PWOM can elicit positive emotion by providing useful information and reducing risk (Arndt, 1967;

Moldovan, Goldenberg, & Chattopadhyay, 2011; Murray, 1991; Söderlund & Rosengren, 2007). We make the novel prediction that PWOM might also be perceived as social pressure to use the adopted product competently and successfully, or else risk negative judgments from the recommender (Berger & Heath, 2008; Cialdini, Kallgren, & Reno, 1991; Schultz et al., 2007). Imagine a consumer who hears that the latest smartphone is the best yet. While this information should elicit positive emotion, we ask whether PWOM might also create social pressure for the consumer to have as positive an experience with the phone as the recommender. This PWOM-induced social pressure might elicit negative emotion such as worry or anxiety (Baumeister & Tice, 1990; Berthoz, Armony, Blair, & Dolan, 2002), with potential consequences for the consumer's intentions toward the recommended product (Alexander, 2013; Wood & Moreau, 2006).

We explore when PWOM might elicit both positive and negative emotions in adopters and investigate the consequences of these emotions for usage intentions. Since prior work suggests that PWOM should consistently elicit positive emotion, we focus on identifying conditions under which PWOM also elicits negative emotion. To do so, we examine four moderating variables that should increase the social pressure exerted by PWOM and thereby elicit negative emotion in adopters.

Across three studies, we examine 1) volume of PWOM received (study 1); 2) type of PWOM: whether PWOM is liking-based or performance-based (studies 2/3); 3) social distance: whether the recommender is close to or distant from the receiver (study 2); 4) product difficulty: whether the product is easy- or difficult-to-use (study 3). We predict that when these moderators exert social pressure to competently use a new product—when volume is high, PWOM is performance-based, the recommender is close, and products are difficult-to-use—adopters receiving PWOM will feel negative as well as positive emotion.

In study 1, we examined how PWOM influenced emotions in a sample of real consumers ( $N = 299$ ) adopting one of 21 new technology products. We surveyed consumers within one week of acquiring the product and measured their receipt of PWOM, and positive and negative emotions. We found that the more PWOM consumers received about the product, the more positive *and* the more negative emotions they felt about this newly acquired product. However, study 1 is correlational, and consumers do not always receive WOM in such quantities. Thus, our next two studies use a lab setting to explore additional moderators that might elicit negative emotion in single episodes of PWOM.

In study 2, we examined how social pressure affects negative emotion after receiving PWOM from a single consumer. We held product difficulty constant and manipulated type of PWOM and social distance. Undergraduates imagined receiving liking-based (participants were told their friends were “addicted” to the product) or performance-based PWOM (participants were told their friends were “masters” at using the product) from a close or distant social other (a friend or an exchange student). To ensure that our results were due to the social pressure exerted by PWOM, rather than to receipt of new information, we also manipulated whether participants adopted the app because of the PWOM or on their own initiative. This resulted in a 2 (type of PWOM: liking or performance) by 2 (social distance: close or distant) by 2 (adoption influence: own or other) design. We predicted that only in the other-adoption condition would performance-based PWOM from close others exert social pressure and therefore elicit negative. As expected, there were no significant effects on negative emotion in the own-adoption or in the liking-based PWOM conditions. However, as predicted, in the other-adoption conditions, participants who received performance-based PWOM felt more negative emotion when this recommendation came from a close compared to a distant other.

In study 3, undergraduate participants were informed that their school was adopting video editing software for use in class projects, and that the software was either easy- or difficult-to-use. They then imagined receiving PWOM from a close friend, who said the software was “incredibly cool”, and that they were either addicted to (liking-based PWOM) or masters at using it (performance-based PWOM). Thus, study 3 was a 2 (type of PWOM: liking or performance) by 2 (difficulty: easy or difficult) between-subjects design. We predicted that negative emotion would be elicited only when performance-based WOM was received about a difficult-to-use product. Consistent with this prediction, positive and negative emotions were simultaneously elicited only in the difficult-to-use

conditions when participants received a performance-based WOM recommendation; type of PWOM did not influence emotions in the easy-to-use conditions. In this study, we also measured usage intentions. We found that positive emotion increased, while negative emotion decreased, usage intentions. Further, negative emotion mediated the relationship between our social pressure variables (type of PWOM and difficulty) and usage intentions.

In sum, we find a downside to PWOM; PWOM can elicit negative as well as positive emotions in new product adopters, and negative emotions undermine adopters' usage intentions.

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### ***When and How Price-Dropping Serves as a Coping Mechanism for Unintentional Overpayment***

Aaron Garvey, University of Kentucky, USA\*

Simon Blanchard, Georgetown University, USA

Karen Winterich, Pennsylvania State University, USA

Imagine you just bought a new designer jacket that you are quite pleased with despite its high price—that is, until you hear that someone else purchased the exact same jacket at a different store for a lower price. In such a situation where you realize that you unintentionally overpaid for a product, how do you feel? To date, and perhaps not surprisingly, research has indicated that unintentional overpayment significantly decreases satisfaction (Oliver and DeSarbo 1988) and likely results in negative feelings and attributions given the extent to which paying a lower price than retail results in positive affect (Schindler 1998). Building on this research, we consider how consumers cope with unintentional overpayment. Specifically, we examine how consumers may casually mention to others that they overpaid, which we term *price-dropping*, as a way to cope with unintentional overpayment.

Previous research has shown that name-dropping, where an individual mentions a name in a conversation, is used to manage impressions and enhance self-presentation. For example, individuals that name-drop may be perceived as more likeable and competent when signaling a distant and casual connection with the person whose name was invoked (Lebherz, Jonasa, and Tomljenovic 2009). Similarly, we propose that sharing overpayment through price-dropping may signal pecuniary strength and status that aids in consumer coping with overpayment (e.g., increased product satisfaction).

This theorizing is supported by recent empirical literature, which indicates that the appeal of many products is due to status needs rather than material needs (Amaldoss and Jain 2005), and dearth of discounted payment may be perceived as a status signal (Argo and Main 2008). Furthermore, heightened sensitivity to status cues due to individual differences (Lichtenstein, Ridgway, and Netemeyer 1993) or situations (Rucker and Galinsky 2008) may increase signaling tendencies. Thus, consumers experiencing the negative consequences of unintentional overpayment may obtain psychological status benefits from telling others about their overpayment (i.e., price-dropping).

The results of three studies demonstrate that i) consumers choose to engage in price-dropping if they are naturally sensitive to status or if they are in a status-relevant context, ii) satisfaction with the product is improved when price-dropping, and iii) consumers perceive themselves as wealthier and more popular after price-dropping.

Study 1 explored whether consumers choose to engage in price-dropping after unintentional overpayment based upon perceived importance of status cues. After imagining purchasing an iPad for a given price, participants in the unintentional overpayment (no overpayment) condition were informed that the product was readily available at a nearby store for a higher (lower) price. Participants

then indicated their likelihood to share the price paid if asked. To investigate whether willingness to price-drop depends on consumers' perceived importance of status cues, a multi-item measure of individual prestige sensitivity was recorded (Lichtenstein, Ridgway, and Netemeyer 1993). A significant two-way interaction between overpayment condition and prestige sensitivity (analyzed continuously) emerged. As predicted, highly prestige sensitive consumers were more likely to price-drop when they experienced overpayment than those who did not. In contrast, low prestige sensitive consumers were less likely to price-drop when they overpaid than when they were not. Product quality assessments did not differ between conditions, thus precluding a price-quality inference explanation. Consistent with predictions, the desire among prestige sensitive consumers to price-drop suggests that negative effects of unintentional overpayment may be offset by signaling (and thus self-perceiving) heightened status. Subsequent studies examine whether the value obtained from price-dropping is reflected in product satisfaction.

Study 2 was conducted to determine whether product satisfaction is influenced by price-dropping. A 2 (overpayment: yes/no) x 2 (price-drop: yes/no) between-subjects design with a continuous measure of prestige sensitivity was employed. After reading about their (lack of) overpayment for the purchase of an Armani jacket, participants in the "no price-drop" condition indicated their product satisfaction. In contrast, participants in the "price-drop" condition were told they shared the actual price paid and the market price with a colleague prior to being asked about satisfaction. A three-way interaction supported our predictions. First, the effect of price-dropping on satisfaction differed by perceived importance of status cues: price-dropping increased satisfaction for high prestige sensitive consumers experiencing overpayment whereas low prestige sensitive consumers were less satisfied after overpayment regardless of price-dropping. All consumers experiencing overpayment (vs. no overpayment) without price-dropping were dissatisfied. Notably, the level of satisfaction for price-dropping consumers rivals the level of satisfaction of other consumers who were unexpectedly delighted by under-paying for the same product. Study 2 thus demonstrates that price-dropping following overpayment recovers satisfaction for status-concerned consumers.

Study 3 investigated whether price-dropping can aid in coping with an overpayment (i.e., increase satisfaction) among consumers not perpetually concerned with prestige if a status-relevant context arises. A 2 (overpayment: yes/no) x 2 (status relevance: important/unimportant) between-subjects design was employed. Specifically, after learning of the same (lack of) overpayment for the Armani jacket from study 2, the requestor of the jacket price paid was described as either high or low in receptivity to status cues ("...shops at high-end stores...recently vacationed at the Ritz-Carlton" vs. "...shops at discount stores...recently hiked and camped the local Appalachian trail"). Jacket satisfaction and self-ratings on several characteristics were then recorded. A significant two-way interaction confirmed our predictions. Consumers reporting to an audience low in receptivity to status cues were less satisfied in the case of overpayment. In contrast, and as predicted, those reporting to an audience receptive to status cues demonstrated full satisfaction recovery (i.e., satisfaction equal to those not experiencing an overpayment). Mediation analysis suggested that individuals engaging in price-dropping in status-relevant conditions perceived themselves to be wealthier and more popular. Thus, price-dropping provides direct psychological benefits in addition to improving satisfaction.

In summary, this work introduces the theoretically novel concept of price-dropping and explicates how consumers may engage in this behavior to overcome the otherwise negative effects of unintentional overpayment. Beyond theoretical contributions to pricing and status literatures, this work has substantive implications, particularly given the abundance of price communications among consumers in social media.

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### ***Word of Mouth Impairs Memory for Product Experiences***

Zoey Chen, Georgia Tech, USA\*

Ann Schlosser, University of Washington, USA

A growing stream of research examines how word of mouth (WOM) affects product performance in the marketplace (e.g., Chevalier and Mayzlin 2006). The impact of engaging in WOM on the speaker, however, has been largely ignored. While recent research has looked at how transmitting word of mouth affects sender attitudes (Moore 2012), little is known about how engaging in word of mouth affects reviewers' memories of product experience.

Reviewers often aim to be well-reasoned when writing their recommendations and this behavior is encouraged by many review websites since rational/logical messages (also known as utilitarian appeal, Johar and Sirgy 1991; Stafford and Day 1995) can be persuasive. For example, when eliciting movie reviews, Yahoo asks the reviewer: "Tell us if you liked or disliked the film, but also why you liked or disliked it. Compare this film to others - why is this better or worse?" (movies.yahoo.com). In this case, reviewers are not only asked for their opinion, but are asked to provide a rationale for their opinion (e.g., it is better than other movies?).

We hypothesize that when people are asked to write reviews, they are motivated to appear logical, and thus focus on logical and rational explanations of the product experience rather than re-live the product experience by describing it. As a result, they experience greater difficulty separating fact (what happened) from fiction (what did not). If they had instead been encouraged to merely describe the product experience, then they should be more likely to re-play the product experience in their mind, thereby better preserving the original experience episode. As a result, those who write reviews are likely to have more impaired memory for the original experience (than those who received reviews) and this is especially likely when reviewers are explicitly encouraged to write logical reviews.

A series of studies confirm these ideas and show that reviewers tend to have worse memory of the underlying product experiences than those who did not write reviews, and that this appears to be driven by reviewers' desire to appear logical.

In Study 1, participants were randomly assigned to one of four 2(sender vs. listener)  $\times$  2(logic-based vs. imagery-based) between-subject conditions. All participants first watched the movie "Oktapodi," a short (2-minute) animation. After watching the movie, senders were asked to write a recommendation for the film to a student who will participate in the study at a later date. Those in the logic-based condition were instructed to be well-reasoned and logical when writing their recommendation whereas those in the imagery-based conditions were instructed to visualize and describe the film when writing their recommendation. After watching the movie, those in the receiver condition were randomly assigned to read one of the logic- or imagery-based reviews written by those in the sender conditions.

All participants were then given a recognition test with fourteen statements about the movie and were asked to indicate whether each statement is true or false. Of the fourteen statements, seven were true and seven were false. Total correct (maximum 14) is measured as the sum of correct acceptances (i.e., accepting true statements as true) and correct rejections (i.e., rejecting false statements as false). After completing the memory test, participants rated the recommendation they wrote/received on logic and descriptiveness (manipulation checks).

The results of the manipulation checks revealed that the logic- (vs. imagery-) based instructions worked as intended. Confirming our hypotheses, in the logic-based condition, senders had worse memory performance (i.e., fewer total correct answers) than receivers. However, in the imagery-based condition, senders and receivers performed equally well on the memory test. Furthermore, speakers who were given logic-based instructions performed worse than those given imagery-based instructions.

Study 2 is identical to Study 1 with the addition of a distraction condition (2(sender vs. listener)  $\times$  2(logic-based vs. imagery-based) + distraction). Instead of writing or reading a review after watching the film, those in the distraction condition were immediately asked to solve anagrams for two and a half minutes, which should prevent rehearsing the film experience and thus should impair memory ( Craik and Watkins 1973). The results replicate those of the first study, where senders of logical WOM had worse memory performance (i.e., fewer total correct) than receivers and senders of descriptive WOM. Furthermore, senders of logic-based

recommendations performed similarly to those in the distraction task, consistent with the prediction that sending logical WOM impairs memory.

In our final study, we show that even without explicit instructions, and regardless of senders' relationship with the audience, senders strive to be well-reasoned when writing reviews and thus have worse memory for the product experience than listeners. Participants were assigned to one of four conditions in a 2 (friend vs. stranger) × 2 (sender vs. receiver) between-subject design. Senders first watched the same short film and were then asked to write a recommendation to either a friend or a stranger. The receivers first watched the film and were then randomly assigned to read a review written by those in the sender condition. Results reveal that in the absence of explicit logic-based instructions, senders had worse memory than receivers, regardless of whether the intended recipient was a friend or stranger. This is consistent with the idea that in general, senders strive to be logical—regardless of whom they are writing to—and thus show worse memory than receivers.

In summary, this work makes important contributions to two streams of research. First, we contribute to research on word of mouth by showing that *how* consumers talk about a product experience affects their memory for the underlying product experience. We show that in comparison to writing imagery-based recommendations, writing logic-based recommendation can impair reviewer's memory of their actual product experience. Second, this research contributes to research on the factors that impair consumers' memory (Loftus 2003; Rajagopal and Montgomery 2011; Schlosser 2006). The current work suggests that the desire to appear rational may have dire consequences for memory for product experience.

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### ***No Idle Boast: Consumer Responses to Self-Enhancing Sources of Product Information***

Grant Packard, Wilfrid Laurier University\*

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David B. Wooten, University of Michigan, USA

By some accounts, boasting online has become a social epidemic (Bernstein, 2012). For example, over half of people surveyed indicate they boast about their travel exploits online even before they return home (Travelmail Reporter, 2012). A recent book documents the pervasiveness of online 'humblebrags'—people who post information using false modesty as cover for their self-enhancing boasts (Wittels, 2012). What's more, it is not uncommon for individuals to convey self-enhancing information in word-of-mouth contexts, such as when sharing their product opinions via online reviews or other product-centered forums (De Angelis et al., 2012; Packard and Wooten, 2013; Wojnicki and Godes, 2012). For example, a consumer returning from a vacation may post a review of a hotel that includes self-enhancing information about herself, such as boastful claims of her travel knowledge, expertise, or status. But what are the consequences of source boasting on the attitudes and decision-making of the recipient of word-of-mouth information? The present research seeks to answer this question.

A growing body of evidence suggests that self-enhancement is a central motive in the social transmission of consumer information (DeAngelis et al., 2012; Packard and Wooten, 2013). Prior research reports mixed findings with respect to how recipients will interpret and be influenced by source self-enhancement. For example, self-enhancing statements about one's own abilities or attributes have been shown to be perceived negatively by others (Robinson et al., 1995; Sedikides et al., 2008). However, other work reports that recipients are generally unlikely to perceive 'ulterior motives' from interpersonal sources of product information (Brown et al., 2007; Dellarocas, 2003). Finally, where source credibility information is otherwise scarce, boasting might be a welcome means by which

consumers can assess a source's expertise. This may enhance, rather than detract from the source's credibility, potentially bolstering persuasion.

Secondary cues pertaining to the source, message, or channel context are often critical determinants of situated social perceptions (McGuire, 1978; Schlenker, 1980). We examine five secondary cues related to perceptions of trust that we predict will moderate when boasting will have a negative, neutral, or positive effect on social perception and persuasion. Specifically, moderators we examine include expectations of the motives of a word-of-mouth source, demographic similarity between source and recipient, source reputation, generalized suspicion (Benedictus et al., 2010; Reichheld & Scheffer, 2000), and the relevance of boastful claims. We hypothesize that only when trust is diminished by these secondary cues will boasting lead the source to be perceived as a self-centered braggart (Schlenker, 1980; Schlenker & Leary, 1982; Sedikides et al., 2008), weakening the source's credibility and persuasiveness. In contrast, when trust is not threatened, boasting will not diminish the perceived credibility or persuasiveness of the word-of-mouth source. Finally, when source credibility is enhanced, such as when a person is known to be a "trusted reviewer", boasting should lead to perceptions of heightened source expertise, bolstering the source's ability to persuade. Four studies test these predictions.

Study 1 examines normative source motives and finds that boasting decreases persuasion when the source is perceived to be self-interested (a sales agent of a firm; Kirmani & Campbell, 2004). In contrast, and consistent with prior work that people tend to perceive altruistic motives in consumers who share product information (Grewal et al., 2003; Hennig-Thurau et al., 2004), the same boastful statements had no effect on persuasion when made by a word-of-mouth (consumer) source. Notably, manipulation checks suggest it was not a difference in the *perception* of boasting behavior by source condition that drove the results, but the different *consequences* this perception had on recipient inferences about the source's motives.

Our second study builds on prior research on source-recipient similarity in social influence (Gershoff et al., 2001; Naylor et al., 2011). We found that similar (dissimilar) demographic information between the source and recipient enhanced (attenuated) the persuasiveness of a boastful source of product information. Given demographic similarity (dissimilarity) between source and recipient, trust concerns were attenuated (increased), and the boastful source was more (less) persuasive. Bootstrap mediation analyses revealed that source trustworthiness (but not source expertise or likeability) mediates the effect.

Study 3 considers the problem of source anonymity common in online settings, where the recipient has little ability to scrutinize, evaluate or constrain claims made by the source (Ba & Pavlou, 2002). We operationalize source reputation through the "rate the reviewer" feature commonly leveraged in the market (Resnick et al., 2006) and in prior experimental research (e.g., Weiss et al. 2008). Study results reveal that source self-enhancement can increase persuasion given a positive reputation of the source's credibility. Bootstrap moderated mediation analysis confirmed that the source's reputation for trustworthiness supported increased social perceptions of the boastful (vs. modest) source's expertise, bolstering their persuasiveness.

Our fourth study moves beyond source cues to test cues pertaining to channel and message factors. First, we predict that generalized suspicion, a state often attributed to the online shopping context (Benedictus et al., 2010; Pavlou & Gefen, 2005), will cause participants to reject boastful sources of product information. Study 4 also tests whether a source's provision of self-enhancing information that is irrelevant to the participant's decision-making raises trust concerns (Beach et al., 1976; Grice, 1975). Both factors (suspicion and relevance) were found to make concerns about source trustworthiness salient, which subsequently impeded persuasion by the boastful (but not modest) source.

Overall, the results suggest that modesty is not in itself a virtue--nor immodesty a vice--when it comes to interpersonal persuasion. Secondary cues pertaining to the source, message content or environment help determine whether boasting is "idle," bolsters, or impedes persuasion. We hope that the present research may help inform consumers as they persuade and evaluate one another and the

managers who wish to optimize this behavior, and guide future research exploring the impact of source self-enhancement on consumer judgment and decision-making.

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## **4.6 Symposium: Products as Stimuli: Consequences of Product Use, Access and Touch on Dimensions of Performance**

**Room: MICHELANGELO**

**Chair:** Adriana Samper, Arizona State University, USA

### ***Rolling the Dice with Premium Products: Using a High End Product Polarizes Self-Perceptions of Performance***

Adriana Samper, Arizona State University, USA\*

James R. Bettman, Duke University, USA

Gavan J. Fitzsimons, Duke University, USA

Phrases like “dress for success,” or “the clothes make the man” suggest that having the right accoutrements for a performance task can be beneficial to success. Importantly, while we may purchase elite branded products in the hopes that they will help us perform well, sometimes we may succeed, while other times we may still fail. In the current research, we examine how a performance outcome interacts with the type of product used to influence self-perceptions.

We draw from work on priming and self-concept (Wheeler, DeMarree & Petty 2007) to suggest that using a high-end product has an interactive effect with success or failure to inform self-perceptions of performance. Objects have been shown serve as primes to increase the accessibility of related aspects in self-concept (Kay et al. 2004). In this sense, the use of a high end golf club may make the construct of a skilled golfer more accessible, increasing expectations of performance. Success with a high end golf club assimilates to this construct, strengthening the link between the self and elite golfer, resulting in greater self-perceptions of skill and talent. However, failure with a high end club contrasts even more starkly, thus making self-perceptions seem poorer. In this manner, individuals should feel more skilled following success with a high-end (vs. low-end) product, and importantly, they should also feel even less skilled following failure with this same high-end (vs. low-end) product. This should be most pronounced for individuals who are more susceptible to primes, such as low self-monitors (Snyder & Tanke, 1976).

In Study 1, we test this effect in an actual golfing performance context, looking at the effects of product use on failure and success, and examining the role of the self by comparing situations in which one is assigned to (non self-relevant) vs. chooses (self-relevant) to use a high end product. Four hundred and twenty eight participants were randomly assigned to the conditions of 2 (product: high end Odyssey club vs. low end Basic club) x 2 (selection: choice vs. assignment) design. Participants were informed that they would be evaluated on their putting skills. Participants were either assigned to use a high (low) end Odyssey (Basic) putter, or were allowed to choose their putter. Participants completed one putt, and either succeeded or failed. Neither the choice vs. assignment of a putter nor the use of a Basic vs. Odyssey putter nor their interaction influenced success or failure. As such, we crossed these two factors with success vs. failure to yield a 2 (product: high end vs. low end) x 2 (selection: choice vs. assignment) x 2 (success vs. failure) between-subjects design. All cells had at least 21 participants. Participants then rated their self-perceptions of how skilled they felt in their putting performance. Results revealed a significant selection x club x outcome interaction: for individuals assigned to a putter, there was no difference in self-perceptions across putters following failure, and no difference across clubs following success. In the choice conditions, however, in which individuals were able to choose their putter, a distinct pattern emerged. Following success,

individuals felt more positive self-perceptions if they had chosen the Odyssey vs. Basic putter. Following failure, individuals felt more negative self-perceptions of skill if they had chosen the Odyssey putter. These results suggest that high end product choice makes one feel even more skilled after success, but even less skilled after failure. Importantly, the role of choice suggests that the linking of the product to one's self-concept must be present for these effects to hold. In Study 2, we probe the driver of these effects.

In Study 2, we test whether choosing a high end product actually does increase skill accessibility and hence, expectations of performance. Three hundred and eighty two mTurk participants were randomly assigned to a 2 (product: high end vs. low end) x 2 (outcome: success vs. failure) experiment. Participants read a scenario in which they were debating whether to splurge on an upscale Armani suit or save their money and get a plain H&M suit for a highly anticipated job interview. Participants were randomly assigned to "ultimately decide" on the Armani (H&M) suit. Immediately following the decision screen, participants rated their expectations of how they expected to perform in their upcoming interview (e.g., "how well would you expect to do," "how impressive would you expect to be"). Following these ratings, participants read a short passage describing their interview as highly successful or highly unsuccessful. Participants then rated their self-perceptions of interviewing performance in a parallel manner as Study 1. First, examination of expectations revealed that individuals choosing the Armani (vs. H&M) suit expected to perform better at the job interview. Next, self-perceptions results showed that as before, the high end (vs. low end) suit made people feel better about their interviewing performance following success, yet worse about this performance following failure. Most importantly, these self-perceptions were driven by initial expectations of performance. Recognizing that our questions about expectations may have elicited demand effects, in Study 3 we ran the same study without expectations questions, also measuring the moderator of self-monitoring, resulting in a 2 (product: high end vs. low end) x 2 (outcome: success vs. failure) x (self-monitoring, measured) design. We predicted that we should again observe polarization for success and failure, but that this should be most pronounced for low-self-monitors, who are known to be particularly susceptible to primes (Snyder & Tanke, 1976). Results revealed a significant product x outcome interaction on self-perceptions, replicating the polarization effects observed in Study 2. Most importantly, a significant product x outcome x self-monitoring interaction emerged. Spotlight analyses revealed that the polarization following success and failure was greatest for low self-monitors, or those individuals most affected by the mental constructs elicited by products.

Thus, these results suggest that using high end products can have unanticipated consequences on self-perceptions performance. While individuals typically gravitate toward choosing higher end goods to emulate the individuals they aspire to be, their use may have polarizing effects resulting in sweeter success, but sourer failure.

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### ***Uncovering Reverse Placebo Effects: When Better Brands Lead to Worse Performance***

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People have powerful beliefs. Their expectations about experiences, products, and their own future well-being not only inform decisions but also have the self-fulfilling ability to determine actual outcomes. For example, individuals are known to seek hypothesis-consistent information to see what they want to see (Balcetis and Dunning 2006), to actually perform better when paying more for an energy drink implicitly believed to be of higher quality (Shiv, Carmon, and Ariely 2005), and to truly experience less pain even when taking an inactive placebo medication (Wager et al. 2004). Similarly, it may be plausible that the higher quality expectations afforded by consuming a high-status branded product might also lead to self-fulfilling improvements in product efficacy. In the present research, however, we find evidence of the opposite, that in spite of being willing to pay more for them, high-status

branded products can exhibit lower efficacy and their use can actually result in worsened performance.

We focus on identifying and accounting for a reverse placebo effect of high-status brand products, whereby the labeling of a product with a high-status brand actually reduces subsequent product-related performance. Our analysis extends the belief-expectancy-outcome model (Shiv, Carmon, and Ariely 2005) by deconstructing the process by which beliefs about performance are formed. First, since a large body of work has demonstrated that brand signals can engender reference group comparisons (e.g. Escalas and Bettman 2005), we focus on the fact that high-status branded products can elicit comparisons to high-performing reference others. When these social comparisons promote contrast against the target group, they lead to negative evaluations of an individual's own relative performance. By generating negative beliefs about relative performance, detrimental response expectancies are activated, subsequently emerging in the form of hampered performance.

In Study 1, we directly test the effects of brand status on product efficacy. We developed a new paradigm to test the effectiveness of brain training programs on improving cognitive ability. Participants from a national online sample completed two tasks in the study: first, a branded brain training exercise followed by a cognitive ability exam. While the content of the training programs was identical across conditions, subjects were randomly assigned into one of three brand conditions: (1) a high-status brand condition where subjects were told that the training was developed for MIT students, (2) a low-status brand condition for University of Phoenix students, or (3) a control condition in which participants received no information about a target demographic. Following training on the cognitive fitness exercise, we measured efficacy of the brain training program on a cognitive ability exam made up of challenging questions adapted from IQ tests. Scores on the cognitive ability exam revealed a significant main effect of the brand – participants in the MIT condition performed significantly worse than those in the University of Phoenix and control conditions. Because people differentially attend to and rely on external standards to evaluate their own behavior, we also explored how the tendency towards self-monitoring influences the reverse placebo effect. We find that the effect is most pronounced when these high-self monitors must answer especially challenging questions.

To test the robustness of our findings and to better elucidate the mechanisms involved, in Study 2 we developed a paradigm to assess the efficacy of new language learning tutorials. Online participants were asked to complete a brief training program to learn the unfamiliar language of Na'vi from the film Avatar. Since subjects had no prior knowledge of the language, we were able to measure the efficacy of the language learning tutorial by testing for understanding of the language after the training program. Again, participants completed two tasks: a training program where they were randomly assigned to one of two brand conditions, either MIT or University of Phoenix, and a test to measure acquisition of the new language. Despite the fact that the training programs were identical except for branding, we once again find a significant main effect of brand on performance where participants in the MIT condition again underperformed relative to participants in the University of Phoenix condition. Moreover, a three-path mediation analysis reveals that the effect of the brand is mediated by the standards implicit to the task such that those in the MIT condition feel that they should be higher achievers. These higher standards subsequently drive higher levels of intimidation, which finally drive lower performance on the efficacy measures. In Study 3, we replicate these findings and also show that the reverse effect of high-status brands overpowers the positive effect of high prices.

Finally, in Study 4 we explore the boundary conditions of the phenomenon. First we identify sufficient conditions that are able to elicit performance effects by holding branding constant while manipulating only reference group comparisons. If the differences in reference group comparisons are indeed the main component of the brand differences that drive negative performance outcomes, changing only the reference group comparison should be sufficient to elicit performance effects. Second, we identify positive rather than negative performance outcomes that may occur. Since people often assimilate toward features of comparison targets when the target is considered to be similar, we anticipate that in a population of participants that are similar to the comparison targets, people will assimilate towards high-performing reference others, leading to positive performance effects. Here, we recruited a population of MIT students to complete a brain training program identical to that in Study 1. Participants were randomly assigned to one of three

conditions where only MIT brands were used: (1) a high-performance reference group, (2) a low-performance reference group, or (3) a control condition. Prior to the training task, reference group comparison was manipulated by having participants read a profile about a current MIT student named Eric, who was either a high-performer or a low-performer. Scores on the cognitive ability exam show that within our population of MIT student participants, performance actually increased in the presence of high-performance others and decreased in the presence of low-performance others, relative to the control.

In the studies presented here, we document a performance reducing effect of high-status brand products. We observed that participants who used high-status brand products designed to improve performance actually performed worse when completing subsequent diagnostic tasks compared to participants using identical products of a low-status brand. This work has uncovered a novel and perhaps cautionary finding that better brands may actually lead to worse performance outcomes, a result that may have wide implications in how brands are used.

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### ***Merely Accessible: Products May be Effective without Actual Consumption***

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Imagine the following scenario. You wake up with a headache one morning, so on your way to work, you stop by the pharmacy and buy headache medicine. You put the medicine in your bag and continue your journey to work. When you arrive, you are so busy that you do not take the medicine right away. Would the fact that you purchased the product and had access to it have a positive effect on your headache even though you did not actually consume the product? Could the mere fact that a solution was available and accessible to you help relieve the problem?

In this paper, we demonstrate this effect and provide evidence for its underlying mechanism. Specifically, we suggest that mere availability of a task-relevant product provides a person with a sense of control over a situation or a task, and may do so through both external and internal routes (Skinner 1996). The downstream psychological consequences of having external and internal means of control are actually similar: greater persistence, lower anxiety, optimism about the outcome. The main difference is that the self is implicated in the latter. In line with this, we argue that having a helpful product merely available without actually consuming it can boost people's self-efficacy – confidence in their ability to perform a task on their own. This theoretical difference can have potentially important implications. One which we explore is that if and when perceived ability drives enhanced well-being and performance, such effects may persist even after the product is no longer available.

A pilot study was conducted following the first outbreak of swine flu in the UK in late 2009. We tested whether ease of access to Tamiflu (the main drug used in the prevention and treatment of swine flu), would affect participants' self-reports of immune system strength. Student participants in an online pool first received basic information about swine flu. Then they received information about Tamiflu and were told that it functions similarly to the immune system by preventing the flu virus from entering body cells and by blocking the release of new copies of the virus. Participants in the high-accessibility condition were told that college and university students (along with infants, schoolchildren, pregnant women, and the elderly) would be included in the priority groups to receive Tamiflu. Priority groups in the low-accessibility condition did not include college and university students. Participants then filled out a self-report of current immune system strength, which included items such as: How strong is your immune system in fighting viruses? How often do you get colds and flu? How are your energy levels? My immune system is ... very weak/very strong. My general health

is ... very bad/very good. Participants in the high-accessibility condition reported their current immune system to be stronger. Moreover, their beliefs about the efficacy of Tamiflu in treating swine flu did not have a significant effect on the results. These results provided initial support for our contention that mere access to a remedy may bring about the claimed effects of the remedy.

In the next study, participants completed two separate concentration tasks. After the first task, participants in the experimental condition were told that coffee was available if they wanted it. On a table behind the participants were a thermos, cups, sugar/sweetener, and milk. In the control condition, coffee was not available and was not mentioned throughout the study. In a third condition aimed to rule out a priming explanation, coffee was mentioned as being available but then was not accessible during the study. The main dependent measure was participants' performance in a second reaction-time task. Participants saw a grid with empty check-boxes presented as a 10 x 10 matrix on a computer screen. We asked participants to click on as many boxes as they could in 35 seconds. We also collected self-reports of stress and perceived control, as well as expectations about coffee's efficacy in improving task performance. Results showed that performance in the coffee-available condition was significantly better than performance in the control and coffee-noted-but-unavailable conditions. Self-reports of stress, perceived control, and expectations about the efficacy of coffee did not show any significant effects.

These results, along with those of the pilot study, suggest that mere access to a product can be as effective as actual consumption and that this effect of accessibility is independent of expectations about product efficacy. Although perceived product efficacy did not have an effect on participants' performance in these experiments, accessibility to a beneficial product may enhance consumers' self-efficacy in accomplishing tasks related to the product's benefits and, as a result, improve task performance. If self-efficacy plays such a role in this process, we would expect to observe the positive effect of product accessibility even after the product is taken away as the individual's self-efficacy is boosted when he/she performs the task without using the product in the earlier stage.

Thus, in the final study, we tested whether the effect observed in the previous study persists in a second stage in which the product was made unavailable and examined the effect in a new setting. In the first task, participants solved word puzzles. Half the participants had access to a dictionary to which they could refer during the task if they wanted to do so. This was the manipulation of accessibility. Then, in the second task, participants solved anagrams. At this stage, the dictionary was removed from the room for those participants who had it available. Results indicated that those who had access to a dictionary in the first task outperformed those who did not have access to it. Further, this effect was observed also in the second task in which none of the participants had access to a dictionary. Whether participants made use of the dictionary did not change the results.

These results suggest that mere accessibility to a remedy increases consumers' self-efficacy and their task performance. In other words, under certain conditions, products can be effective without being consumed.

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### ***Where is the Fun in Creativity? The Influence of Product Touch on Consumer Creativity***

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In many contexts, consumers are engaged in design or co-creation of a product in order to customize it to their own needs. In such cases, the level of creativity displayed by a consumer may lead to positive outcomes. Creativity may be influenced by individual factors, the environment, and even the product. In our research, we examine the effect of product-related haptic cues ("touch") on creativity.

Recent approaches have largely taken a cognitive lens in understanding consumer creativity. Yet, we believe that a fundamental aspect of touch is the sense of play that it breeds. For example, kids enjoy playing with products such as blocks and building various interesting looking shapes with them. Accordingly, our conjecture is that touch facilitates creativity via a hedonic route.

Four lab experiments were conducted to shed light on this topic. Experiment 1 explored the effect of haptic cues (presence/absence) on creativity. Participants were asked to design a toy that a child (aged 5-11) can use to play with. They were provided with either 14 shapes (haptic cues condition) or 14 photos of shapes (no haptic cues condition), with the same shapes across conditions. In the haptic cues condition, participants could touch and manipulate the shapes whereas without haptic cues, participants could only see the shapes. A MANCOVA shows that with haptic cues, novelty was higher than without haptic cues. This finding shows that haptic cues affect the novelty dimension of creativity.

Experiment 2 examines the mediation role of hedonic value on the relationship between haptics and consumer creativity. Haptic cues were manipulated between subjects. Subjects were instructed to list creative uses of a plastic cup. Only participants in the haptics cues condition were allowed to touch the cup. Hedonic value was measured with two items adapted from previous research (e.g., Babin and Darden 1995; Catalog Coalition 1993). Mediation analysis shows that haptic cues produced more creative uses than no haptic cues. The mean indirect effect from the bootstrap analysis was positive and marginally significant with a 95% confidence interval, excluding zero. The direct effect of haptic cues was also significant. Thus, we can conclude that when individuals can touch the product, their enjoyment leads to enhanced creativity.

Experiment 3 followed a 2 (haptic cues vs. no haptic cues) x 2 (visual cues vs. no visual cues) between-subjects factorial design to examine the moderating role of visual cues. The creativity task was the same as in Experiment 2. In condition 1, participants were able to see and touch the product (a cup). In condition 2, participants were able to touch the cup but not see it (it was placed inside a box). In condition 3, participants saw a picture of the cup on a computer screen. In condition 4, participants read a description of the plastic cup such as color, weight, height, and texture on the computer screen. Subsequently, participants wrote down as many creative uses of the cup as they could identify. A two-way ANOVA revealed a main effect of haptic cues as well as a significant two-way interaction. Planned contrasts revealed that when haptic cues were not provided, the presence of visual cues led to more creative uses. When haptic cues were provided, however, the presence of visual cues did not influence creative uses. This finding demonstrates the moderating effect of visual cues, such that visual cues can compensate for the absence of haptic cues. This finding has important implications for products that are not amenable to consumer touch, suggesting that visual cues can be effective.

Experiment 4 investigated the moderating role of ownership, following a 2 (haptic cues vs. no haptic cues) x 2 (ownership vs. no ownership) between-subjects factorial design. When haptic cues are not present, product ownership provides a higher level of motivation and enhances creativity (Amabile 1996). The creativity task was the same as in Experiment 1. To induce a feeling of ownership, half the participants were instructed to imagine that the toy company would give them the toy that they just designed. A MANOVA revealed that the provision of ownership significantly influenced novelty and appropriateness. Specifically, participants in the no haptic cues condition with ownership showed enhanced novelty and appropriateness than participants in no ownership conditions. However, when participants were provided with haptic cues, the level of ownership did not significantly influence novelty or appropriateness. This finding demonstrates the moderating effect of ownership, such that ownership can compensate for the absence of haptic cues.

This paper contributes to the literature in two ways. First, this paper shows the relationship between sensory inputs and creativity which has rarely received attention in the marketing context. Second, it shows an alternative fun route to creativity stemming from the

sensation of touch. In addition, this paper guides managers on how to compensate for the absence of haptics in environments (e.g., online) where such cues are not available.

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**JCP AE RESEARCH AND REPORT MEETING**

**4:00 pm – 4:55 pm**

**CAMBRIDGE**

**JCP ERB MEETING**

**5:00 pm – 7:00 pm**

**CHOPIN BALLROOM**

**WORKING PAPER SESSION 2 Sponsored by: University of Miami**

**6:00 pm – 7:30 pm**

**TRIANON**

***Working Papers: WORKING PAPERS SESSION 2***

**Room: TRIANON**

***The Hopeful Materialists: Materialism, Economic Mobility, and Saving Propensity***

Sunye Yoon, University of Wisconsin - Madison, USA\*

Nancy Wong, University of Wisconsin - Madison, USA\*

We propose that materialism's impact on saving propensity is moderated by individual belief about economic mobility. A survey shows that materialistic value does not result in low saving propensity when people believe that society is offering equal opportunity for everyone to move up the income ladder, while it results in low saving propensity when people have doubts about the fairness of society. Low economic mobility in the US and diminishing belief about the American Dream are discussed as a possible factor of decreasing savings rate in the US. Implications of this research to consumer wellbeing and its theoretical contribution are also discussed.

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***Spirituality Enhances Creativity: The Role of Feelings of Freedom and Unconscious Thought***

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This research empirically examines how spirituality affects creativity and unveils the underlying cognitive mechanism. The results from three experiments verify that spirituality enhances creativity and this effect is mediated by feelings of freedom. Spirituality boosts creativity by inducing feelings of freedom especially when people are engaged with unconscious thought.

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***Activating Multiple Facets of the Self: Identity-Signaling and Brand Personality***

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Frank Pons, University Laval

Using a multi-method approach consisting of qualitative and quantitative studies, the authors examine the impact of the identity salience on the preference for the different dimensions of brand personality. Results from those studies demonstrate that consumers' motivations to express parts of their identities have influence on their preferences for brands and their consumption behaviors. Indeed, diverse dimensions of brand personality can trigger different parts of consumers' identities and that this match-up can affect participants' perceptions of the brand.

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***A Cognizant Mind: Materialism in the Digital World***

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Millions of people are connecting everyday through online social networking communities, and they are constantly being bombarded with “experience” consumerism. So what impact does this have on our own materialism? Across a series of studies we discover that high social networking users have a significantly higher personal materialism values score than low social networking users. Additionally, those low in social networking show a change in materialism when shown consumerism social networking profiles (both materialistic and experience profiles), while no impact is shown for those high in social networking. This research furthers our understanding on how social networking affects materialism behavior.

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***The Sound of Success: Sound Symbolism's Effect on Stock Performance During First Year of Trading***

L.J. Shrum, HEC Paris, France

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The current research extends the notion of phonetic symbolism to stock performance. Because stop (vs. fricative) consonants are associated with concepts such as larger and stronger, and also more masculine and powerful, we expected and found support for the proposition that tickers with stop consonants outperform those with fricatives, for masculine industries. For feminine industries, we expected the opposite pattern, indicating a match-up hypothesis. Feminine (masculine) industry companies performed better when their ticker had fricative (stop) consonants and therefore more feminine (masculine) connotations. However, no effects were noted for front vs. back vowels.

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***Online Photo-posting as Narcissistic Supply: Social Media, Self-Esteem, and Self-Control***

Jinghui Hou, University of Southern California, USA\*

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Recent research has begun to show detrimental effects of social network use. We take a more nuanced approach and probe the psychological antecedents and consequences of a popular social network activity – posting photos on microblogging platforms. Our studies show that people high in narcissism, due to their self-exhibition motives, post more photos on microblogging sites than their non-narcissistic counterparts, particularly photos with self-promotional elements (Study 1). Consequently, such photo-posting activities, functioning as narcissistic supply, enhance momentary self-esteem for narcissists (Study 2 & 3), which subsequently mediates the influence of photo-posting on worsening self-control (Study 4).

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***Feelings...Nothing More Than Feelings: The Impact of Embodied Cognition on Consumer Preference and Evaluation***

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Nancy J. Sirianni, Northeastern University, USA

Bodily feelings...or bodily sensations...have you ever wondered where they originate? Do the bodily sensations we receive when we walk barefoot on a hard tile floor in the morning affect what we choose to eat when we open our refrigerator? Embodied Cognition is a construct that is rooted in understanding “acting beings” versus “thinking beings.” The purpose of this paper is to examine the cues involved in embodied cognition as they relate to consumer preference and evaluation. We begin by testing the impact of manipulated bodily sensations on experienced affect and product choice in an online shopping context.

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***Effects of store size on consumer's emotion and behavior***

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This study was designed to look into the influence of size of the store on the emotions and behaviors of consumers. Subjects(N=400) were randomly divided into two groups and watched videos of stores. According to t-test, consumers felt that the environment of large store is less crowded and more pleasant. They also showed more favorable responses in cognition, attitude and behavior toward large store. Although regression analysis showed that causality between all variables are significant, the result of chow test revealed that the effect of store size was not significant enough to affect the emotions and behaviors of consumers.

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***Experiencing Works of Art Enhances Creativity: The Role of Inspiration as a Mediator***

Dongwhe Ahn, Hongik University, Korea\*

Nara Youn, Hongik University, Korea\*

This research empirically documented the effect of experiencing works of art on creativity. Participants experiencing works of art were inspired more, and showed higher performance in creative search for solutions. Positive affect induced from inspiration explained the effect of art appreciation on creativity.

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***Coping versus enhancement motives of compulsive buying and the heterogeneity of compulsive buyers***

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We assessed the heterogeneity of compulsive buyers (CB) based on affective motives of buying: coping and enhancement motives. Latent profile analysis identified three clusters of compulsive buyers: high coping CB, moderate coping/enhancement CB, and low coping/enhancement buyers. High coping CB cluster had significantly more serious CB problems than the other clusters. Our findings suggest that the conventional focus on coping motive in the conceptualization of CB may need to be revised.

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***The Experiential Recommendation: Why it Occurs and When it Might Not Hold***

Sarah Roche, University of Texas at San Antonio, USA (PhD student)\*

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This research supports the idea that happiness is not always sacrificed at the altar of material possessions. First, the greater happiness associated with experiential (vs. material) purchases is due to a greater proportion of recalled thoughts being hedonic for experiences versus possessions (affect as information). Second, when participants were asked to focus on affective purchase aspects, material (vs. experiential) purchases are recalled in equally hedonic terms, result in fewer negative thoughts about the purchase, and are associated with higher happiness scores. Thus, when prompted with the right frame of mind, material possessions might actually surpass the happiness brought from experiences.

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***Exclusivity as a Key to Exclusive People's Hearts***

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We argue and demonstrate that highly avoidant people, who tend to be detached in their interpersonal relationships, form stronger self-brand connections with exclusive brands than consumers who are low in avoidance. We also explore: 1) whether this relationship depends upon highly avoidant consumers' levels of attachment-related anxiety; and 2) whether (and why) exclusive brands provide emotional comfort to consumers who are high versus low in avoidance.

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***Mental Traveling Along Social and Temporal Distance: The Influence of Cultural Orientation on Construal Level***

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This paper provides an integrated framework in examining the antecedents of construal level that implies interactive effects of general cultural orientations (e.g., individualism/collectivism and short/long-term orientation) and psychological distance (e.g., social and temporal) on construal level. We also explored the possibility that social or temporal orientations influenced judgments along dimensions other than the one to which they directly pertained. The present research reconciles the mixed findings of previous research on the effects of cultural orientation on construal level. Moreover, it provides preliminary evidence that construal level theory may not be universal across cultures.

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***The Positive Effect of Possession Mimicry: The Role of Mimicker's Competence and Mimickee's Approval Motive***

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To date, research on possession mimicry has mainly demonstrated it to be a distinctiveness threat. The current research explores the circumstances in which possession mimicry is construed as flattery and suggests that the competence of the mimicker and approval motive of the mimickee influence the construal of mimicry. Studies 1a and 1b demonstrated that one's possession being mimicked by a competent other is interpreted more like flattery than when being mimicked by an incompetent other. As a result, evaluation of and willingness to sell the mimicked product increased. In Study 2, when a mimickee has a higher approval motive, he or she motivationally construed the mimicry as flattery regardless of the mimicker's competence.

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***Digital pirates, a heterogeneous fleet? A psychographic segmentation of illegal torrent downloaders***

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Although existing literature on the antecedents and ethical aspects of digital piracy provide valuable insights, a comprehensive understanding of the pirating population as a whole is still lacking. This research aims to integrate various perspectives in literature by disclosing psychographic subtypes of digital pirates and gain unique insights into the ineffectiveness of current piracy-combatting measures. Four subtypes along a continuum of pirating internalization were found: the anti-pirate, the conflicted pirate, the cavalier pirate and the die-hard pirate, based on differing constellations of ethical evaluation, feelings of guilt and attitudes towards piracy.

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### ***Licensing vs. Consistent Behavior: The Moderating Role of Action Stage***

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Results on self-licensing contradict other lines of research (e.g., foot-in-the-door effect, Freedman & Fraser, 1966) that suggest that people avoid acting inconsistently as it is perceived as uncomfortable (Merritt et al., 2010). Thus, it is an open question under which circumstances people are acting inconsistently rather than consistently. We examine the moderating role of action stage (intended vs. completed) on the self-licensing effect. Our findings contribute to the understanding of underlying mechanism of the self-licensing effect and help to unravel the contradiction between the literature on licensing and consistent behavior.

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### ***Fluency effects on brand name recognition and preference: The role of product context***

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Existing research has not provided a clear understanding of processing fluency effects on memory. In a laboratory experiment with novel non-words, we found a recognition advantage of fluent non-words over moderately fluent and disfluent non-words. This advantage diminished when non-words were presented as novel brand names in different product contexts. We further tested a preference reversal in favor of disfluency and found that disfluent brand names (non-words) were equally disliked across different products contexts. A preference reversal could be observed when fluent names were preferred in an everyday product context and moderately fluent ones were favored in an exclusive product context.

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### ***Existential insecurity and materialism – New insights from a dispositional approach***

Christian Martin, University of Lausanne\*

The reported studies show that chronic levels of death-related cognitions do not just motivate enactment of (materialistic) values, but are indeed related to the strength with which consumers hold these. Furthermore, materialistic values mediated the relationship between preferences for prestigious goods and dispositional concerns regarding one's own mortality. This finding helps to clarify

ambiguous results regarding the relationship between mortality concerns and status consumption. Last, our studies are among the first to explore not just the effects of non-conscious, but also of conscious existential insecurity on consumers.

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***Suppressing Pocketbook Patriotism for International Dominance: Joint Effects from Dominance-Related Perceptions of Buying Products from Developing Countries and Social Dominance Orientation***

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Perceptions of buying products from companies that outsource business operations to countries with developing economies vary widely, and their effects on consumer behavior are understudied. Drawing on Social Dominance Theory and research on Social Dominance Orientation (SDO) we observed, from an online survey of 175 Canadian respondents, that consumers will neglect domestic products if they believe doing so maintains their country's global influence, but only if they have higher levels of SDO-dominance. Our results imply that individuals with strong group-based dominance motives may use their purchases as a way to maintain dominance over countries with developing economies.

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***Want to Make Me Happy? Tell Me about Your Experiences, but Not Your Objects***

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We know that experiential purchases advance more happiness than do material purchases (Van Boven and Gilovich, 2003). We also know that people share more about their life experiences than their material objects, which explains experiential purchases' superiority in advancing the teller's happiness (Bastos and Brucks, 2013). The present work develops this body of knowledge by investigating the effects of experiential versus material sharing on the listener. Findings show that the superiority of experiential purchases in advancing happiness extends to people listening about the purchase, and that such effect is mediated by the listener's feeling of social connection with the teller.

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***Shiny Happy Chickens Tasting Good: Ethical Company Practices Affect Consumer Experience***

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The ethicality of company behavior and food-production has received increasing prominence in the public eye over the past years, with more and more companies attempting to offer ostensibly ethical alternatives. The current studies show that the ethics of production influences consumers' product experience. Specifically, we show that people report enhanced taste experience for "happy chickens". We provide initial evidence that these effects are not merely due to positive affect and quality inference. Nor can they be

explained by moral disgust. We suggest that such knowledge about ethical production may enhance taste as a case of conceptual consumption.

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***Pretty in Pink? Asymmetric Gender Stereotyping From the Color and Texture of Clothing***

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We investigate in a study among undergraduates (n = 133) the interactive effects of fabric color and texture in consumers' perceptions of gender appropriateness for men's and women's clothing. We find that the fabric used for women's (but not men's) shirts are perceived as gender-inappropriate if they reflect both a masculine color plus masculine texture (e.g., are made from a blue and rough fabric). The lack of such effects on the perceived appropriateness of a man's shirt suggests asymmetric gender stereotyping in perceptions of women's and men's clothing.

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***Nobody puts music in the corner: The effect music prominence on consumer's perceptions of advertising***

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This research investigates music prominence in advertising. Results of two studies show that popular music does not simply serve as background, but can be utilized in a variety of different prominences in video advertisements. Additionally, in according to the figure-ground principle, less prominent stimuli stand a greater chance of being overlooked, while more prominent stimuli improve consumers' opportunity to process it. This may have substantial impact on consumers recall and attitudes toward brands and their subsequent purchase intentions. Further study on these effects is supported.

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***An Eye Tracking Study of Actual and Lay Theories of Gender Differences in Form and Function Trade-off***

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Using advanced eye-tracking equipment, this paper explored the actual and the lay theories of gender differences on form and function trade-off. We found a counterintuitive result that when choosing products for themselves in a private setting (accessibility to actual gender differences), males would pay more attention to both product form and functional attributes than females. Interestingly, when shopping gifts for friends (accessibility to lay theories of gender differences), males were more likely to focus on product form for friends of females than friends of males, while females would pay more attention to functional attributes for male than female friends.

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### ***Self-regulation Effectiveness and Goal Persistence in a Social Media World***

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Our research examines the relationship between self-regulation effectiveness and goal persistence. We propose hypotheses about how characteristics of the social media environment moderate this relationship. In study 1, we investigate how goal publicity and feedback moderate the effect of self-regulation effectiveness on goal pursuit. In study 2, we then show that goal value also moderates this key relationship, depending on the level of goal-publicity. Finally, we examined whether the type of goal (content vs. social) matters in an on-going study 3. Our research has implications for goal persistence literature and social media advertisers.

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### ***Influence of Hyperopia and Frugality on Spending and Saving***

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Hyperopia is a general aversion to indulgence and frugality is restraint in terms of purchasing goods and being resourceful in how goods are used. We found that both hyperopic consumers and frugal consumers save more and spend less, but that the mechanisms that drive the spending and savings behavior of hyperopic and frugal consumers differ. Hyperopic consumers spend less since they undervalue the importance of spending. Frugal consumers spend less because of their focus on saving goals.

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### ***A Good Defense is the Best Offense: The Effects of Mortality Salience on Money and Time Allocations***

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Consumers tend to cope with the fear of death through defensive tactics. In this research we examine the impact of mortality salience on cross-cultural consumers' within-self money allocation (i.e., spending money between hedonic and utilitarian consumption on oneself) and self-others time allocation (i.e., spending time between self and others) decisions. Findings from two studies reveal that mortality salience shifts American consumers' within-self money allocation in favor of utilitarian consumption and self-others time allocation in favor of self whereas the same effect shifts Taiwanese consumers' within-self money allocation in favor of hedonic consumption and self-others time allocation in favor of others.

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### ***The Psychological Downsides of Power***

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Although past literature generally converges on the notion that having power fosters an agentic orientation, this research investigates conditions under which power can lead individuals to adopt a more communal focus. Despite the allure of power, having the power to dictate negative outcomes for others triggers feelings of psychological discomfort and concerns about negative evaluation. Individuals may attempt to mitigate this negative state by acquiring products that facilitate creation of social connections with others. While prior literature demonstrates that power tends to foster an agentic orientation, how one decides to exercise this power can moderate this effect.

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### ***Do Consumers Care Who Recommends Products? Effects of Amount of Choice and Source of Recommendation on Consumers' Attitudes***

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The effects of amount of choice and source of recommendations on website attitude were examined via a 2 (Amount of choice: high, low) x 2 (Recommendation source: present, absent) experiment. Results showed that number of choices did not have a positive effect on website attitudes; however, having the source was deemed more useful when users were asked to choose from a greater number of options to choose from than when only a limited number of choices was provided.

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### ***Sex sells fair trade better than love***

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This paper examines whether the presence of an attractive potential mate influences male and female consumers' preference for ethical products. In line with sexual strategies theory, we predicted different effects according to the time investment (short-term vs. long-term). Results showed that women's relative preference for ethical products is not affected by mating primes. Men, however, showed a surprising pattern: they are more likely to prefer ethical products in the presence of a potential short-term partner than in the presence of a potential long-term partner.

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### ***How Private Label Brands Benefit from Ethical Attribute Introduction***

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This research argues that ethical attributes—product attributes that reflect social and environmental issues—may have differential effects for different types of brands and may not always be an asset for a brand. The results of three experiments show that adding an ethical attribute enhances consumer evaluations of retailer's private label brands (PLBs), yet does not change consumer evaluations of national brands (NBs). The effect of ethical attributes on PLBs depends on competitive pricing of PLB with respect to the NB. Interestingly, offering ethical attributes at lower prices hurts evaluations of PLBs.

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### ***Cultural Differences in Designing a Customized Product***

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A vacation tourist often faces a decision as to whether to visit as many cities as possible (i.e., breadth variety) or to thoroughly explore only a few cities (i.e., depth variety). The current research examines when and why consumers choose breadth over depth during product customization. Two studies demonstrate that East Asians seek more breadth variety in their customized travel than Westerners. The evidence suggests a social motive for interdependence activates for East Asian more than for Western travelers.

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### ***The Effect of Power Status on Purchases of Material versus Experiential Goods***

Yue Liu, University of Central Florida, USA\*  
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This research investigates the effect of power status (powerless vs. powerful) on consumers' likelihood to purchase material versus experiential goods. We also propose a moderating effect of implicit theory on the relation between power status and purchase types. In an experiment, we find that among consumers with incremental theories, a powerless (vs. powerful) status increases their likelihood to choose material (vs. experiential) goods. For consumers who hold entity theories, power status does not affect purchase types.

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### ***Excessive Shopping, Visual Attention, and the Influence of the Store Environment on Product Evaluations***

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This research shows that excessive shoppers are more susceptible to the influence of the store environment because they allocate more visual attention to the store environment. Participants viewed pictures of products in attractive vs. unattractive store environments while an eye tracker measured their attention. The higher the tendency for compulsive buying, the more attention participants allocated to the background (vs. the product). Participants rated products with an attractive background as more attractive than products with an unattractive background. Importantly, this difference was greater for participants with higher compulsive buying tendency.

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### ***Construal Level Influences How Consumers under Financial Constraints Respond to Price Promotions***

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The market provides consumers with attractive offers in the form of price promotions. However, many consumers exposed to these price promotions experience financial constraints. A series of three studies investigates how having an abstract (vs. concrete) mindset influences the way consumers evaluate price promotions when they are under financial constraints. Results show that under financial constraints: (1) consumers with a concrete (vs. abstract) mindset have more favorable evaluations of price promotions, (2) consumers with an abstract mindset evaluate price promotions more favorably when their constraint is external (vs. internal), and (3) consumers with a concrete mindset evaluate price promotions more favorably when their constraint is internal.

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### ***The Motivating Effect of Money***

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The current work posited that the combination of money cues and the presence of a goal can produce highly motivated behavior. The results of seven experiments supported this prediction. The motivating effect of money was observed across such diverse contexts as goals related to health and problem solving — and even the goal to have fun.

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### ***“I am the Underdog”: Self Communication of a Brand’s Passion Enhances Brand Evaluations***

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Underdog brand biographies are narratives based on brands’ passion and determination leading to success despite a lack of resources (Paharia et al., 2011). Two experiments demonstrate that an underdog (compared to a topdog) brand biography leads to higher

purchase intentions when the brand is the information source. If the underdog biography is communicated by an independent source, this effect does not emerge. Process analyses reveal that increased consumer elaborations due to brand as information source underlie this effect. Theoretical and managerial implications of the findings are further discussed.

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***The Part-Whole Bias: The Influence of Packaging Format on Judgments and Experiences of Product Efficacy***

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Although there is an abundance of research on the effects of packaging and serving size on food consumption, there is limited work on the effects of packaging on product efficacy judgments. We demonstrate that when consumers' processing capacity is limited, consuming a fixed amount of an efficacious product from a smaller pool of resources (e.g., the entirety of a single-serve package; a "whole") feels subjectively more adequate than consuming the same amount from a larger pool (e.g., a package containing many units; a "part"). This "part-whole bias," in turn, affects both efficacy perceptions and behavioral outcomes (task performance).

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***Closed-Loop Supply Chain Management: A Conceptual Framework on Product Acquisition***

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Closed-Loop Supply Chain (CLSC) is one of the initiatives taken by firms to achieve sustainability. Product acquisition is most important activity in CLSC setting. The purpose of this paper is twofold. First, it offers a literature review on the product acquisition management and consumer disposition behavior. Second, it proposes a conceptual framework, that extends the existing CLSC setting by introducing consumers' disposition behavior. Our study is first to establish a link between CLSC and disposition practices literature. Our study makes a significant theoretical contribution in the field of CLSC and consumer disposition practices as it links both of the areas. Firms that have CLSC operation can use our framework to increase better quality product returns which in turn increase profitability.

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***Influence of Identity Salience on Product Satisfaction in Customizing for Self Versus Others***

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We examine how making one's creative identity salient affects product satisfaction when consumers design products for themselves versus as gifts for others. Two studies use a real customization task to reveal that for consumers feeling lower levels of creativity,

making creative identity salient increases satisfaction for products designed for themselves, but not for others. However, for consumers feeling higher levels of creativity, making creative identity salient increases satisfaction for products designed for others, but not for themselves.

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### ***Vices & Virtues, Virtues & Vices: How Store Layout Can Make a Difference***

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To enhance store image, retailers increasingly opt to expose their customers to fresh produce (i.e., virtues such as fruit and vegetables) at the store entrance and to position indulgent food assortments (i.e., vices such as chocolate and confectionary) more store inwards. But, could this retail trend also affect consumers' product choices? By means of an online shopping experiment, we show that consumers both buy more vices and more products, when shopping for groceries in this type of store than in a store with the opposite layout. A licensing and a self-control account are put forward to explain these findings.

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### ***The Consequences of Envy: A Socio-perceptual Perspective***

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We investigate the socio-perceptual consequences of envy. Two experiments reveal that feelings of envy lead individuals to psychologically distance themselves away from the envied target. Specifically, when people are envious of a target individual, they perceive themselves to be more different from the envied target (experiment 1) and to possess different values in life than the target (experiment 2). These effects are more pronounced among people with a dispositional tendency to attend to their feelings (Salovey, Mayer, Goldman, & Turvey, 1995). The potential bases and implications of these effects are discussed.

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### ***Ambient scent cue increases positive emotions and willingness to consume scent-related products***

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This study investigates the influence of ambient product-related scents on emotions and impulse buying in the context of food consumption. Two experiments were conducted in order to test the effect of chocolate and coffee scents. The results demonstrate that ambient olfactory cues enhance positive emotions, influence discrimination times toward scent-related products and increase willingness to consume those products. These experiments support previous findings on the effect of scent on emotions and impulse buying by providing additional evidence on the arousing/activating effects of scents on reaction time tasks.

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***Service with a Smile: Does the Type of Smile Matter?***

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This study is the first attempt, to our knowledge, to experimentally examine the relationship between the type of smile a salesperson displays (i.e., Duchenne vs. Non-Duchenne) and the gender of the salesperson (male vs. female) on the Stereotype Content Model dimensions of warmth and competence. Results suggest that there is an interaction between type of smile and gender on ratings of competence; however, the same pattern of results was not found for ratings of sincerity.

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***The Effect of Competitive Labeling on Prosocial Behavior***

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To motivate donors, charities can display the amount raised by competing donor groups; an approach we call competitive labeling. In the present research, we argue that competitive labeling increases donations when the gap between donor groups is low, but decreases donations when the gap between donor groups is high.

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***Will I Buy Today What I Chose Yesterday? The Effect of a Delay Between Product Choice and the Purchase Decision***

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A consumer who leaves an item in her virtual shopping cart and returns later to make her final purchase decision may either feel endowed to her prior choice and continue with this purchase or cool off from the excitement of the product and be less likely to buy. We argue that a delay is a “stop-and-think” cue, leading consumers to approach decisions from a more cognitive perspective. In two studies, we demonstrate that a delay (vs. no delay) leads to lower purchase likelihood for hedonic but not utilitarian products, and this is moderated by the presence of other “stop-and-think” cues.

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***Negative emotions and information processing: the effect of cognitive appraisal dimensions of 'uncertainty', 'anticipated effort' and 'control'***

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While prior research on the effect of emotions on depth of processing has shown that emotions characterized by high uncertainty lead to systematic processing, we posit and provide initial support for the hypothesis that both perceived control and anticipated effort also have an effect on processing. Further, we argue that the effects of anticipated effort on processing are moderated by the choice of emotion regulation strategy, which in turn is determined by levels of uncertainty and control. The scrutiny is limited to negative affect.

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***How People Underestimate the Risks of Home-Buying***

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We provide evidence that people underestimate home buying risks. Individual home-owner risk is three or four times that of the market risk. We showed college students price-time graphs of several unspecified assets and asked them to match those graphs with a list of assets. The graph they picked for a particular home was less volatile than the graph they picked for S&P 500. Next, we asked MTurk participants to consider a particular home and a real estate investment trust, which diversifies risk. When we asked them to pick the safer, less risky investment option, they picked the home.

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***Psychological Contagion and Visual Boundaries: Changing Evaluations without Contact***

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Placing pictures of several items together is a common practice for menu design. The potential threats of psychological contagion effect have long been ignored, where negative sources have an impact on consumers' evaluation of the product located nearby without any contact. Our research using menu designs suggests that even if the negative object were presented by picture, it could still contaminate the items next to it. However, a visual boundary that separates the target from the source eliminates this contagion effect.

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***Minty Fresh! Absolving Dieters of Their Sins***

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May Lwin, Nanyang Technological University, Singapore

Melissa Bublitz, University of Wisconsin - Oshkosh

We investigate the effect of minty flavors on dieters' food preferences and consumption choices. In studies 1 and 2, we demonstrate that dieters prefer "taboo" food (e.g., cookies, chocolate) when they contain a minty flavor. In studies 3, we show that after having consumed a taboo food, dieters prefer to cleanse their palates with oral cleansers that are mint-flavored.

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***Pushing and pulling the future as I want: the moderating effect of feelings of control on consumer temporal distance perception***

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The current paper proposes that feelings of control moderate people's felt distance towards future events. Specifically, we argue that for negative future events, the event feels closer when people have low (vs. high) feelings of control. However, for positive future events, high (vs. low) feelings of control result in closer temporal distance perceptions. The hypotheses are tested in two experiments, where feelings of control were manipulated through a power manipulation (Study 1), or by giving choice (Study 2). Theoretical contributions, including how this framework integrates two seemingly contradictory findings in past literature, and practical implications are discussed.

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***Don't Eat Me!: Loneliness, Anthropomorphism, and Consumption***

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This paper demonstrates the role that anthropomorphized products play in how lonely people assess food advertisements. Drawing on the anthropomorphism literature, we reason that loneliness dictates a strong desire for social connection, which would be diminished if one were to consume that which is perceived as human. In essence, lonely people do not wish to eat their only friends. One experiment reveals that non-lonely people show no differences in desire to eat either regular or anthropomorphized tortilla chips; however, lonely people much prefer to eat regular chips compared to their humanized counterparts.

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***The Impact of Voice Style on Persuading Consumer***

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This paper reviews the existing literature and gives a new guideline for the way of approach to the study of purchase intention related to salespeople's type of voice. It investigates the effect of voice cues (voice pitch and speech rate) on personality perception and classified the voice into three categories (attractive, persuasive, and credibility) in study 1. In study 2, we investigated the relationship between categorized voice and purchase intention in the situation of the level of involvement of the product.

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***Saving Face While Making Money: Why “Reward Both” (vs. “Reward Me”) Referral Schemes Are More Likely to Succeed for Experiential vs. Material Purchases***

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We find that purchase type (material vs. experiential) moderates the effect of a reward scheme (Reward Me: only the recommender receives rewards; Reward Both: both recommender and recommendation recipient receive rewards) on the likelihood of making a referral in a referral reward program. Specifically, for material purchases, referral likelihood does not differ between Reward Me and Reward Both schemes, whereas, for experiential purchase, people are more likely to make a referral under Reward Both (vs. Reward Me).

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***The Best Poster in the Universe, ever: How Blatantly Overblown Claims Enhance Product Judgment***

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By setting heightened expectations, companies may enhance product evaluation. However, when a claim is blatantly exaggerated, consumers may at best discount it, and at worst devalue the product due to disconfirmation. The current research demonstrates that even overblown claims may not result in reduced evaluation. More importantly, the research demonstrates that when consumers are explicitly aware of the falsity of exaggerated information, such information may ironically influence them to enhance product evaluation. Accordingly, participants told a chocolate is the best chocolate in the world rated it as tastier, but only if told the information was false.

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***My Love is the Same Even if You Change: The Effect of Rebranding on Self-Brand Connections***

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We hypothesize that when a brand rebrands and changes its identity, whether a consumer's self-brand connection (SBC) changes or not depends on the strength of SBC and the strength of the consumer's own self-identity. The survey results showed that participants who

have high SBCs with Coca-Cola and low self-identities decreased their SBCs after learning about Coca-Cola's rebranding. This research is important in that it examines the effect of rebranding, which has not been much investigated in the consumer-brand relationship literature.

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***The influence of information on status consumption; mediating role of perceived awareness***

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For status conveying goods conspicuously consumed, perceived awareness of others about a product should play a key role in the purchase process. In 4 experiments we show that providing more information about a product actually boosts consumers' own awareness about the product but also the perceived awareness of others. As a consequence, consumers who were given more information about a product had a higher willingness-to-pay, higher purchase-intention and higher perceived (future) satisfaction. We also established the moderating role of information type (hedonic vs. utilitarian) and we ruled out the potential impact of cognitive load as an alternative explanation. Implications in advertising, store layout and online retailing for status-conveying products are discussed.

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***The Effect of Aging on Consumer Regret***

Li Jiang, University of California Los Angeles, USA\*

Aimee Drolet Rossi, University of California Los Angeles, USA

The present research is among the first to investigate the influence of aging on consumers' feeling of regret. We show that older adults regret justifiable choices that turn out badly less, compared to young adults.

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***Comics Are Not Just for Entertainment: An Exploratory Analysis of the Impact of Graphic Narratives in Consumer Health Promotion***

Cuauhtemoc Luna Nevarez, Sacred Heart University, USA\*

Elise "Pookie" Sautter, New Mexico State University, USA

Graphic narratives (i.e. narrative works in the form of comics) are widely recognized as entertainment media. Recently, these narratives have emerged as potential promotional tools for health communication, advertising, and education. Despite their growing popularity and potential benefits for consumers, the study of the persuasive impact of graphic narratives has received little attention. Drawing from the transportation-imagery model and dual-coding theory, the present research attempts to fill this gap in the literature by investigating the persuasive effects of graphic narratives in the context of consumer health promotion.

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**RECEPTION Sponsored by: University of Miami**

**6:00 pm – 8:00 pm**

**TRIANON**

# Saturday, 08 March 2014

**REGISTRATION**  
7:00 am - 3:45 pm  
**BALLROOM FOYER**

**BREAKFAST**  
7:30 am - 8:15 am  
**BALLROOM FOYER**

**SESSION 5**  
8:15 am - 9:30 am

## ***5.1 Symposium: The Prosocial Life Cycle: Antecedents and Consequences of Charitable Behavior***

**Room: BALMORAL**

**Chair:** Lalin Anik, Duke University, USA

### ***A Race to the Finish: Goal Gradient in Helping Behavior***

Cynthia Cryder, Washington University, USA\*

George Loewenstein, Carnegie Mellon University, USA

Howard Seltman, Carnegie Mellon University, USA

Generous acts can increase happiness, but where does the joy of giving come from? We explore the idea that perceptions of personal impact are an influential source of prosocial satisfaction. Specifically, we use the domain of goal pursuit, and the finding that people experience a greater feeling of progress when they approach achieving a goal, to test the role of impact as both a driver of charitable acts, and as a source of satisfaction from giving.

As humans and other animals approach a goal, their efforts toward that goal increase (Locke & Latham, 1984). One reason that such “goal gradient” patterns occur is that people judge late-stage events to have greater impact than equivalent early-stage events. For example, participants randomly assigned to receive a coffee loyalty reward card with 7 out of 10 coffee purchases completed, stated that they would make greater progress toward the 10-drink goal with 1 additional drink purchase than did participants who received a card with 3 out of 10 coffee purchases completed (Koo & Fishbach, 2012). The same objective unit of progress (one drink) seemed more impactful later in the sequence than earlier.

Because the perception of impact increases with goal proximity, and because impact is important for prosocial acts (e.g., Grant et al. 2007), we predicted that people would be more likely to contribute as prosocial campaigns approached their goals. Additionally, evidence is building regarding the hedonic benefits of giving (Dunn et al., 2008; Harbaugh, Mayr, & Burghart, 2007), yet, little is known about where this happiness comes from. We investigated the hypothesis that one source of the happiness from giving is a sense of personal impact. Four studies tested these ideas.

Study 1 relied on information from Kiva.org, an organization that connects potential microloan recipients and microloan providers via the web. Using a web robot (a 'bot'), we collected information every hour, every day, for approximately one week for each loan recipient listed on the Kiva website (Number of recipients = 209; Number of Observations = 2,011).

Results supported the hypothesis that rates of helping increase as recipients approach their fundraising goals. The rate of contribution when recipients were 66.01-100% of the way toward reaching their fundraising goals was significantly greater than when recipients were 33.01-66% of the way ( $p = 0.01$ ), which was significantly greater than when recipients were 0-33% of the way ( $M_{0-33\%} = 6.7\%/hour$ ,  $M_{33-66\%} = 10.8\%/hour$ ,  $M_{66-100\%} = 12.8\%/hour$ ). This pattern of increasing rates of donation was robust across different choices of cutoffs.

Study 2 was an experimental field test of goal gradient giving. 13,500 charity donors received one of six mailings that corresponded to six experimental conditions. Three conditions included an indicator of a fund's progress to date: a 10% progress fund raised money for a GPS system, a 66% fund raised money for a radio communication system, and an 85% progress fund raised money for a generator. To control for inherent differences in the appeal of the three items, three complementary control conditions raised money for the same three items but did not mention a level of progress. Our main outcome of interest therefore was the difference in amount raised when potential donors were provided with information about each fund's percent progress toward the goal (10%, 66%, or 85%) compared to the corresponding control condition without progress information.

Consistent with goal-gradient giving, the donation rate more than doubled when mentioning that a fund was 85% towards reaching its goal compared not mentioning progress (control condition), a significant difference ( $\chi^2(1, N=4500)=4.24, p<0.05$ ). No other significant differences emerged.

Study 3 attempted to rule out the possibility that goal gradient giving in Studies 1-2 occurred simply because people prefer to donate to causes that are likely to succeed. Participants in Study 3 were randomly assigned to read one of two vignettes about Sheila, a 7<sup>th</sup> grade student who needed to sell either 1 or 21 more candy bars to meet her quota. In both conditions, participants were informed that "Sheila is certain to reach her goal by the end of the day," holding constant the likelihood of Sheila's success. Participants then were asked "How likely are you to buy a candy bar from Sheila?" Participants reported a significantly higher likelihood of helping Sheila when she needed to sell 1 more candy bar compared to 21 more candy bars ( $t(1, 161)=2.41, p<.05$ )

Study 4, designed to measure process, was similar to Study 3, but added process measures about impact, sympathy, satisfaction, and predictions of Sheila's success. Consistent with results from Study 3, participants were significantly more likely to help Sheila when she needed to sell 2 more candy bars compared to when she needed to sell 32 more candy bars ( $t(1, 159)=2.12, p<.05$ ).

Using the Preacher and Hayes (2008) macro with 1,000 bootstrapped samples, we observed that, when entered individually as mediators, impact and satisfaction both showed patterns of indirect-only mediation or "full mediation" of the goal proximity effect (Zhao, Lynch, & Chen, 2008; Baron & Kenny, 1986), whereas sympathy and likelihood of goal completion did not.

The bootstrapping analysis also allowed simultaneous examination of multiple mediators. When we included sympathy, satisfaction, impact, and likelihood of goal completion in the same bootstrapped model, only satisfaction significantly mediated the relationship between goal proximity and helping,  $Z = 2.41; p < 0.05$ . Further analysis suggested a two-step model in which 1) impact mediates the relationship between goal proximity and satisfaction and 2) higher anticipated satisfaction mediates the relationship between impact and increased helping.

The literature about generosity has focused on themes such as the altruistic versus egoistic nature of generous acts and the emotional triggers of those acts. The current findings add to an emerging literature about the importance of impact for triggering generosity, and

ultimately, for increasing the satisfaction that prosocial actors can feel. In conclusion, it appears that people are not generous simply to be kind or to relieve negative emotions; they obtain satisfaction from the feeling that they have personally had impact in solving a social problem.

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### **75% (Social) Proof: Converting One-Time Donors to Recurring Donors**

Lalin Anik, Duke University, USA\*

Michael Norton, Harvard Business School, USA

Dan Ariely, Duke University, USA

The 2011 Fundraising Effectiveness Survey Report notes that for every \$5.35 received in donations, \$5.54 was lost through donor attrition, which has reached 59% compared to only 5% customer attrition for commercial businesses. Since acquiring a new donor is at least three times as expensive as keeping a donor, nonprofits are facing a major and costly problem. In order to stop the bleeding, they need to retain donors and sustain commitment to the future: How can nonprofits move donors from contributing one-time *today* to committing to recurring donations in the *long run*?

In the existing model for online donations, the donor browses the projects on the charitable website, picks a cause, and is directed to the check-out page. There, the donor determines the frequency and amount of donation, and makes a single donation. There is 60% likelihood that s/he never contributes again. We offer a new model for retaining one-time donors and turning them into long-term givers: At the check-out page, the donor is provided with information about other people's behaviors, and encouraged to commit to recurring donations. We argue that givers' willingness to upgrade to recurring donations is influenced by two countervailing forces: *social proof* (how many other people are likely to donate?) and *plausibility* (can the project reach the target percentage of donors?).

Social proof refers to the way that people discern an appropriate or correct behavior in a situation by noting the behaviors of others (Cialdini 1993; Goethals and Darley 1977; Miller 1984). The effect is particularly prominent in situations when there is ambiguity about the appropriate mode of behavior (e.g., Griskevicius et al. 2006). In the case of online charitable giving, upgrading to recurring donations is still not very common and may pose uncertainty: "Is upgrading to recurring donations rather than making a one-time donation the appropriate mode of behavior?" or "How many other donors would agree to make a recurring donation?" Given the potential ambiguity of the donation situation, we predict that donors will want to be informed about the behaviors of others.

We argue that the effect of social proof will face a counteracting force: *plausibility* (can the goal for recurring donations be reached?) Previous work has documented that individual motivation is strongly influenced by the distance to the goal; proximal goals offer instant and attainable rewards, while distant goals are ineffective in triggering effort (Bandura and Schunk 1981; Proffitt 2006). In the charitable donations context, people exert more effort and are more willing to help the closer they are to the goal (e.g., Heilizer 1977; Hull 1932; Lieberman and Förster 2008).

Across two experiments, we examined the influence of social information on converting people to be long term donors. We first conducted a field study on GlobalGiving.org, a non-profit organization that connects donors with grassroots projects around the world. We provided information about the behavior of other donors and measured upgrades from one-time to monthly recurring donations (Experiment 1). Next, we tested our model in a controlled lab experiment and explored the underlying mechanisms (Experiment 2).

In Experiment 1, we examined the impact of providing social adoption information on people's willingness to sign up for monthly recurring donations. After browsing the projects available on GlobalGiving.org, donors ( $N = 12,769$ ), who added a one-time donation to their shopping cart, proceeded to the check-out page. On the check-out page, donors viewed the project, the amount of donation they selected and the frequency of the donation, which was set at "one-time" as the default. It was optional to switch the frequency from one-time to a monthly recurring donation. Our dependent variable was the percent of people who converted from one-time to recurring donations. Donors were assigned to one of five conditions available: Those in one of the four *group* conditions were told "If (and only if) X percent of donors commit to recurring donations, we will match all donations today". The percentages were set at 25%, 50%, 75%, or 100%. Donors in the *control* condition didn't view any prompts. We found that social adoption information positively impacted people's willingness to upgrade from one-time to monthly recurring donations ( $p = .02$ ) but only when it was at a specific level. Conversion from one-time to recurring donations peaked for the *group 75%* condition, which significantly differed from the *control* condition ( $p = .03$ ). These results provide initial evidence that perceiving others as acting in concert is motivating but only when participation is perceived to be at the 75% level.

In Experiment 2, we aimed to replicate our results in a controlled experiment where we examined the mechanism. Participants ( $N=275$ ) were asked to imagine taking part in Experiment 1 and being assigned to one of the five conditions. They all read about the same grass root project about helping sick kids, and were then asked to indicate whether they would commit to recurring donations (dependent variable). We predicted that *social proof* and *plausibility* would impact donors' choices to be long-term contributors. Therefore, we measured *social proof* by asking participants "what percent of people who see this message would upgrade to a monthly recurring donation?" and *plausibility* by asking them "how likely do you think that the project would reach its goal?" Replicating our results from the field experiment, the participants in the *group 75%* again indicated the highest willingness to upgrade to recurring donations. We also showed that *social proof* and *plausibility* mediated the relationship between information about other donors' behaviors and people's willingness to commit to recurring donations in the long run.

Across two experiments, we tested a new model for motivating donors' willingness to donate today as well as commit to monthly recurring donations in the future. Our results correspond to 10% improvement in donor attrition rate, and over \$1.1M annually in new monthly recurring donations.

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### ***Through the Motivation Lens: Ought and Want in Prosocial Behavior***

Elizabeth Keenan, University of California San Diego, USA\*

Ayelet Gneezy, University of California San Diego, USA

Chen-Bo Zhong, University of Toronto, Canada

Humans' capacity to care for things beyond ourselves is reflected in our choice to benefit others (e.g., donating blood, volunteering at a soup kitchen), often at a cost to ourselves (Batson & Powell, 2003; Bénabou & Tirole, 2006; Eisenberg & Miller, 1987). However, while we have a propensity toward prosocial concern, the motivations underlying such behaviors may differ across causes. Specifically, we might behave prosocially due to a sense of obligation or alternatively, because we have a desire to do so. It is therefore plausible that the nature of motivation—Ought versus Want—may determine the extent to which an individual would be likely to engage in the prosocial act, and importantly, the downstream effects of that act on the individuals' emotions (e.g., warm glow), self perception, and subsequent behavior.

For example, one way to interpret the contradictory findings on moral licensing (Monin & Miller, 2001), and moral consistency (Bénabou & Tirole, 2011; Dunn, Aknin, & Norton, 2008), is by allowing the motivations underlying each initial prosocial act to differ. Specifically, we predict that ‘Ought’ [‘Want’] prosocial behaviors would be more likely to produce morally licensed [consistent] behaviors. Our prediction is related to recent findings pointing to one moderating factor for these inconsistent findings—the costliness of the initial prosocial behavior (Gneezy, et al. 2012). Specifically, data suggests that costly prosocial behaviors serve as signal of prosocial identity, causing people to behave consistently with that self-perception. In contrast, costless prosocial behaviors do not carry such identity signals, and instead license them to behave selfishly.

We believe the opposing effects of consistency and licensing may be further explained by the *motivations* underlying the initial prosocial act. For instance, if one’s prosocial behavior is primarily motivated by a sense of obligation (i.e., Ought to) she would be more likely to attribute her act of kindness to social norms than to her moral Self, which would increase the likelihood she would be subsequently licensed to be less prosocial. If, on the other hand, her prosocial behavior is more reflective of her true values (i.e., Wanting to), we would expect she would attribute that same act of kindness to her kind Self, which would increase the likelihood she would subsequently engage in additional prosocial behaviors. Similarly, individuals helping under Want motivation, should be willing to put in more effort and may derive greater utility from the behavior, which could in turn increase self-perception of prosocial identity (Bem, 1972; Bem & McConnell 1970; Bénabou & Tirole, 2011) and feelings of “warm glow” (Andreoni, 1990) compared to actions motivated by a sense of Ought.

In this paper we investigate the role of Ought versus Want motivations on individuals’ decisions to engage in prosocial behaviors, on the effort they exert to benefit a cause, on their emotions, and on their subsequent behaviors. In our studies, we treat environmentally related causes, as being driven by ‘Ought’ motivation, and human related causes as driven by ‘Want’ motivation

We started our investigation by measuring participants’ reported Ought and Want attitudes and perceptions towards different causes (environmental vs. human-centric). After reading a short description of randomly presented charities, participants (N = 118) responded to how *empathetic* they feel toward the cause each charity address, how *responsible* they would feel for helping the charities, how much they *Wanted* to help the charities and how *bad* they would feel if they did not help the charities. Results show feelings of empathy, desire to help, and likelihood to feel bad if they did not help were greater for human-centric charities (all  $p < .05$ ). Notably, the extent to which participants felt responsible was marginally greater for the environmental charities ( $p = .055$ ).

As an initial test of our ‘Ought’ vs. ‘Want’ distinction, we ran an experiment involving two fictional charities: one related to human health and the other to the environment. Participants (N = 99) were randomly assigned to one of three conditions: environmental charity, health charity, and control. Participants were first asked to solve memory games to benefit their respective charity (\$1 for each game completed) or for the purpose of measuring concentration and memory (control). This was followed by a second, unrelated task. Finally, each subject chose a statement, out of four statements possible (two in line with ‘Want’ motivation and two in line with ‘Ought’), that best described his/her motivation while engaging in the first task.

Our results support the proposed Ought vs. Want distinction. Specifically, those in the health related charity condition were significantly more likely to indicate that they engaged in the charity task because of a feeling of ‘Want’ compared with those in the environmental charity condition (82% vs. 55%, respectively,  $\chi^2(1) = 5.66, p < 0.05$ ). We did not, however, observe differences in effort. While participants in both charity treatments played significantly more games relative to a control group ( $M_{\text{health}} = 17.59, M_{\text{env}} = 17.15$  vs.  $M_{\text{control}} = 15.24; p$ ’s  $< .05$ ) they did not differ significantly from each other. We believe the lack of difference in the number of games solved in each condition was due to demand effects created by the presence of the experimenter, and the social pressure associated with the presence of other participants in the room. In addition participants reported being suspicious with regards to the “realness” of the charities. We address these concerns in follow up studies.

We are currently extending the findings of the initial study in order to assess the level of effort expended to help an environmental (e.g., The Nature Conservancy) versus non-environmental (e.g., Make a Wish Foundation) cause, and whether motivation type mediates effort. We then plan to measure the consequences of these motivations (e.g., feelings of warm glow), explore the moderators involved (e.g., perceived impact, construal level), and examine any spillover effects (e.g., licensing/consistency, goal activation).

Our results would help understand why, despite huge efforts to motivate green behavior, success has been limited (Gardner & Stern, 1996; Stern, 2000).

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***Prosocial Incentives: Limits and Benefits of Working for Others***

Alex Imas, Carnegie Mellon University, USA\*

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Individuals and organizations are often interested in finding the right motivation for others to provide the most effort at the least cost. However, offering a small monetary incentive may actually decrease performance relative to when no explicit incentives are offered (Heyman and Ariely, 2004). Monetary incentives have been shown to decrease prosocial behavior (Ariely, Bracha and Meier, 2009), reduce socially efficient contributions in public goods experiments (Fuster and Meier, 2010) and depress effort provision (Gneezy and Rustichini, 2000). Even if direct monetary compensation does not decrease performance per say, it may still not be the first-best incentive scheme to motivate effort.

Suppose that a company wanted to create a program for its employees to be healthier and lose weight, and that the most it can spend is \$5 per pound lost. Since each pound is difficult to lose, individuals may find \$5 not enough to motivate them to actually lose the weight, and the “crowding out” of intrinsic motivation may actually result in an overall weight *gain*. Alternatively, suppose that instead the company offered to donate \$5 for every pound lost to a local charity. We propose that, in this case, employees would be more motivated to lose weight than under a traditional incentive scheme or when no incentives were provided at all. Namely, this prosocial incentive scheme would be first-best in motivating effort in losing weight.

Several lines of research have demonstrated that individuals derive pleasure directly from giving to others (Andreoni, 1990; Charness and Rabin, 2002). Dunn, Aknin and Norton (2008) show that individuals who spent money on others reported feeling happier than those who were asked to spend the money on themselves. However, the actual impact on others of the prosocial act may not be directly tied to the value one derives from it. Individuals may value the fact that they engaged in the act and put in the effort rather than the actual impact of the effort itself. Hsee and Rottenstreich (2004) demonstrate this scope insensitivity, showing that individuals are willing to donate the same amount for the rescue of one animal as for the rescue of four animals (see also Small, Loewenstein and Slovik, 2007).

Based on this, we form two hypotheses. First, when incentives are low, individuals will exert more effort under a prosocial incentive scheme—when each unit of effort is tied to a charitable contribution—than under a standard incentive scheme. However, when incentives go up, individuals work harder when this money is given to them but may not change their effort when the money is donated to others. We provide support for these conjectures below.

We recruited 187 students from a university wide subject pool to participate in this study. Subjects were given a \$5 show up fee and could earn more depending on the condition and effort exerted. To measure effort, we asked subjects to squeeze a hand dynamometer that recorded force output in Newtons, twice. All participants were first asked to squeeze the device for 60 seconds to calibrate the sensor. The total force exerted acted as the baseline measure. Participants were then presented with the treatment stage in which they were asked to squeeze the device again for 60 seconds according to one of two payment schemes (For Self and For Others) crossed with one of two incentive levels (Low and High). In each case, the amount earned by either the subject or the charity (Make a Wish Foundation) was directly tied to effort.

We use the ratio  $R$  of total force exerted during the treatment stage to the calibration stage as our measure of effort. This acts as our normalized measure of effort that controls for individual characteristics such as gender and physical fitness.

There was no difference in the baseline measures ( $F(4, 182)=1.01, n.s.$ ). As shown in Figure 1 below, our results support the main hypothesis. Effort in the low incentive prosocial condition ( $M=1.51$ ) was significantly higher than in the low incentive self condition ( $M=1.14; t(72)=2.37, p=.02$ ); effort in the high incentive prosocial condition ( $M=1.48$ ) was approximately the same as in the high incentive self condition ( $M=1.74; t(74)=-.96, p=.338$ ). Importantly, while effort went up as the size of the incentive increased when participants were working for themselves ( $t(70)=2.58, p=.012$ ), effort did not respond to the size of the incentive when participants were working for the charity ( $t(76)=-.13, n.s.$ ).

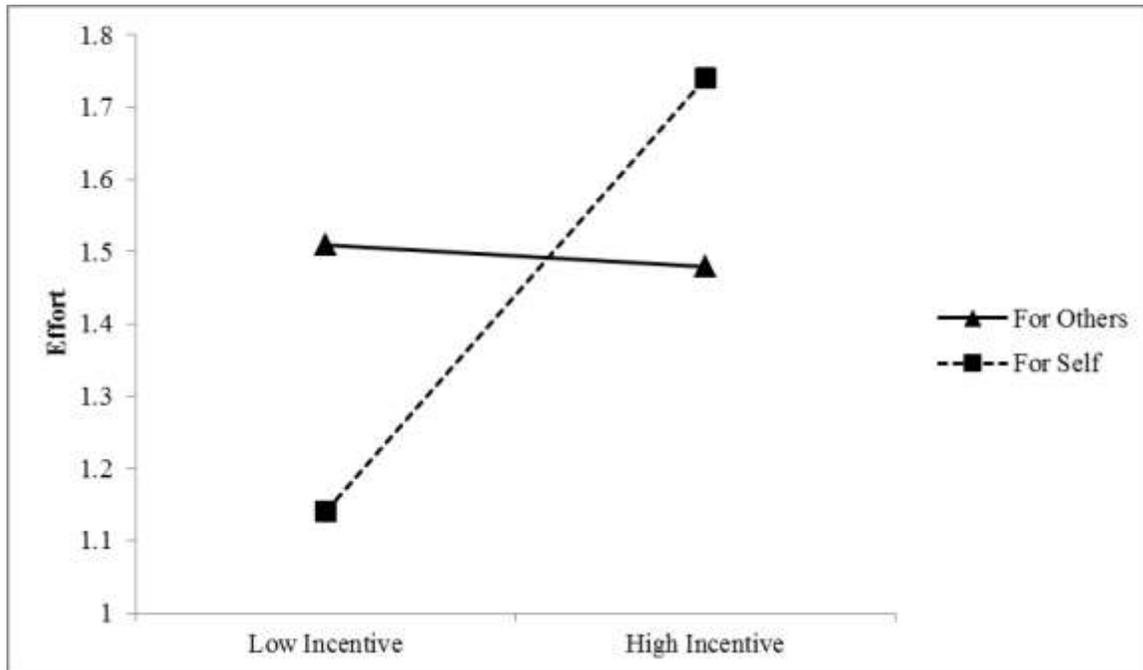
We designed our next study to test whether individuals anticipated the relationship between incentives and utility suggested by Figure 1. Particularly, whether they would *choose* to work for charity when incentive stakes were low and if this choice would reverse as the stakes increased.

We recruited 57 students from a university wide subject pool to participate in this study. Subjects were given a \$5 show up fee and could earn more depending on the condition and effort exerted. Effort was measured similarly to Study 1. All participants squeezed the hand dynamometer for 60 seconds to obtain a baseline measurement and were informed of their initial force output. At the outset of the study, each participant was randomly assigned into one of two conditions: Low Incentives ( $N=30$ ) or High Incentives ( $N=27$ ). They were then asked to choose one of two payment schemes, For Self (self-benefiting) or For Others (prosocial), prior to squeezing the device again for 60 seconds. As in Study 1, effort exerted For Others benefited the Make a Wish Foundation and effort For Self was tied to payment received at the end of the experiment.

Our results suggest that individuals did indeed anticipate the benefits of prosocial vs. self-benefiting incentives as implied by Study 1. At Low incentive levels, 77% (23) of participants chose to work For Others, compared to 23% (7) who chose to work For Self. In contrast, at High incentive levels 15% (4) chose to work For Others, compared to 85% (23) who chose to work For Self. This difference was significant ( $\chi^2(1) = 21.81; p<.001$ ).

**Figure 1**

*Effort Ratio by Treatment*



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## **5.2 Individual Papers: Mind and Body: Embodied Cognition and Physical Experiences**

**Room: SANDINGHAM**

**Chair:** Jeff Rotman, IVEY Business School, Canada

### ***The Warmth of Our Regrets***

Jeff Rotman, IVEY Business School, Canada\*

Andrew Perkins, Ivey Business School, Western University

Mark Lee, Colorado State University

Extant embodied cognition literature focuses on the link between physical temperature and its relation to social relationships (Williams & Bargh, 2008). Interestingly, previous research ignores how emotion might induce differences in perceived ambient temperature. We propose that one emotion, *regret*, induces a differential perception of ambient temperature (study 1). Further, we suggest that individuals self-regulate that experienced regret via consumptive behavior and that this effect is not due to priming (study 2). Lastly, Study 3 investigates whether advertising manipulated for temperature could mitigate the psychological effects of regret.

The regret literature suggests that individuals can regret their actions (errors of commission), as well as their inactions (errors of omission) (Gilovich & Medvec, 1995). Within a consumption setting, *action* regret results from a consumer's active decision (e.g., purchasing a stock that subsequently plunges in value), whereas *inaction* regret is caused by a failure to act (e.g., not purchasing a stock that subsequently rises in value). Previous research suggests that action and inaction regret are distinct emotions (Gilovich, Medvec, & Kahneman, 1998). It is thought that action regret elicits "hot" emotions (e.g., anger, embarrassment), whereas inaction

regret elicits feelings of wistfulness and despair (e.g., nostalgia or misery) (Gilovich et al., 1998; Kedia & Hilton, 2011). We extend these findings by examining whether different types of regret cause differential perceptions of ambient temperature, and whether that perceived change in ambient temperature can be mitigated via consumptive self-regulatory behavior.

Study 1 (n=57) investigates whether recalling a past experience of action versus inaction regret yields different perceptions of ambient temperature. Subjects were randomly assigned to recall a situation where they either experienced action regret (e.g., regretted something they have done) or inaction regret (e.g., regretted something they failed to do - missed opportunities). Subjects were then instructed to estimate the current room temperature. A *t*-test revealed that subjects who recalled an action regret experience reported higher estimates of the room temperature than those who recalled an inaction regret experience ( $M_{action} = 69.89$  vs.  $M_{inaction} = 67.76$ ;  $t(55) = 2.16$ ,  $p < .05$ ).

Extending Study 1, prior research suggests that individuals use consumption to regulate both actual and symbolic discrepancies (Holbrook & Hirschman, 1982). Further, as discrepancy increases, so does the desire for a consumptive object related to the discrepancy (Lieberman & Friedman 2007; Higgins 1987). For example, individuals who have their morality threatened show a greater desire for cleaning products (Zhong & Liljenquist, 2006). Lee and Schwarz (2010) demonstrated that an increase in desire for cleaning products was moderated by the modality of the immoral act. These results suggest that consumptive experiences can be used as self-regulatory behaviors.

Thus, Study 2 (n=245) was a condition (prime / regret) x heat (action-regret, inaction-regret/hot words, cold words) by beverage temperature (hot / cold) between subjects design. To manipulate regret, we provided each participant with information about a fictitious pharmaceutical stock (Verap Pharmaceuticals, current stock price \$2.50). Subjects had the option to invest or not invest in the stock. To induce action regret, individuals who invested in the stock were later informed that the stock price dropped by to \$1.25 (50% loss on their investment). To induce inaction regret, individuals who did not invest in the stock were later informed that the stock price rose to \$3.75 (50% gain on their investment). To prime participants, participants were given a set of 14 words to unscramble, 9 of which were related to hot or cold (e.g. frosty or humid) and 5 were neutral (e.g. folder).

All subjects were then presented with a prototype description of a new tea from Teavana In one condition, we indicated that the drink is best served cold (e.g., iced tea). In the other condition, we indicated that the drink is best served hot (e.g., warm tea). We then asked subjects to indicate the extent to which they desired the drink at this current moment (1 = not desirable; 7 = very desirable).

ANOVA analysis revealed a 3-way interaction effect of condition, heat, and beverage type, ( $F(1,237) = 17.36$ ,  $p < .001$ ). Simple effects revealed that people experiencing action regret evaluated the cold drink more favorably than people experiencing inaction regret ( $M_{action} = 5.31$  vs.  $M_{inaction} = 4.50$ ;  $F = 5.47$ ,  $p < .05$ ). Conversely, simple effects revealed that people experiencing inaction regret evaluated the hot drink more favorably than people experiencing action regret ( $M_{action} = 4.90$  vs.  $M_{inaction} = 5.63$ ;  $F = 4.56$ ,  $p < .05$ ). On the other hand people receiving the hot primes evaluated the hot drink more favorably than people getting the cold drink ( $M_{hot} = 5.56$  vs.  $M_{Cold} = 4.84$ ;  $p < .05$ ), whereas those getting the cold prime evaluated the cold drink as more favorable ( $M = 5.62$ ) than the hot drink ( $M = 5.08$ ),  $p < .10$ .

Experiment 3 (n=113) investigated whether marketing promotions (advertisements) that feature attributes related to temperature can mitigate participant regret. A 2 (regret: action / inaction) x 2 (advertisement temperature: winter / summer) between subjects design. Regret was manipulated with the stock manipulation from study 2. However, following the regret manipulation, participants were asked to imagine themselves on either an Alaskan adventure (winter condition), or a Caribbean adventure (summer condition). Following the advertisement, participants answered four items related to regret

ANOVA analysis revealed an interaction effect  $F(1, 112) = 7.19, p < .01$ . Simple effects revealed people experiencing action regret experienced less regret in the winter condition than the summer condition ( $M_{\text{winter}} = 4.52$  vs.  $M_{\text{summer}} = 5.20$ ;  $F = 6.21, p = .08$ ). Conversely, simple effects revealed that people experiencing inaction regret experienced less regret in the summer condition than the winter condition ( $M_{\text{winter}} = 4.38$  vs.  $M_{\text{summer}} = 3.61$ ;  $F = 8.44, p < .05$ ).

Together, we show that individuals experiencing action regret felt physically warmer than individuals experiencing inaction regret. Moreover, we find that individuals self-regulated their perceived warmth by desiring cooler drinks (vs. warm) when experiencing action regret, whereas individuals desired warmer drinks more so than cooler drinks when experiencing inaction regret and that even imagining warmth or coolness can mitigate regret. The results of this research should aid marketers in reducing consumer regret when they experience post-decisional dissonance.

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### ***Touching Hardness Makes You Attend to More Details***

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People can process the same stimulus in different ways - they can either form a general impression of it (i.e., global processing), or pay attention to the detailed features of it (i.e., local processing; Navon, 1997). Prior research highlights a full range of critical triggers for local versus global styles (for a review, see Föster & Dannenberg, 2010), including the distance of the stimulus (Liberman & Förster, 2009) and people's motivation or resources to process it carefully (e.g., mood; Gasper, 2004; Gasper & Clore, 2002). In the current research, we propose a novel determining factor of the local/global processing style, that is, the hardness (vs. softness) perception that people are experiencing at the time of judgment.

The hardness level of an object (e.g., ball) is determined by how much distance another object (e.g., finger) can penetrate the surface of the former when applying a normal force (Klatzky, Lederman, & Reed, 1987). Pressure, which is the amount of force exerted on the surface, is critical to measure hardness: the greater pressure needed to penetrate the surface, the harder an object is (Harper & Stevens, 1964). As the amount of pressure people exert on an object will in turn act on their skin which is the receptor of the touch sense, hardness represents a relatively stronger (vs. weaker) sensory input as compared to softness.

According to literature on cross-modality correspondence (Lewkowicz & Turkeztiz, 1980; Ramachandran & Hubbard, 2001; Walker et al., 2010), people reliably associate stimuli in different sensory modalities based on the intensity of them. When the stimuli share a similar amount of intensity, people may associate them together (Walker et al., 2010). For example, a strong stimulus in visual sense (e.g., bright light) is associated with a strong stimulus in auditory sense (e.g., high-pitched sound), and a weak stimulus in visual sense (e.g., dim light) is considered to be similar to a weak stimulus in auditory sense (e.g., low-pitched sound; Marks, 1974; 1982). Thus, we predict that the greater intensity in touch sense (induced by hardness perception) may transfer to a greater perception of intensity in visual sense.

Visual intensity of an object is signaled by the amount of firing rate of the visual cortex neurons (Kandel, Schwartz, & Jessell, 2000): the more neurons, the stronger visual sense, and the greater attention determines the amount of attentional resources devoted to process this object (Reynolds & Chelazzi, 2004). The greater amount of attention devoted to a certain visual stimulus, in turn,

increases people's sensitivity to details (Janiszewski, Kuo, & Tavassoli, 2013; Kristjánson, 2006; Mack & Rock, 1998). If the speculations are correct, hardness (a strong touch sense) may facilitate a local processing.

We conducted three experiments to test these possibilities. In Experiment 1, participants were asked to hold a hard ball (hardness condition), a soft ball (softness condition), or nothing (control condition). We used Kimchi-Palmer-figure task (Kimchi & Palmer, 1982) to measure local/global processing style. The results suggest that participants in the hardness condition ( $M = 4.03$ ) are more likely to adopt local processing style than those in the softness condition ( $M = 2.28$ ;  $F(1,87) = 5.77$ ,  $p < .05$ ) and in the control condition ( $M = 2.59$ ;  $F(1,87) = 3.58$ ,  $p = .06$ ). The latter two conditions did not differ with each other ( $p > .60$ ).

Experiment 2 was designed to examine the underlying mechanism. We expect that intensity of the visual stimuli mediates the positive effect of hardness on local processing style. Participants were asked to touch either hard or soft balls while viewing a picture. We then measured how participants processed the picture (in separated parts vs. as a whole), their perceived intensity of the picture (how strong the visual sense is), and their perceived comfortableness and mood. The results suggest that people in the hardness condition ( $M = 3.46$ ) were more likely to pay attention to the separate parts of the picture than those in the softness condition ( $M = 2.79$ ,  $F(1,57) = 3.94$ ,  $p = .05$ ). They also perceive the picture with greater intensity ( $M_{\text{hard}} = 5.59$ ,  $M_{\text{soft}} = 4.79$ ,  $F(1,57) = 5.19$ ,  $p < .05$ ). Process evidence further suggests that increased visual intensity mediated the effect of hardness on shift of processing style. Moreover, hardness has no influence on perceived comfortableness and mood.

Experiment 3 investigated whether the shift of processing style (as a result of touching hardness) would bias people's memory towards detailed visual stimuli. Depending on different conditions, participants sat on a hard versus soft chair. Participants were first asked to form an impression on a lamp picture on the computer screen. Afterwards, participants proceeded to the next page and were asked to recall and describe the lamp they just saw. Two independent coders coded the descriptions and categorized participants' descriptions into local features (i.e., detailed description of the lamp) and global features (i.e., general impression of the lamp). We then divided the number of local features by the number of total features to form an index of local processing. The results suggest that participants described the lamp with relatively more local features when sitting in a hard chair ( $M = .38$ ) rather than a soft chair ( $M = .20$ ,  $F(1,45) = 5.05$ ,  $p < .03$ ). The number of total features did not differ across conditions ( $p > .30$ ).

Taken together, these findings add to the growing literature on the determining factors of local/global processing style by identifying a new factor (hardness). Our hypothesis differs from some prior findings (e.g., mood-based) as the hypothesis draws on the cross-modality correspondence in sensory intensity. Specifically, a strong (vs. weak) touch sense – hardness (softness) in touch sense – may lead to an intensified (vs. weakened) perception of an unrelated visual stimulus, encouraging a local (vs. global) processing of the stimuli.

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### ***Decoding The Opening Process***

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Many “first times” in our lives are associated with the process of opening something. We can get an unexpected surprise after opening a gift box. Or we may unexpectedly find a crab after lifting a rock. These “first times” surprise and excite us. In many instances, however, opening does not reveal anything new. When you lift your bride's wedding veil, at that moment you think she is the most

beautiful woman in the world, although you know her very well. As Forest Gump's mother told him: "Life is like a box of chocolates, you never know what you're gonna get." But what if you already know the flavors in the box. Can opening the box still delight you? This paper suggests the answer is yes.

Opening something is a dynamic event that reveals an object by removing the cover of its container (e.g., opening a box). We postulate that two factors can independently influence the positive effect of the opening process: surprise and action. In the first regard, "schema discrepancy" theory (Stiensmeier-Pelster, Martini & Reisenzein, 1995) suggests that when the same stimulus is presented a second time, there is no discrepancy between the input information and existing knowledge and so surprise is not elicited (Vanhamme, 2000). However, we argue that because of the previously formed association between opening a container and the discovery of its contents, opening elicits a conditioned "surprise" response even if the contents of the container are familiar. Moreover, although there are instances in which the object revealed can be frightening (e.g., the discover of a spider or snake), the conditioned response to opening per se is likely to be affectively positive.

Second, the opening process is relatively dynamic. There is evidence that dynamic visual stimuli have an advantage over static pictures in learning (Hoffler & Leutner, 2007). In consumer research, action and inaction have typically been studied under conditions in which individuals themselves engage in actions or not (Kahneman & Tversky, 1982). In our research, however, the opening process was performed by the experimenter or was shown in pictures. Thus, participants were observers of action (the opening process) or inaction (the open already status) and were not personally involved. We nevertheless hypothesized that observing the action would elicit positive affect that would be misattributed to the product, thereby increasing its evaluation (Schwarz & Clore, 1983, 1988). Across five studies, positive affect was found mediating the effect of the opening process on product evaluation. Study 1 tested the basic question of whether the opening process enhances product evaluation if participants had already seen the product. Participants were invited to the lab and were presented a picture of a commemorative coin to get familiar with it. Then the experimenter showed the real coin in a box with an opaque cover. The box either was already open or was being opened by the experimenter. The opening process significantly increased liking for the product, the willingness to purchase it, and overall enjoyment. The surprise that participants reported significantly mediated these effects.

To test the impact of felt surprise while minimizing the dynamic nature of the opening process, participants were presented either (a) a set of three pictures showing the box closed, partly opened or fully opened (Figure 1), or (b) only a single picture of the box fully opened. In addition, some participants were exposed to the product before being shown the pictures whereas others saw the product for the first time. Results revealed a significant interaction ( $F(1, 74) = 7.88, p < .01$ ). As Table 1 indicates, when the product was unfamiliar, participants had a positive reaction to it regardless of what picture(s) they were shown subsequently. When they had already seen the product, however, showing them pictures of the box in various stages of opening increased their evaluations. Moreover, these differences were mediated by surprise, as shown in the last section of the table.

To test the influence of action independently of the effect of surprise, Study 3 used a box with a transparent cover so that the product could be easily seen even when the box was closed. Consistent with expectations, however, participants liked the product more when they were exposed to the box being opened ( $M = 4.11$ ) than when the box was already open ( $M = 3.11$ ;  $F(1, 36) = 4.99, p < .05$ ). The same pattern was found for the attractiveness of the experimenter ( $5.05$  vs.  $4.37$ ;  $F(1, 35) = 3.09, p < .10$ ).

Study 4 further tested the impact of action by using an empty box with a transparent cover. Because there was no product in the box, no expectation or surprise would be elicited. Still, participants in the opening process condition liked the box more than those in the open already condition.

Study 5 adopted a  $2$  (opening process vs. open already)  $\times$   $2$  (elegant box vs. normal box) design and demonstrated that the effect of the opening process was independent of the box quality, and this was true even if the box had a transparent cover (Figure 2). We also

controlled the amount of information participants got to make sure they saw both the closed and open status of the box in all conditions. Again, this positive effect of the opening process was mediated by positive affect. Moreover, no differences were found on attention, surprise, or curiosity.

The products (commemorative coin, wristwatch, tie clip, necklace) tested in our studies are more hedonic rather than utilitarian and thus were particularly likely to be influenced by affective reactions. Whether the opening process has an impact on utilitarian products deserves further investigation. Nevertheless, our study suggests a strategy for marketers to use in presenting their products. Followed the quote from the film *Forest Gump*, our study suggests that “If you have known the flavors of those chocolates, put them back in a box and reopen it. You will love them again.”

Table 1. Results of Study 2

	Occasion	
	First time	Second time
Liking of the product		
Open already	1.89(1.78)	-0.15(2.74)
Opening process	1.95(1.57)	2.05(1.32)
WTB		
Open already	3.61(1.38)	2.50(1.43)
Opening process	3.80(1.40)	4.00(1.26)
Overall enjoyment		
Open already	4.28(1.41)	2.80(1.51)
Opening process	4.30(0.66)	4.35(0.99)
Felt surprise		
Open already	2.67(1.61)	1.70(0.73)
Opening process	2.65(1.31)	2.75(1.62)

Note: Liking of the product was rated on an 11-point scale (from -5 to +5). Others were on a 7-point scale (from 1 to 7).

Opening Process Condition



Open Already Condition



Figure 1. Static Pictures Used In Study 2

Elegant Box Condition



Normal Box Condition



Figure 2. Stimuli In Study 5

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### ***Does Dirty Money Drop Product Valuations?***

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Evidence suggests that when consumers receive a signal that another consumer has touched a product, both their evaluations and their purchase intentions for that product will be lessened (Argo, Dahl, & Morales, 2006). The key finding from this work is that disgust is the core facilitator of consumer contamination effects. In fact, even when a normatively disgusting object touches another product, contamination can transfer and thus lower product evaluations (Morales & Fitzsimons, 2007). These findings are consistent with the general idea that disgust can lead individuals to reject or devalue a contaminated object (Rozin & Nemeroff, 1990). The most recent example of this phenomenon utilized crumpled new bills to tap normative beliefs that money is dirty (Di Muro & Noseworthy, 2013). The authors found that disgust derived from worn banknotes encouraged individuals to rid themselves of the notes, thus increasing spending. This work generated significant media attention under the premise that dirty money (quite literally) may fuel the economy. Indeed, there may be a quantifiable benefit to leaving worn bills in circulation. However, what the authors may have overlooked is that people may buy more with dirty money, but they may put less value on the things they purchase.

This prediction is not without support. Evidence suggests that discrete emotions can play a major role in economic transactions. Specifically, disgust can trigger the goal of expelling, which subsequently reduces buying and selling prices, whereas sadness triggers the goal of changing one's circumstances, which can increase buying prices but reduce selling prices (Lerner, Small, & Lowenstein, 2004). For example, by featuring a clip from the film *Trainspotting*, which portrays a man using an unsanitary toilet, Lerner and colleagues (2004) observed that disgust derived from prior irrelevant situations can eliminate the endowment effect—the tendency for selling prices to exceed buying prices for the same object (Kahneman, Knetsch, & Thaler, 1991; Thaler, 1980). This is a form of pathogen disgust or contamination disgust (Tybur, Lieberman, & Griskevicious, 2009), which researchers argue evolved specifically to serve the function of avoidance (Marzillier & Davey, 2004). Pathogen disgust can be elicited through visual cues that are normatively linked to pathogen presence, even when such cues may be devoid of infectious agents (Rozin, Millman, & Nemeroff, 1986). Given the normative belief that money is dirty, it is not surprising that individuals infer contamination from visually worn currency (Di Muro & Noseworthy, 2013). What is surprising is the finding that individuals perceived higher carrying costs with holding worn currency. If perceived contamination can drop the value of legal tender, and if contamination can transfer without an individual observing or directly experiencing contact (Rozin et al., 1989), there is the distinct possibility that people may put relatively less value on products purchased with worn bills.

### **Study 1**

Participants were tested individually in a mock retail setting under the guise that they were participating in a spending prioritization study. Participants were asked to randomly choose from a series of envelopes containing anywhere from \$10-\$30. In truth, each envelope contained a \$20 bill that was either crisp or manipulated to be worn. Participants were then asked to proceed through the retail environment as if it were a regular shopping excursion and to buy at least one item. Following checkout, participants were directed to a cubicle to complete a questionnaire. In line with Di Muro and Noseworthy (2013), the questionnaire contained a manipulation check and measures of perceived disgust, product value, usage value, and a PANAS. Following the survey, participants were asked for their willingness to accept for the products they just purchased.

The manipulation check confirmed that consumers rated the altered bills as more worn-out than the unaltered bills. Importantly, this effect did not influence product selection or participants' affective state. As hypothesized, the results confirmed that participants were more endowed in the crisp bill condition than in the worn bill condition. In fact, endowment did not significantly differ from zero in the worn bill condition. A follow-up analysis yielded a significant indirect effect of the physical state of money on endowment through disgust. Furthermore, there was a significant difference in perceived product value. Specifically, products purchased with worn bills were seen as less valuable than products purchased with crisp bills. When perceived value was added to the mediation model as a serial mediator, the results yielded a significant indirect effect of the physical state of money on endowment through disgust and then product value.

### **Study 2**

In a day and age where cash use is on the decline, there is a need to explore not only the limits of this effect, but also to definitively demonstrate that it was indeed contamination that transferred from the bills to the products. Study 2 is designed for this cause. A 2 (worn/clean) × 2 (sanitized/control) design using \$25 prepaid credit cards was used. Participants followed much the same structure of study 1 with the exception that in the sanitized condition participants were informed that the cards looked worn because of repeated use, and not to worry because they were sanitized prior to use. As in study 1, following the shopping excursion, participants filled out a questionnaire and were asked for their willingness to accept.

Consistent with Study 1, the results confirmed that participants were more endowed in the clean card condition than in the worn card condition. This effect was qualified by a significant interaction between the physical state of the cards and the sanitization

manipulation. The nature of the interaction was such that the sanitization manipulation had no effect in the clean card condition, however, participants in the worn card condition showed greater endowment when the worn card was said to be sterilized than when it was not. Importantly, a moderated mediation analysis confirmed the underlying mechanism was perceived disgust that transferred to perceived product value.

## **General Discussion**

Given that we live in a culture of consumption, it is essential to understand how the exchange of money and goods influence each other. This research is some of the first evidence that the appearance of the payment mechanism can influence subsequent product valuation. Specifically, these findings confirm that the physical state of the payment mechanism can lower product valuation to such an extent that the endowment effect does not manifest. In practice, these findings can have severe consequences on monetary policy and economic development. Overall, this research suggests that the appearance of the payment mechanism has a much larger impact than previously thought.

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## **5.3 Symposium: A 360-Degree Review of Negative Emotions and Consumer Behavior: Comparing 4 Theoretical Perspectives**

**Room: WINDSOR**

**Chair:** Andrea Morales, Arizona State University, USA

### ***Negativity Dominance: The Paradoxical Co-existence of Spontaneous Negative Mental Chatter and Positivity Bias***

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Positivity bias, which refers to the finding that people hold themselves in higher regard than they do their peers, and believe that their future is going to be rosier than that of others, has been established as a prevalent phenomenon (Gilovich 1991; Taylor and Brown 1988). However, several findings hint at the possibility that people may not always think of themselves as superior to others, or believe that their future is going to be rosier than that of others. For example, people think that others tend to judge them more harshly than is actually the case (Savitsky, Epley and Gilovich 2001). Further, there is a tendency to think that imminent future events (e.g., a tense game) are more likely to end badly than well (Inbar, Cone and Gilovich 2010).

We posit that the true feelings people have about themselves, relative to their peers, and about their own futures, may be less positive than previously reported. One reason why positivity bias seems so pronounced in past studies is that these studies have elicited potentially superficial reports from participants. In a typical study on the “better than average” effect, participants are asked to evaluate themselves relative to others on a variety of criteria, including intelligence, job performance, and popularity. Likewise, in a typical study on unrealistic optimism, participants are asked to estimate the likelihood of a positive (getting a great job) or negative (having a heart attack) outcome occurring in the relatively distant future. A prevalent aspect of these studies is that participants report these ratings without much reflection or contemplation—that is, without first taking stock of their own thoughts about the judgments they are called upon to make. As such, participants may be reporting what they implicitly believe to be true, rather than what they think is true at a deeper level. This is similar to how people spontaneously rate a past vacation as having been more enjoyable than it

actually was (Mitchell et al. 1997), or how they spontaneously report feeling more optimistic about accomplishing a future goal on time (Buehler, Griffin, and Ross 1995; Zhang and Fishbach 2010). Another potential reason for the positivity bias is self-deception: people may unconsciously or consciously present themselves in a more positive light in order to derive (psychological or economic) benefits from doing so (Martin and Tesser 1996).

In this project, we examine whether positivity bias is mitigated when participants are first asked to record and report the content of their naturally-occurring thoughts. Specifically, we predict that, if people's evaluations about themselves are obtained via an "indirect" route (i.e., after they have recorded both the content and the emotional tenor of the thoughts that naturally occur to them), their evaluations will be less positive than if they are elicited more "directly" (i.e., without having them record their spontaneously occurring thoughts). A secondary objective is to shed light on some reasons for the paradoxical co-existence of spontaneous negative "mental chatter" and the positivity bias.

In study 1, as a first step towards testing our central hypotheses, MBA students enrolled in a marketing class were asked to maintain a journal for a period of 2 weeks. During these two weeks, students were asked to monitor the content of the thoughts that naturally occurred to them at various points in the day. Then, at the end of the two weeks, students were asked to comment on the nature of their thoughts and the emotions reflected in them. A review of the student reports revealed the occurrence of "negativity dominance," a term we introduce to refer to the notion that self-introspection yields a greater proportion of spontaneously-occurring negative (versus positive) thoughts. Specifically, both in terms of comparisons with their peers as well as in terms of optimism about future events, students reported significantly more negative than positive thoughts ( $M_{\text{Comparison to peers}} = 72\%$  negative;  $M_{\text{Future}} = 65\%$  negative), both  $t$ s  $< 4.00$ , both  $p$ s  $< .05$ . Extrapolating from these findings suggests that positivity bias will be mitigated among those asked to monitor their spontaneously occurring thoughts.

The objective in study 2 was to document evidence for an underlying mechanism for the discrepancy between spontaneously occurring thoughts (which are negative) and participants' self-vs.-other evaluations and their forecasts (which are positive). Specifically, the study was designed to test for the possibility that, although people's default thoughts may be skewed towards negativity, they tend to "draw from" thoughts in the positive-end of the distribution when asked to make evaluations or forecasts about themselves or their futures. Thirty-six participants were asked to take a test on "creative intelligence." The test consisted of 30 RAT (Remote Associates Test) questions (Bowden and Jung-Beeman 2003). After taking the test, participants were assigned to either the "point estimate" or the "best/worst estimates" condition. Those in the point-estimate condition were asked to estimate their percentile ranking in the test (1 = "I'm likely to be at the very bottom," to 100 = "I'm likely to be at the very top"). Those assigned to the "best/worst" estimate condition were asked to estimate, in counterbalanced order, both the "best case scenario" and "worst case scenario" estimates of their percentile rankings. Results revealed that the percentile of point estimate condition ( $M = 65.95$ ) did not differ from the best percentile ranking ( $M = 69.25$ ,  $t = .519$ ,  $p = .607$ ), while it differed significantly from the worst percentile ranking ( $M = 37.38$ ,  $t = -4.330$ ,  $p < .001$ ), suggesting that people draw from the "best" (vs. "worst") case scenario by default.

In studies that are currently being conducted, we examine: (1) whether those with a propensity to engage in positively biased self-deception (e.g., Chance et al. 2011) are more likely exhibit positivity bias even as their spontaneously occurring thoughts tend to be negative, and (2) whether those in positions of higher (vs. lower) power and authority exhibit greater negativity dominance

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### ***Sadness is Cold and Guilt is Inside: Perceptual Features Describe and Differentiate Negative Emotions***

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Consumers often describe objects in their world in terms of perceptual features. We use the term perceptual features to describe specific perceptual qualities that characterize entities. We use the term “perceptual dimensions” to characterize perceptual features that are opposite of one another. Thus big and small are perceptual features that anchor ends of a perceptual dimension of size. Up and down anchor a perceptual dimension of verticality. Notably, perceptual features can describe not only inanimate objects (e.g., products) but people (e.g., celebrity endorsers or salespeople) as well. For example, consumers might characterize the personality of others as warm, cold, hard, soft, loose, loud, quiet, deep, shallow, bright, dark, sharp, dull, heavy, lightweight, thick, or sweet (Asch 1958). We ask whether consumers may also use perceptual features to describe *specific emotions* and, if so, how such findings may facilitate development of consumer behavior theory at the intersection of emotion and judgment.

Past research provides some evidence that judgments of positivity (or goodness) are linked with a small number of perceptual features (e.g., big, up, bright, clear) whereas judgments of negativity (or badness) are associated with the opposing perceptual features (e.g., small, down, dark, cloudy; Crawford, Margolies, Drake, and Murphy 2006; McMullen and Conway 2002; Meier and Robinson 2004; Meier, Robinson, and Caven 2008; Meier et al. 2007). However, research on whether consumers use perceptual features to describe and differentiate *specific emotions* is surprisingly limited. Additionally, relatively few perceptual features have been identified in past research, and importantly, most research efforts have examined a single dimension (i.e., up vs. down) or a perceptual feature (i.e., anger is hot) in isolation as opposed to examining a larger set of perceptual features and their mapping to more nuanced feeling states.

We suggest that consumers perceive the world of emotions in terms of *multiple perceptual features* that span a variety of sensory modalities and that these descriptions are important to understanding *specific consumer emotions*. Thus, whereas certain perceptual features are used to describe anger, a different set of perceptual features may be used to describe envy. Next, we present two studies designed to show that perceptual features describe and differentiate specific negative emotions.

**Study 1: High Elaboration Study** Three hundred seven participants (51% female) between the ages of 18 and 40 ( $M=20.2$ ,  $SD=2.25$ ) completed the study at a campus behavioral lab for course credit. Participants were randomly assigned to one of five between-subject negative emotion conditions: anger, envy, guilt, fear, and sadness.

Before introducing the focal emotion and asking participants to evaluate the extent to which various perceptual features might describe it, participants were shown an example designed to illustrate the task they were to perform. Participants were asked to imagine the emotion and to consider what that emotion feels like. With this feeling in mind, they were asked to indicate the extent to which a set of words describes that emotion.

In each emotion condition, participants were asked to recall and write about a time when they had personally experienced the focal emotion and to complete two open-ended questions as truthfully and in as much detail as possible using a standard method for inducing emotional states (see Lench, Flores and Bench 2011). After writing about the focal emotion, participants were asked to indicate the extent to which the perceptual features (58-items) describe this feeling. For each emotion, participants used a slider to rate the features on a 101 point scale, where 0=Not at all and 100=Very much.

**Study 2: Low Elaboration Study** Fifty-three paid participants (53.4% male; 46.6% female) between the ages of 18 and 27 ( $M=21.7$ ,  $SD=2.1$ ) completed the study at a campus behavioral lab. The study consisted of five within-subject negative emotion conditions involving the same emotions as those examined in study 1 (anger, envy, guilt, fear, sadness). The presentation order of the emotions was randomized for each individual.

Participants were told that they would be completing a study about “how you experience emotion” and asked to consider a set of different emotions and the extent to which a series of words described their experience of each particular emotion. Before beginning, participants were guided through the same illustrative example used in study 1 and then continued to the focal task. They were asked to imagine a situation when they felt the target emotion and to consider what the target emotion feels like. Participants then used the same 101 point sliding scales and the same set of perceptual features to rate each of the emotions, as in study 1. Participants in study 2 were not asked to write; hence, elaboration of the emotion episode was relatively low (vs. writing in detail in study 1).

Provided space considerations in reporting the results of 58 features for each of five emotions across two studies, we present significant findings in a concise summary table format to ease communication for present purposes (see Appendix A). Notably, we observe several differences from previous research in the domain of negative emotions. Our research adds to research on consumer emotion by proposing and showing that: (1) perceptual features describe and differentiate specific emotions and (2) specific emotions can be characterized by a unique profile of perceptual features that have important implications for consumer behavior.

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### ***Apocalypse Now: The Effect Of Fear And Time Orientation On Choice Deferral***

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Although researchers have examined how a range of psychological processes can influence consumer choice among sets of alternatives, less is known about the factors that shape choice deferral. Because the decision to choose or defer underlies every consumer decision, the psychology of choice deferral is integral to understanding consumer behavior. In the current investigation, we consider the role of incidental emotion in deferral. In doing so, we focus on the functional relationship between fear, time orientation, and situational vigilance.

Several theories have been developed to predict how emotions affect consumer behavior and each makes distinct predictions about the relationship between fear and deferral. Valence-based explanations draw distinctions between positive and negative emotions (Schwarz 2002). Although this perspective has not explicitly considered deferral, increased choice deferral has been linked to negative experiences of decision difficulty (Dhar 1997; Novemsky, Dhar, Schwarz, and Simonson 2007). If negative situational cues can increase deferral, one possibility is that negative emotional experiences will also increase deferral.

Instead of solely focusing on valence, some researchers have proposed that emotions can be distinguished by a series of underlying appraisal dimensions, including certainty and control (e.g., Smith and Ellsworth 1985). Indeed, negatively-valenced emotions that vary in appraisal certainty differentially affect decision-making (e.g., Lerner and Keltner 2001). Because uncertainty increases choice deferral (Dhar 1997, Tversky and Shafir 1992), this perspective suggests that emotions related to uncertainty, such as fear and hope, will increase deferral, whereas those associated with certainty, such as disgust and pride, will reduce deferral.

In addition to examining appraisal dimensions, researchers have also highlighted the usefulness of considering the functionality of specific emotions—in particular, how emotions help people navigate recurring sets of threats and opportunities (e.g., Griskevicius, Shiota, and Nowlis 2010). From this perspective, fear may uniquely affect choice deferral. Fear is part of a broader self-protection system that helps people survive threats from predators and other humans (Daly and Wilson 1988). Once activated, this system increases vigilance to the current environment, enhances present-focus, and fosters perceptions that the future is risky (Angie,

Connelly, Waples, and Kligyte 2011, Davis et al. 2011). When it comes to choice, increasing focus on the present is likely to reduce deferral—a person facing a threat may not be around long enough to choose in the future. Supporting this thinking, people are less likely to defer choice when facing time pressure (Dhar and Nowlis 1999). More generally, because fear enhances vigilance and attention to details of the current situation, people experiencing fear may increasingly value non-threatening aspects of their environment. Thus, fear may lead people to value products that they encounter in their present environment more—regardless of whether they choose them or not.

In five experiments, we tested between the competing predictions generated by the valence-based, appraisal-tendency, and functional perspectives. In study 1, participants were randomly assigned to read a story designed to elicit fear, disgust, or no emotion. Afterwards, participants made a series of decisions in which they could select among several products in a choice set or “wait to get more information.” Participants made eight such decisions among choice sets that represented a variety of products. In line with the functional perspective, participants in the fear condition were significantly less likely to defer choice than participants in the other conditions ( $p < .03$ ).

In study 2 we compared fear to a range of other emotions selected to represent variation along several appraisal dimensions (disgust, sadness, hope, and pride). Participants were exposed to pictures designed to elicit one of these emotions. Then, they completed the dependent measure from study 1. Participants in the fear condition were less likely to defer choice than participants in any of the other emotion conditions ( $p = .002$ ); none of the other emotion conditions were significantly different from one another ( $p > .3$ ).

In study 3, we tested whether the relationship between fear and deferral is mediated by an increasing focus on the present. Participants were randomly assigned to view a series of pictures that either elicited fear or no emotion. Next, they completed the dependent variable from the previous studies and a measure of time orientation that assessed present versus future-focus (Strathman, Gleicher, Boninger and Edwards, 1994). Participants in the fear condition deferred less than those in the control condition ( $p < .05$ ) and also became more present-focused ( $p < .01$ ). Importantly, increasing present-focus mediated the relationship between the fear manipulation and deferral (CI: .0045, .0343).

In addition to reducing deferral, the functional perspective also predicts that people concerned with fear may value products that they encounter in their present environment more, regardless of whether they choose them. In study 4, we tested this prediction. Rather than giving participants the option to “wait to get more information,” participants in study 4 could opt to defer choice altogether by selecting “none” of the products. If fear is increasing participants’ valuation of products, people primed with fear should elect to choose a product—even when they don’t have to choose anything. Participants were randomly assigned to read one of the three stories from study 1 and completed the modified dependent variable. As predicted, participants in the fear condition were less likely to defer choice than participants in the other conditions ( $p < .05$ ).

Study 5 used the same independent and dependent variables from study 4. However, after deciding whether to select a product or defer choice, participants also rated how much they liked each product. As in previous studies, participants in the fear condition were less likely to defer ( $p < .05$ ). Moreover, relative to the other conditions, participants in the fear condition also rated all of the products that they were presented with more favorably ( $p < .03$ )—even those that they did not choose.

Taken together, these findings highlight the role of incidental emotion in choice deferral. Moreover, they demonstrate the usefulness of considering the relationship between emotions and decision-making from a functional perspective. As predicted uniquely by the functional approach, fear led to reduced choice deferral and increased liking of products.

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## ***In God's Hands: How Religion Dampens the Effectiveness of Fear Appeals***

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For many consumers, the concept of God or another divine being plays a central role in their everyday lives. Worldwide, the median proportion of residents who report that religion is an important part of their daily lives is 82% and in some parts of the world (e.g., Sri Lanka and Indonesia), over 98% of residents report that religion plays an important role in everyday life (Gallup poll, 2009). Despite the importance of God and religion for many consumers however, their implications for psychology and marketing are not well-understood. In the current research, we focus on understanding how religion might affect consumer compliance with fear-based advertising.

Fear appeals are persuasive messages that are designed to frighten consumers into compliance with the message's recommendations and they have been used to promote a broad range of consumer products and services, and to address many important public health and safety issues. Research on fear appeals suggests that many factors including message features (e.g., format, Keller 1999) and individual differences (e.g., self-construal, Block 2005; socioeconomic class, Burnett and Oliver, 1979) determine fear appeal effectiveness.

Research on religion suggests that God and religion often serve as resources that aid consumers in coping with threats and negative emotions. For instance, relative to nonreligious individuals, religious individuals report higher overall subjective wellbeing (suggesting that they cope effectively with everyday negativity) (Myers 2000; Ellison 1991) and cope better with chronically negative situations (e.g., Koenig, Larson and Larson, 2001; Smith et al., 2003), discrete negative life events (e.g., McIntosh, Silver and Wortman, 1993; Newton and McIntosh, 2010), and extreme uncertainty (e.g., Kay et al., 2010).

In the current research, we draw on research on fear appeals, religion and coping to suggest that when God is salient, consumer persuasion and compliance with fear appeals is dampened. Specifically, we suggest that when God is salient, consumers feel that they will be supported during hard times, and that this sense of available support leads them to be less likely to comply with the appeal's recommendations.

In study 1, we prime individuals with a standard religion prime or with a neutral prime (e.g., Shariff and Norenzayan 2007) before having them evaluate a fear appeal (an ad for an ADT security system). We find that individuals in the religion condition exhibit less persuasion and compliance to the fear appeal relative to individuals in the neutral condition ( $p = .03$ ).

In study 2, we measure participants' existing levels of religiosity and ask them to evaluate either a fear appeal or a neutral ad regarding the dangers of BPA in water bottles. Consistent with study 1, compliance decreased as religiosity increased within the fear appeal condition ( $p = .01$ ).

In Study 3, we prime participants with religion or a neutral manipulation and ask them to evaluate an ad about BPA and also to indicate how serious they thought the consequences of not complying with the appeal were. Participants in the religion prime condition indicate less compliance with the fear appeal ( $p = .002$ ), and believe the consequences of non-compliance to be less serious relative to those in the neutral prime condition. There is moderated mediation such that concern about BPA moderated the relationship between prime and future intentions to avoid BPA in the fear ad but not the neutral ad conditions.

In study 4, we explore the possible mechanisms behind the "religion effect" by priming participants with "support", "protection" "a greater plan / destiny", or a neutral prime before asking them to evaluate either a fear appeal or a neutral ad. Relative to the neutral

condition, individuals in the “religion” ( $p = .05$ ) and “support” prime ( $p = .03$ ) conditions indicated lower compliance with the fear appeal (while the other conditions did not), suggesting that religion dampens fear appeal persuasion because religion gives consumers the sense that God will support them through hard times.

In study 5, we show that the “religion effect” can be moderated by shifting the primary responsibility for coping with negative outcomes from God to the consumer. We prime consumers with either a religion or neutral condition, and then have them evaluate an ad for a vegetable wash. Ads were either fear or neutral appeals, and contained either the text “your body is a temple” (a well-known Bible passage that places the responsibility for individuals’ wellbeing on the individuals themselves) or “your body is important” (neutral text). In the fear appeal / no responsibility reference conditions, we replicate the effect where participants in the religion condition display dampened compliance to the appeal ( $p = .02$ ). In the fear appeal / responsibility conditions, the effect reverses.

In study 6, we reason that in most conceptions of God, He supports individuals as they engage in morally upright activities, and not immoral ones. In this study, we primed participants with either a religious or neutral prime and then had them evaluate an ad. The ad was either a fear appeal or a neutral appeal for a Hepatitis A vaccine, and was framed as resulting from either a moral or immoral behavior. In the moral conditions, the “religion effect” replicated such that within the fear appeal conditions, religion prime condition participants were less interested in getting the vaccine relative to neutral prime condition participants ( $p = .05$ ). In the immoral conditions, the difference between the religion and neutral prime conditions disappears.

In study 7, we explore whether physical settings might serve as a more naturalistic prime of religion. Participants were randomly assigned to complete an ad evaluation study in either Sage Chapel (a campus Chapel) or Sage Hall (a campus building). Participants evaluated either a fear or a neutral appeal. Results show that within the fear conditions, individuals in the chapel condition exhibited lower compliance and persuasion than those in the neutral building ( $p = .03$ ). This difference did not exist in the neutral ad conditions. Together, these studies enhance our understanding of both religion and advertising by revealing how notions of God provide a psychological buffer that may unintentionally reduce our compliance with fear-based appeals.

## Appendix A

**Table: Perceptual Features with Significant Mean Differences in Both Studies**

<b>ANGER</b>	<b>ENVY</b>	<b>GUILT</b>	<b>FEAR</b>	<b>SADNESS</b>
Heavy	Heavy	Heavy	Heavy	Heavy
Strong	Down	Dark	Dark	Dark
Tight	Sour	Tight	Tight	Tight
Hot		Deep	Deep	Deep
Rough		Rough	Rough	Down
Closed		Cloudy	Cloudy	Cloudy
Hard		Hard	Hard	Cold
		Inside	Dense	Closed
			Sharp	Black & White
			Narrow	

$p < .01$  for all table entries

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## **5.4 Individual Papers: In Pursuit of Health: Understanding the Effects of Nutritional Information**

**Room:** ESCORIAL

**Chair:** Oleg Urminsky, University of Chicago, USA\*

### ***Investigating The Psychological Basis of Successful Interventions for Healthful Eating: The Role of Salience***

Goswami Indranil, University of Chicago, USA

Oleg Urminsky, University of Chicago, USA\*

Providing consumers with calorie information has received a great deal of attention, as municipalities such as New York City have mandated greater disclosure and retailers (including Panera and McDonalds) now provide calorie information on their menu boards nationwide. However, tests of providing decision makers with information on the calorie content of food has yielded very mixed results (Bollinger, Leslie, & Sorensen, 2010; Elbel, Gyamfi, & Kersh, 2011; Loewenstein, 2011). Across a series of surveys and field studies, we contrast in a single setting the effects of commonly discussed psychological mechanisms (goal-setting, lack of information and mistaken beliefs, difficulty interpreting information), and compare these mechanisms to a simple salience (or “mere reminder”) mechanism.

In a field study conducted at the end of December and beginning of January, museum visitors (n=1127) were offered a choice of candy bars before completing an unrelated survey as a compensation for their time. The survey was about gift card preferences, and a few demographic questions were asked at the end. Visitors chose between four different candy bars whose calorie content ranged from 70 to 280 calories in increments of 70 calories (Snickers, 280; Hersheys, 210; Chips Ahoy, 140; M&Ms 70). Notably, the candy bars all disclose calories on their packaging. The museum patrons chose a candy bar from one of four boxes which either showed in large font (a) just the names of the candy bars, (b) the names and calorie information, (c) names with calories and “exercise equivalents” (e.g., number of minutes of running or biking required to burn the calories). Ordinal regression revealed that, compared to the no information disclosure condition, visitors consumed significantly fewer calories, on average, in the conditions where exercise equivalents were additionally made available (mean = 177 calories vs. 199 calories; Wald=9.4,  $p < .01$ ). The reduction in calorie consumption was slightly weaker and only marginally significant when calorie information alone was disclosed. The effects were robust across age, income, gender and body-mass index (BMI).

The two waves of data collection in our field study provided an opportunity to contrast the effects of informational interventions with a natural experiment on goal-setting. Prior research has reported that making New Year’s resolutions facilitates success in goal pursuit (Norcross, Mrykalo and Blagys 2002). We find that nearly a third of our January sample made a New Year’s resolution, and 80% of the resolutions were health and fitness related. In a separate initial question about general goals asked in both waves, we also find a higher rate of health goals in January than in December (73% vs. 65%,  $p < .01$ ). However, despite the effect of New Year’s on setting health goals, we find no main or interaction effect of December vs. January on the calories of the option chosen. Likewise, collapsing the December and January data, we find no direct or moderating effect of having a self-reported health goal. Participants with and without either health goals or New Year’s resolutions were equally likely to take a high-calorie candy bar in the control condition, and were not differentially affected by the informational interventions.

In a second field study (N=838) in which participants chose among four sizes of Snickers candy bars, we tested the effects of three types of interventions in four conditions: no information, minimal calorie disclosure (small labels currently being used in retail packaging), salient calorie information and salient exercise-equivalents. These manipulations were crossed with survey-based prompts that induced participants to consider calorie or exercise information without providing any new information to them. Participants

received one of three versions of an ostensibly unrelated survey containing either no prompt (control), questions asking them to estimate unrelated calories, or asking them to estimate the relationship between calories and amount of exercise. We find no effect of minimal disclosure intervention (e.g. what is currently being used on product packaging). However, we find significant and similar reductions in calories chosen of both salient informational interventions (providing participants with calorie or exercise equivalent information about the candy bars) and of salient non-informational interventions (merely asking participants to estimate unrelated calories or to estimate exercise-to-calorie equivalencies). Our findings suggest that prior research documenting effects of calorie or exercise informational interventions may be due to the salience effect of the interventions (e.g. prompting people to think about calories) rather than due to providing consumers with new information.

In two additional hypothetical-choice studies we replicate our findings. We find significant effects of both calorie and exercise equivalent information (when sufficiently salient), and we find similar effects from “mere reminders” (estimating calories or calorie-to-exercise equivalents). We also find no effect of health goals or New Year’s resolutions. Overall, we do not find differential effectiveness of the interventions by BMI.

Our studies provide strong evidence that salience is critical for effective nutritional interventions (whether providing exercise equivalents or just calorie disclosure). In particular providing salient calorie information along with exercise equivalents seems to be a particularly robust and effective way to reduce calories in unplanned consumption opportunities. However, our results call into question the traditional interpretation of such interventions (when successful) and suggest that salient informational interventions may reduce calories chosen because they serve as a reminder to everyone, rather than because they provide new information or support pre-selected goals.

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### ***Effect of Health Halo on Nutritional Inferences and Consumption***

Aparna Sundar, University of Cincinnati, USA\*

Frank Kardes, University of Cincinnati, USA

The halo effect leads people to over generalize from a global impression to multiple specific unknown features (Eagly, Ashmore, Makhijani, & Longo, 1991). In recent years, however, the halo effect has been identified as the basis of misattribution of socially ethical food production on unwarranted healthful inferences of food products (Schuldt, Muller, & Schwarz, 2012). The underlying mechanisms of this process and limitations based on attribute variability warrants investigation. This research was designed to estimate the discrepancies between high and low variability attributes on perception of nutritional information.

Categorization literature suggests that perceived attribute variability influences the perceived applicability of the central tendency of an attribute for inference imputation (Hamilton & Sherman, 1994). When no explicit information about category variability is provided, consumers tend to expect that the performance of the product is likely to vary greatly (Gürhan-Canli, 2003) and consumers associate a subjective value based on the information they receive about the attribute (Meyer, 1981). This subjective value associated with a product’s attribute is formed in terms of 1) the amount of information about the attribute that is available and 2) the variability of the attribute (Meyer, 1981).

Consumers frequently assume correlation of product attributes based on the amount of information presented, the manner in which information is organized, and how quickly they are pressed to come to a conclusion (Kardes, Cronley, Kellaris, & Posavac, 2004). When consumers assume two variables are correlated, they tend to selectively focus on instances that support the hypothesis and

rarely consider contrary evidence (selective hypothesis testing; Kardes et al., 2004), which we predicted would mediate the influence of variability on estimates.

In the three studies presented, a pretest was conducted to determine the variability of various attributes commonly found on nutrition labels of the product used in the study. Consumers were asked, “how much does the listed attribute vary across different brands of potato chips,” (anchored: 0 = does not vary much; 10 = varies a lot). These were used as stimuli in each experiment.

### *Study 1*

To establish the variability and health halo on attribute estimates, participants ( $N = 122$ ) were randomly assigned to one of the four conditions in an experiment using a 2 (halo: no halo vs. halo)  $\times$  2 (variability: low vs. high) between-subjects design. ANOVA results show a attribute variability  $\times$  halo interaction,  $F(1, 118) = 3.72, p < .05$ . Simple effects confirmed that attribute estimates varied by halo. In the no halo condition, participants made lower estimates of the low variability attribute,  $M = 3.22$ , than the high variability attribute,  $M = 4.35; F(1,118) = 11.17, p < .05$ . However, when the halo was present, estimates of low variability attribute,  $M = 3.46$ , and high variability attribute,  $M = 3.66$ , did not vary significantly. As predicted, more favorable nutritional inferences were formed in low perceived variability than in high perceived variability conditions.

### *Study 2*

The product used in this study was orange juice. In addition to procedures similar to study 1, participants ( $N = 161$ ) covariation judgments were captured similar to Kardes et al. (2004). ANOVA results show a significant attribute variability  $\times$  halo interaction,  $F(1, 157) = 6.57, p < .05$ . To determine whether covariation judgments accounted for the increased estimates of the product, a moderated mediation analysis was conducted (Hayes, 2012, Model 7). Covariation judgments mediated the relationship between the attribute variability and estimates in the absence of the halo,  $B = -.11, SE = .07, 95\% CI: -.32, -.006$ , but not when the product was positioned with the halo logic,  $95\% CI: -.05, .19$ . The results of this study indicate that consumer inferences of the relationship between the positioning (no halo vs. halo) and attribute caused estimates to vary by attribute. Attributes with higher variability were ambiguous, but we see this effect augmented when positioned with the halo. Hence, consumer biases about attribute content being affected by the positioning (no halo vs. halo) augmented the effect of variability on estimates. Further, we find evidence that when presented with the halo, there is no significant difference of estimates between the high and low variable ingredients, indicating that the effect of the halo was given significantly more weight than the inferences based on variability.

### *Study 3*

This study was a lab study which was announced as a chocolate taste study ( $N = 211$ ). The design and measures were similar to study 1, in addition taste and consumption measures were recorded. ANOVA results showed a significant attribute variability  $\times$  halo interaction  $F(1, 207) = 4.48, p < .05$ . Taste ratings were rated differently than the estimates of nutrition. ANOVA results indicated that taste ratings yielded a significant attribute variability  $\times$  halo interaction  $F(1, 207) = 6.01, p < .05$ . In the no halo condition, estimates of the two attributes did not vary significantly. When positioned with the social ethical claims halo, the effect of variability on taste estimation was significant and participants made lower estimates of low variability attribute,  $M = 4.84$ , than the high variability attribute,  $M = 4.37; F(1,207) = 3.93, p < .05$ . In addition, participants consumed more pieces of chocolate when the halo label was present,  $M = 2.17$  (.27 oz), rather than absent,  $M = 1.79$  (.22 oz),  $t(209) = 2.01, p < .05$ . This finding indicates that the halo can augment calorie estimates and increase consumption of foods due to the halo logic.

## **General Discussion**

The results demonstrate that consumer inferences about nutrition are susceptible to the perceived variability of the attribute. This effect is however, augmented when positioned with halo logic. Estimates of consumers who believed that a strong positive relationship exists between the positioning statement and the attribute are more likely to be affected by perceived variability. Although attributes high in perceived variability are uninformative, this occurs only if there are missing attributes with high perceived

variability. Finally, not only does presented attribute variability increase informativeness, the effect is transferable across products and the effect influences actual taste perceptions.

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### ***The Focusing Illusion of Calories: How Calorie Information Ironically Influences Food Perceptions***

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Conventional wisdom suggests that providing consumers with calorie information should help them make more informed and healthier choices. Calorie counts on menus in restaurant settings are generally presumed to facilitate consumers' ability to track their consumption. This assumption is so prevalent that current and pending legislation exists to support the view that more information is better.

Several studies have examined how consumers use calorie information, including the impact of nutrition information on purchasing (Moorman et al., 2004). Other findings indicate that relatively few Americans pay attention to food labels, and those who do tend to already have the inclination and knowledge to pursue a healthy diet (Drichoutis et al., 2006; Nayga, 2000). Research has also examined the extent to which people are accurate in their assessments of the calories contained in certain food items (Chandon & Wansink, 2007; Chernev, 2011; Chernev & Gal, 2010), and how the size of the package influences consumption (Scott et al., 2008).

While prior research has examined decision-making in the food choice context, it has not specifically addressed cognitive biases related to healthiness perceptions of food that can result from thinking about calorie information. This research explores how the mere act of thinking about calories can influence healthiness perceptions of food items.

For instance, as a result of posting calories on menu boards, sales of some Starbucks beverages that contain a relatively high amount of calories actually increased after calorie information began to appear in New York City following local legislation (Bollinger, Leslie, and Sorensen 2010). One possible explanation for this outcome could be that previous caloric beliefs were salient in consumers' minds and thus influenced healthiness perceptions and ultimately purchases of these beverages. This research seeks to address this dilemma by investigating why consumers might purchase a relatively unhealthy item even though calorie information is provided. Five studies investigated the perceived healthiness of food items when consumers relied on their existing perceptions of caloric content in addition to the posted calorie information provided by fast casual restaurants.

Thinking about caloric content of food items requires focus and may produce a focusing illusion, whereby evaluations of food items become more extreme regarding the salient information. As consumers evaluate additional evidence, in the form of actual calorie counts, they may do so selectively (Kuhn & Lao, 1996). Becoming overly focused on calories is likely to result in a focusing effect that also produces a shift in healthiness perceptions relative to a situation where calories are not as salient.

Five experiments provide evidence that calorie counts can increase perceptions of the relative healthiness of fast food when consumers have previously estimated calories compared to when they have not. Conversely, the opposite effect occurs for healthier foods, whereby consumers who estimate calories view these food items as relatively healthier than consumers who did not previously estimate calories. The mechanism driving this effect is a focusing illusion that is limited to calories as a single indicator of nutrition, and is further moderated by nutrition knowledge. Consumers who are particularly knowledgeable about nutrition are less likely to fall prey to the focusing effect of calories.

The findings from experiment 1 demonstrate that individuals who estimate calories for fast food items view those foods as healthier than individuals who did not first estimate calories. Experiment 2 provides evidence that this effect is even stronger when individuals are shown actual calorie information. Experiment 3 shows that this relationship reverses for more nutritious food items. Individuals who estimate calories for more nutritious food items view those foods as unhealthier than individuals who did not first estimate calories. Experiment 4 demonstrates that the focusing effect of calories is further moderated by nutrition knowledge. Experiment 5 illustrates that the focusing illusion seems to be limited to the calorie content of food items, as thinking about nutrient content does not produce the same effect.

In the process of uncovering the focusing illusion of calorie estimation, several alternative explanations were ruled out in the course of these experiments. Accuracy of initial calories estimates did not impact healthiness assessments; as such, uncertainty does not seem to affect healthiness perceptions. Anchoring and adjusting also does not explain the pattern of results observed across these three studies. Initially underestimating calories leads to fast food items being viewed as more healthy, whereas anchoring and adjusting would predict the opposite. Frequency of consuming fast food items also did not affect healthiness judgments; therefore, motivated reasoning is unlikely to be driving this effect.

There is overwhelming support in the media for continuing to provide consumers with increased information related to nutrition and health. In particular, many legislators wish to mandate the posting of calorie counts in restaurants. Conventional wisdom suggests that providing consumers with more information should, in fact, lead to healthier choices. However, these studies provide evidence that thinking about calorie information has a tendency to bias consumer perceptions of the healthiness of food items.

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### ***When Hungry People See Leaner Meals: Hunger Reduces Calorie Evaluations***

Aner Tal, Cornell University, USA\*

Brian Wansink,

Given that consumers have a broad array of fluctuating physical needs and wants, understanding the link between physical needs and choice – embodied consumption – has key implications for consumer choice (van den Bergh 2008; Krishna 2011; Reimann et al. 2012; Elder and Krishna 2012). In light of concerns with obesity, alterations in food choices due to physical states could have both person and public health implications.

Physical states can influence judgment in a basic way that consumers are unable to discount (Loewenstein 1996). For instance, being hungry might lead one to devalue products unrelated to hunger (Brendl et al 2003). Hunger may also lead consumers to make food choices that are incongruent with their baseline preferences (Read et al. 1998, Gilbert et al 2002, Goukens et al 2007). It can lead people to buy too much (Mela et al. 1996, Nisbett and Kanouse 1969, Tom 1983) or lean towards less healthy foods (Wansink and Tal 2012, Tal and Wansink 2013).

Notably, most examples of research looking into the impact of physical states on judgment primarily focus on the distortion of overall product valuation (Read et al. 1998, Brendl et al. 2003). Little work has focused on the selective distortion of particular product attributes. The current studies demonstrate that ostensibly objective attributes such as size or calories may be distorted according to situational factors based on their functionality given current needs.

Gibson's Ecological Psychology (Gibson 1986) posited that people view objects in terms of actions those objects afford. Similarly, objects may be judged in terms of needs they fulfill. For instance, people may see food as tastier if they're hungry (Read et al. 1998). On a more "objective" dimension, distances may be seen as longer if a person is tired, because subjectively they are longer - i.e., it takes more effort to cross the distance (Proffitt 2006). Even objective attributes, such as temperature, may be distorted according to current needs. For instance, temperature may be evaluated as lower if a person is hypothermic and needs to obtain a higher body temperature (Cabanac 1971).

Applied to consumer behavior, these ideas project that consumers would see and judge products not according to their objective qualities, but rather according to how these products serve them given current needs or physical states. The extent to which products fulfill needs translates into a subjective impression. This subjective sense would in turn affect judgment of objective product properties. For example, when one is encumbered with a heavy burden, every action one takes requires greater energy. Functionally speaking, foods provide a lower portion of one's total energy needs. Consequently, it may seem that there is less food.

Participants (N = 45) in our first study were randomly assigned to groups asked to carry either light (empty) or heavy (128-168 ounces) shopping bags as part of a shopping simulation. Participants were then asked to evaluate the weight of four food items: pasta, couscous, beans, and fries. Items were displayed in color pictures printed in paper questionnaires. For each item, participants were asked to evaluate how much each item weighed in ounces. On average, burdened participants estimated items weigh less (13 ounces) than did unburdened participants (15.58 ounces). The effect was tested in a mixed repeated measures model, with item type and its interaction with burden (NS) included in the model. The effect was significant at the .01 level:  $F(1, 19) = 7.54$ .

In the second study participants (N = 55) participants were randomly assigned to groups asked to carry either light or heavy shopping bags as part of a shopping simulation. Participants were asked to estimate the diameter of three baked goods. Participants carrying heavy shopping bags evaluated products as being an average of 4.92 inches, narrower in diameter than did participants carrying lighter shopping bags: 5.66 inches. This 12 percent differences was significant at a  $p = .03$  level,  $F(1, 55) = 5.26$ .

The third study attempted to replicate our findings within a field setting, as well as extend to observe whether the burden one carries would affect not only abstract judgment, but subsequent consumption. Researchers coded the size of purse carried by food-court visitors (N=135) on a scale of 1 (very small) to 5 (very large). They then recorded estimated calories each person ordered. There was a significant effect of purse-size on calories:  $F(1, 132) = 4.6$ ,  $p = .03$ . People carrying heavier purses purchased more caloric foods.

This distortion of estimated product size testifies to the functional nature of judgment. Consumers appear to judge products not in terms of their objective attributes, but rather in terms of the extent to which they think they might satisfy current physical needs. This may in turn leads to alterations in choice similar to those displayed in study 3.

In addition to exploring an extension of the theory to further empirical derivations, further research could examine the process underlying functional judgment, demonstrating that altered functionality given current needs underlies our findings. Studies should also demonstrate whether or not judgment of size mediates the choice effects found in study 3.

These findings extend our knowledge regarding the effects of physical state on judgment. In addition, framing such effects under the theoretical umbrella of functional judgment may provide a unifying framework for effects of physical states on judgment and choice.

From the practical perspective of a retailer, being aware of the effects of such physical elements on consumer judgment has implications for whether one encourages hand carts or shopping carts. For consumers, this knowledge can help prevent undue biases in judgment and choice.

## **5.5 Individual Papers: The Devil is in the Details: The Effects of Branding Decisions on Consumer Evaluation**

**Room: ALHAMBRA**

**Chair:** Keri Kettle, University of Miami, USA\*

### ***Putting the Customer Second: Pronoun Use in Customer-Firm Interactions***

Grant Packard, Wilfrid Laurier University, Canada\*

Sarah G. Moore, University of Alberta, Canada

Brent McFerran, University of Michigan, USA and Simon Fraser University, Canada

Recent work has demonstrated the importance of specific word use in influencing consumer behavior. This emerging body of work has examined the impact of language use on consumer senders and receivers of word of mouth (Moore, 2012; Patrick & Hagvedt, 2010; Schellekens et al., 2010) and advertising (Sela et al., 2012). Yet there is little work examining the impact of firm employee language on consumers, particularly in the context of service interactions.

Firms, however, are starting to pay attention to interaction content. For example, Apple has “stop words” that employees are prohibited from saying to customers (Chen, 2011). In contrast, online retailer Zappos does not have scripts for its agents, allowing each to create a “personal emotional connection” with customers (Hsieh, 2010). Despite their different philosophies on language use, both Apple and Zappos recognize the importance of measuring and managing what is said between customers and employees. In this vein, we contribute an empirical examination of the behavioral consequences of language use in service interactions. While prior research on service interactions often examines how actions taken by firm agents (e.g. apologies, compensation; Rust & Chung, 2006) impact consumers, we are unaware of research assessing the affect of their words on the same outcomes.

Our conceptual focus is on pronoun use, a central psychological indicator (Pennebaker, 2011) previously found to impact brand information processing (Sela et al., 2012). Managerial theory suggests that firm agents should talk about “you” (the customer) in interactions, thereby “putting the customer first” (Basch, 2003; Evenson, 2011). A pilot study we conducted found that lay consumers share this belief. This tenet is further corroborated by findings from linguistic psychology that demonstrate “you” pronouns can convey a focus on and desire to satisfy an interaction partner (e.g., Ickes et al., 1986). In contrast, we propose that self-centered firm agent language—represented by heavier use of “I” pronouns—may be more effective. Some support for our prediction comes from research suggesting that “I” pronouns indicate agency (e.g., Ahearn, 2001; Pennebaker, 2011) and socially-shared concerns (i.e., empathy; Campbell & Pennebaker, 2003). Our research thus examines the impact of firm-agent use of “I” (vs. “you”) pronouns on customer attitudes and behaviors, with perceived firm-agent agency and empathy as potential mediators of this relationship.

Study 1 examined which pronouns firms prioritize in practice. We constructed two emails—a customer question and a complaint—and sent these to a random sample (N = 40) of top online retailers (<https://www.internetretailer.com/top500>). Consistent with the tenet of “putting the customer first” we found, for example, that while “you” pronouns appeared in nearly all (98%) firm responses, “I” pronouns were present in only a minority (45%). It appears that firm agents may indeed focus more on the customer (vs. themselves) in these interactions. But is this necessarily ideal?

Study 2 sought to answer this question, and also to assess the process underlying the impact of pronoun use on customer attitudes. Lab participants were asked to imagine they had engaged in one of eight versions of a hypothetical customer-firm interaction in a 2 (customer inquiry: complaint, question) x 4 (firm response: I, we, you, control) between subjects design. Versions of the firm response varied the preponderance of pronoun use only, with no change in meaning. After reading the interaction, participants reported their satisfaction with the interaction, and then their perceptions of firm agent agency and empathy. Regardless of customer inquiry condition, the “I” condition resulted in higher customer satisfaction than the “you”, “we”, or control firm responses. Bootstrap tests revealed parallel mediation of the “I” effect by perceptions of firm-agent agency and empathy.

While we observed positive effects of increased usage of “I” pronouns on satisfaction in study 2, the use of experimenter-constructed stimuli may be partly responsible for this result. To test this, in study 3 we took a sample of six real firm email responses received in study 1 (three inquiry and three complaint responses representative of the larger sample of 50). These emails were modified to increase “I” pronoun usage (relative to “you” and “we” 5 pronouns) in a manner intended to minimize potential changes in meaning. To further enhance robustness, this study introduces an additional dependent measure (purchase intentions). A between subjects analysis using lab participants revealed higher satisfaction and purchase intentions for five out of six of the “improved” firm emails (vs. respective original firm emails).

Our final study leveraged a unique dataset from a large online retailer to examine whether firm agent pronoun use has real behavioral consequences beyond the intentions revealed in the prior lab studies. The data is comprised of over 1,100 interactions (6,500 emails) between customers and firm agents of a multi-channel retailer over a one-year period and includes each customer’s purchase data for a one year period pre/post each interaction. Similar to study 1’s findings, firm agent use of “you” pronouns was higher than the use of “I” pronouns (91% vs. 28% of emails). More importantly, controlling for a large number of alternative explanations and covariates (e.g., customer pronoun use, pre-interaction purchases, complaint dummy, compensation dummy, # of emails in interaction, customer anger, demographics), we found that firm agent use of “I” pronouns (but not “you” or “we”) was linked to a significant increase in post-interaction purchases at one-year and shorter time intervals.

This research opens the door to further examinations of language use in customer-firm interactions. We show that while firms appear to prioritize the customer through the use of “you” pronouns, the use of “I” pronouns have a greater positive impact on customer satisfaction, intentions and purchase behavior. Our analysis sheds light on how firms might leverage the linguistic content of customer-firm communications (e.g. email, blogs, social networks, etc.) to improve their use of language in these interactions, thereby enhancing customer relationships.

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### ***Look for the Signature: How the Infusion of Personal Signatures Affects Product Evaluations and Purchase Behavior***

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Personal signatures have a long, meaningful history in marketing. For centuries, artists have inscribed their personal signature on their works, and personal signatures have featured prominently in advertisements (e.g., Papa John’s Pizza), branding efforts (e.g., Gallo Signature Series Wine), and on labels and packaging (e.g., Schewepe’s Ginger Ale). Despite their widespread use, no prior research has examined how the infusion of personal signatures into marketing stimuli influences consumer behavior.

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<sup>5</sup> We refrain from extensive discussion of “we” here for brevity. Over 98% of firm agent use of “we” in Study 3 referred to “firm + agent”, not “firm + customer” or “agent + customer.” “We” pronouns use had null or negative effects in all studies.

Personal signatures that are infused into marketing stimuli are extrinsic cues – factors that can be altered without changing the properties intrinsic to the product – which consumers use to assess the properties of a product or service (Dawar and Parker 1994). We posit that personal signatures are multidimensional extrinsic cues that, like brands, are imbued with meaning (Erdem et al. 2006; Richardson et al. 1994), and can thus signal a multitude of characteristics to consumers. This research focuses on two characteristics: quality and identity. First, we hypothesize that personal signatures are broadly associated with quality, and the mere presence of a personal signature can thus enhance perceptions of product quality (H1). We further propose that this effect that is greater (lesser) the more positive (less positive) the consumer’s perceptions of the signer’s credibility (H2). Second, we propose that personal signatures are uniquely associated with identity, and thus make salient the identity of the signer. This implies that the infusion of a personal signature into marketing stimuli uniquely enhances product preference for consumers who share a self-important aspect of their identity with the signer (H3). Six studies, including two field studies conducted in retail stores, provide strong support for our theoretical account (see figure 1).

The first study was a natural experiment conducted at a small winery. In early 2013, winery management added the personal signature of its winemaker to the back label of one type of wine. As compared to sales in the identical month in previous years, sales of the focal wine increased significantly (by 50%) after the infusion of the personal signature.

Studies 2 and 3 were designed to examine whether the infusion of a personal signature onto packaging would enhance perceived product quality. In study 2, we independently manipulated whether the (fictitious) personal signature of a farmer was infused onto the label of Organic Valley cheese, and whether the farmer’s name was provided to participants. In support of H1, participants rated the cheese with the personal signature on it as being of higher quality, and this effect persisted even when participants did not know the signer’s name.

Study 3 examined whether this phenomenon generalizes to a more familiar brand – Papa John’s pizza. Using images of actual Papa John’s pizza boxes, we manipulated whether the personal signature of the founder (John Schnatter) was present on (or absent from) the pizza box, and asked participants to separately rate each pizza box on how it influenced their perceptions of the product’s quality. The presence (or absence) of the signature was not brought to the participants’ attention at any time. Replicating study 2, participants rated the pizza with the personal signature on it as suggesting higher quality. This result is noteworthy given the subtlety of the manipulation (the removal of a small personal signature from a pizza box) and the popularity of the Papa John’s brand.

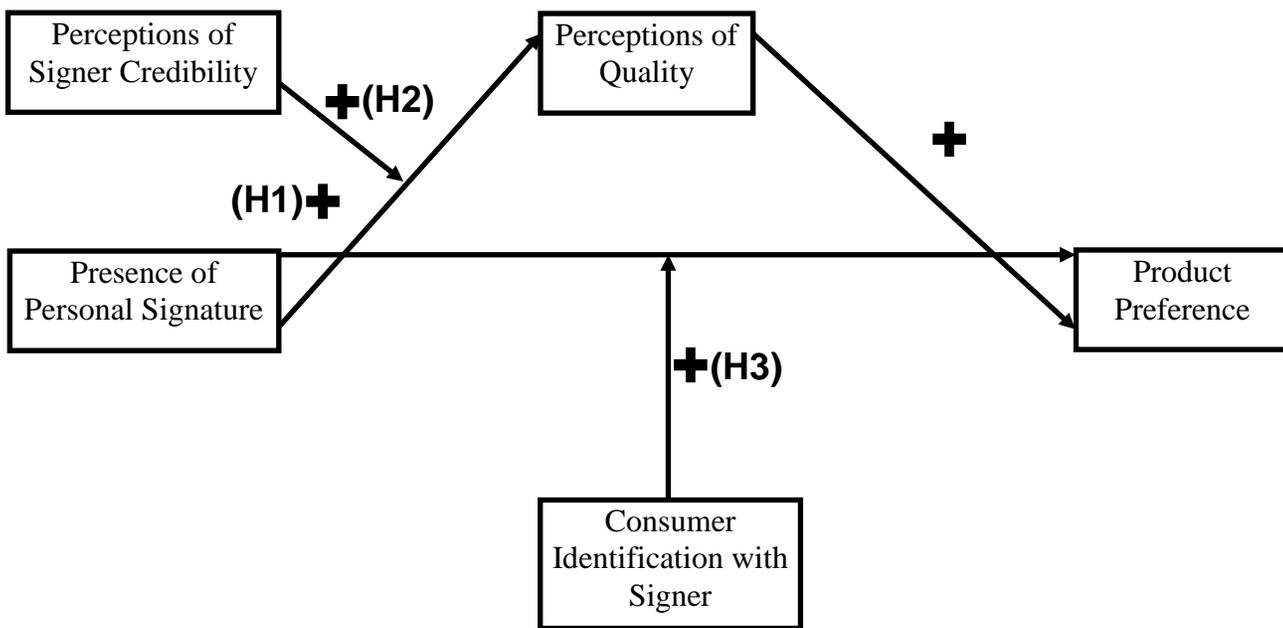
In study 4, we tested H2 – that the effect of the personal signature on perceived quality is moderated by the consumer’s perceptions of the signer’s credibility. In addition to manipulating the infusion of a personal signature, we measured consumer perceptions of the credibility of the signer (the winemaker for a major wine brand). In support of our account, the effect of the personal signature on perceptions of product quality was greater (lesser) among consumers who perceived the signer to have greater (lesser) expertise, such that the infusion of a personal signature enhanced perceived quality when consumers perceived the signer to have high credibility, but had no effect when the signer was perceived as having low credibility

Studies 5 and 6 were designed to test H3: that a personal signature should uniquely enhance product preference for consumers who share a self-important aspect of their identity with the signer. We conducted study 5 at a wine tasting event in a retail store; we manipulated whether the winemaker’s signature was printed on the back label, and measured whether each customer shared a social identity (their regional identity) with the winemaker. Consistent with studies 2-4, participants rated the quality of the wine as greater when the personal signature was infused onto the label. Further, the infusion of the personal signature led to a 500% increase in product sales and – in support of H3 – the increase in sales was entirely attributable to consumers who shared a self-important social identity with the winemaker.

In study 6, we examined the self-importance of the shared social identity. Using a cheese brand renowned for sourcing locally, we told participants that the farmer resides in their home state. We manipulated whether the farmer’s signature appeared on the label, and we measured the self-importance of the consumer’s state identity. Again, the infusion of a personal signature enhanced perceptions of product quality and – in support of H3 – there was an additional direct effect on preference for consumers for whom the shared social identity with the signer (their state identity) was of high self-importance.

The present research makes several important contributions. First, this research extends the extrinsic cues literature by examining a unique multidimensional cue – a personal signature – that influences consumer behavior through two distinct processes: perceptions of product quality and relevance of the consumer’s identity. Second, we make an important contribution to the consumer identity literature by identifying a cue that can enhance the salience of a consumer’s identity through an unlikely source – a self-important social identity shared with another individual. Importantly, we demonstrate these effects with actual purchase behavior in a retail setting.

FIGURE 1  
CONCEPTUAL FRAMEWORK



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*Perceptual Balance in Brand Logos Affects Consumer Use and Valuation of Goods*

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Brand logos are an important part of the branding strategy. People start recognizing logos at a very young age (Fischer et. al, 1991) and the aesthetics of the logo are important for consumers’ perceptions of the brand (Bottomley & Doyle, 2006). We are interested in the visual aspects of the logo; specifically, orientation of the shapes in the logo. Pavlova, Sokolov, and Sokolov (2005) show that

when shapes are perceived as unstable, people ascribe negative emotions to them. We posit that perceptually unstable shapes in a brand logo lead to feelings that the environment is unsafe. These feelings impact use of and willingness to pay for products that can mitigate this unsafe environment.

In study 1, we test whether perceiving structural imbalance affects the consumption quantity of a risk-reducing product. We predict that people will use more hand sanitizer when drawing from a bottle with a structurally imbalanced (vs. balanced) logo.

A small bottle of hand sanitizer was given to each participant. Structural balance was manipulated by vertically inverting a triangle-like structure in the brand logo and presenting it either symmetrically (balanced) or asymmetrically (imbalanced). After looking at the logo, participants tried the hand sanitizer and used as much as they liked. As predicted, participants who used bottles with the structurally imbalanced logo rated that they had used more of the hand sanitizer than those who used bottles with the structurally balanced logo ( $M_{\text{imbalanced}} = 61.77$  vs.  $M_{\text{balanced}} = 52.35$ ),  $t(65) = 2.00$ ,  $p = .05$ ,  $d = .50$ . It seems that an imbalanced (vs. balanced) logo on a risk-reducing or security-enhancing product (hand sanitizer), can impact consumers' use of that product.

Study 2 shows the specificity of the described effect. We designed two brand logos, each with three shapes as part of the logo, which could be seen as balanced or imbalanced depending on how the participant viewed the logo. The first logo was balanced when viewed as a whole, but imbalanced when viewed item by item. Logo 2, on the other hand, was imbalanced when viewed as a whole (not symmetrical overall), but each triangle is positioned so that when viewed individually, the logo is seen as balanced. Because each logo is balanced or imbalanced depending on the perspective of the participant, we employed a global/local visual perception manipulation (Navon 1977). Research suggests that visual perception can be focused in a holistic manner (global) or a relatively item-focused manner (local; Friedman et al. 2003; Forster, Liberman and Kuschel 2008). In our case, a global perspective would result in viewing logo 1 as balanced and logo 2 as imbalanced and vice versa with a local perspective. For the global/local manipulation, participants focused on a map either as a whole (global perspective), or some specific feature (local perspective).

Participants viewed the logo as part of a shopping cover story. Willingness to pay for products that either provided some feeling of security (e.g., bike helmet) or were neutral in terms of security (e.g., bike basket) was assessed. We expected that participants who viewed an imbalanced logo would indicate higher WTP for uncertainty reducing products than participants who felt less uncertainty as a result of viewing the balanced logo. There should be no differences in WTP for neutral products.

We standardized all WTP responses for the uncertainty-reducing and neutral products and analyzed responses in a repeated measures ANOVA. A significant interaction emerged between logo and prime match or mismatch (a match indicates a perceived balanced logo while a mismatch indicates an imbalanced logo) and product type (risk-reducing vs. neutral;  $F(1, 141) = 5.59$ ,  $p < .05$ ). Contrasts revealed that for the uncertainty reducing products, a prime/logo mismatch ( $M = .09$ ) led to higher WTP than a prime/logo match ( $M = -.08$ ;  $F(1, 141) = 3.90$ ,  $p = .05$ ). For the neutral products, the logo and prime match/mismatch made no difference in WTP ( $M_{\text{match}} = .02$  vs.  $M_{\text{mismatch}} = -.02$ ;  $F(1, 141) = .13$ ,  $p > .70$ ).

Study 3 further explored the idea that perceptions of an unforgiving environment, caused by imbalanced logos, leads to the increased willingness to pay for security-enhancing products. Therefore, we primed half of the participants' perceptions of the environment by presenting an article that described the harshness of the external environment (problems in the economy, society, and other aspects of people's lives). The other half of participants read no article (control). Logos were manipulated (balanced vs. imbalanced), but in addition to WTP, we asked how useful the security-enhancing products would be. We expected that after reading the article describing a harsh environment, participants would indicate overall higher WTP and perceived usefulness of security-enhancing products, regardless of the logo. In the control condition, the results on WTP should replicate study 2; that is, an imbalanced logo (vs. balanced) should lead to higher WTP and perceived usefulness.

Usefulness of the product and WTP were standardized and treated as a with-subjects factor. As predicted, a 2-way interaction emerged between environment prime (harsh vs. control) and logo (balanced vs. imbalanced;  $F(1, 179) = 4.45, p = .04$ ). In the control condition, participants who saw the imbalanced logo gave a higher WTP and perceived usefulness score to the security-enhancing products ( $M = .07$ ) as compared to those who saw the balanced logo ( $M = -.11$ ;  $F(1, 179) = 4.01, p < .05$ ). However, when participants read the harsh environment article first, the logo type did not have an impact on WTP and usefulness ratings ( $F(1, 179) = .95, p = .33$ ). As expected, people who read the harsh environment article had higher WTP and usefulness ratings overall as compared to those in the control condition ( $F(1, 179) = 4.63, p = .03$ ). Apparently, priming a feeling of environmental uncertainty produces a similar effect as showing an imbalanced logo.

Overall, in three studies we show evidence that perceptual imbalance, through the manipulation of a brand logo, can lead to feelings of uncertainty, greater use of a cleanser, and higher WTP and ratings of usefulness for security-enhancing products.

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### ***Brand Logo Frames: How and When Framing Brand Logos Increases Product Evaluations***

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Some brand logos feature a frame (e.g. Kenmore, Bic) while others lack this design element (e.g. Subway, FedEx). Building on research showing that frames provide a sense of structure and order, we propose that adding a frame around a brand logo will reduce perceptions of purchase risk. Given that consumers associate hedonic goods with more risk, we expect the effect of brand logo frames to be stronger among hedonic goods. Specifically, we hypothesize that a brand logo frame increases purchase intent for hedonic products but not for utilitarian products.

In Study 1, participants were presented an advertisement for either a utilitarian product (e.g. a paper shredder) or a hedonic product (e.g. an MP3 Player). The product's logo, its name (held constant), was either framed by a black, square logo or not. A 2 (product type: hedonic, utilitarian) x 2 (logo frame: present, absent) ANOVA on purchase intent revealed a two-way interaction,  $F(1, 84) = 3.90, p = .05$ . For a hedonic product purchase intent was higher if its logo was framed ( $M = 6.38$ ) than if it was not ( $M = 5.11, F(1, 84) = 4.10, p < .05$ ). For a utilitarian product purchase intent was unaffected by the presence or absence of a frame ( $F < 1$ ). Analysis of perceived risk revealed a complementary pattern. The purchase of a hedonic product was perceived as less risky if its logo was framed. For a utilitarian product perceived risk was unaffected by the presence or absence of a brand logo frame. Perceptions of purchase risk mediated purchase intent.

In study 2 we demonstrated that framing the brand logo (as oppose to other aspects of the advertisement) has a unique effect on purchase intent. We also replicated findings from study 1 holding the target product constant. Participants were assigned to one of eight conditions in a 2 (Product Type: Hedonic, Utilitarian) x 4 (Logo Frame: Absent, Around-the-Brand-Logo, Around-the-Product-Image, Around-the-Product-Description) between-subjects design. Participants were presented an advertisement for a candle which was presented as being either hedonic or utilitarian. We also manipulated the presence of a frame and its location. In the absent condition there was no frame present in the advertisement. In the brand-logo condition a black, square frame was placed around the logo, its name. In the product-image condition this frame was placed around the product image. In the product-description condition this frame was placed around the product description. Results revealed a main effect of framing,  $F(2, 272) = 4.56, p < .05$ . Placing the frame around the brand logo ( $M = 5.73$ ) lead to higher purchase intent than not having a frame ( $M = 4.92, p < .05$ ), or

placing the frame around the product description ( $M = 4.13$ ,  $p < .01$ ). Follow-up analyses indicated that framing the brand logo is the only condition in which framing has a positive effect. A 2 (product type: hedonic, utilitarian) x 2 (logo frame: absent, around-the-brand-logo) ANOVA on purchase intent revealed a two-way interaction,  $F(1, 170) = 3.97$ ,  $p < .05$ . When the candle was described as hedonic purchase intent was higher if its brand logo was framed ( $M = 6.24$ ) than if it was not  $M = 4.70$ ,  $F(1, 170) = 8.68$ ,  $p < .01$ ). When the candle was described as utilitarian purchase intent was unaffected by the presence or absence of a frame ( $F < 1$ ). Again, process measures indicated that perceptions of risk mediated this effect.

If adding a frame around a brand logo decreases perceptions of risk then the effect of a brand logo frame should be moderated by the type of frame employed. If a brand frame does not convey a sense of stability it will not reduce perceived risk. In other words, only frames that are sturdy should reduce perceptions of risk and increase purchase intent. In study 3 participants were assigned to one of six conditions in a 2 (Product Type: Hedonic, Utilitarian) x 3 (Logo Frame: Absent, Sturdy Frame, Un-Sturdy Frame) between-subjects design. Participants saw an advertisement for shampoo which was presented as being either hedonic or utilitarian. We also manipulated the type of frame around the product's logo, its name. In the absent condition there was no frame. In the sturdy frame condition participants saw a black, square frame similar to the frames used in earlier studies. In the un-sturdy frame condition participants saw one of four frames: a light-blue frame, a dashed frame, a thin frame, or an oval frame; all pretested as less sturdy. Analysis of purchase intent revealed a two-way interaction,  $F(2, 186) = 3.68$ ,  $p < .05$ . When the shampoo was described as hedonic purchase intent was higher if its logo was framed by a sturdy frame ( $M = 5.50$ ) than if it was not framed ( $M = 4.14$ ,  $p = .01$ ) or if it was framed by an un-sturdy frame ( $M = 4.39$ ,  $p < .05$ ). When the shampoo was described as utilitarian purchase intent was unaffected by the type of frame ( $p = .27$ ).

In study 4A we manipulated perceptions of risk through presence of a quality guarantee. When a guarantee was not provided and perceived risk was relatively high we saw a replication of earlier results, for a hedonic product, a sturdy logo frame ( $M = 3.66$ ) resulted in higher purchase intent than no framing ( $M = 2.91$ ,  $p < .05$ ) or an un-sturdy logo frame ( $M = 2.66$ ,  $p < .01$ ). When a guarantee was given and risk was low purchase intent was unaffected by framing ( $F < 1$ ). In study 4B we manipulated perceptions of risk through price and found similar results.

Importantly, we measured attractiveness of the logo in all studies. The frames employed never influenced ratings of attractiveness indicating that our results were not driven by logo attractiveness. In this work we demonstrate how perceptions of a brand logo frame can transfer onto a product and influence purchase intent. We focus on one aspect of a frame – its ability to convey sturdiness and thus reduce purchase risk.

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## **5.6 Symposium: Cool Consumers and Cool Products – Antecedents, Interpretations & Consequences of Cool**

**Room:** MICHELANGELO

**Chair:** David Wooten, University of Michigan, USA

### ***Antecedents of Cool Brands***

Geraldo Matos, University of Rhode Island, USA\*

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Researchers and the popular press alike have noted the importance of Cool to brands. It has been credited as a critical component of the success of many top brands, with Nike and Apple being notable exemplars of this phenomenon (Labich and Carvell 1995; Owen and York 2011, Associated Press 2011; Chaffin 2011; Leonard 2011; Rothwell and Walid 2011; Task 2011). Brands from a broad array of categories and classes of goods are believed to have benefited from Cool including sportswear (Gladwell 1997; Pountain and Robins 2000), personal computers (Pountain and Robins 2000; Chaffin 2011; Task 2011), and high school yearbook photos (St. John 2012). Many marketers nurture perceptions of Cool (Gloor and Cooper 2003) in an attempt to mimic this success. This can be a delicate task, given that Cool is hard to define (Cassidy and van Schijndel 2011), and perceptions of Cool are personal (Nairn, Griffin and Wicks 2008; Holtzblatt, Rondeau and Holtzblatt 2010) and dynamic (Gladwell 1997; Pountain and Robins 2000; Belk 2006).

The purpose of this study was to attempt to determine what antecedents could be identified when consumers provided their feedback for what makes a brand or product Cool. Utilizing a “direct” qualitative methodology (Mahlhotra 2010) similar to that of Grisaffe and Nguyen’s (2011) investigation into the antecedents of emotional brand attachment, participants were prompted to list a brand they think is Cool, to describe the brand, and explain what makes the brand Cool. Comments from participants noting why they felt a brand is Cool varied from very short statements to a few sentences. Following the Grisaffe and Nguyen (2011) framework, grounded theory (Glaser and Strauss 1967) and thematic analysis (Boyatzis 1998) were utilized to guide the development of the coding system. Undergraduate college students (n=249) from two New England universities comprised the participant pool (one a large, public university, the other a private, religious university). Brands listed as cool covered a wide range of product and service categories. Brands listed included automobiles, technology, beverages and a host of other categories. The breadth of categories from which Cool brands were listed supports the rigor of our results.

Despite the range of brands listed as Cool, Nike and Apple were listed as the brand they considered to be Cool by more than one-third of the participants (Nike 20% of participants and Apple 14%). As noted prior, these brands are recognized in popular press as Cool brands and enjoy some of the strongest brand recognition (Associated Press 2011; Chaffin 2011; Leonard 2011; Rothwell and Walid 2011; Task 2011; Labich and Carvell 1995; Owen and York 2011). Even with the frequency of listing Apple and Nike as Cool brands, the reasons participants offered for why these two brands were considered to be Cool showed no consistent thematic differences from other brands discussed.

We found five common antecedents of Cool. The first antecedent relates to the influence of peers, celebrities or a general sense of high levels of popularity of a brand. Essentially, this antecedent is the notion of a product being cool because it is popular. Numerous participants cited the fact that many people owned a brand as the reason for why the brand was Cool. Cool, from this point of view, is related to a sense of being one with the crowd, as opposed to being unique (Frank 1996; Lasn 1999). This antecedent relates to what has been labeled “inauthentic commercial Cool” (Belk, Tian, and Paavola 2010). Because this popularity antecedent was one of the most common reasons for a brand being described as cool it may be an indication that Cool has been fully turned upside down and commoditized (Cassidy and van Schijndel 2011 and Frank 1996).

The second antecedent is the extent to which a brand is perceived to consistently generate cutting-edge innovation relative to its peers. It is interesting to note that this innovation antecedent was apparent beyond categories where one might expect this to be relevant. While innovation on the part of Apple was regularly described as driving the perception of Cool, innovation was also noted as a driver of Cool for a professional sports league, an apparel company and a sports equipment brand.

The next antecedent relates to aesthetics or design. While this antecedent was common cited as core part of what made apparel brands Cool, it also was used noted for technology products such as Apple and a wide array of different brands. Many participants also noted that Cool brands were high quality products. While high quality was widely cited when describing Cool brands participants rarely listed quality as the sole reason that a brand was Cool. That is not true of other antecedents such as the influence of external parties, innovation or even design aesthetics. It would appear that for many participants a brand had to be of high quality to be considered

Cool, but that perhaps this was not alone sufficient to merit the status of being Cool. Further research is warranted in this area to more specifically address this area.

The last of the common antecedents use for what made brands Cool in the eyes of the participants related to the ability of the brand to engender positive/transformational feelings through use. One example of this antecedent was a participant who noted the “special aura” one felt when using the brand in question. Additionally, there were a few antecedents that, while not held across a large portion of the participant pool, were cited by smaller numbers of participants. The first of these is the perception of a brand as a high level of luxury or prestige. This was also sometimes related to social status. Other antecedents included the sense that the brand is not broadly popular or yet discovered by the masses; and a brand that uses well regarded marketing communications/efforts.

An area for future research is to look at a different, non-student population. Our study utilized college students, who multiple studies have found to be susceptible to using brands as an important component of their identity signaling (Escalas and Bettman 2003; Berger and Heath 2008). This suggests that how college students perceive brands may be unique and different from other populations.

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***My Street Credibility is Cooler than Your Cool: A Qualitative Approach to Detangling the Construct of Street Credibility and Cool***

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Street credibility is the respect earned by those who have survived experiences unique to cultures of terror such as those found in poor inner-cities (Bennett and Diamond 2012). The use of street credible endorsers in marketing communication has increased over the past few years, and they are predicted to replace athletes as the most important endorsement group (McCarthy 2005). However, research on street credibility and street credible endorsers is scant. Intuitively, the construct appears to be a certain type of “cool,” however, this has not been empirically determined to date. Thus, we question if cool and street credibility are, at most, one and the same or, at least, that gaining street credibility is an avenue for becoming cool. The purpose of this paper is to further an understanding of the construct of street credibility and its relation, if any, to that of cool.

Literature Review. Research on street credible endorsers posits that the antecedents of street credibility are grounded in the poor inner city (Bennett and Diamond 2012). In agreement, the term “cool” has roots in urban settings, and has been traced to African-Americans’ behaviors of not appearing to be flustered or shaken when facing overt racial discrimination during the 1930s (Moore 2003). More recently, cool has been defined as a characteristic of select individuals who are admired because they “exhibit a nonchalant control of emotions, a rebellious trickster demeanor, or an ironic detachment in the regard of others and a cool style of talking, walking, gesturing, and grooming” (Belk 2006). Academics and practitioners both agree that the latter meaning of cool has been instrumental to the promotion of products since the 1990s. Cool products are positioned as those being used by those who are cool. These products are then acquired by consumers who attempt “to be like others” who are within their cool reference group (Belk 1988; Childers and Rao 1992; Belk 2006; Belk 2010). In such instances, the possession of the cool product provides psychological benefits such as “social approval, personal expression, and outer-directed self-esteem” (Escalas and Bettman 2005). To this end, we seek to understand the conceptualization of cool and street credibility among consumers within this age group.

Methodology and Procedure. To gain an understanding of consumers’ views of cool, we conduct two qualitative studies with college-age consumers. In our first study, we used a grounded theory approach in interviews with college age students. Because both constructs have originated within the inner city and have spread to the mainstream, non-inner city population, both inner city and non-inner city were included. Respondents from the inner city (N = 13) were acquired through a college success program in Harlem

where the principal investigator worked part-time. Non-inner city respondents (N = 9) (ages 18-22, mean age 21) were recruited from a major northeastern university. In this study, interview respondents were asked to provide definitions for the terms “street credible” and provide exemplars. Later respondents were asked to do the same for “cool” and then asked if the two terms were the same. Later, respondents were asked to give examples of people who were both street credible and cool, street credible but not cool and, finally, cool but not street credible.

In our second study, we conducted in-depth interviews with a standard interview guide with students from the inner city (N=10) and non-inner city (N=20) (ages 19-22, mean age 21). We employed photo elicitation techniques to gain a further understanding of consumers’ categorized celebrities. Respondents were given photos of 16 popular celebrity endorsers and asked to categorize them as street credible, cool, trendy, nerdy, weak, or poser. Respondents then explained their categorization of each.

**Analysis and Results.** Overall, respondents in study 1 provided consistent examples of people who were street credible and cool. An overview of the life histories of the exemplars most mentioned by the inner-city students indicates that the street credible figures have the antecedents associated with street credibility while those figures described only as cool did not.

Our findings from study 2 indicated that street credibility is different than cool. In agreement with study 1, here respondents regularly categorized the same celebrity endorsers as street credible and rarely gave this distinction to any other celebrities. Still, when categorizing celebrities the few times that these endorsers were not categorized as street credible, they were most often placed into the cool category. A further analysis of the interviews indicates that while a celebrity may have ownership of both constructs, the two are different. The respondents' statements indicate that at the very least, it may be cool or even hyper cool to have street credibility but that the two constructs are not mutually inclusive.

**Conclusion.** In short, our interviews indicated that street credibility is determined by where one comes from and what one has seen and understands, while cool reflects a state of being or something that is neat or exciting. Thus, street credibility, to some extent, is something that can only be generated or produced by a group of individuals from a particular background. This caste-type system that produces street credibility distinguishes it from the construct of cool, which anyone is able to acquire, imitate or purchase (Belk, 2006). Moreover, unlike cool, which fades with time, changes in trends, or over-popularity, street credibility can only be diminished through the loss or reversal of its antecedents. That difference explains why, though it may be cool or even hyper cool, to have street credibility, having street credibility does not make one cool, nor does being cool give one street credibility. In detangling these two constructs, we hope to move the field further in understanding street credible endorsers. Thus, we hope to draw greater attention to the need for research on consumers’ affinity to this new and important group of endorsers.

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### ***Understanding the Concept of Product Coolness***

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In contemporary culture being cool has become the new form of social capital, with the majority of consumers wanting to be perceived as cool (Belk, Tian, & Paavola, 2010; Thornton, 1995). The by far most prevalent route for achieving coolness is through selective material consumption, whereby a consumer owns and uses products which themselves are perceived as “cool” (Nancarrow, Nancarrow, & Page, 2002; Pountain & Robins, 2000). While marketing practitioners have been avidly trying to unlock the recipe for

creating the “next cool thing” (Belk et al., 2010; Pountain, & Robins, 2000), academic research on the drivers of product coolness is rather limited (Gurrieri, 2009), most likely because consumers typically find it challenging to articulate what cool is, although they will recognize a cool product immediately (MacAdams, 2001; Pountain & Robins 2000). In light of such research gap, this paper aims to uncover how consumers conceptualize product coolness. Since adolescent consumers have been shown to use cool products as a means for either standing out or fitting in (Belk, Tian, & Paavola, 2010; Wooten and Mourey, 2013), we do not expect consumers’ conceptualization of coolness to be uniform. Our goal is to identify what the different interpretations of product coolness are, as well as what kind of demographic characteristics, product-related features and consumer perceptions these interpretations are associated with.

**Pilot Study.** The Pilot Study aimed to provide preliminary, yet robust insights into the notion of coolness and its drivers. It included two panels: one from a U.S.-based university (210 participants) and one from a U.K.-based university (180 participants). Participants provided open-ended responses to several questions regarding product coolness, which were subsequently coded by one of the researchers. The emerging pattern of results was remarkably similar across the samples. Both cultures can readily differentiate product coolness from the related, yet distinct construct of brand coolness, are largely unable to define what “coolness” represents to them (instead they would list a set of product-related characteristics as drivers of coolness), and have a somewhat nuanced understanding of where the essence of coolness comes from.

With regard to the interpretation of coolness, three main themes emerged, which were consistent across the two samples. The first theme (mentioned by 40% of the U.S. and 42% of the U.K. sample) pertained to products being cool when they possess a particular characteristic or set of characteristics (e.g., good design, high usability). The second theme (mentioned by 35% of the U.S. and 22% of the U.K. sample) entailed coolness as being determined by social influences (e.g., “when the majority thinks it is cool,” “they achieve recognition from a select group of well-informed individuals,” “when not everyone can have one because they are expensive”), while the third theme (mentioned by 17% of the U.S. respondents and 30% of the U.K. respondents) referred to coolness as being the result of the personal value that a consumer assigns to a product (e.g., “when they satisfy a need that I have,” “when they start to represent what cool means to me”).

**Main Study.** This study aimed to determine how the three aforementioned interpretations of product coolness relate to consumers’ demographics, to the importance that consumers assign to various product-related features when forming impressions of coolness, and to consumers’ perceptions about cool products and their users. For this study we administered a survey to three different population samples: a sample 136 students from a private U.S. university, an online panel of 248 U.S.-based respondents (which was demographically representative of the U.S. population), and an online panel of 136 German-based participants.

We presented participants with brief descriptions of the different interpretations of coolness identified in the Pilot Study, and asked them to select the interpretation that most closely matched their own view of coolness. In order to measure the different product-related features that contribute towards impressions of coolness, we used the constructs and terminology employed by the Pilot Study participants to generate a pool of items and then conducted an Exploratory Factor Analysis. A two-factor solution emerged, which was robust across the three samples. The factors describe two qualitatively different types of benefits that consumers would gain from a cool product, namely functional versus symbolic benefits (but, interestingly, not hedonic benefits). The functional benefits included items related to usability (e.g., “easy-to-use”) and usefulness (e.g., “practical”), while the symbolic benefits contained items related to exclusivity (e.g., “status-signaling”) and aesthetics (e.g., “stylish”).

Across the three samples, the pattern of results was very similar between participants who view coolness as determined by the personal value assigned to a product (comprising between 33.5% and 47.8% of each sample) and those who view coolness as determined by particular product features (comprising between 29.4% and 33.8% of each sample), hence suggesting that these two groups likely form one single cluster. In contrast, respondents who view coolness as determined by a product’s social value

(comprising between 15% and 33.1% of each sample) had a significantly different profile. The social value group was, on average, younger than the personal value/feature group, and considered a product's symbolic benefits more important than its functional benefits in driving coolness. In contrast, the personal value/feature group considered functional benefits more important than symbolic benefits in determining product coolness. Finally, while all groups viewed cool products as equally desirable, the social value group was more likely to assign a social stigma to them (i.e., view them as fads and their owners as superficial).

In conclusion, this research provides preliminary evidence that consumers can view a product as cool if social influences trigger such perceptions, but also if the product contains features or attributes that one deems as personally valuable. The social interpretation favors aesthetics and exclusivity over functional benefits, and is most prevalent in young consumers. As consumers mature, they view a product's usefulness and ease-of-use as the more important drivers of coolness and, hence, not surprisingly, assign less of a social stigma to such products. These findings appear not to be restricted to U.S. consumers and instead extend to other Western cultures such as Germany.

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### ***Is Concealing Emotional Expression Cool?***

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Despite a widespread belief that coolness sells products and drives marketplace trends, it is unclear what influences perceptions of coolness (Frank, 1997; Heath & Potter, 2004; Kerner & Pressman, 2007). Researchers have argued that things (products, brands, trends, etc.) become cool through association with cool people, such as a brand's spokesperson, employees, or consumers (Gladwell, 1997; Southgate, 2004). Therefore, in order to understand what makes things cool, it would help to know what makes people cool.

A number of authors have argued that people become cool by concealing or controlling emotional expression (Bird & Tapp, 2008; Connor, 1995; Erber, Wegner, & Therriault, 1996; Stearns, 1994). According to this view, people become cool by concealing emotional expression and by portraying an air of ironic indifference (Belk, Tian, & Paavola, 2010).

On the other hand, coolness is a positive trait (Belk et al., 2010). Both theoretical and empirical studies suggest that coolness is closely associated with desirable personality traits (Dar-Nimrod et al., 2012), product preferences (Warren & Campbell, 2013), social status (Heath & Potter, 2004) and marketplace influence (Gladwell, 1997; Kerner & Pressman, 2007). Interestingly, studies in psychology illustrate that people who conceal emotional expression have a more difficult time communicating with others and are generally perceived more negatively than people who express their emotions (Butler et al., 2003; Cunningham, Barbee, & Pike, 1990; Riggio & Friedman, 1986).

In sum, the literature on coolness argues that concealing emotion directly increases the extent to which someone seems cool. In contrast, the literature in psychology, which finds that emotional concealment typically lowers evaluations, suggests that concealing emotion may indirectly decrease the extent to which someone seems cool by making the person seem less likable. However, no studies have directly tested the effect of concealing versus expressing emotion on perceptions of coolness.

We conducted three experiments to empirically test whether concealing emotion makes people seem more or less cool. In our first study 181 US respondents on mTurk viewed a picture of a male model who was either smiling (expression condition) or portraying a "cool pose" (concealment condition; Majors & Billson, 1992). Subsequently, participants evaluated the extent to which the model

seemed cool and likable (seven-point scales). In contrast with the view that concealing emotion makes a person cool, respondents considered the model less cool when he masked his emotions than when he expressed them by smiling ( $M = 3.77$  vs.  $4.60$ );  $F_{1,179} = 19.35$ ,  $p < .001$ ). Consistent with the psychology literature, concealing emotion made the model less likable ( $M = 4.22$  vs.  $5.52$ );  $F_{1,179} = 63.47$ ,  $p < .001$ , and this effect mediated the relationship between concealing emotion and perceived coolness (indirect effect =  $-.45$ ; 95% C.I. =  $-.60$  to  $-.32$ ; Preacher & Hayes, 2008).

A limitation of the initial study is that the operationalization of emotional expression (i.e., a smile in a picture) may not have captured the variety of ways that people express or conceal emotions during richer, face-to-face encounters. Our second study, therefore, examined whether concealing emotion in a face-to-face conversation would similarly make a person seem less likable and, consequently, less cool. Graduate students ( $N = 74$ ) at a European university rated the coolness of a confederate who was posing as another study participant. Unbeknownst to the student participants, the confederate either expressed or concealed his or her emotions during a five-minute introductory conversation. Replicating study 1, participants considered the confederate less cool when he or she concealed emotions during the conversation than when he or she expressed emotion ( $M = 4.66$  vs.  $5.35$ );  $F_{1,66} = 6.53$ ,  $p = .01$ . The effect of concealing emotion on coolness was similar across four different confederates (concealment x confederate interaction:  $F_{3,66} = 1.30$ , NS). As before, the concealing emotion decreased coolness because confederates were liked less when they concealed their emotions ( $M = 5.32$  vs.  $5.81$ ),  $F_{1,66} = 4.07$ ,  $p < .05$ , and likability mediated the effect of concealing emotion on perceived coolness, indirect effect =  $.10$ ; 95% C.I. =  $-.30$  to  $-.01$ .

Our third study examined whether the effect of concealing emotion on coolness depends on which emotion people conceal. For example, expressing sadness might make a person seem empathic and likable (and consequently, more cool) whereas expressing fear might make a person seem vulnerable and weak (and consequently, less cool). To test this hypothesis, we asked 84 undergraduate students at a European university to indicate the extent to which they considered one of two actors cool. Participants watched a brief video in which an actor ostensibly was responding to a phone call he or she was receiving on Skype. We crossed emotional expression with the type of emotion expressed or concealed using a 2 (expression: express, conceal) x 2 (emotion: sadness, fear) x 2 (actor gender: male, female) between-subjects design. In the sadness condition, the actor reacted to a neighbor saying that his wife had just been diagnosed with cancer. In the fear condition, the actor reacted to a neighbor saying that someone was trying to break into the actor's house. The data revealed only a main effect of expression,  $F_{1,76} = 6.69$ ,  $p = .01$ . As in previous studies, the actors seemed less cool when they concealed their emotion than when they expressed their emotion ( $M = 3.23$  vs.  $3.92$ ). Interestingly, actors who concealed emotion seemed less cool irrespective of whether they concealed sadness or fear,  $F_{1,76} = 1.15$ , NS). Neither the gender of the actor nor the gender of the participant had any significant effects.

Despite the belief that people become cool by concealing emotion, we found that concealing emotion actually makes people seem less cool by making them less likable. Surprisingly, people become cool in the eyes of consumers by being friendly and likable rather than by being ironic or acting detached. Our research suggests that marketers and consumers who want to become cool should try to associate with people (spokespeople, employees, consumers, etc.) who freely express their feelings, not those who attempt to mask or control their emotions.

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**BREAK**

**9:30 am 9:45 am**

**BALLROOM FOYER**

## SESSION 6

9:45 am - 11:00 am

### 6.1 Symposium: Insights into Decision Making Under Risk & Uncertainty

**Room: BALMORAL**

**Chair:** Kupor Daniella, Stanford University, USA

On Amir, University of California, San Diego

#### *Risks, Interrupted*

Kupor Daniella, Stanford University, USA

Wendy Liu, University of California San Diego, USA

On Amir, University of California San Diego, USA\*

Individuals are constantly interrupted. For example, office workers are interrupted every five minutes by e-mails alone (Jackson, Dawson, & Wilson, 2003). Undergraduates are interrupted every two minutes by instant messages, e-mail, and other sources of disruption when using computers (Benbunan-Fich & Truman, 2009). How do such interruptions affect behavior? Consider a consumer who is deciding whether to invest her money in a risky asset. While she deliberates, she is interrupted by a phone call. When she returns to the decision, will she make a different investment decision than if she had not been interrupted? This research shows that she might become more risk seeking.

Interruptions are events unrelated to a focal task that disrupt an individual's cognitive focus on the focal task (Coraggio, 1990). We posit that when a consumer resumes making a risky decision after being interrupted, his/her previous consideration of the decision may cause it to feel more familiar. Familiarity with a stimulus can increase positive affective reactions to the stimulus, increase approach responses, decrease avoidant responses, and increase the perceived likelihood of a successful outcome (e.g., Winkielman & Cacioppo, 2001; Zajonc, 2001; Imura, 2013; Slovic, 2010), all of which can each increase risk taking (Weber et al., 2005; Rottenstreich & Hsee, 2001; Cavallo, Fitzsimons & Holmes, 2009; Kuhnen & Knutson, 2005). Across three studies, we find that indeed decision interruption increases risk taking by decreasing avoidance motivation and increasing the perceived likelihood of a successful outcome, and that felt familiarity with the decision is the driver of this interruption effect.

In Study 1, participants were given \$1.50 (real money), and had the option to invest any portion of this amount in a risky option that had a 50% chance of yielding 2.5 times the amount invested, and a 50% chance of a loss of the invested amount. Participants were informed that they could keep the money they chose not to invest. Participants in the Interruption condition were interrupted during the decision with a filler task. Participants assigned to the No Interruption condition completed the filler task prior to starting the decision task—thus they completed the same tasks, but their focal decision was not interrupted. Participants in the No Interruption condition invested more money (\$.80) than participants in the Interruption condition (\$.67),  $t(199) = 2.10$ ,  $p = .037$ .

Study 2 replicated this effect in a different context and provided process insights. This time the risky decision involved a hypothetical \$150, and any amount invested had a 10% chance of yielding 20 times the amount invested, and a 90% chance of losing the amount invested. After participants made their decisions, they reported their avoidance motivation, approach motivation, affective responses to the risky option, and perceptions of the risky option's likelihood of success. Participants in the Interruption condition invested more money (\$64.85) than participants in the No Interruption condition (\$40.68),  $t(68) = 2.11$ ,  $p = .039$ . Further analysis revealed that decision interruption significantly decreased avoidance motivation and increased the perceived likelihood of a successful outcome, but

did not change approach motivation nor affective responses to the risky option. The decrease in avoidance, and increase in the perceived likelihood of the option's success, mediated the interruption effect.

In study 3 we manipulated feelings of familiarity upon resuming the decision to test the role of familiarity in driving the interruption effect. We did so by adding a variant of the original interruption condition where we changed the presentation format of the decision (while keeping the informational content the same) when participants resumed the decision. We predicted that this condition would reduce the subjective feeling of familiarity with the decision after the interruption, thereby eliminating the decision interruption effect. Results confirmed our hypothesis - out of a real \$1.50, condition significantly impacted average investment amount (MNo Interruption = .45; MInterruption = .57; MInterruption With Format Change = .50),  $F(2, 484) = 2.97, p = .05$ .

In all studies, we also examined the potential role of decision time, and found that the effect of interruption is driven by neither elongating the total decision time, nor shortening the final decision time. Instead it is driven specifically by an interruption-induced feeling of familiarity.

Our research has important implications for understanding the dynamic course of risky decisions, as well as the role of feelings in risk preferences. In particular, this research suggests that decision discontinuities can provide previously unrecognized opportunities for metacognitive feelings (such as feelings of familiarity) to enter a risky decision and shape the decision outcome. Limitations and future directions will be discussed.

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### ***Known Unknowns in Judgment and Choice***

Daniel Walters, University of California, Los Angeles

Craig Fox, University of California, Los Angeles\*

Philip Fernbach, University of Colorado at Boulder

Steven Sloman, Brown University

Many consumer judgments and choices are made under conditions of uncertainty—from budgeting, planning and contracting to investing and insuring. Such activities require not only predictions of relevant outcomes, but also metacognitive awareness of the adequacy of such predictions. In this presentation I'll review several studies linking accuracy in judgment and choice to sensitivity to known unknowns.

Rozenblit and Keil (2002) report that people tend to be overconfident in how well they understand how everyday objects like toilets and combination locks work. Inducing them to generate a detailed mechanistic explanation punctures this sense of understanding and leads judges to decrease their rated confidence in their own understanding. We argue that this illusion of understanding reflects a more general tendency for consumers to focus on known facts and present information and ignore or underweight unknown facts and missing information, similar to the What You See Is All There Is (WYSIATI) phenomenon discussed by Kahneman (2011). We find that the Cognitive Reflection Test (CRT, Frederick, 2005) is a valid indicator of the tendency to spontaneously consider “known unknowns.”

In Study 1 we find that the illusion of explanatory depth is stronger among consumers with lower CRT scores. We adapted Rozenblit and Keil's (2002) method in which participants rate their understanding of a number of common household objects (e.g. a toilet). Next they generated mechanistic explanations for a subset of the objects and then re-rated understanding. An illusion of explanatory

depth exists if the pre-explanation rating of understanding is higher than the post explanation rating. We find a highly significant interaction between timing of the judgment and CRT score, with low CRT scorers providing higher ratings of understanding pre-explanations. Because all participants showed the same understanding after the task, it appears that this effect is driven by differences in metacognitive awareness, rather than differences in actual knowledge about how these products work.

In Study 2 we independently manipulate known knowns and known unknowns in a task in which participants assess the probability that a coin flipped several times landed heads more often than tails, given information about how it landed on a subset of trials (known knowns) but for which the outcome on the remaining trials is missing (known unknowns). Participants scoring higher on the CRT were no more accurate than those scoring lower, and they were no more sensitive to known knowns, but they were more sensitive to known unknowns when assessing probabilities.

In Study 3 we sought to confirm CRT is an indicator of metacognitive awareness by measuring it directly. We asked participants to estimate various quantities (e.g. the number of visitors in 2010 to the Great Wall of China) and then to provide a 90% confidence interval. Soll & Klayman (2004) provide an analysis that allows for the dissociation of two sources of overconfidence: failures of knowledge and failures of meta-knowledge. A failure of knowledge refers to providing an estimate that is far from the true value. A failure of meta-knowledge refers to generating a range that is too small. We predicted that low CRT participants would be more overconfident than high CRT participants and that this difference would be driven by a failure of meta-knowledge. We also expected that low CRT participants would be more susceptible to failures of knowledge, i.e. they would provide estimates further from the truth, though this was not our main interest. These predictions were confirmed.

In Study 4 we explored awareness of known unknowns in the context of the comparative ignorance effect (Fox & Tversky, 1995). In particular, we explored whether individuals with a greater tendency toward cognitive reflection would exhibit more stable assessments of their subjective knowledge and be less affected by spurious attempts to manipulate their subjective knowledge. Following Fox and Weber (2002), we asked participants whether they wanted to gamble on the inflation rate in Chile (or receive a certain return). One group of participants were provided economic data that in principle could be used to predict the inflation rate (GDP growth, interest rates, unemployment). Fox and Weber (2002) found that people were less willing to gamble when provided the objectively useful economic data, presumably because it made them feel subjectively less knowledgeable. Consistent with our hypothesis we find that this effect is significantly more pronounced among low CRT scorers than high CRT scorers.

In Study 5, we investigated whether we could nudge participants to more actively consider known unknowns when assessing 90% confidence intervals. We attempted to puncture the illusion of understanding for one group of participants by asking them to describe the causal mechanisms influencing outcomes of complex policies (e.g. cap-and-trade policy for curbing carbon emissions). In prior work (Fernbach, Rogers, Fox & Sloman, 2013) this manipulation was found to reduce confidence in the understanding of relevant policies, and pilot work indicated that this shaken confidence may extend beyond the focal topic. In Study 4 we found, consistent with our prediction, that this manipulation reduced overconfidence when assessing 90% confidence intervals on unrelated topics. We found that puncturing the illusion of understanding improved metacognitive knowledge (i.e., width of confidence intervals relative to their accuracy) rather than merely improving knowledge (i.e. accuracy of the center of confidence intervals). Also, the benefactors of increased metacognitive knowledge were higher CRT scorers, suggesting meta-knowledge improvements may be facilitated by a greater capacity for cognitive reflection.

In Study 6 we found that piercing the illusion of understanding (by inducing mechanistic explanations of household objects as in Rozenblit & Keil, 2002) eliminated the comparative ignorance effect for all participants, both high and low in CRT.

In summary, we find the failures in metacognitive knowledge are linked to increases in overconfidence, the illusion of understanding, and the comparative ignorance effect. We propose that increasing metacognitive awareness (e.g. by inducing detailed causal

explanation) will increase attention to known unknowns and can provide a useful tool to improving consumer judgment and choice.

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***Algorithm Aversion: Seeing (Superior) Algorithms Perform Makes People Reject Them***

Berkeley Dietvorst, University of Pennsylvania, USA\*

Joseph Simmons, University of Pennsylvania, USA

Cade Massey, University of Chicago, USA

Dawes (1979), Meehl (1954), and others have demonstrated that algorithmic forecasts are more accurate than human forecasts in many domains. And, of course, when algorithmic forecasts are better than human forecasts, people should prefer to rely on algorithms rather than humans to make forecasts. But do they?

There is anecdotal evidence suggesting that they do not, that forecasters prefer humans to superior algorithms. But the reasons for this are unknown. It is true that scholars have proposed many reasons for this preference, including: people are intolerant of error and imperfect algorithms will necessarily err (Dawes, 1979; Einhorn, 1986), forecasters believe that algorithms are incapable of learning (Dawes, 1979), people perceive that algorithms make dehumanizing simplifications about individuals (Dawes, 1979; Grove & Meehl, 1996), algorithms are unable to consider details of individual targets (Grove & Meehl, 1996), and forecasters believe that algorithms have an inability to comprehend qualitative data (Grove & Meehl, 1996). But it is not clear which, if any, of these explanations factor into forecasters' decisions to rely on human judges instead of algorithms. Further, these accounts do not clearly predict when forecasters will prefer to rely on human forecasts instead of algorithmic forecasts.

We hypothesized that people's distaste for statistical algorithms springs from seeing algorithms err. Following this hypothesis, we conducted four studies showing that people who are exposed to predictions (and consequently errors) from a statistical algorithm are less likely to defer to the algorithm, and they make less accurate predictions as a result.

In Study 1, we tasked participants in the Wharton Behavioral Lab with predicting the percentiles of actual MBA applicants in an MBA program based on their undergraduate degree, GMAT scores, interview quality, essay quality, work experience, average salary, and parents' education. Participants were randomly assigned to four conditions. Participants either: practiced making forecasts for 15 students with feedback on their accuracy, received estimates from a statistical model for 15 students with feedback on its accuracy, both of these, or neither of these. Then, participants decided whether to tether their monetary incentives to the model or themselves for 10 future predictions.

We found that participants who were exposed to the statistical model were less likely to tether their incentives to the model (24%) than participants who were not exposed to the model (64%) ( $p < .001$ ). Even participants who saw the model's estimates and were outperformed by the statistical model were less likely to rely on the model's estimates than their own estimates (31%) ( $p < .01$ ). Further, watching the model perform had a negative effect on performance, precisely because participants who saw the model perform were less likely to choose it. Finally, participants who witnessed the model's performance reported that they had less confidence in the model ( $p < .001$ ) and thought that the model performed worse relative to themselves ( $p < .001$ ) than participants who were not exposed to the statistical model.

Studies 2 and 3 demonstrated the robustness of these findings. In Study 2, we found that the results of Study 1 persist with different payment rules and a different ordering of the experimental procedures. In Study 3, we carried out a conceptual replication of Study 1

with a different prediction task (predicting the rank of individual U.S. states in terms of the number of airline passengers who departed from that state in 2011), a different population (Mturk participants), a different payment rule based on average absolute error, and a model that outperformed participants by a wider margin.

While Studies 1 through 3 established that participants preferred their own estimates to the model's after seeing the model err, these studies left open the possibility that participants would not have preferred a different human judge's estimates to the model's. Therefore, based on the evidence from studies 1 through 3, it is not clear if this effect is a reflection of overconfidence on the part of the participants, or a general tendency to disregard algorithms after seeing them err. We designed Study 4 to address this question and demonstrate that forecasters have a general tendency to pass over statistical algorithms after witnessing their imperfect performance. In Study 4, we used the same exact paradigm as Study 1; however, participants were yoked to a participant from Study 1, viewed the estimates that the past participant made instead of making their own estimates, and chose whether to have their incentives tethered to the past participant's estimates or the estimates produced by the statistical model. We found that participants were more likely to use the past participant's estimates after being exposed to estimates from the model, even when the model outperformed them. Study 4 confirms that this effect is not restricted to forecasters who have the option of using their own estimates, and demonstrates that participants in our studies generally favored human forecasters to algorithms that they had seen err.

In summation, we demonstrate that people who have been exposed to estimates from an imperfect statistical algorithm are less likely to use that algorithm for prediction tasks, even when it has outperformed their alternate method of prediction. Interestingly, we found that limiting participants' exposure to the statistical models in our studies increased participants' willingness to use the model and their subsequent performance. This work has important implications for professionals and individuals who have the opportunity to use algorithms for prediction, including forecasters predicting market demand for a product, recruiters making selection decisions, individuals choosing between investments, and consumers selecting products with input from recommendation systems.

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

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Nathan Novemsky, Yale University, USA

We propose that consumer choices will be highly dependent on mood after experiencing a gambling loss but more dependent on wealth level after experiencing a gambling win. Thus, a loser will purchase hedonic products in an attempt to make themselves feel better even if those products cost more. However, people will find it difficult to predict that they will make this decision based on their mood. Instead, they will predict that they will make this decision based on their decreased wealth. This misprediction will cause predictions across winners and losers to differ but the actual outcomes to remain the same since each undergoes different processes during choice.

Since mood affects our behavior, predicting when decisions will be made based on affect is vitally important yet research has documented many systematic failures of predictions of mood effects. For instance, 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 experience anticipated regret about something that is unlikely to happen. They may also make incorrect decisions based on what they think will happen rather than what will actually happen.

Research on gambling has suggested that pleasure is a primary gambling motivator (Cotte 1997; Martinez 1983). Unfortunately, losing induces negative affect. Therefore, people gamble because they think that the pleasure will outweigh the extent of the subsequent negative emotions (Andrade and Iyer 2009). However, their calculations are usually incorrect as they miscalculate their future negative emotions. This causes gambling choice to differ from those predicted before gambling (Andrade and Iyer 2009). While the size of the negative affect is one miscalculation, our research highlights a second one. In addition to miscalculating the extent of the negative mood, people miscalculate that their mood will affect their decision at all. In other words, our hypothesis is that people will predict that choices after 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 stop spending once they lose a certain amount of money, they will, instead, spend more money rather than less in the hopes of improving their mood.

This project consists of 9 studies that highlight the discrepancies and similarities between lay theories and actual post gambling choices. It also shows that negative affect mediates loser choices while feelings of subjective wealth mediate winner choices. It shows that losers want to buy hedonic products specifically rather than all available products. Finally, the paper concludes with a field study conducted at a food court of an actual casino showing that our hypotheses pan out outside the laboratory setting.

In all of our studies, we simulate 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 Studies 1-2, we show that gambling losers, as opposed to neutrals, are 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 (but not due to their mood). Winner buying preferences were correctly predicted but loser preferences were not.

Study 3 looks at process by manipulating mood directly by showing participants either neutral IAPS photographs or positive affect IAPS photographs (Lang, Bradley, and Cuthbert 2008). In the loser condition, positive affect photographs serve to improve negative mood. As such, losers in the positive affect condition do not report greater willingness to buy truffles as much as winners do or even losers in the neutral photograph condition.

Study 4 looks at the process behind winner decisions. Subjective wealth was manipulated after the gamble by asking participants to recall small or large accounts (Morewedge, Holtzman, and Epley 2007) after the gamble. While loser 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 suggesting that both winners and neutrals make decisions based on subjective wealth and losers do not.

Studies 5 and 6 look at price/quality tradeoffs by asking participants to buy cheaper/low quality jokes as opposed to 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 could predict winner choices, they could not predict loser choices thinking that losers would buy the less expensive jokes because of their mood.

Study 7 seeks to rule out that losers experience the “what the hell effect?” (Cochran and Tesser 1996) and just want to buy anything available after they lose money. We find that that losers, as opposed to winners and neutrals, have a strong preference for hedonic over utilitarian spa massages. Study 8 shows that people predict the opposite – that losers should have a stronger preference for utilitarian products.

Finally, Study 9 involved a field study in a nearby casino where diners at a casino food court were questioned about their past gambling. Additionally, their dining preferences were recorded. Losers and winners ate unhealthier and higher calorie foods than neutrals thus corroborating Study 7.

Thus, overall, this research shows the prevalence of vice oriented businesses around casino establishments as well as how winners and losers make different types of decisions. The former bases their decisions based on their wealth level while the latter on their mood.

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## **6.2 Individual Papers: All About Memory: Structure, Antecedents, and Outcomes**

**Room: SANDINGHAM**

**Chair:** Noelle Nelson, University of Kansas, USA\*

### ***When do people round fractional prices? The role of analog and symbolic representations***

Tatiana Sokolova, HEC Paris, France\*

Manoj Thomas, Johnson Graduate School of Management, Cornell University, USA

Over the past decade consumer researchers interested in behavioral pricing have paid considerable attention to the systematic biases in numerical comparisons (e.g. Cheng & Monroe, 2013; Coulter & Coulter, 2007; Thomas & Morwitz, 2005). In this paper we focus on a well-documented bias in numerical cognition known as the left-digit effect (Manning & Sprott, 2009; Thomas & Morwitz, 2005). This effect manifests itself as individuals' tendency to anchor their judgments of numerical differences on left-most digits. Falling prey to the left-digit bias, people judge the difference between \$2.99 and \$4.00 to be considerably larger than that between \$3.00 and \$4.01 even though the differences are identical. Research indicates that the left-digit effect emerges not just in laboratory experiments, but also in real-world settings with non-trivial economic consequences (Bhattacharya, Holden, & Jacobsen, 2012; Lacetera, Sydnor, & Pope, 2011).

While its robustness and implications have been demonstrated in a variety of contexts, the mechanisms that underlie the left-digit effect remain unclear, with a number of explanations offered to date. Some researchers suggest that the bias is caused by automatic anchoring of price judgments on the left-digit differences with insufficient adjustment for the right digits (Thomas & Morwitz, 2005). Others posit that the effect emerges because consumers truncate prices to their left-most digits to minimize their cognitive effort (Bizer & Schindler, 2005; Brenner & Brenner, 1982). Finally, the effect could manifest itself because the cognitive complexity of multi-digit computations induces errors in multi-digit subtractions (Furst & Hitch, 2000). The above accounts have subtle differences, yet they all imply that consumers process fractional prices without rounding them. If people appropriately round the fractional numbers, their judgments should not be biased by the left-most digits. For example, left-to-right processing could make consumers overestimate the difference between 2.99 and 4.00 because the difference between the left-most digits (i.e., 4 and 2) is larger than the actual difference (1.01). However, rounding 2.99 to 3.00 would eliminate this estimation bias.

So, why are people reluctant to round fractional numbers despite the potentially high benefits it would bring? We posit that the mental representation of numbers in the working memory has a role to play in this rounding aversion. Numerical cognition research shows that a number can be represented in memory in its symbolic and its analog form (Dehaene, 1992). Symbolically represented numbers are stored in memory as digit sequences with a precise syntactic structure but do not convey any sense of magnitude. In contrast, analog representations, underlying judgments of physical size and signal intensity, enable people to associate numbers with large or

small magnitudes (Moyer & Landauer, 1967). We argue that symbolic representations, the dominant mode underlying cognitive arithmetic (Aschcraft, 1995; McCloskey, 1992), bias individuals against the rounding strategy. This happens because symbolic representations are based on precise visual encoding of multi-digit numbers and are likely to be incompatible with rounding which inevitably distorts the precise digital code.

We further propose that increased accessibility of analog representations, less compatible with fractional numbers, should increase rounding propensity. Unlike integers, fractions are underrepresented in our life and our brain simply lacks practice in converting them into mental magnitude representations (Cohen, 2010). Consequently, when analog representations are more accessible, people should be more prone to think in terms of whole numbers. Formally, we hypothesize that increasing the saliency of analog representations or reducing the saliency of symbolic representations makes people more likely to round fractional numbers. We refer to this as the representational saliency hypothesis.

We report three experiments designed to test the representational saliency hypothesis. Following prior research (Manning & Sprott, 2009; Thomas & Morwitz, 2005), we constructed 16 price pairs such that for half of the pairs, labeled as control pairs, the left-digit differences were indicative of the actual discount magnitudes (e.g. \$8.01 and \$7.00) and misleading for another half (e.g. \$8.00 and \$6.99). Thus, for the “control” pairs left-to-right processing, associated with symbolic number representations, was not going to bias the discount magnitude judgments, but was going to inflate them for the “misleading” pairs. Across all three studies participants had to make price difference judgments for both control and misleading price pairs presented in random order.

In the first study we introduced a picture-matching task in which people had to either match pictures based on their similarity of shape or based on their similarity of size. Research has shown that analog representations underpin a wide array of judgments including judgments of physical size (Lourenco & Longo, 2010). Thus, we expected that making such judgments should increase the relative saliency of analog representations in subsequent multi-digit computations. Consistent with our prediction, increasing the saliency of analog representations through the size-matching priming task increased the propensity to round fractional numbers during mental computations and reduced the left-digit effect (Experiment 1).

Similarly, reducing the relative saliency of symbolic representations through memory-based processing increased consumers’ propensity to round fractional numbers and thus reduced their tendency to anchor their discount judgments on left-digit differences (Experiment 2 and Experiment 3). In Experiment 2 we show that the left-digit effect was weaker when consumers were making price difference judgments without having prices visually present in front of them. In Experiment 3 we conceptually replicated the results obtained in Experiment 2 with a different set of price stimuli. Thus, memory-based processing also mitigated the left-digit effect.

The present set of experiments contributes to the consumer behavior literature by identifying novel moderators of the left-digit effect known to have important implications for consumers’ judgment and decision-making (e.g. Bhattacharya, et al., 2012; Thomas & Morwitz, 2005). This research also contributes to the broader literature on numerical cognition as it shows that the relative saliency of analog and symbolic representations of numbers can be influenced by contextual factors. Most important, this research supports the representational saliency hypothesis that the relative saliency of analog representations can influence everyday numerical judgments. Thus, it is the first paper to conceptualize and empirically test the interaction between the two systems of numerical cognition – the analog system and the symbolic system – in mental arithmetic.

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***What You Don’t Remember Can’t Bore You: Working Memory and Rate of Satiation***

Noelle Nelson, University of Kansas, USA\*

Satiation is an important aspect of consumption, from entertainment to eating. Marketers and consumers alike often look for ways to prolong enjoyment: marketers want repeat purchase and consumers want the most out of their purchase. For marketers, 'tiring' of products and experiences, or becoming satiated, is clearly an important problem. Becoming satiated leads to seeking out different products or experiences (Herrnstein and Prelec 1991; McAlister 1982), which, if a brand does not offer enough products in its own line, could lead to discontinued product use, brand switching, or lowered attitudes toward the product.

For marketers and academics alike, understanding the mechanism behind satiation is a vital first step in understanding the nature of satiation and its effects on consumer behavior. While previous research in consumer behavior has demonstrated the effects and moderators of satiation (Ratner, Kahn and Kahneman 1999; Redden 2008; Galak, Kruger and Lowenstein 2011), there is little understanding of why some people satiate more than others, and thus, how marketers can modify rates of satiation.

At times, satiation is largely physiological, such as when one eats a large meal and becomes, quite literally, full. However, experiences of stimuli varies, and so too does 'tiring' of them. Perceptions, rather than physiological cues, of what one has consumed in the past can affect levels of satiation. Redden and Galak (2013), for example, show that being able to easily retrieve instances of products people have consumed can change how much those same people enjoy and want to continue consuming the same product. These differences in satiation occur even if, objectively, people have consumed identical amounts of the same product, indicating that physiological satiation cannot have caused changes in satiety.

Because physiological cues do not always dictate the amount or rate of satiety that consumers experience, the stimuli itself need not be physically consumed (e.g., eating food). Consumers tire of goods that aren't ingested too (McSweeny and Swindell 1999). In fact, consumers satiate on virtually every stimulus when it is repeatedly consumed.

In this paper, we offer one mechanism, namely, working memory, and argue that variation in working memory capacity causes varying levels of satiation in several domains. Working memory capacity varies with individuals (Just and Carpenter 1992), but can also be affected by external interventions (Klingberg 2010). We show that rate of satiation is related to both chronic capacity, as well as capacity affected by our manipulations.

The satiation literature gives clues as to the link between satiety and working memory. For example, the elderly, who tend to have low working memory capacity (Cohen 1979; Wingfield et al. 1988), do not seem to tire of goods or experiences as quickly as consumers who are younger (Salthouse and Babcock 1991). Similarly, distractions and interruptions, which adversely affect memory (Edwards and Gromlund 1998), are able to slow rates of satiation (Nelson and Meyvis 2008). People who have memory deficits, such as those suffering from amnesia, do not satiate as quickly as those without the same deficits (Rozin et al. 1998). As mentioned, satiation on some goods and experiences is largely psychological or perceptual; therefore, we expect that one's memory about those goods and experiences should affect the rate of satiation. Our hypotheses state that not only are one's capacity and rate of satiation related, but that capacity, whether chronic or influenced, causes the rate of satiation.

By establishing the relationship between memory and satiation, we contribute to the literature in three ways. First, we provide insight into the mechanism behind satiation. Though this link has been speculated (Galak, Redden and Kruger 2009; Higgs, Robinson and Lee 2012), we show direct evidence that people's memory, specifically working memory capacity, for a variety of stimuli drives the respective rate of satiation for that stimuli. Second, we demonstrate that a chronic individual difference, working memory capacity, is related to an important aspect of consumption: being satiated on products or experiences. Third, our findings help explain the effects that distractions and age have had on satiation in past research.

In our initial study, we show that a classic measure of working memory, the n-back task, and rate of satiation are indeed related. We find our expected significant overall interaction between capacity and trial ( $F(1, 161) = 4.26, p = .04$ ). While participants at varying levels of working memory capacity do not differ in their initial enjoyment of art pictures ( $\beta = -1.37, p > .80$ ), participants who perform relatively well on the n-back (which measures working memory both in terms of storage and processing abilities) produce a steeper slope ( $\beta = -10.87, p < .001$ ) than their low performance counterparts ( $\beta = -8.48, p < .001$ ) on their enjoyment of the art over time ( $t(1,161) = 2.92, p < .01$ ).

Three other studies find similar results for varying types of experiences and measures of working memory. Study 2 extends our findings to another accepted measure of working memory; we measured capacity by retention of number and letter strings. Study 3 provides yet another, novel, measure of memory; specifically, participants' working memory capacity is measured by performance in the game 'Simon', in which players are shown and then must repeat a sequence of colored lights arranged in a circle. In study 3 we also generalize the hypothesized relationship by demonstrating the effects with a different set of satiety stimuli, this time with music clips. Finally, in study 4 we manipulate working memory capacity by either increasing it through a memory aid or decreasing it through cognitive load. We then show that the resulting changes in working memory cause differences in rates of satiation; higher rates ensue when capacity is enhanced and slower satiation results from capacity under load.

In sum, four studies support our hypothesis that working memory capacity, whether chronic or manipulated, causes variation in rates of satiation. This research provides some of the first that suggests a causal factor in variation in rates of satiation and, in so doing, gives insight into how marketers might be able to affect the rate of satiation.

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### ***Synonyms, Not So Similar: How Consumers Perceive and Respond to Structural Properties in Memory Networks***

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Memory activations, generated by advertising slogans, can provide a temporary boost to the perceived importance or desirability of a given product (van Osselaer and Janiszewski 2012). For instance, fluctuations in memory activations have been shown to influence goal pursuit (Bargh et al. 2001), the valuation of goal facilitating means (Forster, Liberman, and Friedman 2007), and product choice (Sela and Shiv 2009). However, memories are not activated in isolation. Rather, an entire network of interrelated concepts is activated along with the focal memory through various learned associations (Balota and Lorch 1986). Despite a great deal of knowledge detailing the phenomena of memory spreading activations (Anderson 1983), research has primarily focused on who is connected to whom (Krishnan 1996), rather than how concepts are connected to their surrounding whole networks. This research identifies consumers' responses to the activation of certain network patterns surrounding a focal memory node (an individual concept), rather than the activation of specific associations. For brevity, two of four studies are reported.

### **Network Theory**

Few things exist in isolation. Rather, most are members of a larger system of interconnected relationships (Borgatti and Foster 2003). For instance, people enjoy certain opportunities based on their patterns of relationships with others, such as influence or access to novel information (Brass 2011). Memory nodes may also possess a similar type of associative capital, generated by their pattern of connections with other concepts in memory. As such, the activation of network structures can provide consumers with evaluative information that operates outside of explicit conscious awareness, similar to primes.

For example, the words friend and partner may activate similar associative concepts in memory. Yet, how each word is connected to its associative connections may differ, producing a distinct consumer response. For instance, friend may serve as a critical mediator to others concepts in memory, whereas the concepts directly connected to partner may be more peripheral. As such, friend may be located on a semantic super highway, while partner rests in a quiet cul-de-sac. Thus, friend enjoys a relatively high betweenness centrality (i.e., providing mediated access to other concepts in memory via the shortest path). That is, friend is more centrally connected to different or distinct parts of its surrounding network than partner is. Through semantic spreading (Anderson 1983), consumers may become non-consciously aware of a node's relative location in its associative network, affecting decision making. For instance, nodes with greater betweenness centrality values may generate perceptions of prestige and power derived from being in the middle of things (Van Den Bulte and Wuyts 2007). As such, the structural network patterns surrounding the word friend may activate a sense of desirability or importance, influencing consumers' attitude evaluations of products that utilize the word in advertising.

H1: As betweenness centrality of a word increases, consumer behavioral intentions increase.

H2: Product attitude mediates the relationship between betweenness centrality and behavioral intentions.

### **Experiment 1**

This study examines how the betweenness centrality of a focal memory node influences consumers' willingness to pay (WTP) and word of mouth intentions (WOM). Forty-six respondents evaluated a health insurance print advertisement with the word friend prominently displayed in its slogan. We measured WTP ("It would be worth paying a little more to use this product, relative to the other brands that are available") and WOM ("I am likely to tell other people about this product") on a 7-point Likert scale.

Respondents then constructed a memory network for friend, including direct and indirect ties following standard procedures (John et al. 2006). Qualitative pre-tests and a word association database (Nelson, McEvoy, and Schreiber 2004) were used to develop the word bank. Respondent memory networks were analyzed in terms of strong ties via UCINET (Borgatti, Everett, and Freeman 2002).

### **Results**

Regression results indicate that focal word betweenness centrality significantly predicted WTP ( $\beta$  .31;  $t = 2.14$ ,  $p < .05$ ) and WOM intentions ( $\beta$  .38;  $t = 2.73$ ,  $p < .01$ ).

### **Experiment 2**

This experiment explores the unique variance focal word betweenness centrality provides to the prediction of key behavioral intentions, controlling for consumers' direct attitudinal rating of the focal word. Additionally, the mediating role of product attitude is identified. Two hundred thirty-two respondents participated in a 2 factor (focal word: friend or partner) between subjects design, evaluating an online storage advertisement with the condition word prominently featured in its slogan (pre-test indicated betweenness centralities for friend ( $M = 286$ ) and partner ( $M = 28$ ) differed significantly ( $t = 9.28$ ,  $p < .001$ ). First, WTP was measured as an open-ended response ("How much would you be willing to pay per month for each additional 25 gigs of storage?") and WOM via a four-item index ( $\alpha = .91$ ) (example, "I am likely to spread positive word-of-mouth about this product") on a 7-point Likert scale. Next, product attitude was measured via a four-item index ( $\alpha = .92$ ) (example, "I like this product very much") on a 7-point Likert scale. Finally, respondents constructed a memory network following the same procedure in experiment one and focal word attitude was measured ("What is your initial 'gut reaction' to how negative or positive the words listed below seem to you?") on a 7-point bipolar scale.

### **Results**

A hierarchical regression indicates that focal word betweenness centrality added significant explained variance to predict WTP  $\Delta R^2 = .017$ , ( $\beta$  .14;  $t = 2.03$ ,  $p < .05$ ) and WOM  $\Delta R^2 = .025$ , ( $\beta$  .16;  $t = 2.46$ ,  $p < .05$ ), beyond focal word attitude. Product attitude fully

mediates (Preacher and Hayes 2008) the relationship between focal word betweenness centrality, WTP (indirect effect = .55, SE = .31, 95% CI = .05 to 1.32), and WOM (indirect effect = .18, SE = .06, 95% CI = .07 to .29), with non-significant direct effects.

## Discussion

These results suggest that focal word betweenness centrality influences consumer responses beyond the simple attitudinal rating of words used in advertising. Without an understanding of how concepts are connected to their surrounding networks, organizations miss important information regarding the value and desirability of certain advertising word associations to generate favorable consumer responses.

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### ***Remember the Bad? Goal Relevance, Valence, and the Encoding of Information in Consumer Decisions***

Michael Hair, Georgia Tech, USA\*

Samuel Bond, Georgia Tech, USA

Consumer decisions typically involve the retrieval of information that is stored in memory (Bettman, 1979; Lynch Jr & Srull, 1982), and this topic has received considerable attention in consumer research. It is now commonly accepted that memory formation and retrieval are goal-directed, such that memory is stronger for information that passes a standard of goal-relevance (Ehrlich & Johnson-Laird, 1982; van den Broek, 1990; Zeithaml, 1988).

The present research focuses on the manner in which encoding of product attribute information is affected by consumption goals—i.e., benefits that the consumer seeks. Our most straightforward prediction is that product information is more likely to be encoded when it can be linked to an active consumption goal. Indeed, prior research suggests that goal-irrelevant information is actively ignored (Huffman & Houston, 1993; Tipper, 1985; Tipper, Weaver, & Houghton, 1994). Thus, goal activation should shift attention away from attributes unrelated to active goals, which are then less likely to be encoded.

Importantly, we suggest that the effect of consumption-goal activation on memory depends on two additional factors: information valence and goal framing. First, negative information has been shown to receive more weight (and be more diagnostic) than positive information across a variety of judgment tasks (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Fiske, 1980; Rozin & Royzman, 2001). Based on the arguments above, however, we predict that any advantage of negative information will be strongest when it is relevant to active consumption goals. Second, the framing of goals as approach-related or avoidance-related is known to impact attention and elaboration for relevant information. Some prior evidence suggests an asymmetry whereby approach goals lead to greater encoding of positive information and avoidance goals lead to greater encoding of negative information (Neumann & Strack, 2000); however, the opposite has been shown for information that is especially vivid (Johnston & Hawley, 1994). Therefore, it is important but unclear how the framing of consumption goals affects the encoding of valenced information.

Our first study examined the influence of consumption goal activation and information valence on memory in a hypothetical decision task: choosing among automobiles. Sixty online participants took part in exchange for payment. In the goal-activation phase, subjects examined a pre-determined ‘master list’ of 12 possible approach goals for selecting an automobile (e.g., “...that will help me save money on gas”), and designated those they deemed personally relevant. Subjects then viewed information about four different automobiles (A, B, C, and D), for 45 seconds each. The information included information on 12 attributes, each directly related to one goal on the master list (e.g., “mileage”). For each automobile, positive and negative attributes were approximately balanced (5-7

of each). Immediately after viewing the descriptions, participants completed a multiple-choice test of their memory that included one question for every attribute of every automobile (i.e., 48 questions total).

Prior to analysis, test items were coded for their valence, and items for each participant were divided into goal-relevant and goal-irrelevant, based on whether they mapped to a goal that was identified by that participant. The percentage of correct answers for each of the four subgroups was calculated, converted via arcsin transformation, and submitted to repeated-measures ANOVA. Consistent with prior research, results revealed significant main effects of valence and goal relevance: subjects remembered negative information significantly better than positive information ( $t=-3.56$ ,  $p=.001$ ), and they remembered goal-relevant information significantly better than goal-irrelevant information ( $t=2.278$ ,  $p=.002$ ). More importantly, these effects were qualified by a significant valence\*relevance interaction ( $F_{1,59}=11.679$ ,  $p=.001$ ). Consistent with our predictions, pairwise comparisons revealed that memory for negative information was superior among goal-relevant attributes ( $t=-3.963$ ,  $p<.001$ ), but this effect of valence did not obtain for goal-irrelevant attributes ( $t=-.60$ ,  $p=.546$ ).

Our second study was designed both to replicate the findings of the first study and to specifically examine the effects of goal framing. Ninety-four subjects participated online in exchange for payment. The procedure involved a hypothetical automobile decision similar to the prior study, and included similar manipulations of valence and goal relevance. In addition, goal framing was manipulated as a 2-level, between-subjects factor. In the approach conditions, the 12 goals on the 'master list' were framed in terms of achieving positive outcomes (e.g., "...helps me save money on repairs"); for those in the avoidance condition, the 12 goals on the master list were framed in terms of preventing negative outcomes (e.g., "...helps me avoid spending money on repairs"). As before, subjects identified their consumption goals from the master list, then viewed attribute information regarding four different automobiles, and finally completed a memory test.

Prior to the analysis, test item responses were again coded based on their valence and goal relevance, and the percentage correct in each category was converted via arcsin transformation. Mixed ANOVA revealed main effects for valence and relevance consistent with the prior study, such that negative attributes were remembered significantly better than positive attributes ( $t=-3.01$ ,  $p=.003$ ), and goal-relevant attributes were remembered significantly better than goal-irrelevant attributes ( $t=2.21$ ,  $p=.029$ ). More important, these effects were again qualified by a valence\*relevance interaction ( $F_{1,89}=5.405$ ,  $p=.022$ ). Consistent with our framework, pairwise comparisons revealed better memory for negative information among goal-relevant attributes ( $t=-4.421$ ,  $p<.001$ ) than among goal-irrelevant attributes ( $t=-.598$ ,  $p=.551$ ). Moreover, analyses did not reveal any reliable effects of goal framing on memory performance: the overall difference between approach and avoidance groups was not significant ( $F_{1,92}=.792$ ,  $p=.376$ ), nor were any interactions involving the framing variable.

In contrast to prior work addressing specific variables in isolation, our findings suggest that the encoding of information during consumer choices depends jointly on the valence of that information and its relevance to active consumption goals. In particular, memory for negative information appears to be heightened primarily when that information is relevant to an active goal. Representation of goals as approach or avoidance produced no reliable effect on the encoding of information in our studies. Beyond its theoretical contribution to current understanding of consumer information processing, our research offers straightforward implications regarding the presentation of brand information via advertising, packaging, communications, etc. In particular, it is important for marketers to understand what goals are active when consumers encounter such information to consumers, because negative information about those goals will be remembered and influential on behavior.

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## 6.3 Symposium: Affect Regulation: Persuasion, Daily Life, and the Effects of Changing Feelings

**Room:** WINDSOR

**Chair:** Nicole Coleman, University of Pittsburgh, USA

### *Not Always the Best Medicine: Frequent Smiling Can Reduce Wellbeing*

Aparna Labroo, Northwestern University, USA

Anirban Mukhopadhyay, Hong Kong University of Science and Technology

Ping Dong, University of Toronto, Canada\*

Most people want and try to regulate their mood and be happy (Gross, 1998; Thayer, Newman, & McClain, 1994), as happiness provides many benefits—it improves thinking, boosts immune health, extends one’s lifespan, improves personal relationships, and helps people cope with negativity (Aspinwall, 1998; Baron, 1990; Barsade, 2002; Clark & Isen, 1982; Fredrickson, 2001; Lyubomirsky, King, & Diener, 2005). Extant literature on mood regulation suggests that a smile is a simple yet powerful way to increase people’s happiness and subjective wellbeing—the more people smile, the happier they will be. Indeed, smiling can increase pain tolerance (Isen & Labroo, 2003), positive attitudes and enjoyment (Harvas et al., 2007; Strack, Martin, & Stepper, 1998), and eventually enhance happiness and wellbeing (Tugade & Fredrickson, 2007).

However, research suggesting smiling increases happiness assumes a single, specified association between emotion and behavior. It suggests smiling intensifies happiness because the act of smiling serves as a feedback loop signaling that one is happy (Koriat, Ma’ayan, & Nussinson, 2006). Some researchers, however, have questioned the existence of such singular links between behavior and emotion (Horstmann, 2003; Isen, 1984; Robinson, 1998), and instead proposed that contexts, and the kinds of thoughts people are having in any moment, determine the emotion-behavior link. For example, recent research regarding the effects of mood on affect regulation (Labroo & Mukhopadhyay, 2009) suggests that people’s lay theory of emotion transience affects mood regulation such that if people believe that emotion is fleeting, those feeling happy (vs. unhappy) engage in affect regulation because they infer that they need to take actions to maintain their positive feelings. In contrast, if they believe that emotion is lasting, those feeling unhappy (vs. happy) engage in affect regulation because they infer that the negative feelings will persist unless they take actions to repair them. Following this logic, in this research, we consider whether—as well as when and why—smiling can sometimes make a person less happy, and backfire on one’s intention to regulate their mood. Specifically, we propose that people’s lay theory of smiling—whether they are more likely to think of smiling as reactive (i.e., a mood-expression mechanism) or proactive (i.e., a mood-regulation attempt)—can moderate the effect of frequent smiling on subjective happiness.

Our key proposition is that based on accessible naïve theory, smiling may signal to the self either that one must already be happy (smiling as reactive mood-expression) because one smiles frequently, or that one must not be happy (smiling as proactive mood-regulation), otherwise one would not feel the need to smile frequently. Therefore, we suggest that frequent smiling is likely to increase happiness when one’s accessible theory is that smiling is reactive, but reduce happiness when one’s accessible theory is that smiling is proactive.

Experiment 1 tested this basic intuition. Participants (N = 61) first reported how frequently they smile (1 = very infrequently, 7 = very frequently), and then were randomly assigned to one of two smile theory conditions, in which they were instructed to either briefly explain why people might frequently smile because they feel good (reactive smile condition) or why people frequently smile because they are trying to feel good (proactive smile condition). Finally, to assess happiness level, we asked participants to complete a second survey assessing wellbeing using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). As expected, results revealed that among participants who interpreted smiling as reactive, frequent rather than infrequent smiling resulted in higher reported happiness.

However, among participants who interpreted smiling as proactive, infrequent rather than frequent smiling resulted in higher reported happiness.

Experiment 2 (N = 63) intended to provide converging evidence by instead manipulating frequency of actual smiling and measuring smile theory. We first measured participants' lay theory of smiling as relatively proactive or reactive (1 = people smile to feel good; 7 = people smile when they feel good), among several filler questions. Next, participants proceeded to an unrelated "picture evaluation study," in which we manipulated smiling frequency. In the infrequent smiling condition, participants were presented with one funny picture, while in the frequent smiling condition participants viewed ten funny pictures. Participants indicated their liking and the extent to which the picture made them smile right after they viewed each picture. Following an extended filler task, we assessed participants' wellbeing using the same scale as in Experiment 1. Similar to Experiment 1, among participants who believe smiling is more reactive, wellbeing was higher after they had smiled frequently (ten times) rather than infrequently (one time). The reverse was true among participants who believe smiling is more proactive—frequent smiling resulted in less wellbeing than infrequent smiling.

In Experiment 3 (N = 85), we manipulated both lay theory of smile (by asking participants to recall a past experience where they smiled either because they felt happy or because they wanted to feel happy) and frequency of smile (by asking participants to engage in simple facial muscular exercises—to either place a pen gently between their front teeth without it touching their lips for the smiling condition or to put the pen gently between their lips and to puff their cheeks for the no-smiling condition) in two unrelated studies. As in previous experiments, after completing a short filler task, participants responded to the same SWLS scale to assess their wellbeing. The results replicated those of the first two experiments and supported our position that frequent smiling can backfire and result in less happiness among people primed to consider that smiling is the cause rather than consequence of feeling good.

As a set, these studies suggest that smiling cannot always increase happiness. Rather, happiness is in the mind, and sometimes smiling more—in an effort to mood-regulate—can instead make a person less happy. Indeed smiling serves as affective feedback, but whether the feedback is interpreted as implying one is more or less happy depends on the naïve theories one applies to interpreting the experience.

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### ***Rise and Shine!: Does the Mood in Which You Wake Up Color Your Mood for the Rest of the Day?***

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Findings from prior research suggest that mood states can be "sticky," that is, there is a tendency for mood-states to exhibit inertia. The reason for this is that mood states bring to mind thoughts, goals, and attitudes that are mood-congruent (e.g., Bower 1981; Isen et al. 1978; Forgas 1995), which, in turn, help sustain the mood-state. Thus, for instance, those in a positive mood tend to bring to mind positive memories and evaluations of events and objects in one's life (Isen et al. 1978), resulting in a self-reinforcing "cognitive loop" that propagates the current mood. Other findings suggest a separate reason for why mood-states exhibit inertia: those in a positive/negative mood invite interactions with people in a similar mood; thus, "mood reciprocity" (Frederickson 2003) is another reason that makes mood-states sticky.

The inertia associated with mood-states appears particularly pronounced for negative states; as several findings show (e.g., Nolen-Hoeksema and Morrow 1991), those in a negative (vs. positive) mood state tend to be especially prone to ruminating about negative (vs. positive) thoughts, and perhaps to inviting negative reactions from others as well, thereby producing a vicious cycle of negativity.

Based on the findings just reviewed, we expect that the mood state in which one wakes up will likely pervade into influencing the mood state for the rest of the day. Thus, compared to a person who wakes up feeling neutral, one who wakes up in a positive mood is likely to feel positive for the rest of the day. Further, based on the findings that negative moods are likely to be especially sticky, we expect the effect (which we will refer to as the “mood overflow” effect) to be particularly pronounced for negative (vs. positive) moods, such that those who wake up in a negative (vs. neutral) mood are likely to feel significantly more negative for the rest of the day.

Note that our predicted findings, if obtained, would be surprising for the following reason: presumably, the most significant determinants of mood-states during any given day are the set of mood-relevant events that transpire that day. Assuming that these mood-relevant events—such as, being stuck in traffic, receiving good news on the work front, behavior of one’s kids, etc.—are likely to be unrelated to the mood in which one wakes up, it would seem that the mood-state in which one wakes up should have little influence on the mood for the rest of the day. As such, the predictions we make, if confirmed, would be counter-intuitive.

Overview of Studies: We have conducted one study and plan to conduct two others in the near future. In the study we have conducted, participants (n = 34) were asked to maintain a journal for a period of 14 consecutive days. Participants were instructed to write in their journal two times each day: once soon after they woke up and once at a later point in the day. To mask the true purpose of the study, participants were informed that the purpose of the study was to get a better understanding of the nature and content of people’s thoughts.

Participants were instructed to write down any and all thoughts that they have as soon as they woke up. Following that, they were asked to report their mood state using a 5-point “emoticon scale” (see below), which ranged from “very negative” to “very positive.”



Consistent with our predictions, we found a significant mood overflow effect. Specifically, the mood-state in which participants woke up had a significant effect on the mood-state at the later point in the day,  $\beta = 0.24$ ,  $t = 3.57$ ,  $p < .001$ . To rule out the possibility that this high regression coefficient was due to the participants’ moods being more or less constant across the period of the study, we conducted a follow-up analysis in which participants’ mood states on a particular day were regressed against their mood states on another random day. Results revealed a non-significant correlation between any two randomly selected mood-states in the 14-day period ( $\beta = 0.09$ ,  $t = 1.34$ ,  $p > .18$ ), indicating that the mood-overflow effect isn’t an artifact of consistency in mood across the period of the study.

Follow-up analyses also indicated some support for the prediction that negative mood states are stickier than positive ones; specifically, among those who reported a negative mood after waking up, the correlation with a 2nd mood report was higher ( $\beta = 1.13$ ) than that among those who reported a positive mood after waking up ( $\beta = 0.07$ ), and this difference in correlations was significant,  $t = 2.22$ ,  $p < .05$ .

We propose to conduct two other studies to further explore the mood-overflow effect. In one, we will examine whether the mood overflow effect is mediated by the quality of interactions that people have with others during the course of the day. In this study,

participants who have been asked to maintain a record of their mood states will be contacted on one or more random days during the period of the study, and asked to comply with a request made by a research assistant unfamiliar with the hypotheses. The assistant will record their perception of the participants' friendliness and overall attitude. We expect that participants who have woken up in a more positive (vs. negative) mood will be rated more positively by the assistant. Another study will explore whether an intervention—e.g., watching a movie or exercising—that improves (worsens) the mood state at the beginning of the day has a beneficial (detrimental) impact on the mood state for the rest of the day.

Summary: The expected pattern of results across the two future studies, in conjunction with results from the study already conducted, will provide strong support for the mood overflow effect, the mechanisms (“cognitive loop” and “mood reciprocity”) that mediate it, and finally, will provide a useful way by which people can take advantage of it (by using interventions that elevate their mood soon after they wake up).

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### ***Preventing One Disease, Promoting Another? Anxiety-Driven Effects of Health Message Processing on Subsequent Self-Control***

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Health messages often attract consumers' attention by highlighting a high risk of disease. Recognizing the widespread use of high-risk messages, substantial research in marketing and health psychology has examined how communicating health risks actually influences consumer behavior related to health. Most of this research, however, examines the effects of high health risk perceptions about a particular disease (e.g., hepatitis) on behaviors related to that disease (e.g., getting tested for hepatitis). Very little research has explored how those same health risk perceptions can influence health behaviors unrelated to the focal disease (e.g., getting a dental checkup).

In one investigation of this topic, Agrawal and Wan (2009) found that high risk health messages deplete regulatory resources, subsequently reducing self-control in health domains unrelated to the high risk message. Furthermore, they demonstrated a cognitive process underlying this depletion effect—high-risk messages decreased self-control for participants at lower construal levels, but not for those at higher construal levels. The present research extends these findings by exploring an emotional rather than cognitive process driving the effects of high-risk health messages and by examining the consequences for health behaviors both related and unrelated to the perceived risk. Drawing on research on health risk perceptions and emotions (Menon, Block, and Ramanathan 2002), we propose that high-risk messages cause anxiety, which is beneficial in related domains but detrimental in unrelated health domains.

People generally cope with anxiety in one of two ways—reducing the cognitive uncertainty that characterizes the experience or reducing the intensity of the negative emotion. When people are unable to cope via the cognitive route, they defer to the emotional route (Lazarus and Folkman 1984). When facing a potential health risk, engaging in related healthy behaviors (e.g., getting tested for the perceived risk) reduces uncertainty. Thus, anxiety due to high perceived health risk should increase engagement in related healthy behaviors. However, unrelated healthy behaviors provide no means of reducing uncertainty, thereby necessitating emotion-focused coping, which is likely to deplete regulatory resources and undermine self-control (Muraven and Baumeister 2000). Thus, anxiety due to a perceived health risk should decrease engagement in unrelated healthy behaviors.

Three studies test this basic hypothesis and investigate the affective process. In each study we manipulated self-risk perceptions using health messages and then measured self-control for related healthy behaviors, unrelated healthy behaviors, or both. In study 1,

secondhand smokers and non-secondhand smokers viewed an advertisement about the consequences of secondhand smoking and then were provided the opportunity to eat cheese sticks (an unrelated behavior). As expected, secondhand smokers perceived greater risk and felt more anxiety than non-secondhand smokers after viewing the advertisement. More importantly, secondhand smokers ( $M = 4.91$ ) ate more cheese sticks than non-secondhand smokers ( $M = 2.73$ ,  $F(1, 67) = 14.11$ ,  $p < .001$ ), and this effect was mediated by anxiety.

Study 2 examined whether the same anxiety that hinders self-control in unrelated domains can help self-control in related domains. Accordingly, we presented participants with a message conveying high or low risk of contracting avian flu, a manipulation adapted from past research (Menon et al. 2002), then measured self-risk perceptions, anxiety, and either intentions to get tested for avian flu or intentions to get a dental checkup. Replicating study 1's findings, participants who read the high-risk (vs. low-risk) message perceived greater risk of contracting avian flu and experienced more anxiety. Furthermore, high-risk participants reported greater intentions of getting tested for avian flu than low-risk participants ( $M = 5.00$  vs.  $3.73$ ,  $F(1, 26) = 6.19$ ,  $p < .05$ ), but lower intentions of getting a dental checkup ( $M = 3.62$  vs.  $5.14$ ,  $F(1, 25) = 4.54$ ,  $p < .05$ ). Importantly, anxiety mediated both the positive effect of high-risk messages on flu test intentions and the negative effect on dental checkup intentions.

Finally, study 3 provided further evidence of the anxiety-driven process by also manipulating cognitive reappraisal—a strategy known to reduce anxiety—after administering the health risk manipulation. Insofar as anxiety underlies the effects of high risk messages, eliminating anxiety should also eliminate these effects. Research on emotion regulation suggests that individuals can reduce the experiential components of negative emotions by reappraising situation in ways that alters their emotional impact (Gross 1998). Accordingly, we manipulated self-risk perception for meningitis using a similar manipulation to study 2 and instructed half of the participants to adopt the perspective of a medical professional while reading about the disease. We then gave participants the opportunity to eat chocolate candy (an unrelated health behavior). Consistent with our hypothesis, health message and reappraisal strategy interacted ( $F(1, 60) = 4.41$ ,  $p = .05$ ), such that in the control condition high-risk participants ate more chocolates than low-risk participants ( $M = 1.19$  vs.  $.59$ ,  $F(1, 60) = 11.61$ ,  $p = .001$ , but this difference did not emerge in the reappraisal condition ( $M = .71$  vs.  $.65$ ,  $F < 1$ ). Moreover, anxiety mediated this interactive effect on chocolate consumption.

Across three studies, we demonstrate that coping with anxiety from one perceived health risk can ironically lower intentions to engage in unrelated healthy behaviors, ultimately placing consumers at greater risk for other health conditions. Our research enriches the literatures on health communications, self-control, and anxiety by exploring the affect-driven effects of high-risk messages on behaviors both related and unrelated to the focal health risk.

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### ***Hardening My Heart: Regulating Emotions to Resist Sad Appeals***

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Sad appeals can enhance feelings of sympathy for needy individuals thereby increasing helping behavior (Bagozzi and Moore 1994; Fisher, Vandenbosch, and Antia 2008; Small and Verrochi 2009), suggesting that when eliciting prosocial behavior, marketers should produce sadness in consumers. The Persuasion Knowledge Model (PKM) depicts consumers as active interpreters of influence attempts, deploying resources to perceive, decode, and cope with persuasion (Friestad and Wright 1994). A growing body of research has examined the implications of consumers' persuasion knowledge (PK). We examine the impact of PK on responses to sad prosocial

appeals, proposing that when PK is active, consumers respond to sad appeals by engaging in emotion regulation processes (Gross 1998), using cognitive reappraisal to reinterpret the appeals, hardening their hearts and reducing sympathy.

Study 1 examines whether activating PK will trigger emotion regulation, mitigating sympathetic responses to a sad appeal, using a 2 persuasion knowledge (active, not) by 3 appeal (sad, happy, neutral) design. Participants read an article to activate (or not) PK (Campbell and Kirmani 2000), then viewed an appeal for a charity, within which emotion was manipulated via the victim's facial expression (Small and Verrochi 2009). Dependent measures were reappraisal and sympathy. A significant interaction of PK and emotion on sympathy emerged ( $F(2, 184) = 6.220, p < .005$ ). In the PK inactive conditions, previous research replicated; the sad appeal generated greater sympathy than happy ( $F(1, 184) = 6.771, p < .01$ ) or neutral ( $F(1, 184) = 11.183, p < .001$ ). However, when PK was accessible, there were no significant differences in sympathy following exposure to the sad, happy, or neutral appeals, eliminating the sadness benefit. Specifically, sympathy after viewing a sad appeal was significantly reduced when PK was active compared to inactive ( $F(1, 184) = 7.614, p < .01$ ). Additionally, moderated mediation of sympathy through cognitive reappraisal was found, such that when PK was active, participants who viewed the sad appeal engaged in reappraisal, which then reduced their sympathy ( $ab = -.4920, 95\% \text{ CI } -.8603, -.2639$ ).

Study 2 used the same design and manipulations. Print advertisements were privately given to lab participants at the end of the lab session, along with their payment (\$12); one \$5 bill, six \$1s, and four quarters. Participants could donate any portion of their payment to the charity in the ad. They were instructed to seal the envelope and give it to the experimenter upon exiting, even if not donating (Small and Verrochi 2009). A significant, negative, interaction between sadness and PK accessibility emerged on donation choice ( $b = -2.701, \text{Wald } \chi^2(1) = 9.549, p = .002$ ); when PK was accessible (vs. inaccessible); participants who saw a sad appeal were less likely to make a donation. A similar interaction was found on donation amount ( $F(2, 168) = 3.861, p = .051$ ); in the sad condition, when PK was active they donated significantly less than PK was inactive ( $F(1, 168) = 9.194, p < .005$ ).

These studies demonstrate the impact of active persuasion knowledge on cognitive reappraisal, feelings of sadness, sympathy and donation behavior. However, they use overt manipulations to activate PK. Study 3 examines the intensity of the sadness depicted in the appeal on perceptions of manipulative intent and emotion regulation, and attitudes. Like self-interested intentions questions (Williams, Fitzsimons and Block 2004), or delayed advertiser identification (Campbell 1995), we expect intensely sad appeals will provoke attention to the emotion of the appeal as a potentially manipulative tactic.

Study 3 was a 3 appeal (neutral, mild sad, strong sad) by 2 PK accessibility (high, low) design, with cognitive reappraisal and attitude toward the ad (Aad) as dependent measures. Thirty-second commercials for the ASPCA were created, combining information, music, and photos. Each contained facts about animal abuse and euthanasia. Photographs portrayed animals, but the mild and strong sad pictures showed abused and caged animals; neutral photographs were animals at rest. A significant interaction between PK accessibility and emotion appeal was found ( $F(2, 157) = 7.098, p < .001$ ), driven by the mild sad appeal, where there was a significant impact of PK accessibility on participants' Aad. When PK was inactive they had a significantly more positive attitude toward the mild sad commercial than when PK was active ( $F(1, 157) = 24.870, p < .001$ ). There was no difference in Aad for either the neutral or strong sad advertisements, regardless of PK activation ( $ps > .6$ ). Aad was highest for the mild sad appeal when PK was inactive, compared to either the neutral ( $F(1, 157) = 6.175, p = .014$ ) or strong sad appeals ( $F(1, 157) = 11.246, p < .001$ ) replicating the sadness benefit, however, when PK was active, there were no significant differences in Aad across the three appeals. Regardless of the overt PK activation, attitudes toward the strong sad appeal were consistently low, implying that the mere strength of sadness can be a cue for manipulative inferences.

Additionally, moderated mediation was found; the interaction effect of PK and emotion pass through cognitive reappraisal to impact Aad. Importantly, this higher-order interaction was only significant in the mild sad condition ( $ab = -2.8713, 95\% \text{ CI } -8.0076 \text{ to } -.3083$ ), but not in the strong sad condition ( $ab = 2.033, 95\% \text{ CI } -.0234 \text{ to } 7.1069$ ). When viewing the mild sad appeal, participants

with active PK engaged in cognitive reappraisal which then affected Aad. However, when viewing the strong sad appeal, moderated mediation did not occur; cognitive reappraisal occurred regardless of PK activation. This result suggests that the intense sadness within an appeal can trigger inferences of manipulative intent and cognitive reappraisal, reducing the prosocial benefits of sad appeals.

Despite the vast amount of research linking emotions and persuasion, there is little examining emotions within the context of persuasion knowledge (Kirmani and Campbell 2008). We examine when and how consumers deploy persuasion knowledge and subsequently regulate their emotions in counter to sad appeals that seek to play on their emotions. Further, we show that sad prosocial appeals are effective only when the ads or their viewing context do not activate consumer persuasion knowledge.

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## **6.4 Individual Papers: Motivated Consumption**

**Room: ESCORIAL**

**Chair:** Keisha Cutright, University of Pennsylvania, USA\*

### ***When Losing Hurts Less: Moderating Influence of Spending Time vs. Spending Money***

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Consumers often invest time and money in activities in the hope of getting a desired outcome. In this research, we show that, while an uneven spending of time and money make little difference in wins, spending more time reduces the sting of losses relative to spending more money.

Thinking about money spent on an activity triggers an “investments” mindset (Vohs, Mead, & Goode 2006), leading consumers to seek tangible benefits in return (Soman 2001). Losing, consequently, elicits the unhappy thought that the money has gone to waste. In contrast, thinking about time spent on an activity activates an “experience” mindset rich with positive feelings and emotions (Schwartz & Clore 1996) that strengthens personal connections to the focal activity (Mogilner & Aaker 2009). A subsequent loss, then, may not sting as much, as individuals might feel that the time spent helped in their personal development (Mogilner 2010) and psychological well-being (PWB; Van Boven & Gilovich 2003). One straightforward implication, therefore, is that PWB mediates the effect of an uneven spending of time and money on how consumers feel if they lose at a focal activity.

Study 1, with one hundred and forty-eight undergraduates, employed a 2 (resource: time, money) x 2 (outcome: win vs. loss) between-subjects design. The participants imagined that they were preparing to enter an investment competition. In the “money” (“time”) condition, participants were told that they had spent \$500 (40 hours) in buying (learning) software to prepare for the competition. We calibrated the exchange rate between the two resources in a pretest (n = 30) and found that the tradeoff rate to be \$12.5 per hour (Okada & Hoch 2004). The win/loss manipulation had half of the subjects imagining that they ultimately won the competition, and the other half imagining that they lost the competition.

Participants completed various measures. They rated how much time/money (too much/too little) was spent on the activity. They reported how they felt about the outcome (happy-unhappy; satisfied-dissatisfied; very pleased-not at all pleased;  $\alpha = .94$ ), self-assessed their PWB following the outcome (six items;  $\alpha = .85$ ; see Appendix A), and reported how much time-pressured (Andrews & Smith 1996) and/or money-pressured (Mittal 1994) they felt, in general (the latter two treated as statistical covariates).

Manipulation check confirmed that the time/money spent had equal impact ( $M_{\$500} = 6.28$  vs.  $M_{40\text{ hours}} = 6.04$ ;  $t(1, 146) = 1.37$ , *n.s.*). Consistent with our prediction, spending time and losing resulted in less unhappiness compared to spending money and losing ( $M_{\text{time}} = 4.57$  vs.  $M_{\text{money}} = 3.56$ ;  $t(1, 72) = 1.89$ ,  $p = .06$ ); however spending time and winning had the same impact as spending money and winning ( $M_{\text{time}} = 8.07$  vs.  $M_{\text{money}} = 8.15$ ;  $t(1, 72) < 1$ ; Figure 1). As predicted, PWB mediated the time/money effect in losses (see Figure 2).

Study 2 tested the robustness of study 1 in three ways. First, we added a second activity (participants imagined that they were entering a tennis tournament) in a new experimental condition. The inclusion of the latter was suggested by a pretest ( $n = 23$ ) where participants indicated that they are more inclined to spend more time in a sports related activity and more money in an investments related activity. Second, participants reported their idiosyncratic exchange rate and self-selected if they wished to spend time or money to prepare for the focal competition. For example, if a participant's exchange rate was \$7.5 per hour, we asked that participant to select between spending 40 hours or \$300 ( $\$7.5 \times 40$ ) on the focal activity. Third, we added a downstream intension measure (willingness to try again) in addition to measuring outcome happiness

Two hundred and ninety-two undergraduate students were randomly assigned to a single-factor (i.e., tennis tournament vs. investment competition) between-subjects design. Varying the activity did not alter the results. Consistent with our prediction, participants who chose to spend time (compared to money) felt less unhappy after losing ( $M_{\text{time}} = 3.78$  vs.  $M_{\text{money}} = 2.47$ ;  $t(1, 290) = 5.68$ ,  $p < .00$ ) and were more willing to participate in the activity again ( $M_{\text{time}} = 6.23$  vs.  $M_{\text{money}} = 4.39$ ;  $t(1, 290) = 5.96$ ,  $p < .00$ ). Results showed that the perception of PWB mediated these effects.

In Study 3, we tested two alternative explanations. First, do consumers devalue more the time spent rather than money spent once they find that they have lost (Okada & Hoch 2004)? Relatedly, and second, do consumers ignore time-related sunk costs more than money-related sunk-costs (Soman 2001)? Thus, in Study 3, we asked the participants to assess the value of the time/money spent before and after they found out about the results, and included various sunk cost measures (six items;  $\alpha = .86$ ; Soman 2001).

Study 3 with ninety-six undergraduates employed a resources (time/money) x activities (investments/tennis) between-subjects design. Consistent with the first two studies, we found participants who chose to spend time (relative to money) were less unhappy after losing at the focal activity ( $M_{\text{time}} = 5.4$  vs.  $M_{\text{money}} = 6.4$ ;  $t(1, 94) = -2.68$ ,  $p < .05$ ) and more likely to participate in the activity again ( $M_{\text{time}} = 5.85$  vs.  $M_{\text{money}} = 4.77$ ;  $t(1, 94) = 2.22$ ,  $p < .05$ ). There was no differential devaluation of time and money. Finer analyses revealed (a) a double mediation model involving time/money spent with PWB and sunk costs on outcome happiness (Figure 4), and (b) a single mediation (PWB) model for the same effects on the willingness to participate in the activity again.

Our research offers several important contributions. First, we show that activating thoughts about time (vs. money) can buffer against the sting of losses in the context of goal pursuit. Second, we demonstrate that the time/money effects extend beyond cognitive outcome evaluations into deeper feelings of personal growth. Third, we show the connection between PWB and subjective well-being (i.e., happiness) (Ryan & Deci 2001). Finally, we offer tactical suggestions as to how marketers can keep consumers remain engaged in an activity even when they have not achieved their desired outcome by using time information.

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### ***Doing it the Hard Way: How Low Control Drives Product Preferences***

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As consumers strive to improve themselves in various domains (e.g., health, wealth, beauty, etc.), products often position themselves as heroes that will do the hard work for them, or as products that will aid the consumer in achieving the same outcomes, but require consumers to also invest their own hard work. In other words, products vary in how they partner with consumers to help them accomplish various personal goals (Aggarwal and McGill 2012; Deighton 1992), situating themselves on a continuum that ranges from taking full responsibility for the work necessary to reach a consumer's desired end state on one end, to having consumers carry that responsibility at the opposite end. Consider how Reebok asserts itself as a hero with its EasyTone shoe, instructing you to "simply walk and let the shoe do the rest," while Nike takes pride in suggesting that its Trainer One shoe only "works if you do." What determines to which product consumers are most attracted?

In the present research, we explore feelings of personal control as a crucial determining factor. We argue that when feelings of control are low, individuals will seek to regain a sense of control through their consumption. Specifically, given that hard work and effort are perceived to be means of asserting control over outcomes (Weiner 1972), we expect that individuals will seek products that allow them to exert effort and witness how their hard work drives desired outcomes, even when they believe the outcomes will ultimately be the same.

In Study 1, we examine how control impacts consumers' preferences for products that require great effort over those that do not. We first manipulate control (i.e., think of a positive time where you felt low control [high control] (Kay, et al. 2008)). We then manipulate perceptions of consumer effort by adapting a Nike print ad that suggests that Nike "does it all for you" in the low effort condition or "does it all with you" in the high effort condition. A control x consumer effort ANOVA revealed a 2-way interaction on purchase likelihood ( $p = .05$ ). As expected, when control was low, participants were more likely to purchase the Nikes that required high effort ( $M = 4.06$ ) than those that required low effort ( $M = 3.24$ ). This difference was mediated by greater anticipation of personal empowerment stemming from the 'high effort' positioning. When control was high, there were no differences in purchase likelihood or anticipated empowerment. Finally, in this and the remaining studies, we rule out alternative explanations that might attribute these results to differences in goals, expected outcomes, mood, etc.

In Study 2, we explore how individual differences moderate whether low control motivates people to prefer products that require high or low effort. Specifically, we focus on how chronic beliefs about the value of hard work impact consumers' preferences. We investigate the degree to which people endorse "incremental" versus "entity" implicit theories. Unlike entity theorists, incremental theorists believe that their personal qualities and outcomes can be improved through effort (Dweck and Leggett 1988). Thus, when feelings of control are low, incremental theorists should be most likely to prefer high effort products over low effort products. We first measured participants' implicit self-theories and manipulated control via a news article related to health. Participants then viewed an exercise fitness system, presented as one that required high or low effort to achieve their fitness goals. A significant implicit theory x control x consumer effort regression ( $p = .05$ ) revealed that, as expected, in the low control conditions, incremental theorists preferred high effort over low effort ( $p = .05$ ), but entity theorists showed no such differences ( $p > .21$ ). This suggests that low control leads to a preference for high effort products, but only when people possess an underlying belief that effort matters in controlling outcomes. (There is no difference between low and high effort products when control is high).

In Study 3, our goal was to build on the prior studies and understand not only purchasing attitudes, but also behavior. We manipulated feelings of control and then presented individuals with a "PING" golf club ad emphasizing the club as requiring high or low consumer effort. Participants were then given an opportunity to practice putting and answered questions regarding purchase intent. Results indicated that when control was low, participants practiced longer ( $p = .02$ ) (irrespective of product role), indicating a desire for greater control over their performance. However, as expected, these low control participants were more likely to purchase the club advertised as requiring high effort ( $M = 3.84$ ) than one requiring low effort ( $M = 2.91$ ).

In Study 4, we ran a field experiment with intramural basketball players to test our hypotheses, using game outcome as a proxy for control (recent loss = low control; recent win = high control). We recruited players directly after a game and presented them with a Nike print ad. The ad presented Nike as requiring low effort (“Work less, Jump Higher”) or high effort (“Work harder, Jump Higher”). A game outcome x consumer effort ANOVA revealed a 2-way interaction ( $p = .05$ ) whereby when feelings of control were low (i.e., following a loss), players were more interested in Nike when it was presented as requiring high effort ( $M = 3.76$ ) than when it was presented as requiring low effort ( $M = 2.75$ ).

In sum, the present set of studies is designed to provide a better understanding of how a critical aspect of everyday life—the feeling of control—influences our desired relationships with products. More broadly, it provides a novel perspective on control that veers away from research that has historically focused on the helpless responses often observed when control is low (e.g., Lefcourt 1973). We demonstrate that when a means to empower one’s self through hard work is available, individuals will prefer it (when control is low). In doing so, this research challenges a basic and seemingly rational assumption that consumers want the most powerful, efficacious products possible as they seek to achieve personal goals.

Figure 1: Study 1 Means (Outcome Happiness and Psychological Well-Being)

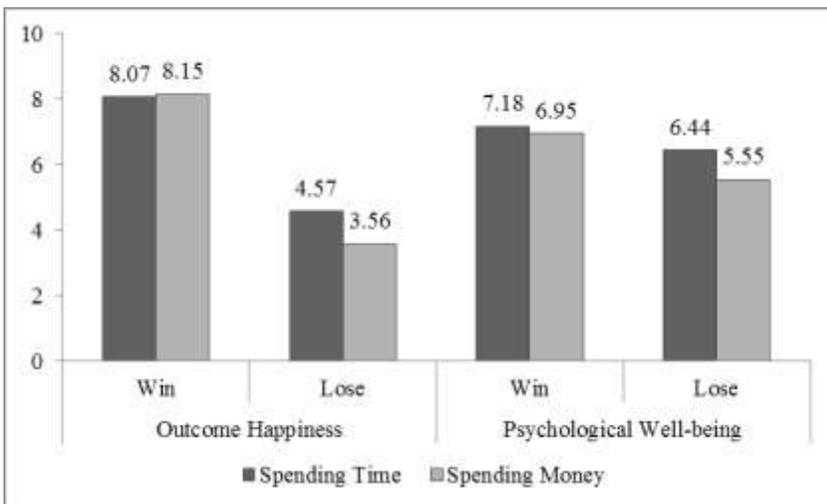
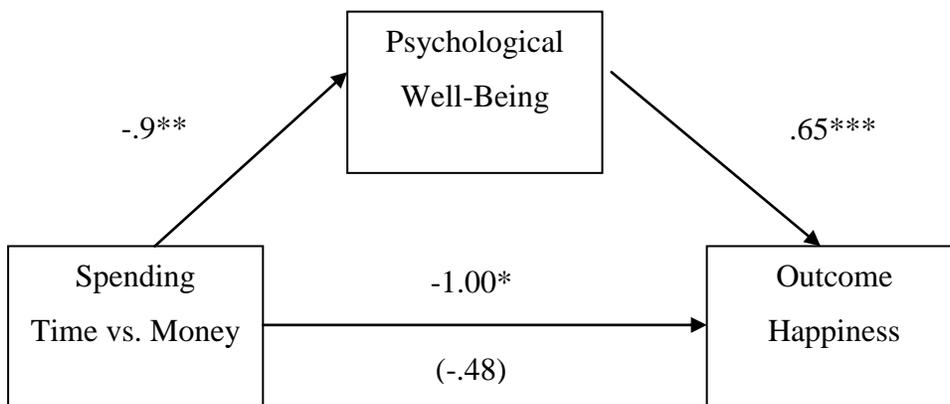


Figure 2: Study 1 Mediation Test

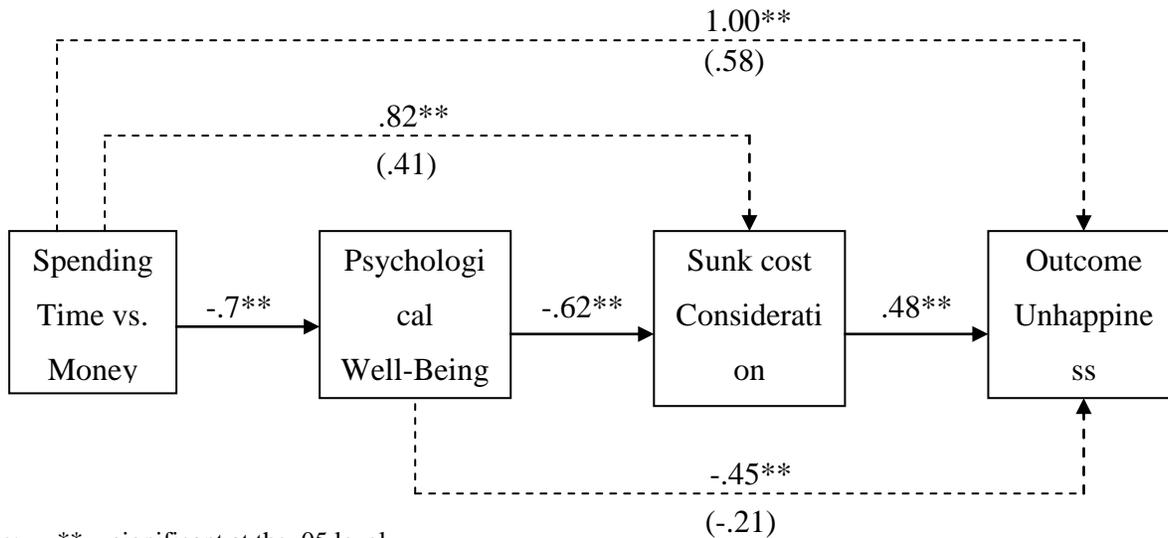


Note: \* = significant at the .1 level; \*\* = significant at the .05 level; \*\*\* = significant at the .01 level

Coding: time = 0, money = 1

The number in parenthesis is the effect of time/money on outcome happiness after adding PWB in the regression equation (Sobel  $Z = -2.26, p = 0.01 < .05$ ). The 95% bias-corrected confidence interval for the indirect effect excluded zero [.03, 1.81] indicating a significant indirect effect (Preacher and Hayes 2008).

Figure 3: Study 3 Path model of the influence of PWB and sunk cost consideration on outcome unhappiness



Note: \*\* = significant at the .05 level

Coding: time = 0, money = 1

The 95% bias-corrected confidence interval for the multiple mediation with mediators operating in serial excluded zero [CI = .02, .41] (Preacher and Hayes 2008).

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***Doing Your Best or What's Best for You: Behavioral and Neural Correlates of Mixed Motivations***

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Rita Ludwig, Harvard University

Malia Mason, Columbia Business School

Small acts of dishonesty are pervasive and generate an economic burden on society. For example, projections of employee theft from their employers are approximately \$600 billion annually (Association of Certified Fraud Examiners, 2006) and IRS estimates suggest United States citizens typically underpay their owed taxes by over \$300 billion (Herman, 2005). Such high base rates call into question the notion that unethical acts are committed by a small few with poor moral values (Di Nocia & Tigner, 2000; Steinel & De Dreu, 2004; Verplanken & Holland, 2002) and suggests instead that most individuals can succumb to the temptation to transgress ethical standards.

Recent research has explored the factors that can lead to dishonest behavior. Although individuals clearly respond to the expected benefits of committing ethical transgressions and motivations for individual gain contribute to dishonest behavior (Allingham & Agner, 1972; Becker, 1968; Rick & Loewenstein, 2008), individuals also seek to preserve their perceptions of themselves as honest

(Bem, 1972; Mazar, Amir, & Ariely, 2008). When people commit unethical acts, they typically do so to a small degree, leading researchers to propose that there exists “an acceptable range of dishonesty” (Argo & Shiv, 2012; Mazar, Amir, & Ariely, 2008) and that acts that fall into this range do not challenge one’s perception of themselves as an ethical individual. Thus, both motivations for personal gain and the desire to preserve one’s self-concept appear to contribute to unethical behavior (Mazar, Amir, & Ariely, 2008; Rick & Loewenstein, 2008). But how do individuals balance these competing motivations? What underlying processes shape ethical behavior?

To investigate this question, we recruited twenty-five participants to complete an adapted version of the dots game (Mazar & Ariely, 2008). On each trial, participants viewed a display with 100 dots presented on the screen and a vertical line dividing the screen into left and right halves. Participants were instructed to indicate which half of the screen contained more dots, the left or the right side, via a button press. The difficulty of the discrimination was manipulated by varying the extent of the discrepancy between the two sides from 2 dots (i.e., 51 dots on one side versus 49 on the other) to 12 dots (i.e., 56 dots on one side, 44 on the other). While participants were encouraged to respond accurately, they were also instructed that they would be compensated \$0.01 each time they selected the left response and \$0.10 each time they selected the right response. This instruction created a monetary incentive to indicate that there were more dots on the right side of the screen, which competed with the motivation to perform the task accurately. Participants performed 150 trials of this task while undergoing functional magnetic resonance imaging.

To examine the influence of both the offered monetary incentive and the motivation to perform the task accurately on participant behavior, response rates were submitted to a repeated-measures ANOVA with the within-subjects factors of response (left or right) and difficulty of the discrimination (hard or easy). This analysis yielded main effects of side,  $F(1,23) = 19.725$ ,  $p < .001$ , as participants were significantly more likely to indicate there were more dots on the right side of the screen, which is consistent with the monetary incentive. There was also a main effect of difficulty,  $F(1,23) = 4.582$ ,  $p = .043$ , and both of these effects were qualified by a significant interaction,  $F(1,23) = 14.049$ ,  $p = .001$ . The right response rate was larger for difficult discrepancies than easy ones,  $t(23) = 4.737$ ,  $p < .001$ . The left response rate did not differ across discrimination difficulty levels,  $p > .2$ . This pattern is consistent with a proposed “acceptable range of dishonesty” (Argo & Shiv, 2012; Mazar, Amir, & Ariely, 2008), as participants demonstrated a self-serving bias to respond right when the correct answer was difficult to discern, but not when the correct response was easy to identify. However, not all participants exhibited conflicts of interest in their judgments to the same degree. Analyses of neuroimaging data revealed that bilateral prefrontal cortex exhibited greater activation in participants who exhibited less self-interested responses when they resisted the temptation to respond in a self-serving fashion and instead registered accurate judgments on difficult trials. These findings indicate this region contributed to overriding the motivation to seek personal gain. Participants appeared to manage their conflict of interest by embracing the monetarily incentivized option more often when the objectively correct answer was ambiguous, and neural activation in regions involved in self-control tracked the balance between competing motivations in shaping behavior.

Both motivations for personal gain and the desire to maintain one’s objectivity (and a positive self-concept) drive individuals’ behavior. In the present experiment, participants managed the conflict between these competing motivations by harvesting the financial incentive more often when the accurate response was difficult to discern. In cases where the discrimination was difficult to make and honest mistakes were likely, providing a dishonest response for personal gain was more tempting and less threatening to one’s self-concept as an honest, objective individual. Neuroimaging findings supporting a role for self-control in shaping judgments under these circumstances suggests that this ethical temptation may share features with other classes of temptation that pit immediate desires against higher-order, long-term goals. Multiple mechanisms help maintain the balance between indulging one’s personal desires and maintaining one’s self-image, with implications for a range of real-world decisions.

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## ***Banning the Beloved: System Justification and the Defense of Unrestricted Access to Iconic Cultural Products***

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How might a brand reflect certain values and what are the consequences of this? Combining system justification theory (which posits that people are motivated to see one's social systems favorably; Jost and Banaji 1994) with the theory of basic values (Schwartz 1994) offers a novel answer to these questions. We propose that people high in system confidence (those who chronically support the existing social system) vs. low in system confidence (those who have less confidence in the system) differentially emphasize two opposing values for their society: power and universalism (respectively). In turn, this colors their perceptions of and attitudes toward brands that either reflect or do not reflect these values. Thus, brands may be seen as cultural icons and defended from brand-relevant policy if they reflect people's ideal values for the system.

### *System Justification Theory*

System justification theory posits that people are motivated to see one's social systems (i.e., institutions and social arrangements under which we live) as favorable and legitimate (Jost and Banaji 1994) because they determine outcomes for our lives (Kay et al. 2008; 2009), and can be difficult to leave (Laurin et al. 2010). In the context of America, people higher in system confidence support the system directly and explicitly, while those low in system confidence tend to support it more indirectly, such as by choosing domestic over non-domestic products (Banfield et al. 2011; Cutright et al. 2011). Given that America's dominant ideology emphasizes power more and universalism less than many other nations (Schwartz and Bardi 2001), it follows that those high in system confidence should emphasize power as an American value more than lows. Conversely, people low in system confidence should show more concern for universalism over power. We propose that brands will be increasingly liked, perceived as cultural icons, and defended from brand-relevant policy, when the brand reflects one's ideal values for America (for high system justifiers, power; for low system justifiers, universalism).

### *Research*

A pretest determined that system confidence positively relates to power values, and negatively to universalism values. In Study 1, forty-nine participants rated their level of confidence in the system using the system justification scale (Kay and Jost 2003). They were then shown Coke ads that were rated as reflecting power more than universalism, or universalism more than power, and rated how much they liked the ad. Results showed that those low in system confidence liked the universalism images more than highs ( $\beta = -.35$ ),  $t(47) = -3.25$ ,  $p < .01$ , whereas highs liked the power images more than lows ( $\beta = .60$ ),  $t(47) = 5.18$ ,  $p < .001$ .

What are the consequences of this for policy? In Study 2, 291 participants completed the system justification scale, and then were exposed to either the Coke images from Study 1 that reflected (i) power, or (ii) universalism. Participants were then told about the proposed ban on the sale of large soda in New York City, and asked to rate how much they agreed with it. Controlling for how much participants like soda, a significant interaction was found, ( $\beta = .54$ ),  $t(287) = 2.24$ ,  $p = .03$ . Consistent with our predictions, those low in system confidence (i) supported the ban more in the power condition (i.e., when Coke reflected values they do not support) than in the universalism condition, ( $\beta = -.78$ ),  $t(287) = -1.99$ ,  $p = .05$ , and (ii) supported the ban more than highs did in the power condition, ( $\beta = -.43$ ),  $t(287) = -2.54$ ,  $p = .01$ .

How might a brand unintentionally signal its values to consumers, and what are the consequences of this? In Study 3, 203 participants completed the system confidence scale, and then saw facts about the Disney brand that either suggested that the brand cares about power (i.e., wealth and control over resources) or cared about universalism (i.e., concern for multiculturalism and equality). Participants then rated Disney on how much they liked the brand, and how much of an American icon it is. Results yielded a significant interaction, ( $\beta = -.46$ ),  $t(200) = -2.48$ ,  $p = .01$ . While those high in system confidence liked Disney equally in both

conditions, those low in system confidence liked Disney significantly less and saw them as less of an American icon in the power condition than in the universalism condition, ( $\beta = 1.26$ ),  $t(200) = 3.94$ ,  $p < .001$ . This effect is mediated by perceptions of the brand's universalism, with lows seeing Disney as reflecting universalism less in the power condition than in the universalism condition.

In Study 4 we investigated whether or not a brand shifting to more premium products would have a similar effect as in Study 3. Two-hundred and eighteen participants were told about a fictional toothpaste company that either (i) traditionally made a high quality low cost toothpaste, but was now focusing on making a premium product for affluent consumers, or (ii) traditionally made a premium product, but now makes that quality available to everyone at a lower price (conditions reflect either power or universalism, respectively). The results mirrored those of Study 3. A significant two-way interaction was found, ( $\beta = -.44$ ),  $t(214) = -2.23$ ,  $p = .03$ , and again, those low in system confidence saw the brand as less likeable, ethical, and less reflective of their ideal values for America in the power condition than in the universalism condition, ( $\beta = 1.72$ ),  $t(214) = 5.29$ ,  $p < .001$ .

These results represent a significant advancement to system justification theory by clarifying the predictions that can be made with the theory, and also offers a novel account for how a brand may intentionally or unintentionally signal its values, and the consequences for how people perceive brands, their place in society, as well as brand-relevant policy. The results speak to the importance of having a brand or product that is symbolically associated with the social system and the benefits that this affords by reflecting the values that people want for their society. It also has implications for the acceptance of consumer and brand-relevant policy.

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## **6.5 Individual Papers: With a Grain of Salt: The Skeptical Consumer: Insights on Consumer Skepticism and Persuasion**

**Room: ALHAMBRA**

**Chair:** Peter Darke, York University, Canada\*

### ***Mind Suspicious Minds! A Mindset Account for the Carryover Effects of Suspicion on Unrelated Information Processing***

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Maggie Geuens, Ghent University, Belgium

Mario Pandelaere, Ghent University, Belgium

Elizabeth Cowley, The University of Sydney Business School, Australia

“Suspicion is a dynamic state in which the individual actively entertains multiple, plausibly rival hypotheses about the motives or genuineness of a person's behavior” (Fein, 1996, p.1165). Suspicion motivates perceivers to engage in thoughtful information processing and complex attributional thinking (i.e., questioning why a behavior occurs) before they attribute behavior (e.g., Fein, 1996). The effects of suspicion are not restricted to the specific situation in which suspicion is aroused; they actually transcend specific situations (Darke & Ritchie, 2007; Fein, 1996; Kirmani & Zhu, 2007). This suggests that suspicion activates a procedural mindset. However, in prior research, a certain level of relatedness was always involved between the two situations. Yet, if suspicion is truly a mindset (i.e., an attributional mindset) its effects should also carry over to completely unrelated situations (Wyer & Xu, 2010). In the context of dealing with commercial persuasion tactics, consumers can adopt a specific attributional procedure; this is reflected by the activation of “persuasion knowledge” (PK) (Friestad & Wright, 1994). Hence, if suspicion is a mindset, its activation in one situation should facilitate PK-activation in a subsequent unrelated commercial persuasion setting.

Importantly, in the current research, we adopt a dynamic conceptualization of suspicion (cf., Marchand & Vonk, 2005) by manipulating three stages of suspicion—no, high, and resolved suspicion. Stages of suspicion were manipulated with a specific scenario that was unrelated to persuasion tactics (e.g., about John who asks Sybille to marry him). In the high-suspicion-condition, uncertainty about the true motives of John was induced (i.e., good and bad motives should seem equally plausible). In the resolved-suspicion-condition, participants were ascertained of the bad motives of John. In the no-suspicion-condition, no suspicion was evoked at all<sup>6</sup>.

Study 1 (N=188; Mage=22.90) tests whether suspicion aroused in one situation facilitates PK-activation for a subsequent unrelated advertisement. PK-activation was measured with (1) skepticism toward the ad<sup>7</sup> and (2) thought protocols concerning the ad<sup>8</sup> (cf., Kirmani & Zhu, 2007). A 3 (suspicion stages)×2 (PK about advertising tactics: primed vs. unprimed) ANCOVA<sup>9</sup> on skepticism revealed a significant interaction effect ( $F(2,181)=3.03$ ;  $p=.05$ ; Figure1). Simple effects analyses showed that, when PK was not externally primed, high and resolved suspicion led to significantly more skepticism than no suspicion ( $F(2,181)=3.07$ ;  $p<.05$ ), as expected. When PK was externally primed, no differences appeared between suspicion conditions, due to the fact that the PK-prime also activated PK in the no-suspicion-condition ( $F(2,181)=.55$ ;  $p>.10$ ). This clearly indicates that participants in the high- and resolved-suspicion-condition already activated PK by themselves. Similar results are found for the thought protocols (Figure2).

Our subsequent research question was whether high and resolved suspicion differ in terms of cognitive capacity available in the second unrelated situation, as this could have implications for the processing of certain persuasion attempts. In case of high suspicion, the consumption of cognitive resources in the first situation likely continues during the second unrelated situation as highly suspicious people are still busy questioning motives of the first situation (e.g., Chaiken et al., 1989). Hence, less cognitive resources may remain to process information in the second situation. In contrast, resolved suspicious people are no longer cognitively engaged with the previous task; they have regained full cognitive capacity.

High and resolved suspicion were manipulated in study 2 (N=90; Mage=20.53). Cognitive capacity was measured by means of the Automated Operation Span Task (Unsworth et al., 2005). An independent samples t-test on the absolute span score<sup>10</sup> ( $t(88)=-2.06$ ;  $p<.05$ ) showed that highly suspicious people ( $M=23.84$ ) have less working memory capacity than resolved suspicious people ( $M=28.67$ ), as expected.

This cognitive burden in case of high suspicion may have implications for persuasion tactics that require full cognitive capacity to be processed, such as product placement. Mostly, product placement is not the primary focus of attention, as people focus their primary attention on the entertainment content in which it is embedded (e.g., Nebenzahl & Jaffe, 1998). Hence, when cognitive capacity is partly devoted to a previous task, insufficient cognitive capacity may be available to systematically attend to and process product placements and thus, to activate PK. Drawing on our previous results, the resolved-suspicion-condition was expected to systematically process the product placements more (i.e., reflected in higher brand recall) than the no- (no suspicious mindset accessible) and high-suspicion-condition (insufficient cognitive capacity to apply the accessible suspicious mindset).

To test this, in study 3 (N=72; Mage=22.83) five movie screenshots with a product placement were presented. Brand recall<sup>11</sup> and

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<sup>6</sup> Several manipulation checks revealed that the manipulation of the suspicion stages was successful in all studies. To the best of our knowledge, no prior research has ever manipulated or compared these three stages of suspicion.

<sup>7</sup> Three seven-point bipolar items: “unbelievable/believable,” “not truthful/truthful,” “deceptive/non-deceptive” ( $\alpha = .87$ ).

<sup>8</sup> These thought protocols were coded for suspicion thoughts by three independent coders (Krippendorff’s  $\alpha = .87$ ).

<sup>9</sup> Controlling for mood.

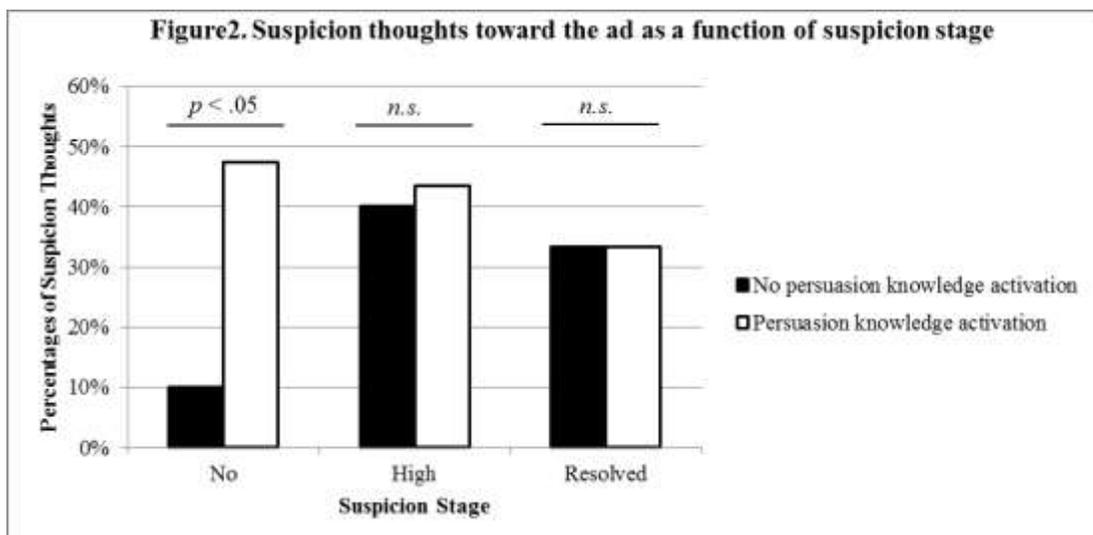
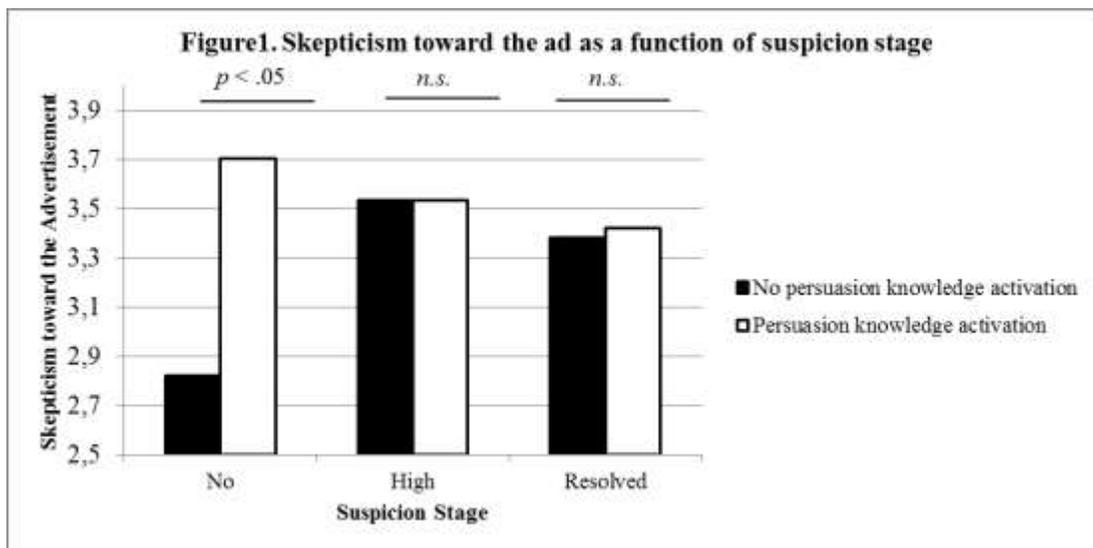
<sup>10</sup> Absolute span score is the total number of letters recalled (while solving mathematical problems) taking into account only those sets of letters that are completely recalled (see also Schmader & Johns, 2003).

<sup>11</sup> Open-ended question (“Which brands have you seen on the pictures?”); ranging from 0 to 5 brands accurately recalled from the five pictures.

PK-activation<sup>12</sup> were measured. An ANCOVA<sup>13</sup> on brand recall ( $F(2,67)=3.35; p<.05$ ) indicated that resolved suspicion ( $M=3.25$ ) led to more brand recall than no ( $M=2.10$ ) and high suspicion ( $M=2.07$ ). Moreover, bootstrap mediation analyses (Preacher & Hayes, 2004) revealed an indirect-only positive effect of resolved versus no ( $a \times b = .53; 95\% CI = [.01; 1.07]$ ) and high suspicion ( $a \times b = 1.02; 95\% CI = [.20; 2.01]$ ) on PK-activation through its impact on brand recall.

In sum, this research may be important for television advertising and product placement planners, and shows that the effects of suspicion are different for focal advertisements versus embedded product placements. Moreover, this research contributes to the literature on contextual effects of television programs on advertising and product placement effectiveness (e.g., De Pelsmacker et al., 2002; Kennedy, 1971).

## FIGURES



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<sup>12</sup> Five items on a seven-point likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree) (e.g., “While watching the pictures, I already realized that these brand appearances were marketing tactics”) ( $\alpha = .95$ ).

<sup>13</sup> Controlling for mood.

## *Seeing is not believing: The influence of advertising skepticism on brand extension evaluations*

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In this study, we examine the influence of advertising skepticism –a measure of a consumer’s tendency to disbelieve advertising claims– on brand extension evaluations (Obermiller & Spangenberg 1998). The use of brand extensions has become a popular strategy in launching novel products (Aaker and Keller 1990). Increasing media costs, consumer price-sensitivity, and market fragmentation have all intensified the risk associated with launching a new product offering. To alleviate this risk, the use of established brands in introducing novel products presents an attractive, relatively inexpensive, and effective means of enter new markets.

A key success factors for brand extensions is their perceived similarity to their parent brand (Aaker & Keller 1990). If an extension is highly similar or dissimilar, the evaluation process is relatively straightforward. However, if the extension is moderately similar, a more extensive and analytical evaluation process ensues (Boush & Loken 1991). Consumers high in advertising skepticism exhibit a natural tendency to engage in analytical information processing (Escalas 2007; Nielsen & Escalas 2010), that is, they make an objective analysis of objects, stimuli, or information using clear and logical arguments (Bruner 1986). Therefore, when viewing an advertisement for a moderately similar brand extension, skeptical consumers are more likely to be analytical and critical of the advertisement and to identify existing inconsistencies between the extension and its parent brand. This process could result in less favorable evaluations of the extension and negative spillover effects onto the parent brand. However, because extremely similar and dissimilar extensions are processed automatically, degree of advertising skepticism should not affect these evaluations.

In two studies, we test these hypotheses. Thus, our investigation contributes to the literature by identifying advertising skepticism as an important trait in predicting brand extension success. Prior brand extension research fails to account for this common and important variable.

### Study 1

In study 1, undergraduate students (N=102, 59% males, Mage=20.6 years) participated in a between-subjects experiment where brand extension similarity was manipulated (low vs. moderate) and advertising skepticism was measured. The parent brand and brand extensions were pre-tested and selected according to their perceived familiarity and similarity. Students were given 30 seconds to review a magazine advertisement featuring the new product, followed by questions evaluating the product according to five items (e.g., “I would consider the purchase of the...”). The items were averaged to create a brand extension evaluation index (M=4.3, SD=1.4,  $\alpha=.89$ ).

Parent brand dilution was measured to determine the effect of the new product offering on perceptions of the parent brand using a 100-point slider scale (-50=much worst; +50=much better). Advertising skepticism was also measured using a version of the 9-item scale developed by Obermiller & Spangenberg (1998). The items were averaged to generate an advertising skepticism index (M=4.4, SD=.9,  $\alpha=.73$ ).

### Results

**Brand Extension Evaluation.** To test the hypotheses, we ran a regression analysis using the brand extension evaluation index as the dependent variable and the dummy coded brand extension similarity (0 = low similarity; 1 = moderate similarity), the advertising skepticism index, and the product of these two terms as independent variables. The coefficient for brand extension similarity was significant ( $\beta=3.5$ ;  $t(98)=3.1$ ,  $p<.01$ ), and, as predicted, the interaction term was also marginally significant ( $\beta=-.46$ ;  $t(98)=1.8$ ,  $p<.1$ ). To further probe the nature of this interaction, we conducted a spotlight analysis (Aiken & West 1991) on brand extension evaluations

two standard deviations below and above the mean for advertising skepticism across the brand extension similarity conditions. For non-skeptics, a significant effect for brand extension similarity emerged ( $\beta=2.3$ ;  $t(98)=4.6$ ,  $p<.001$ ). By contrast, this effect was attenuated for highly skeptical consumers ( $\beta=.68$ ;  $t(98)=1.4$ ,  $p>.1$ ).

**Parent Brand Dilution.** We performed similar analyses for the parent brand dilution measure. The coefficient for brand extension similarity was significant ( $\beta=43.1$ ;  $t(98)=3.4$ ,  $p<.01$ ), along with the interaction term ( $\beta=-5.5$ ;  $t(98)=1.9$ ,  $p<.1$ ). For non-skeptics, a significant effect for brand extension similarity emerged ( $\beta=28.8$ ;  $t(98)=5.1$ ,  $p<.001$ ), while this difference was reduced for high skeptics ( $\beta=9.8$ ;  $t(98)=1.8$ ,  $p<.1$ ). See table 1 for a summary of results.

## Study 2

In Study 2, we manipulated advertising skepticism directly and sampled clients ( $N=218$ , 59% males,  $M_{age}=38$  years) of an electronics store. We also added a highly similar brand extension similarity condition.

The parent brand and brand extensions were pre-tested and selected according to their perceived familiarity and similarity. Participants in the advertising skepticism condition were asked to imagine that they worked for a consumer rights magazine and one of their tasks was to write reviews of advertisements featuring new products (Nielsen & Escalas 2010). All other procedures were identical to that of study 1.

## Results

**Brand extension evaluation.** An ANOVA on the brand extension evaluation index revealed a significant main-effect for brand extension similarity ( $F(2,212)=12.6$ ,  $p<.001$ ), a significant main-effect for advertising skepticism ( $F(1,212)=5.9$ ,  $p<.05$ ) and, as predicted, a significant interaction effect ( $F(2,212)=5.4$ ,  $p<.01$ ). While evaluations did not differ when the brand extensions were high or low in similarity ( $ps>.1$ ), the evaluations of the moderately similar brand extension were significantly higher for participants in the control condition ( $M_{control}=5.5$ ,  $SD=1.0$ ) compared to participants in the highly skeptical condition ( $M_{skeptical}=4.3$ ,  $SD=1.5$ ;  $t(76)=4.2$ ,  $p<.001$ ).

**Parent Brand Dilution.** An ANOVA on the parent brand dilution measure revealed a significant main-effect for brand extension similarity ( $F(2,212)=12.5$ ,  $p<.001$ ) and a significant interaction effect ( $F(2,212)=3.0$ ,  $p<.05$ ). While evaluations did not differ when the brand extensions were high or low in similarity ( $ps>.1$ ), the moderately similar brand extension was significantly higher in the highly skeptical condition ( $M_{skeptical}=3.2$ ,  $SD=17.8$ ) compared to the control condition ( $M_{control}=13.2$ ,  $SD=14.2$ ;  $t(76)=2.7$ ,  $p<.01$ ). See table 1 for a summary of results.

## Discussion

Two studies show that consumers with high advertising skepticism form less favorable brand extension evaluations when the extension is moderately similar to its parent brand compared to consumers with low advertising skepticism. Thus, increased advertising skepticism decreases the likelihood that consumers will purchase brand extensions deemed moderately similar to their parent brand. Moreover, advertising a moderately similar brand extension to a highly skeptical consumer deteriorates the parent brand's reputation, thus, demonstrating a negative spillover effect. These results have important implications for product developers, marketing strategists, and advertisers.

Table 1: Summary of Results - Evaluations and dilution as a function of similarity and skepticism

<i>Study</i>	<i>Extension Experimental Conditions (N = 320)</i>		
	<i>Low Similarity</i>	<i>Moderate Similarity</i>	<i>High Similarity</i>
Study 1 ( <i>n</i> = 102)			
Extension Evaluations			
Low Advertising Skepticism	3.8 <sup>a</sup>	5.9 <sup>b</sup>	-
High Advertising Skepticism	3.5 <sup>a</sup>	4.0 <sup>c</sup>	-
Parent Brand Dilution			
Low Advertising Skepticism	-5.0 <sup>d</sup>	33.5 <sup>e</sup>	-
High Advertising Skepticism	-9.1 <sup>d</sup>	10.3 <sup>f</sup>	-
Study 2 ( <i>n</i> = 218)			
Extension Evaluations			
Low Advertising Skepticism	4.4 <sup>g</sup>	5.5 <sup>h</sup>	5.7 <sup>h</sup>
High Advertising Skepticism	4.5 <sup>g</sup>	4.3 <sup>g</sup>	5.5 <sup>h</sup>
Parent Brand Dilution			
Low Advertising Skepticism	1.3 <sup>i</sup>	13.2 <sup>j</sup>	18.6 <sup>j</sup>
High Advertising Skepticism	5.1 <sup>i</sup>	2.7 <sup>i</sup>	16.1 <sup>j</sup>

Note: the superscripts denote statistical difference at the  $p < .05$  level.

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### ***Trick or Treat?: Effects of Suspicion on Schematic Processing and Sales Promotion Tactics***

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This research examines the schematic processing posited by the defensive suspicion (Darke and Ritchie 2007) and persuasion knowledge models of persuasion (Friestad and Wright 1994) to test the effects of consumer suspicion on a variety of different sales promotion tactics. Specifically, consumer suspicion should have negative effects on sales promotions that are schema-congruent (i.e. fit tactics stereotypical of manipulative/deceptive marketers), while having more positive effects on sales promotions that are schema-incongruent (i.e. associated with honest/fair marketing) and little effect on aschematic offers (i.e., not clearly associated with the stereotype).

Price discounts are one of the most common forms of sales promotion (Darke and Chung 2005), and the literature has shown such offers can increase perceptions of value (Compeau and Grewal 1998). Despite this, consumers can also have distinct negative reactions to discounts, for instance when it is inferred the seller is just offering lower quality products (Chen, Monroe and Lou 1998). Marketing managers use a variety of promotional strategies as alternatives to discounts, perhaps in part to avoid consumer skepticism (Ortmeyer et al. 1991). For instance, everyday low prices (EDLPs) are said to convey value in a straightforward manner (Darke and Chung 2005). Price-matching guarantees (PMGs) are another means of potentially allaying consumer doubts about the true value of the deal (Sivakumar and Weigand 1997). Free gifts may also be effective, since they tend to be taken at “face-value” rather than viewed as sales incentives per se (Darke and Chung 2005). The current research examines how each of these promotional tactics relates to schemer schemas (congruent, incongruent or aschematic) and predicts that defensive suspicion should activate both negative

and positive schema content, which determines whether suspicious consumers respond negatively (assimilation effect) or positively (contrast effect) to promotional offers.

### Study 1

Study 1 was a 2 (suspicion: yes vs. no) x 2 (initial sales promotion: EDLP vs. discount) x 2 (second sales promotion: EDLP vs. discount) between subjects design ( $N = 167$ ). Pilot data indicated that discounts were perceived as typical tactics for deceptive/manipulative marketers (schema-congruent), whereas EDLPs were seen as a straightforward, honest tactic (schema-incongruent). First, participants reviewed an internet advertisement and indicated how good the promotional deals shown in the ad were. Second, participants were then presented with a Federal Trade Commission (FTC) report regarding indicating the same company had been fined for misleading pricing practices (suspicion condition) or received no information (control condition). The FTC report was varied to focus on two different types of promotional tactics included in the initial ads. For the initial discount condition, the report suggested the firm advertised discounts that were inflated or nonexistent, whereas the every-day-low-price (EDLP) version suggested the prices offered by the firm were actually above the industry average (based on Darke et al. 2008). After a 15 minute filler task, participants reviewed a second advertisement for a television that was promoted either as being at an EDLP of \$249 or for the sale price of \$249, representing a \$50 discount. The primary dependent measure was perceptions of deal value (based on Biswas et al. 1999;  $\alpha = .88$ ).

Checks indicated the initial deception successfully manipulated defensive suspicion. Results of the 2 x 2 x 2 between subjects ANOVA revealed only a significant Suspicion x Second-Promotion interaction on perceptions of deal value ( $F(1, 157) = 4.94, p < .05$ ). As expected, while suspicion decreased evaluations of the subsequent discount ( $M_s = 5.35$  vs.  $4.70$ ), it actually increased evaluations of the EDLP offer ( $M_s = 4.92$  vs.  $5.55$ ). This is consistent with the prediction that defensive suspicion can have positive or negative effects on subsequent promotions depending on the level of congruence with schemer schemas. Moreover, the fact the effects were similar regardless of the type of deceptive tactic used in the initial ad indicates the second offer was conceptually matched to schemer schemas evoked rather than on the basis of perceptual feature matching between the promotional offers in the two ads.

### Study 2

Study 2 was a 2 (suspicion: yes vs. no) x 2 (second sales promotion: EDLP vs. PMG) between subjects design ( $N = 64$ ) following a similar procedure as Study 1. The PMG offer in the second advertisement stated that "If you find the identical product at another authorized retailer before or within 30 days of your purchase we will match the price PLUS refund an additional 25% of the difference." Pilot testing indicated PMGs were in fact perceived as schema congruent tactics, meaning suspicious consumers should react negatively. The EDLP advertisement was the same as the previous study. Deal value ( $\alpha = .80$ ) again served as the main dependent measure. A 2 x 2 between subjects ANOVA for perceptions of deal value revealed only a significant Suspicion x Promotion interaction ( $F(1, 64) = 3.90, p < .05$ ). Suspicion again increased evaluations of the EDLP tactic ( $M_s = 5.45$  vs.  $6.20$ ), while decreasing evaluations of the PMG tactic ( $M_s = 6.67$  vs.  $6.00$ ).

### Study 3

Study 3 was a 2 (suspicion: yes vs. no) x 2 (second sales promotion: regular price vs. free gift) between subjects design ( $N = 75$ ). Pilot testing indicated regular prices were not related to schemer schemas, and therefore consumer suspicion should have little impact on such offers. The exact nature of the free gift was not mentioned in the advertisements, only its value of \$50. Results of the 2 x 2 between subjects ANOVA revealed only a significant Suspicion x Promotion interaction ( $F(1, 80) = 4.81, p < .05$ ) where planned contrasts revealed that suspicion increased evaluations of the deal for the free gift ( $M_s = 4.19$  vs.  $5.90$ ), but had little impact on the regular price ( $M_s = 5.88$  vs.  $5.53$ ).

## General Discussion

This work makes a number of contributions to the literature. With respect to the sales promotion literature, we identify which specific promotional strategies are effective (EDLPs and free gifts) versus ineffective (discounts and PMGs) in dealing with suspicious consumers, and provide a theoretical explanation as to why these effects occur. The current research also makes a number of contributions to the existing consumer suspicion literature. First, we show that the more obvious negative effects of defensive suspicion can be eliminated or even reversed depending on the schematic processing involved. Second, we provide a theoretical rationale for these effects. Third, we expand on evidence and theory for the schematic processing of trust and suspicion cues posited by the defensive suspicion and persuasion knowledge models.

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### ***Offering a Veneer of Legitimacy: An Ironic Consequence of Political Advertising Regulation***

Minah Jung, University of California, Berkeley, Haas School of Business\*

Clayton Critcher, University of California, Berkeley, Haas School of Business

Consumers detest negative political advertising. In fact, one recent poll found 80% of Americans believe such negative rhetoric is “ruining our democracy.” Hoping to disincentivize such vitriol in advertising, the most famous piece of recent legislative reform, McCain-Feingold, requires political candidates to appear in their ads, state their name, and “approve this message.” On the Senate floor, John McCain predicted that with adoption of this Stand By Your Ad (SBYA) reform, “no serious candidate would approve the trash” that is common in modern-day, negative political advertising.

In this research, we consider whether SBYA ironically incentivizes the negative advertising the legislation was designed to discourage. Despite being disliked, negative political advertisements tend to contain more information—providing, for example, clear contrasts between two candidates policy positions—than does positive advertisements (Sides, Lipsitz, and Grossman 2010). That said, consumers are skeptical of negative advertisements’ truthfulness, which reflects one key barrier to their effectiveness. We propose that the inclusion of SBYA provides a veneer of legitimacy to an advertisement, thereby helping to reduce the skepticism toward those ads about which people are most naturally suspicious.

We present four studies that: document the ironic consequence of SBYA, determine which aspect of SBYA is responsible for enhancing the perceived legitimacy of negative ads, report field data that connects advertisements broadcast and election outcomes and supports our claims, and, finally, identify relevant boundary conditions on our effect.

In Study 1, we showed participants four actual political attack ads, run by candidates for the U.S. House of Representatives. We created two versions of each ad. One was the true version, which included the SBYA provision. The other was digitally modified such that SBYA was edited out. All participants saw two ads with SBYA and two without; we varied between participants which ads retained the provision. When the ad contained SBYA, it was judged to be more legitimate (e.g., more credible, believable). This effect emerged equally strongly regardless of whether we reminded participants that candidates were required to include SBYA, demonstrating that the effect is not eliminated by consumers’ understanding the provision is not elective, but mandatory.

Study 2 sought to distinguish our veneer of legitimacy account from an alternative hypothesis. By our reasoning, when consumers see the official SBYA message, they are reassured about the broader legitimacy of the advertisement. This idea—that consumers may overextrapolate from a subtle signal of legitimacy to judge the entire ad as legitimate—is analogous to other demonstrations of people overgeneralizing local positive cues to see targets as more broadly legitimate. According to a halo effect, consumers will infer a broad

array of positive qualities about a target after observing a single positive quality. Closer to advertising, brands will rely on spokespeople who have expertise in one area to speak with authority on topics far beyond their narrow domain of expertise. If SBYA offers a veneer of legitimacy, then it suggests that it is not the content of approving the message that produces our effects, but instead the knowledge that SBYA is a required tagline that reflects that the advertisement has legitimately complied with regulation. This suggests that we should be able to invent a new tagline, and if participants believe that this tagline also reflects legitimate compliance with regulation, then such a tagline should similarly enhance the credibility of attack advertising. By an alternative implicit promise hypothesis, when candidates say that they “approve this message,” they are seen as offering an implicit promise of the message’s truthfulness. If so, a new tagline that did not include such a promise would not have the same effect.

In Study 2, we used actual radio advertisements but employed actors to create our own taglines. We used either no tagline, the standard SBYA tagline, or a new one (“My name is \_\_\_\_\_, and I am running for \_\_\_\_\_.”) For some participants, we told them that this new tagline was also consistent with McCain-Feingold regulation. This made the new tagline as effective in increasing the ads’ perceived legitimacy as did the standard SBYA tagline. Thus, the veneer of legitimacy offered by an approved tagline, not the content of the tagline, seems to explain the ironic effect.

In Study 3, we looked at field data to see whether SBYA seemed to enhance advertising’s effectiveness in actual elections. Drawing on data from the Wisconsin Advertising Project, we predicted outcomes in 2008 U.S. House and Senate races from the number of advertisements that candidates ran. The number of policy attack ads that included SBYA predicted election outcomes, but the number of other types of ads that included SBYA or the number of policy attack ads that did not include SBYA, did not. Furthermore, there was no relationship between policy attack ads and election outcomes in 2000, the last election before the SBYA requirement was introduced.

In Study 4, we returned to the lab with two goals: to show the type of ads for which SBYA improves perceived legitimacy, and to show that such evaluations feed forward into positive assessments of the sponsoring candidates themselves. Participants watched 8 ads: half were negative, half, positive; half dealt with policy positions, half, personal character; half included SBYA, half did not. We reasoned that because negative policy ads possess the unique combination of being the object of skepticism and being potentially informative, that SBYA would be uniquely beneficial in enhancing reactions to such ads. Our results confirmed this prediction. Furthermore, the enhanced perceived legitimacy of the advertisements extended to improved evaluations of the sponsoring candidates.

In summary, because SBYA enhances the perceived legitimacy of certain attack ads, it ironically incentivizes the very ads the legislation meant to discourage. Although this research has clear policy applications for political advertising regulation, future research could extend these ideas to show that other signs that products are subject to mild regulation may enhance consumers’ trust in the product as a whole. Future research is necessary to understand how marketing communications can send signals that they are regulated without prompting unjustified trust from consumers.

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## **6.6 Conversations: Self Identity and Social Influence**

**Room: MICHELANGELO**

**Discussion Leader:** Jennifer Escales, Vanderbilt

Darren Dahl, UBC

Claudia Townsend, Miami

Katherine White, UBC

**BREAK**  
**11:00 am - 11:15 am**  
**BALLROOM FOYER**

**PLENARY SESSION 2 - HAZEL MARKUS TRIANON**  
**11:15 am - 12:15 pm**  
**TRIANON**

**AWARDS AND BUSINESS LUNCHEON Sponsored by: The Wharton School, University of Pennsylvania**  
**12:30 pm - 2:00 pm**  
**VERSAILLES**

**SESSION 7**  
**2:15 pm - 3:30 pm**

## **7.1 Symposium: Understanding the “How” and “Why” of Consumer Behavior: The Promise of Eye-Tracking for Consumer Research**

**Room: BALMORAL**

**Chair:** Milica Mormann, University of Miami, USA

### ***The Multi-Tasking Shopper: Mobile Eye-Tracking and In-Store Decision Making***

Wes Hutchinson, The Wharton School, University of Pennsylvania, USA\*

Jacob Suher, University of Texas at Austin, USA

Of all the ways to read a consumer’s mind during a decision making process, the most direct is to look through her eyes to see what she is seeing. This paper examines the pattern of attention to visual stimuli throughout a whole shopping trip. We conduct a grocery field study using mobile eye-tracking technology to record consumers’ exact point-of-focus while navigating the store and at the point-of-purchase. Each visual fixation is classified for its spatial and temporal position along with its visual content, such as price or brand. Using these rich data, we describe the patterns of attention at the point-of-purchase and while navigating the grocery store and propose a general model of consumer multi-tasking.

Eye-tracking technology has been used extensively in scene perception research, especially in advertising contexts. This body of work provides a broad consensus that eye-movements are informative about processes such as attention, information acquisition, and choice. While this technology has been used to “see through consumers’ eyes” for decades, there has been limited work on visual attention at the point-of-purchase (Chandon, Hutchinson, Bradlow, and Young 2009). The research that has examined point-of-purchase decision making has been limited to the laboratory setting. We contribute to this pool of research by using a novel data set that captures point-of-focus data in the field.

Our data consist of shopping trips made by 13 consumers in two medium-sized U.S. grocery stores, including 130 purchases and eye-tracking of all visual search during each trip. Each consumer wore a mobile eye-tracking device to record her exact point-of-focus and field-of-vision throughout a complete shopping trip. To make our quantitative analyses possible, the video data was coded in two ways by video technicians. First, for each purchased product, technicians identified the start-point of the purchase

and then watched the videos frame-by-frame, recording the spatial location and content of each visual fixation over time. Each fixation was mapped onto a still “snapshot” of the purchase display to make the points-of-focus spatially meaningful. The content of each fixation was categorized as picture, brand, description, price, variety, or other. Additional variables, such as product display characteristics and within and between shopper variables were also included in our database. Second, to gain greater insight into the whole shopping process, especially product categories that were considered but did not lead to a purchase, a small number of scanning segments were analyzed in their entirety (i.e., including fixations while the consumer was walking and fixations on products far from the consumer’s current location).

When making a purchase, the majority of consumers’ visual attention is on graphic elements of the product (26% of fixations) or brand name (25%). Textual messages and shelf edge prices together constitute another one third of the fixations (20% for text; 13% for price). The remaining visual fixations address variety or flavor (10%) and non-price shelf-edge messages (6%). Of the six types of visual fixations, the brand name or logo dominates the beginning of most of the purchase events. Graphic images, particularly of the product, closely follow brand identity and exceed the brand attention in the latter half of the purchase process. Attention to visual content varies widely across product categories. For instance, brand information makes up 38% of visual attention for snacks and sweets, whereas it constitutes only 22% of fixations for dairy products. Purchase duration also affects the patterns of fixations. When making longer purchases, shoppers pay more attention to price and brand information and less attention to the photo and product description.

We conducted a quasi-experiment to test the effect of product display characteristics on purchase duration. Thirty-five purchases of packaged goods were coded for their assortment size and the orientation of the consumer’s visual search process, i.e., horizontal, vertical, or both. The purchase durations (in seconds) were regressed on the observed product presentation characteristics. The results show that purchase durations decrease when a consumer’s field-of-vision encompasses fewer SKUs and when her eye fixations are horizontally, as opposed to vertically, oriented. We contend that constrained or bordered product displays, such as mid-caps, can facilitate decision making without altering the category variety.

Next, an analysis of whole shopping trips revealed that while considering a nearby shelf or making a specific purchase, consumers are continuously monitoring the shopping environment with quick glances that fixate on objects that are further away. Some scans appear to be automatic (or even reflexive), such as people entering the aisle or approaching the shopper. Others are clearly related to planning later shopping decisions, such as glancing at more distance shelf displays and signage.

Finally, we propose a general model of consumer multi-tasking that extends current work on specific purchase (usually eye-tracking data) and store navigation (usually shopper-view video and/or RFID cart location data) by interrelating these two areas in terms of information search and decision planning.

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***The Role of Stimulus-Based and Person-Based Factors in Point-of-Purchase Attention and Choice: Insights from Eye-Tracking Experiments***

Milica Mormann, University of Miami, USA\*

Blythe Towal, California Institute of Technology

Christof Koch, California Institute of Technology

What drives consumer attention during decision-making at the point-of-purchase? Do people look at the most visually salient, i.e., brightest, choice alternatives? Or does their attention go to the most liked and thus goal-relevant options? In other words, what are the effects of stimulus-based and person-based factors on attention allocation? And how does this allocation of attention influence consumer choices?

In a binary choice task, we previously examined how the brightness of choice alternatives affects consumer choice (Milosavljevic et al. 2012). We reported the existence of a visual saliency bias, where, independent of consumer preferences, brighter alternatives are more likely to be chosen. We did not, however, offer an explanation as to what mechanisms give rise to the observed visual saliency bias. As a result, it is not clear exactly how, when, and why stimulus-based visual saliency may affect consumer attention and choice. We here address these questions, and in a companion paper build a model that can account for consumers' viewing patterns and choices in a point-of-purchase setting.

Hungry participants viewed high-resolution photos of store shelves filled with a total of 28 typical snack food items (randomly chosen from a set of 41 food items, such as Doritos, Oreos, M&Ms, etc.). Participants were instructed to search for and choose the item that they want to eat. Seventeen participants (median age = 25 years, range = 18 – 55 years; 61% male) completed an eye-tracking experiment (four were dropped due to incomplete eye-recordings or failures to follow task instructions). Each participant made 150 choices in blocks of 25 based on the allowed decision-making times: 0.255 seconds, 0.455 seconds, 0.655 seconds, 1.155 seconds, 3.155 seconds and 25 trials in the free-response condition in which participants had as much time as they wanted to make a choice.

During the entire decision-making process, we recorded moment-to-moment measures of attention, at a rate of 1000 times per second. We used a neuro-model of visual saliency to measure how visually salient each food item on the store shelf is (Koch and Itti 2012; WhiteMatter Labs GmbH; Itti, Koch and Niebur 1998). We used liking ratings of 41 different snack food items, such as Doritos and Snickers, to measure participants' preferences for each item.

We confirm the existence of the visual saliency bias in the multi-alternative choice: the visual saliency of the items that participants chose was significantly higher than the saliency of non-chosen, and sometimes more liked, alternatives. More specifically, when participants chose an item that was not rated as a "5=would like to eat very much", they chose an item rated "4=would like to eat" with the highest saliency ranking (5), as measured by the neuro-model of visual saliency, in significantly more trials than they chose items that were rated 5 but were less visually salient (saliency ranking of 1-4;  $\chi^2(4)$ ,  $p = 5.64 \times 10^{-06}$ ).

To answer how and why this visual saliency bias occurs, we next test three properties of visual attention that may give rise to it. We find that: (1) during initial fixations, the items that participants look at have a higher visual saliency rank than preference rank (all  $p < 0.012$ , Wilcoxon sign-rank test); (2) visual saliency affects eye-movements not only at the beginning of the decision-making process, but up through fixation 7; (3) items that have a very high saliency rank are looked at longer overall than items with lower saliency ranks across all decision-making times ( $H = 64$ , 4 d.f.,  $p = 3.75 \times 10^{-13}$ , Kruskal-Wallis).

In a companion paper, we introduce an integrated model that combines a perceptual decision process about where and when to look with a preference decision process about what to choose (Towal, Mormann and Koch 2013). The perceptual decision process is modeled as a drift-diffusion model (DDM) process for each alternative. Using psychophysical data from a multiple-alternative, forced-choice task, in which subjects have to pick one food item from a crowded display via eye movements, we test four models where each DDM process is driven by (a) saliency or (b) value alone or (c) an additive or (d) a multiplicative combination of both. We find that combined models including both saliency and value weighted in a one-third to two-thirds ratio (saliency-to-value) significantly outperform models based on either input alone. Eye fixation patterns influence a preference decision process, also described as a DDM process driven by subjects' preference for choice alternatives. Our combined model quantitatively explains fixation patterns and choices with similar or better accuracy than previous models, suggesting that visual saliency has a smaller, but

significant, influence than preferences and that saliency affects choices indirectly by guiding perceptual decisions that ultimately affect choice.

The experiments presented here improve our theoretical understanding of the effects of stimulus-based and person-based factors on attention, as well as the effects of attention on decision making. Our results show that every-day choices are systematically biased by visual saliency so that, among several liked alternatives, consumers are likely to choose the alternatives that are visually salient. Using eye-tracking methodology and insights from vision science we further show how and why this effect on choice is generated: participants look (1) earlier, (2) more repeatedly, and (3) overall longer at items with higher visual saliency allowing them more opportunity to consider, and eventually choose, these alternatives.

Our findings have important implications for the management of consumer attention. To date, no systematic knowledge exists of how exactly visual features drive attention. The neuro-scientifically grounded modeling approach to measuring stimulus-based visual saliency, introduced here, offers enormous benefits – in terms of both efficacy and efficiency – to the industry in its quest for guidance on attention management in areas such as design of marketing stimuli. Further, the model can be applied in numerous other contexts to benefit society: to design visually optimized websites that provide easier access to relevant information (e.g., retirement management websites), to optimize food menus that attract people toward healthier food alternatives, or to scan street scenes to streamline traffic flow, to name but a few.

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### ***Repeated Conjoint Choice Generates Decontextualized Values***

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Andrés Musalem, Duke University, USA

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Evidence that repeated conjoint choices decontextualize values comes from research about conjoint generally and from new studies studying conjoint using eyetracking. Past research has shown that the levels displayed in conjoint choices replace external reference levels that a consumer might bring to the exercise. There also has been evidence that asymmetric dominance and compromise that have such a large effect on single choice tend to go away in the context of repeated conjoint choices. Finally, research has shown that people make inferences to missing or ambiguous information in conjoint exercises only when formally asked to do so.

Eyetracking enables an assessment of the extent to which repeated conjoint choices are susceptible to mere exposure and to motivated search. Our study collected fixations on features in a context of 12 choices among 3 brands of coffee makers defined by six attributes. We first show that the practice of repeating choices generates choices that are more reflective of the other choices and takes 50% less time. This efficiency comes from increasing focus on a few objects and selected important features.

We first test for evidence that mere exposure to an object increases its value. This possibility is testable in our study because the placement of features is independent of presentation order. We find that the center object gets 25% more visual attention than those on the right or the left. We then test and find that this additional incidental exposure to the central option has no impact on choice. Thus, there is no evidence that increased mere exposure to the central object distorts choice.

We next test whether motivated search to reinforce a decision distorts the conjoint choices. We test motivated search by assessing whether people seek more positive information on the item they choose and more negative information on what they reject. However, both of these tests were unable to reveal any pattern of biased information search to support conjoint choices.

Eyetracking also reveals an attentional processes that make sense of how conjoint respondents can generate progressively more accurate choices in less time. Initially when examining a choice set, respondents scan the matrix to find the important features with strong positive and negative utility scores. Then greater attention to the finally chosen option is expressed in numerous binary comparisons with other options. Thus, we see a gradual increase in fixations to an object with high utility features as it becomes the focal object. However, within that object attention is drawn equally to features with large positive or negative utility values, at the expense of more neutral stimuli.

What emerges using eyetracking data and from earlier studies is that conjoint choice reflects an efficient process that is surprisingly free from a variety of cognitive and motivational biases that can plague individual choice. This appears to arise from the respondent's desire to develop a pattern of responses to choices that generate quick, reliable responses. The repetition of the conjoint choices in which features are assigned to different levels encourages the identification of important features that are either strongly liked or disliked and that enables the identification of reasonably good options in a short period of time.

In summary, the utility scores generated from conjoint choices are largely decontextualized. The eyetracking studies show them to be free from motivated search or mere exposure effects. Further, the cognitive demands of repeated choice tend to limit other forms of conditional inferences across attributes. Further, respondents replace external reference levels with levels exposed to respondents during the conjoint task. Finally they are less affected by dominance relationships simply because focusing on differences among alternatives requires additional work.

There are striking implications of these results for those predicting and understanding consumer behavior. Since so many consumer choices reside within a setting of a store layout and the reference effects from earlier purchase or use, these context effects are unlikely to be revealed in a conjoint study. What emerges instead is more similar to routinized choice within the marketplace. There consumers may learn, for example, to quickly identify Tide detergent from its red color and typical location, and additionally to quickly choose the needed version and size that takes advantage of local sales. In that sense repetition in conjoint choice task mimics aspects of learning to be a reasonable fast shopper in an otherwise complex and confusing choice environment. However, the results of conjoint are abstract from the kinds of adaptive behavior we see often with one-time choices.

Methodologically, these results suggest that conjoint may not be a good way to evaluate utility changes from say, motivated processing, emotional cues or reference levels as the demands of repeated conjoint cues will tend to diminish these effects. To identify such context effects one is better off with an individual choice of a pair of items or a simple affective reaction to one item.

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### ***Attracting Attention in TV Ads: When to Build and When to Borrow Entertainment?***

Thales Teixeira, Harvard Business School, USA\*

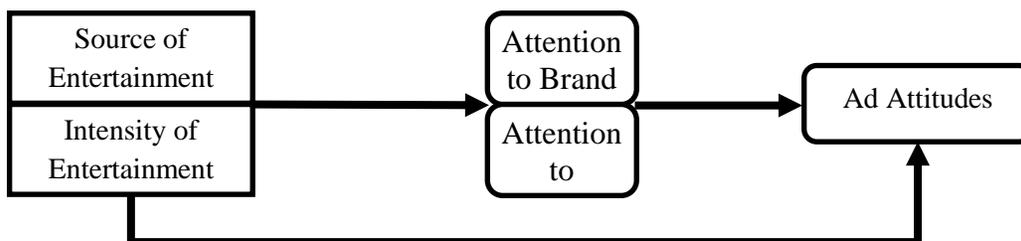
Stefano Puntoni, Erasmus University Rotterdam, The Netherlands

Entertainment is widely used in advertisements to attract consumer's attention to the product and brand advertised. There are broadly two approaches to using entertainment in ads: advertisers can hire ad agencies to create entertaining content thus building

entertainment “from scratch” or they can borrow entertaining content by licensing entertainment from others (i.e., buy). We assess the role of the type of entertainment, built versus bought, as well the resulting level of entertainment, on attention to the product and brand and the subsequent impact on ad attitudes. We find that built (versus bought) entertainment has a greater impact on attention to the product and brand. And higher attention to the brand, but not to the product, helps to increase ad attitudes. Built entertainment increases attention to the brand for low levels of entertainment. For high levels of entertainment, bought entertainment is better at directing attention to the brand. In terms of the direct impact of entertainment, we find that highly knowledgeable consumers have a higher attitude towards the ad when the entertainment used is borrowed (versus built). And low knowledge consumers have higher ad attitude for built (versus borrowed) entertainment, irrespective of the level of entertainment used. Thus, advertisers deciding whether to make or buy entertainment to use in ads should consider the degree of knowledge the target consumers have for the product and entertainment, the expected level of entertainment to accomplish and the type of attitude (general, entertainment, information) to influence.

In this paper formalize predictions regarding the impact of source of entertainment (built or borrowed) and moment-by-moment intensity of entertainment (i.e., how entertaining consumers perceive the ad to be) on attention and attitudes. We formalize the dual route by which entertainment in ads (intensity and source) impacts attitudes towards the ad (see figure 1). Entertainment impacts attitudes directly and indirectly, via its effect on visual attention. In the process of estimating the direct and indirect effects, we control for other factors known to influence attention and attitudes. We control for prior familiarity with the ad, order in which ads are presented, to account for spillover effects, and age of the participant and gender, all known to impact attention and ad attitudes.

**FIGURE 1: CONCEPTUAL MODEL OF THE ROLE OF ENTERTAINMENT**



We find that higher levels of entertainment indirectly increase general and entertainment-related attitudes towards the ad by directly increasing the attention towards the product and brand, which carries over to improve attitudes despite no direct impact of entertainment level on any of the attitude measures studied. More importantly, the source of entertainment used, built versus borrowed, also has a direct impact on the attention towards the product and brand advertised, with built entertainment increasing attention to the product or brand. Yet when built entertainment is very low entertaining, then it draws less attention towards the brand relative to using the same low level of borrowed entertainment. Counter to this, source of entertainment also directly impact attitudes in a positive manner for general and entertaining attitudes but not for information-based attitude. These findings are moderated by the consumer’s level of knowledge.

In general, knowledgeable consumers are more likely to pay attention to the products advertised as well as have more favorable entertainment attitudes towards the ad. In addition, if knowledgeable consumers are highly entertained, they are further more likely to pay attention to the brand, which has positive implications for overall ad attitudes. Yet, if the entertainment used is built versus borrowed then these attitudes are diminished in comparison to entertainment that is borrowed, e.g., via licensing of content. Knowledgeable consumers are more likely to pay attention to the advertised product but not to the brand, unless the content is entertaining. In that case, they are more likely to focus on the brand and, if the entertainment was borrowed, then knowledgeable

consumers are also more likely to have higher attitudes towards the ad across the board. The only exception to this, and that also pertains to lay consumer's is if the content is highly entertaining. In this case, built entertainment increases general attitudes more than does borrowed entertainment

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## **7.2 Individual Papers: The Time Has Come: Exploring Temporal Distance and Temporal Resources**

**Room: SANDINGHAM**

**Chair:** Melanie Rudd, University of Houston, USA\*

### ***Colorful or Black-and-White? The Role of Temporal Distance on How You See the Future***

Hyojin Lee, Ohio State University, USA\*

Xiaoyan Deng, Ohio State University, USA

Kentaro Fujita, Ohio State University, USA

H. Rao Unnava, Ohio State University, USA

The ability to foresee future scenarios is a driving force in human evolution, and a great deal of research has investigated this capability. For example, researchers have studied how people make decisions about a future event, how accurate people are in predicting their emotions, and the relationship between one's forecasts and their actual subsequent behaviors. While most previous work has focused on the content that people create in their mind (mainly by relying on their description of how things will be in future), the specific ways that people visualize their future has not yet been examined. Understanding the nature of people's visual images of the future can yield significant implications for communication and marketing strategies.

In this paper, we investigate whether people always see future in color. We propose that when people imagine events in the distant (vs. near) future, they are more likely to see them in black-and-white (vs. in color).

According to construal level theory (Trope & Liberman, 2003), an event that occurs in the distant future is more likely to be represented abstractly (i.e., with high-level features that convey the essential information), whereas an event occurring in the near future is represented more concretely (i.e., with low-level, incidental features). Trope & Liberman (2010) suggest two criteria for high vs. low level features. The first criterion, centrality, suggests that changing a low-level feature does not dramatically change the meaning of an event but changing a high-level feature does. Indeed, color is often considered as redundant information and the addition or removal of color does not degrade the essential message delivered by visual images (Dooley & Harkins, 1970). For example, people can fully understand a black-and-white picture of a chair and know that the object is for sitting, even though color is absent (Arheim, 1974). The second criterion, subordination, suggests that low-level features depend more on high-level features than vice versa. For example, when asked to draw a picture, people start with lines and then fill in with color. Rarely do people think of the color before they think of the shape; and some shapes may never be colored at all. This asymmetric dependency between shape and color supports our argument that color is secondary information and shape is primary information.

Extending construal level theory to the context of imagination of future, with the assumption that color qualifies as a low-level feature while an object's shape is higher level, we predict that people imagining near future will more likely see it in color while distant future is less colorful. Study 1 examines the main hypothesis that temporal distance leads to different visual representations (i.e., color vs.

black-and-white). Study 2 offers a conceptual replication of the main hypothesis and investigates potential consequences of these differences. In Study 3, we explore whether different color formats impact people's judgments of when an event will occur.

Study 1 asked people to imagine a beach they will be at, either next week or ten years from now. They were then showed pictures of different levels of saturation and asked which of them comes closest to what they imagined. As expected, imagination of being on beach next week was associated with more color than black-and-white ( $p = 0.034$ , one-tailed) while the reverse was true for distant future ( $p = 0.028$ , one-tailed).

In Study 2, participants were asked to imagine attending their friend's housewarming party (either next week or ten years ahead) and to color in a line drawing of friend's house, using 5 colored pencils and 5 greyish pencils. Compared to people in the temporally proximal condition, people in the temporally distant condition showed a stronger tendency to use monochromatic colors for objects ( $p = .018$ ). After coloring the picture, participants were asked to recommend five pictures among six color pictures and six black-and-white pictures to give to their friend as a housewarming gift. Compared to people in the next week condition, people in the ten years later condition were more likely to choose black-and-white pictures ( $p = .018$ ).

In study 3, we examined the possibility that the process could reverse: whether color could signal the temporal distance of a future event. Participants were asked to watch a short video clip describing a highly advanced technology and to indicate when they thought this technology would be available for consumers to use on a daily basis. Compared to people who watched color version of the video, people who watched black-and-white version were more likely to indicate that the product would be available on the market later in the future ( $p = .050$ ).

Our research offers several important theoretical and managerial contributions. The current studies shed light on how individuals mentally depict the future. The finding that temporal distance decreases one's focus on and preference for color suggests that marketers can strategically use color to achieve their goals. Additionally, our last study implies that marketers can influence consumers' psychological distance to new products by controlling the saturation level in a picture of the product. Lastly, we offer a theoretical contribution to the literature on construal level theory by suggesting that shape is a primary and color is a secondary feature in visual stimuli. This research provides the groundwork for future research to examine whether black-and-white (vs. color) pictures lead to high-level (vs. low-level) construal. Future research should also investigate whether people's preference for color vs. black-and-white is affected by other dimensions of psychological distance, such as spatial, social, and hypothetical distance.

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### ***Expand Your Breath, Expand Your Time: Boosting Perceived Time Affluence through Slow Controlled Breathing***

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Modern-day consumers frequently experience "time famine" (Perlow, 1999): They feel there is too much to do and too little time. And, unfortunately, such perceptions can take a toll on social, physical, and mental well-being (Hochschild, 1997; Roxburgh, 2004; Zuzanek, 2004). Although science cannot expand the amount of time in each day, could it shift consumers' perceptions of how much time they have? In this research, I examined whether engaging in slow controlled breathing would increase consumers' perceived time affluence and, consequently, impact their behavior and well-being.

Breathing can be either automatic or under voluntary control. Voluntary breath control can be performed either fast or slow and consists of conscious inhalation, retention, and exhalation (Chodzinski, 2000). But, can slow controlled breathing increase perceived

time affluence? Prior research and theory suggest so. For instance, a drug-induced reduction in breathing rate can reduce the perceived speed of one's internal clock (Hawkes, Joy, & Evans, 1962). Moreover, activities like mindfulness meditation and yoga, which generally involve slow controlled breathing, help direct the mind's attention to the present moment (Brown & Gerbarg, 2009; Brown & Ryan, 2003; Kabat-Zinn et al., 1992). This is important because there is evidence that a stronger focus on the present expands time perceptions (Rudd, 2013; Vohs & Schmeichel, 2003). Taken together, these results suggest slow controlled breathing would increase consumers' perceived time affluence by strengthening their present-focus.

In Experiment 1, participants completed either a slow-controlled-breathing or fast-controlled-breathing exercise. Exercises differed in the breathing rate used, but took the same amount of time to complete. Posture, method of inhalation and exhalation, and depth and force of breath also did not differ across conditions. To manipulate breathing rate, participants in the slow- [fast-] controlled-breathing condition were instructed to "breathe so each complete breath (i.e., inhale plus exhale) lasts 11 counts [4 counts]" and told the inhale should last 5 [2] counts and the exhale should last 6 [2] counts. Participants in the slow- [fast-] controlled-breathing condition completed 3 "sets" of 7 eleven-count-long breaths [19 four-count-long breaths]. Because one could argue that any observed differences in time perceptions might be due to differences in arousal, feelings of arousal were measured after the breathing exercise. However, because both fast and slow controlled breathing exercises are often immediately followed by a physiological and psychological calming (Brown & Gerbarg, 2005; Cappo & Holmes, 1984; Kaushik et al., 2006; Sushil et al., 2010), arousal was not expected to differ across conditions. The other dependent variables were temporal focus (i.e., the extent participants were currently focused on the past, present, and future) and perceived time affluence (i.e., the extent participants currently felt "pressed for time"). Consistent with the hypotheses, those who engaged in slow (versus fast) controlled breathing were more present-focused and felt less pressed for time. And a mediation analysis revealed that slow controlled breathing expanded perceptions of time by heightening people's focus on the present. Importantly, arousal could not account for these effects: Participants in both conditions felt equally aroused after the breathing exercise.

One's sense of time availability is often an indicator of psychological health, with mental health and well-being suffering when time feels compressed (Robinson & Godbey, 1997; Roxburgh, 2004). Thus, Experiment 2 tested whether slow controlled breathing would boost life satisfaction by increasing perceived time affluence. Experiment 2 followed the same procedures as Experiment 1, except this time the dependent variables were perceived time affluence (i.e., participants' current feelings of impatience) and life satisfaction (cf. Kahneman et al., 2006). The results revealed that after engaging in slow (versus fast) controlled breathing, participants felt less impatient and more satisfied with life. Moreover, a mediation analysis demonstrated that those who engaged in slow controlled breathing experienced greater life satisfaction because they felt less impatient.

Prior research suggests feelings of time pressure can hinder creative thinking (Amabile, Hadley, & Kramer, 2002; Andrews & Smith, 1996). Therefore, Experiment 3 tested whether, by increasing perceived time affluence, slow controlled breathing would enhance creativity. For convergent validity, Experiment 3 added a control condition. After completing either the slow-controlled-breathing, fast-controlled-breathing, or no breathing exercise, participants reported their current feelings of time pressure and completed a divergent thinking task (in which they generated creative uses for a brick; cf. Silvia et al., 2008). Creativity scores were determined by two independent raters and followed the scoring method outlined in Silvia et al. (2008). The results revealed that participants who engaged in slow (versus fast or no) controlled breathing felt less pressed for time and were more creative. Moreover, mediation analyses demonstrated that those who engaged in slow controlled breathing were more creative because they felt less pressed for time.

A link between greater perceived time and greater procrastination is also suggested by prior research (Shu & Gneezy, 2010; Vodanovich & Rupp, 1999). Thus, Experiment 4 examined whether, by boosting perceived time affluence, slow controlled breathing would increase procrastination tendencies. After completing either the slow-controlled-breathing, fast-controlled-breathing, or no breathing exercise, participants reported the extent they currently felt pressed for time and the extent they would procrastinate in two imaginary scenarios (Scenario 1: They imagined they had just been assigned a 5 page paper that was due in 7 days and reported on

what day they thought they would complete it; Scenario 2: They imagined they had to fill-out a 1 page form before the end of the week and reported on what day they thought they would return the completed form). The results revealed that participants who engaged in slow (versus fast or no) controlled breathing felt less pressed for time and reported a greater tendency to procrastinate in both scenarios. Moreover, mediation analyses demonstrated those who engaged in slow controlled breathing had greater procrastination tendencies because they felt less pressed for time. This suggests the consequences of expanding perceived time are not always positive.

In conclusion, slow controlled breathing strengthens one's focus on the present, and this greater present-focus can increase perceived time affluence. Importantly, this greater perceived time affluence has important consequences for consumer behavior and well-being: it boosts life satisfaction, enhances creativity, and heightens procrastination tendencies

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### ***The Effect of Regulatory Focus Orientation on the Preferences for Investments Maturing in the Near Versus Distal Future***

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Making "good" investment decisions is mind-boggling for individuals, from everyday stock traders to investment experts, because it is difficult to foretell what the outcome will be. Such uncertainty over the outcome is subject to individuals' interpretations. The literature on inter-temporal decision making shows that individuals can interpret uncertainty optimistically by discounting negative information (Loewenstein and Prelec 1992) faster than positive information (Eyal et al. 2004). Norem and Cantor (1986), on the other hand, have demonstrated that individuals can also tend to view future events pessimistically in order to protect themselves from possible failures.

In this research we investigate the psychological factor, which leads to different interpretations of temporal distance. Through four experiments, we propose and show that individuals with different regulatory focus orientations will differ in their evaluations of investment products with different temporal distances (i.e. the investment period). We consider regulatory focus orientation because it is closely related to the two basic goals that individuals have when making investment decisions: to achieve financial gain and to avoid or prevent financial loss (Zhou and Pham 2004). Promotion-focused individuals are more likely to believe that uncertainty means that greater gain is possible the greater the temporal distance is (i.e., if they sustain their investments longer), because they interpret time as an opportunity to reach their financial goals. On the contrary, prevention-focused individuals are more likely to consider uncertainty to mean that loss will be greater in the distal future than in the near future since they associate time with greater risk and possible losses. These differences in interpretation of temporal distance will influence the evaluations of investment options with different investment maturity. In other words, we show that promotion focused investors see distal investment options more optimistically; while prevention focused investors see these options more pessimistically. Furthermore, we argue that individuals would base their evaluations of investment products on their predictions about profit.

In Study 1, we demonstrate that prevention focused individuals have significantly higher evaluations of the investment option maturing in the near future, while promotion focused evaluate the investment option maturing in the distal future more favorably. We extend the findings of Study 1 by integrating the information about the past in investment decisions.

Literature shows that when individuals are provided with information on past performance, they can make different predictions about future outcomes (Morrin et al. 2002). We investigate how regulatory focus interacts with information on different past trends. To understand how people with different regulatory focus orientations differ in their predictions, we refer to the relationship between regulatory focus orientations and optimism vs. pessimism. Research has shown that an optimistic mindset and promotion focus orientation create a regulatory fit leading to increased engagement in goal pursuit, while a pessimistic mindset fits with prevention focus orientation motivating towards goal attainment (Hazlett, Molden and Sackett 2011). We argue that past trends can trigger a pessimistic versus optimistic mindset depending on the positivity of information.

In Study 2, we show that the direction of the past trend—increasing versus decreasing—leads to differences in evaluation of the investment product with respect to regulatory focus orientation. An increasing trend is likely to trigger more optimistic predictions compared to a decreasing trend leading to a high fit with promotion focus orientation. A decreasing trend, on the other hand, is more likely to lead to pessimistic views and a better fit with prevention focus orientation. Thus, we expect that information on past performance motivates investors to the extent that it fits the investor's regulatory focus orientation. We showed that when the past performance has been exhibiting an increasing trend, promotion-focused individuals have a higher evaluation of the investment product that matures in the distal future, whereas prevention-focused individuals have a higher evaluation of the investment product that matures in the near future. When the past performance has been exhibiting a decreasing trend, the effects were in the opposite direction. Furthermore, we showed that these effects were mediated by the anticipated profit.

In real life, continuously increasing and decreasing trends are very rare. In fact, ups and downs in trends are very common. Thus, in Study 3 we integrate salient highs and lows in trends as past performance information considering every salient up and down a composition of an increasing and a decreasing trend. Hence, the focus on the decrease (leading to pessimism) versus increase (leading to optimism) in the salient up versus low can shape predictions with respect to regulatory focus orientation. We showed that when the chart depicting the past performance of the mutual fund exhibits a salient high, promotion-focused individuals prefer the investment product that matures in the near future, whereas prevention-focused individuals prefer the product that matures in the distal future. Furthermore, in Study 4, we show that these effects are mediated by the expected profit.

We offer major theoretical contributions by taking a cognitive perspective to explain the interaction between temporal distance and regulatory focus orientation. Second, we extend the literature on investment decision making by investigating the impact of motivational difference on interpretation of temporal distance. Furthermore, we show how predictions about performance can differ depending on the past performance depicted in charts and influence preferences for investments with different investment maturity. We establish the relationship between the perceived future performance and regulatory focus orientation.

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### ***The Influence of In-Store Temporal Distance on Promotion Redemption during a Shopping Experience***

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Traditionally, shoppers encounter price promotions either before entering a store or at the moment of choice (Blattberg et al. 1995). Yet, with the proliferation of consumer facing technology, such as smartphones or smart shopping carts, retailers and manufacturers have a greater level of flexibility as to when to engage shoppers with promotions during a shopping experience. This research contributes by examining the role of the temporal distance between the promotional offer and the promoted product and its influence on redemption likelihood, product perceptions, and spending behavior.

Priming literature states that promotional offers should be transient, which suggests that shoppers are more likely to redeem a promotion when it is encountered closer to the purchase decision for the promoted product (Crowder 1976). However, temporal construal theory suggests that the temporal distance between the promotion and the promoted product positively influences consumer perceptions about the product (Trope & Liberman 2002). Specifically, when decisions are perceived to be temporally distant, individuals construe these decisions in terms of abstract, high-level terms, while more temporally proximal decisions are based in concrete, low-level considerations (Liberman & Trope, 1998). Temporal distance increases the influence of the value of high-level construals, while reducing the value of low-level construals, in consumer purchase decisions and evaluations.

An important distinction between high- and low-level construals of goal-directed behavior is the focus on desirability versus feasibility considerations (Trope & Liberman, 2003; Vallacher & Wegner 1987). Desirability considerations refer to the value of the decision outcome (the “why” of the behavior), whereas feasibility considerations refer to the ease or difficulty of reaching the decision outcome (the “how” of the behavior; Trope, et al. 2007). This implies that when the temporal distance between the promotional offer and the promoted product is close (e.g., the promotion is offered immediately prior to the purchase decision), shoppers would be relatively more influenced by feasibility considerations, such as the costs and uncertainties associated with acquiring the promoted product (Castano et al., 2008). When the temporal distance between the promotional offer and the promoted product is longer (e.g., the promotion is offered in advance of the purchase decision), shoppers are relatively more influenced by desirability considerations, such as the brand or taste (Alexander et al., 2008).

In order to examine the influence of temporal distance between the promotional offer and the promoted product on redemption likelihood and spending behavior, we conducted a number of simulated shopping tasks. In Study 1, participants were presented with a shopping list consisting of 8 different product categories and told that their decisions would occur in the order of the shopping list. After every purchase, the shopping list indicated what purchases have been made with a strikethrough (ex: bread) to draw attention to the temporally sequence of purchase decisions (Hornik, 1984). Participants were randomly assigned to one of three conditions: a temporally distant promotional offer (received prior to the 2nd purchase decision), a temporally proximal promotional offer (received prior to the 5th purchase decision that was for the promoted product), or a control condition with no promotions. The promotional offer was “\$2 off Starbucks ground coffee.” The results indicate the promotions were effective: participants in both promotion conditions were more likely than the control condition to purchase Starbucks (21% vs. 6%;  $\chi^2=9.129$ ,  $p<0.01$ ). More importantly, and consistent with temporal construal level theory, participants were more likely to redeem temporally distant promotions than proximal promotions (34% vs. 17%;  $\chi^2= 4.78$ ,  $p<0.05$ ),

Study 2 replicated Study 1 with the three exceptions. First, to mitigate concerns of primacy, participants shopped for 12 items with the promoted product as the 11th purchase decision. The temporally distant promotion occurred before the 5th purchase decisions, while the proximal promotion occurs before the 11th purchase decision. Second, the promotional offer was reduced from \$2 to \$1. Third, perceptions of the promoted product were collected to examine the salience of desirability considerations. As in Study 1, the promotions were effective (37% vs. 8%;  $\chi^2=7.05$ ,  $p<0.01$ ), and participants were more likely to redeem temporally distant promotions than proximal promotions (50% vs. 26%;  $\chi^2=2.84$ ,  $p<0.1$ ). Furthermore, participants who received the temporally distant promotional offer evaluated the taste and quality of the coffee more favorably than those who received the temporally proximal promotion ( $F(1,87)= 5.57$ ,  $p<0.05$ ). This suggests a temporally distance promotion may actually enhance a shopper’s evaluation the desirability characteristics of the promoted product.

In order to examine the robustness of the effect of promotional temporal distance and the proposed mechanism in more detail, Study 3 promoted a product in a different category: \$1 off for Freschetta frozen pizza. Furthermore, additional perceptual measures were collected to examine the effect of the temporal distance on both desirability and feasibility considerations. The results again show that the promotional temporal distance increases the likelihood that participants redeem the promotion and purchase the promoted product (50.0% vs. 39.5%;  $\chi^2=1.85$ ,  $p<0.10$ ). Furthermore, the promotional temporal distance is shown to positively relate to a consumer’s

perceptions of the promoted product's taste (5.66 vs. 5.18,  $F(1,96)=4.15$ ,  $p<.05$ ). An examination of the purchases of those participants that did not purchase the promoted product revealed some interesting results. The temporally proximal promotion leads to a lower spending on pizza (\$6.39 vs. \$6.19;  $t(1,94)=1.63$ ;  $p=0.10$ ), resulting in higher share for the least expensive brand (39% vs. 20%;  $\chi^2=4.14$ ,  $p<0.05$ ). Thus, temporally distant promotions appear to enhance the desirability considerations (e.g., taste) of the promoted product, while the temporally proximal promotion enhances the influence of feasibility considerations (e.g., price).

This research makes two important contributions. First, we are among the first to examine how consumers make distinct inferences about products by increasing the temporal distance between the promotion and product within a single shopping trip. Second, we significantly extend the literature on Construal Level Theory (Trope & Liberman 2006) by demonstrating how the level of a construal about a promoted product changes within a shopping trip as a function of only a few purchases.

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### **7.3 Symposium: Do Positive Self-Perceptions Always Lead to Healthy Behaviors?**

**Room:** WINDSOR

**Chair:** Andrew Perkins, Ivey Business School, Western University, Canada

#### ***Beauty's Rosy Glow: How Feeling Beautiful Leads to Over-Optimism and Poorer Planning***

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How does feeling more versus less physically attractive affect people's decision making? In particular, how does feeling beautiful affect people's decisions about the future that play out over an extended period of time and require planning? While previous research has examined the relationship between people's self-perceived attractiveness and their personality traits (Feingold 1992), there has been little research on how people's transitory perceptions of their attractiveness impact their self-perception, judgments about the future, and their decision-making.

The "above average" effect is pervasive: across many domains, people are overconfident in their abilities and overly optimistic about their future (Weinstein 1980). While generally beneficial, unrealistic optimism can also have negative consequences. One costly consequence, known as the *planning fallacy*, is people's tendency to underestimate the amount of time that it will take to complete a future task, despite knowledge that similar previous tasks have taken longer than planned (Buehler, Griffin, and Ross 1994). Given that people who feel attractive tend to have higher self-esteem and social confidence (Feingold 1992), we predicted that manipulating people's perception of their physical attractiveness and making them feel more beautiful would make them more confident in general, more over-optimistic about their future life outcomes, and worse at planning for the future.

In Study 1 we explored the effect of making participants feel more attractive on their optimism about the future. We developed a novel method of making participants feel more beautiful and randomly assigned 94 participants to either the beauty or control condition. Those in the beauty condition listed three things that make them feel physically attractive and elaborated on two of those, while those in the control condition listed three things they did last week. All participants then reported the likelihood of 12 life events (6 desirable and 6 undesirable) happening to them in the future relative to their peers (7-point scale; -4 = "much less likely to happen to me" to 4 =

“much more likely”), their general self-confidence in their abilities (3-item, 7-point index; Bandura 1982), and their mood (2-item, 7-point index.) Participants who received a boost in beauty were more optimistic about the future (1.29 vs. .45,  $p < .001$  for the average of the 12 events.) They were significantly more optimistic about 10 of the 12 life events, reporting that desirable events were more likely and undesirable events were less likely to happen to them compared to control participants. Participants in the beauty condition were also more self-confident (5.59 vs. 4.76,  $p < .001$ ), but were not in a better mood, n.s. than control participants. Self-confidence mediated the effect of the beauty boost on optimistic predictions about the future, indicating that participants in the beauty condition expressed greater optimism about the future because they were more confident in their abilities.

In Study 2 we sought to explore the behavioral implications of increased optimism and show that making participants feel more attractive leads them to make more optimistic plans for the future. We used a different method of boosting perceptions of own physical attractiveness. Participants in the beauty condition rated the familiarity of 15 photographs of faces where ten of the faces were pretested as unattractive, whereas those in the control condition rated the familiarity of 15 neutral city scenes (Cash, Cash, and Butters 1983). 108 participants were then given 11 days to complete a seemingly unrelated take-home assignment (interviewing a friend about an electronic good purchase and writing a report about the friend’s decision process) and email their report to the experimenter. Participants predicted their completion time for the report, then reported their self-confidence (3-item, 7-point index), their own attractiveness (2-item, 7-point index), and their mood (2-item, 7-point index.) Those who received a boost in beauty did feel more attractive (5.43 vs. 4.83,  $p < .05$ ) and self-confident (5.90 vs. 5.19,  $p = .001$ ), but were not in a better mood, n.s. They predicted that they would complete the assignment faster than control participants (4.49 vs. 6.37 days,  $p = .01$ ), but took equally long to complete it (7.89 vs. 7.12 days, ns), demonstrating a greater gap between predicted and actual completion times, or

In Study 3, we replicated the effect on planning behavior and explored the underlying mechanism. Previous research has suggested that people fall prey to the planning fallacy because they take an inside view of the task at hand, meaning that they both focus too much on the plan at hand and fail to consider obstacles that may arise (Buehler, Griffin, and Peetz 2010). 38 students in an MBA class predicted the exact date and time they would submit a class assignment and listed thoughts about how they came to their predictions after completing the same photo-rating task as in Study 2 to boost beauty. The thoughts were coded for the number of times students mentioned concrete plans and obstacles. Those who received a boost in beauty predicted that they would complete the assignment faster than control participants (8.95 vs. 11.8 days,  $p = .01$ ), but took equally long to complete it (16.3 vs. 14.7 days,  $p = .17$ .) In addition, participants who received a boost in beauty mentioned obstacles significantly less frequently than those in the control condition (1.21 vs. 2.11 obstacles,  $p = .01$ ), whereas there was no difference between conditions in mentioning concrete plans (.63 vs. .58 plans,  $p = .79$ .) The decreased focus on obstacles fully mediated the effect of the beauty boost on predicted completion times, indicating that participants in the beauty condition made overly optimistic predictions because they failed to consider possible setbacks.

We conclude that while feeling beautiful increases people’s self-confidence, it may have a negative impact on judgment and planning behavior. People who feel more beautiful are worse at planning because they are more confident in their abilities, which leads them to underestimate potential setbacks and to have an overly rosy view of the future.

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***Implicit Imbalances Amongst Self-esteem, Self-body attitude, and Self-image: Surprising Findings in Overweight Versus Thin Women***

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Andrew Perkins, Western University, CA

Overall, approximately 50% of young women report being dissatisfied with their bodies (Bearman et al., 2006). This dissatisfaction can lead to a number of physical and psychological problems, including lower self-esteem (Grabe and Hyde 2006). This dissatisfaction is predicted to occur because of a general socio-cultural norm that thin is “ideal” for attractive women (Weissman et al. 1992). Recent research in cognitive psychology (Greenwald et al 2003, Perkins and Forehand 2011) suggests that individuals who do not conform to these “ideal” socio-cultural norms will exhibit unbalanced, or dissonant, cognitive associations in memory that connect one’s sense of identity, self-esteem, and attitudes toward those norms (Heider 1958). The current research observes the existence of these dissonant cognitive associations in overweight and obese individuals, and compares them to similar associations in individuals who better conform to Western ideals of body size and image.

In this study, we examine potential differences in these relationships between self-esteem, body image, and body attitude across low and high BMI (body mass index) women. *A priori*, we hypothesized that women who self-described themselves as thin would exhibit balanced, non-dissonant, identities, and women who self-described themselves as not thin (or overweight) would exhibit unbalanced, or dissonant identities. We hypothesized this difference due to the overwhelming influence of current social norms known to most of the population of study (Weissman et al. 1992), such that high BMI women would have an understanding and acceptance of current social norms and beliefs related to attractiveness, perceived differences between actual self and ideal self, and between actual self and society’s ideal.

To test this hypothesis, adult women in a large metropolitan area participated in a study on attitudes towards exercises and health. This study was part of a larger project that was conducted from September through December 2011, in which we tested how various psychological interventions and exercise techniques influenced body changes and exercise adherence intentions. In the initial stage of that project, we assessed self-esteem, self-body association, and body image attitude using a series of Implicit Association Tests (IAT; Greenwald, McGhee and Schwartz 1998). The IAT is a well-established measure in social and cognitive psychology designed to indirectly measure the strength of association between concepts in memory using a simple computer-based categorization task. The IAT has proved invaluable in measuring associations in memory that individuals are either unable or hesitant to report on traditional measures. Participants also reported their self-perceived current body size, ideal body size, societies’ ideal body size, and a measure of worry about becoming overweight.

We categorized the participants based on their own self-classification of current body size using a conservative measure of thinness. The IAT data were analyzed using D scoring algorithm (Nosek et al 2004). The D scoring algorithm produces a single statistic that may be interpreted as an effects size similar to Cohen’s *d*. In the current research, a positive D score on the self esteem IAT suggests positive self esteem, a positive D score on the self-body association IAT suggests a stronger association between a participant’s sense of self and thin body imagery, and a positive D score on the body attitude IAT suggests a more positive attitude toward thin versus overweight body images. ANOVA analysis revealed a significant difference on the body image and body attitude IATs. We found that thin participants exhibited a stronger self-association with imagery consistent with thin body size ( $M_{thin} = .63, M_{overwt} = .52, p = .037$ ) and more positive attitudes toward thin body imagery ( $M_{thin} = .51, M_{overwt} = .39, p = .044$ ), but did not reveal significant increase in self-esteem compared to overweight participants ( $M_{thin} = .49, M_{overwt} = .51, p = .65$ ). Further, thin individuals revealed a smaller current body image ( $M_{thin} = 3.4, M_{overwt} = 6.0, p < .001$ ; smaller number is thinner), a smaller ideal body image ( $M_{thin} = 2.6, M_{overwt} = 3.8, p < .001$ ), a smaller self-ideal discrepancy ( $M_{thin} = .72, M_{overwt} = 2.39, p < .001$ ), and a smaller self-society ideal discrepancy ( $M_{thin} = .80, M_{overwt} = 3.5, p < .001$ ) than the overweight individuals. Finally, correlational analysis of the thin participants showed a *negative* correlation between self-reported body size and implicit self esteem (such that the thinner your current body size, the *lower* your implicit self esteem) and a positive correlation between worry about becoming overweight and increased implicit self-esteem. None of these correlations held for the overweight group.

As the relationship between the implicit and self-report measures is correlational in nature, balanced identity analysis (BID; Greenwald et al 2003) was performed on the IAT data for both the thin and overweight participants to better understand the characteristics of the targeted associations in memory. Specifically, only the interaction term calculated from any two of three interrelated IATs should predict the third IAT D score in a two-step regression for that relationship to be considered *balanced*, or non-dissonant. Counter to our hypothesis, the expected balanced identity relationship was shown for the *overweight* participant group, but not for the thin participant group.

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***Because I (Don't) Deserve It: Understanding How Relationships and Deservingness Influence When Consumers Do vs. Don't Indulge***

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The notion of deservingness has existed in marketing, and particularly advertising, for quite some time. Marketers have encouraged consumption with slogans like “you deserve a break today” (McDonald’s), “you deserve a car this good” (General Motors) and “because you’re worth it” (L’Oreal). Deservingness seemingly plays a particularly prominent role when promoting self-indulgent products, such as higher-calorie foods or higher-end products. However, relatively little is known about what shapes consumers’ perceptions of their own deservingness and how deservingness might influence consumers’ propensity to indulge or restrict indulgence.

Previous efforts to understand indulgence have focused on goals, individual differences, and specific types of emotion (e.g., Laran 2010; Lyman 1982; Keinan and Kivetz 2008; Ramanathan and Williams 2007; Shiv and Fedorikhin 1999). I examine perceived deservingness as a novel driver of indulgence.

The current research shows that marketers often inadvertently and indirectly alter feelings of deservingness by reminding consumers of social relationships. Advertising and promotions frequently feature the “happy togetherness” of close friends, family, and romantic couples. I examine how such relationship reminders affect consumers’ perceptions of deservingness and their consumption. I hypothesize and show that highlighting relationships that one does not have or no longer has leads to restricted indulgence owing to reduced perceptions of deservingness. Using a variety of contextual, marketing relevant relationship reminders (i.e., greeting cards, popular press articles, advertisements), the studies show that relationship reminders affect indulgent choice and perceived deservingness. Five studies provide support for the hypothesis that perceived deservingness drives indulgent choice and highlight the important role relationship reminders play in affecting deservingness.

*Study 1.* Seventy-four adults ( $M_{age}=25.8$ ,  $SD=8.7$ ) entered a store environment decorated with reminders of romantic relationships. At the end of the store visit, participants approached a cart containing four packaged snacks varying in healthfulness and calories: a fruit and nut bar, a chocolate-chip granola bar, a chocolate dipped granola bar, and a Snickers candy bar. In predicting indulgent food choice, a significant effect for relationship status was found. When reminded of romantic relationships they did not have, singles were significantly less likely to choose indulgent snacks (single=52%, coupled=73%;  $X^2=3.73$ ,  $p<.05$ ).

*Study 2.* 149 adults ( $M=25.6$ ,  $SD=4.4$ ) participated in a 2 relationship reminder (manipulated: romantic/ platonic) x 2 partnership status (measured: single/coupled) design. After viewing greeting cards reminding them of specific relationships, participants chose a series of personal care items: lip balm, shampoo, hand cream, and fragrance, which included economy and higher-end brands. A repeated measures logistic regression revealed a significant interaction of relationship reminder condition and partnership status

( $B=1.22$ ,  $Z=2.62$ ,  $p<.009$ ). After viewing the romantic reminders, single people were less likely to choose higher-end brands than coupled people ( $B=-0.78$ ,  $Z=-2.38$ ,  $p<.02$ ). Single and coupled individuals' choices did not differ after platonic reminders ( $B=0.44$ ,  $Z=1.33$ ,  $p<.18$ ). In addition, coupled people who viewed the romantic reminders were more likely to choose higher-end brands than those who viewed the platonic reminders ( $B=0.66$ ,  $Z=-2.62$ ,  $p<.01$ ).

*Study 3.* 164 adults ( $M=33.8$ ,  $SD=10.9$ ) participated in a 3 relationship reminder (between: control/friendship/romantic) x 2 partnership status (measured: single/coupled) design. Each participant viewed a set of advertisements with the same layout and tagline but differed in terms of the image featured (i.e., product images, friendships, or romantic relationships). After viewing all of the advertisements, participants rated their perceived deservingness ( $\alpha=.97$ ). Analyses revealed a significant relationship reminder x partnership status interaction ( $F(2, 158)=5.51$ ,  $p<.005$ ). After viewing the romantic ads reminding them of a relationship they do not have, singles reported significantly lower feelings of deservingness than coupled individuals ( $M_{\text{single}}=3.44$ ,  $M_{\text{coupled}}=4.83$ ;  $F(1, 158)=10.66$ ,  $p<.001$ ). In addition, singles exposed to romantic advertisements reported lower deservingness relative to control and friendship advertisements  $F(1, 158)=10.10$ ,  $p<.002$ ).

*Study 4.* 147 participants ( $M=22.9$ ,  $SD=7.7$ ) were randomly assigned to read one of two different articles (i.e., “The Power of Best Friends” (treatment) or “The Power of General Education” (control)). After reading the passage, participants were asked: “Do you have a relationship [an education requirement] like this in your life?” (No/Yes). Participants' responses were used to divide the sample into two groups: those that do versus do not have a particular valued relationship (i.e., a best friend). As expected, all respondents in the control condition responded “yes,” i.e. that they all had a general education requirement. The resulting three groups were analyzed accordingly. Participants then completed the product choice scenario, indicating whether they would buy a lower or higher price fragrance, and deservingness measures. Analyses revealed no difference in product choices for those having a best friend ( $M=4.9$ ) and control ( $M=4.9$ ;  $F<1$ ,  $NS$ ). However, participants who do not have the best friend relationship consistently spent less than both those that have the relationship ( $F(1, 144)=5.46$ ,  $p<.02$ ) as well as those in the control condition ( $F(1, 144)=4.47$ ,  $p<.04$ ). Participants who have a best friend were significantly more likely to choose the higher-end product than those who do not have a best friend ( $M=4.1$ ;  $F(1, 144)=6.05$ ,  $p<.01$ ). Process analyses (Hayes 2012) confirmed that deservingness mediated the relationship between condition and indulgent product choice.

*Study 5.* 116 adults ( $M=35.2$ ,  $SD=12.7$ ) were randomly assigned to one of two conditions to manipulate perceived deservingness: 1) thinking about a friendship you currently have or 2) thinking about a friendship you no longer have. After the relationship manipulation, participants completed the product choice and deservingness measure described above. Participants were significantly less likely to choose the higher-end product after thinking about a close friendship they no longer had ( $M=3.4$ ) than one they currently had ( $M=4.2$ ;  $F(1, 111)=4.77$ ,  $p<.03$ ). Participants felt significantly less deserving after thinking about a friendship they no longer have ( $M= 3.62$ ) than those thinking about a friendship they currently have ( $M= 4.63$ ;  $F(1, 111)=10.16$ ,  $p<.002$ ). Process analyses confirmed that deservingness mediated the relationship between relationship manipulation condition and indulgent product choice.

In summary, this work offers a novel theory and framework for predicting when consumers will engage in or restrict indulgence. It demonstrates that reminding consumers of relationships that they do versus do not have affects perceived deservingness and identifies deservingness as an important but previously unrecognized driver of self-indulgent choices.

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### ***Strategies for Success: The Impact of Self-Control Strategies on Behavior***

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At the beginning of every New Year, consumers all over the world make resolutions - resolutions to lose weight, spend less money, watch less television, exercise more, help others, etc. But by the end of January, a third will have broken or given up their resolutions, and by July more than half will no longer maintain their goal. While recent research has found that success increases if the goal is singular and specific (Norcross 2002), it is unclear which self-control strategies work best. Tierney (2012) suggests the use of precommitment, monitoring, rewards, or a combination of these strategies, but other research has found that the success of these strategies varies based on the specific goal being set. For example, monitoring, which involves being aware of the self's behavior or responses and comparing them to a standard (Vohs, Baumeister, Tice 2008), has been looked at in a variety of different contexts and has led to mixed results. Participants who were instructed to self-monitor their alcohol use for two weeks experienced increased peak intoxication levels and reduced their use of the monitoring strategy while drinking (Sugarman and Carey 2009), whereas those asked to monitor their weight loss on a daily basis have demonstrated long-term improvement (Tierney 2012). In other words, it appears that vigilant monitoring might not be a successful strategy for temptations because it actually heightens attention to the tempting stimulus and exacerbates the power of the hot cues to activate impulsive responses (Quinn, Pascoe, Wood and Neal 2010). This is just one example of how self-control strategies can be either successful or unsuccessful based on the individual's goal. Building on this idea, the focus of the current research is to examine if self-control strategies can be classified as either successful or unsuccessful based on whether the goal is to reduce a temptation and decrease a negative behavior (such as drinking or smoking), or improve one's general lifestyle by increasing a positive behavior (such as eating healthy or exercising more).

Across two studies, we provide evidence pointing to differences in the effectiveness of self-control strategies based on reducing a temptation versus increasing exercise behaviors. When confronted with a salient temptation, strategies that look to reduce the attractiveness of the salient temptation or bind the individual to a maximum consumption amount should result in decreased consumption of the temptation. In contrast, when trying to increase a positive behavior, those strategies that cause the individual to focus on the long-term goal, should lead to increased consumption of the behavior.

The goal of study 1 is to investigate which self-control strategies were more effective in helping to increase exercise behavior when considering individuals typical eating and exercise behaviors. As such, in study 1, we ran a 4x2x2 between-subjects experimental design with self-control strategies (precommitment vs. time binding vs. counteractive self-control vs. distraction), dieting self-efficacy behavior (low vs. high) and exercise behavior (low vs. high) as the experimental factors. We randomly assigned participants to one of the four self-control strategies and measured both dieting and exercise behavior, for a total of 276 undergraduate students who received course credit for their participation. Participants were first supplied with one of the four self-control strategies, were given an example of how the self-control strategy should be utilized, and were then led to a small, private room where they met with one lab administrator who told them they were to utilize the given self-control strategy to lengthen the amount of time they spent doing a "wall sit." Participants were then told that a wall sit is performed by placing one's back against a wall with feet shoulder width apart, and lowering the hips until the knees and hips are both at right angles. The position is held as long as possible. The exercise is used to strengthen the quadriceps. Participants then held the wall sit for as long as possible. When they finished, participants returned to the behavioral lab and completed the questions related to dieting and exercise behavior. Results indicated that when participants were assigned to one of the four self-control strategies, the precommitment strategy resulted in significantly less time spent in the wall sit ( $M = 48.965$  seconds) than in any other condition, including distraction ( $p$ 's  $< .05$ ). Additionally, when looking at the interaction between self-control strategy and diet self-efficacy, precommitment with low diet self-efficacy resulted in the lowest amount of time spent in the wall sit ( $M = 37.683$ ) as compared to all other conditions ( $M$ 's  $> 50.891$ ). Consistent with the previous set of results, those in the precommitment condition with low exercise behavior, spent less time in the wall sit ( $M = 41.629$ ) than all other conditions except for the distraction condition ( $M = 50.249$ ). When exercise behavior was low, the difference between precommitment and distraction was not significant. Lastly, when conducting a t-test to look at the difference between the amounts of time committed to

and the time spent in the wall sit, the difference was not significant ( $p = .9709$ ). This provides beginning evidence to the fact that committing to the amount of time spent in the wall sit actually resulted in less time spent exercising as compared to those strategies that look to focus in the moment on the long-term benefits of the behavior.

The main objective of the second study is to investigate which self-control strategies were more effective in helping to decrease consumption of a salient temptation. In Study 2, we ran a 3x3 between-subjects experimental design with food item (pringles vs. reduced-fat pringles vs. carrots) and self-control strategy (precommitment vs. counteractive self-control vs. control) as the experimental factors. Specifically, in study 2 we sought to determine whether the same strategies that were successful in increasing the amount of time spent doing a wall sit (i.e., promoting a positive behavior) had the same effect on reducing consumption of a salient temptation (i.e., decreasing a negative behavior) as compared to the consumption of carrots. The findings of study 2 provide additional evidence as to the fact that some self-control strategies are more successful when used for increasing positive behaviors versus decreasing negative ones. When faced with an actual consumption opportunity, participants ate significantly less when in the counteractive self-control ( $M_{\text{counteractive self-control}} = 9.35$ ) or precommitment ( $M_{\text{precommitment}} = 9.81$ ) conditions as compared to the control condition ( $M_{\text{control}} = 11.25$ ;  $p = .05$ ). The difference between counteractive self-control and precommitment strategies on consumption was not significant ( $p = .6492$ ). Additionally, when you consider each participant's hunger at the time of consumption, we found that when not hungry, the difference in consumption across strategies was not significant ( $M_{\text{not hungry precommitment}} = 6.85$ ;  $M_{\text{not hungry counteractive self-control}} = 8.29$ ;  $M_{\text{not hungry control}} = 7.15$ ). However when hungry, those in the counteractive self-control condition ate significantly less ( $M_{\text{hungry counteractive self-control}} = 10.36$ ) than those in the precommitment condition ( $M_{\text{hungry precommitment}} = 13.05$ ;  $p = .05$ ). Consumption in the control condition ( $M_{\text{hungry control}} = 14.29$ ) was significantly higher than counteractive self-control ( $p = .0043$ ), however the difference between precommitment and the control condition was not significant ( $p = .378$ ). Together this set of results begins to paint a pattern of which strategies are more successful based on the long-term goal.

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## **7.4 Individual Papers: Getting Emotional About Consumption**

**Room:** ESCORIAL

**Chair:** Dominika Maison, University of Warsaw, Poland\*

### ***Beyond declaration – how measurement of basic emotions can help to understand advertising effectiveness***

Dominika Maison, University of Warsaw, Poland\*

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Advertising is a very important tool for marketers, and at the same time it is also a very expensive tool – advertising campaigns, and especially TV campaigns, cost a lot of money. At the same time, there is a lot of evidence that many advertising campaigns are not effective and not worth the money spent on them (Batra, Myers, & Aaker, 1996; Jones, 1999). Therefore marketing practitioners and academic researchers are looking for new methods and tools for testing advertising effectiveness (Haskins & Kendrick, 1991; Davis, 1997).

Because emotions play a significant role in advertising effectiveness, advertising researchers want to understand them by pre-testing. They want to know what is the emotional reaction of consumers to exposed ads. However researching emotional dimensions in ads was always very difficult because of: (a) weak introspection of consumers on their emotional reactions; (b) problems in verbally describing emotions; (c) social desirability effect – consumers do not always want to express their real emotional reaction. Therefore

since the 1970s, psychologists and consumer researchers have been looking for methods of detecting emotions, which go beyond declaration. They have been using physiological measures, such as EEG, GSR, eye tracking, and facial micro-expressions of emotions. However at that time biometric measures were not popular. Nowadays we see a renaissance of biometric methods in consumer and advertising research, both in marketing research and in academic research (LaBarbera, Tucciarone, 1995). This has happened because of three reasons: (1) a growing need to better understand how ads work; (2) technical development – thanks to computers and other technical developments these methods have become more “user-friendly”; (3) a changing paradigm in understanding consumers and consumers’ decisions – automatic, implicit, beyond control – therefore we need new methods to measure them (Greenwald, Banaji, 1996; Shiv and Fedorkhin, 1999; Dijksterhuijs 2004; Perkins, A., Forehand, M., Greenwald, A. G., & Maison, D., 2008).

The goal of our studies was to test a new method, called Face Reader, used to detect emotional reactions toward ads. This method is based on the scientific researches of Paul Ekman (Ekman, 1994) who discovered 6 basic and universal human emotions: sadness, happiness, anger, fear, surprise, and disgust. Each of these emotions has an equivalent pattern of face muscles – a micro-expression. In the past micro-expressions were detected using a very invasive method (attaching electrodes to the face of respondents), and probably because of this the method did not become popular in advertising research. The method used in our research is based on new technologies, which enable passive measurement of facial micro-expression. The respondent sits in front of the CCTV camera, which scans his face while watching the ad. In order to detect respondents’ micro-expressions of emotions an advanced image-processing algorithm is applied. For the purpose of the analysis, the system places a virtual grid consisting of 500 points on the recorded face. Subsequently, variations in the distance between given points are measured 25 times per second. The gathered information is then compared to facial expression patterns of basic emotions: sadness, happiness, anger, fear, surprise, and disgust. The data is processed afterwards using an algorithm, which takes individual differences and the initial mood of the respondents into account.

In order to test the usefulness of applying Face Reader to advertising testing we conducted two studies testing emotional reactions toward controversial ads. In the first study we tested reactions towards shocking ads of two existing brands: Dolce&Gabbana and Sisley. In the second study we tested emotional reactions toward ads promoting legalization of homosexual relations. In both studies we detected implicit emotions by using Face Reader and explicit emotions, based on declaration. At the same time an eye-tracking method was used in order to control for which element of the ad was evoking particular emotions.

In the first study (n=76) we explored emotional reactions to shocking ads. We chose a set of controversial ads by Dolce&Gabbana and Sisley (e.g. suggesting sexual violence, collective rape). The results showed that reactions toward the shocking ads were different on the explicit (declarations) and implicit level (Face Reader and eye-tracking). Declaration of emotions didn’t show significant differences between women and men. However Face Reader showed significant differences in the emotional reactions of men and women toward the presented ads. For example the ad suggesting collective rape (a group of men standing around a lying woman) evoked (a) a strong implicit anger reaction among women and (b) an implicit disgust reaction among men. Moreover, shocking ads appeared to be ineffective – brand image and interest in the brand decreased after seeing those ads. Implicit emotional reactions (based on Face Reader) appeared to be a stronger predictor of ad effectiveness than explicit emotions (declarations).

In the second study (n=130) we explored implicit emotional reactions toward social advertising (PSA) connected to a controversial subject (legalization of homosexual partnerships). The experimental design of the study included three conditions differentiated by the gender of the models: (1) a couple of 2 girls; (2) a couple of 2 boys or (3) a couple of a boy and a girl – control condition. We discovered differences between explicit (declared) and implicit (automatic) emotional reaction toward those ads depending on the gender of the models in the ads (2 girls, 2 boys or mixed gender). In general, explicit measurement showed much fewer differences in reaction toward the tested version of the ads. The only significant difference between the experimental conditions was discovered in the declaration of disgust, which was the strongest when observing the ad with 2 boys, compared to 2 girls and the mixed couple. However on the level of automatic emotional reaction (measured by Face Reader) we discovered significant differences between the

tested versions of the ad in the case of 5 implicit emotions. The ad with 2 boys evoked the highest levels of disgust and fear, and the lowest level of happiness. But the ad with 2 girls evoked the highest level of anger and surprise.

The results of the conducted studies showed that biometric measurements of implicit emotions, in this case based on the Face Reader method can be successfully used for advertising testing. Recording implicit emotional reactions give a better understanding of emotional reaction towards ads than only relying on explicit emotions (based on declaration). Moreover, implicit emotions seem to be a better predictor of ad effectiveness than explicit emotions.

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### ***Self-Brand Connection, Schadenfreude, and Sympathy: A Person-Centered Approach to Understanding Emotional Reactions to Product Failure***

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Envy is a self-threatening emotion, blending covetous desire with inferiority. Upward social comparisons in status consumption contexts (e.g., being confronted by a similar other, who owns a desirable, status-linked product) can prompt dark emotional experiences of envy. The way a person emotionally responds to such situations has implications not only for one's immediate well-being, but also for perceptions of the product/brand that plays a key role in the social comparison.

Defensive, self-protective responses, to envy in social comparisons involving status products, can encourage hostile reactions that may damage a brand or reduce its perceived value (Sundie et al., 2009; Van de Ven et al. 2011). What if the brand in question was one the observer adores and aspires to own? In the present work, we examined how strong self-brand connections may alter the emotional experience of social comparison, dampening, for some people, the often negative emotional consequences. We also document (through latent profile analysis, in two samples) diversity in emotional responses to social comparisons involving status products, and how self-brand connection predicts a subset of such emotional responses.

Further, we provide evidence that any positive effects of self-brand connection (in terms of reducing hostile responses to envy) are likely limited to those people who exhibit higher social functioning. Social anxiety, which is associated with defensive processing (Beck & Clark, 1997), and a lack of empathy may encourage malicious responses to self-threat (Miller and Eisenberg 1988). Therefore, we reasoned that hostile reactions to envy are more likely among individuals with such traits.

In study 1, we take a measurement-of-process approach to examine the role self-brand connection plays in emotional responses to envy during upward social comparisons involving status products. In study 2, we experimentally examine the effect of differing levels of self-brand connection on emotional responses to social comparisons and brand failure (i.e., schadenfreude--feeling happy about another's downfall, and sympathy). In study 3, we focus on those with *strong* self-brand bonds, and examine how individual differences in social functioning (i.e., socially dysfunctional traits) are important in predicting hostile versus benign responses to envy in social comparisons.

**Study 1:** 305 participants first selected a luxury automobile from eight options, then reported their self-brand connection using a validated measure (Escalas & Bettman, 2003). Next, participants read a social comparison scenario featuring a peer who owned the

participant's just-selected luxury vehicle. The scenario describes a group of social acquaintances talking about the luxury car, after the owner arrives in it to join the group for dinner. Participants then reported their emotional responses to this scenario using a continuous scale (e.g., happy, envious, feeling of injustice). The measure of Envy included two items assessing envy of attention and envy of recognition, and the measure of Hostility included four items (injustice, resentment, anger, and unfairness). Next, participants reported the extent to which they identified with owners of the prestige vehicle--this connection measure depicted six pairs of increasingly overlapping circles (Tropp & Wright, 2001), where one circle represented "Me" and the other circle "Owners" of the luxury automobile.

As self-brand connection increased, the relation between Envy and Hostility decreased, and as Overlap with Brand Owners increased, the relation between Envy and Hostility decreased. A strong self-brand connection dampened hostile responses to envy, and this effect was mediated by perceived self-overlap with status brand owners.

**Study 2:** 464 participants chose one of eight luxury vehicles, either a) the vehicle they would *most* like to drive (strong self-brand connection) or b) the vehicle they would *least* like to drive (weak self-brand connection). Participants read an upward social comparison scenario (as in study 1) featuring a similar other who owned their most [least] preferred vehicle. Participants reported emotional responses to this scenario (e.g., envy, happiness for the owner). Next, participants read about the product's failure, and then completed schadenfreude and sympathy measures.

Latent profile analysis of the emotional responses to the social comparison scenario, prior to product failure, suggested four classes (determined through a series of adjusted likelihood ratio tests) with unique emotion profiles: benign envy (N=130, envy, but not hostility), hostile envy (N=89, envy and hostility), pleasant indifference (N=180, happiness for the owner, neither envy nor hostility), and social injustice (N=65, feelings of unfairness and injustice, but not envy). Furthermore, membership in the four profiles was predicted by self-brand connection. Using the pleasant indifference profile as a reference group, self-brand connection (positively) predicted membership in both the benign envy ( $\beta=.28, p<.05$ ) and hostile envy ( $\beta=.20, p<.05$ ) profiles, and (negatively) membership in the social injustice ( $\beta= -.20, p<.05$ ) profile. This pattern suggests that strong self-connection to a brand makes consumers more likely to experience envy (with some experiencing hostile envy, and others the benign form).

Emotion profiles were also associated with schadenfreude after product failure: relative to the pleasant indifference profile, participants experiencing *hostile* envy ( $\beta=.48, p<.05$ ) experienced the most schadenfreude, followed by the social injustice ( $\beta=.28, p<.05$ ) and then the *benign* envy group ( $\beta=.10, p<.05$ ). Emotion profile was also associated with sympathy concerning product failure: relative to participants in the pleasant indifference profile, participants experiencing benign envy reported more sympathy ( $\beta=.14, p<.05$ ), participants feeling injustice reported less sympathy ( $\beta=-.10, p=.05$ ) and participants experiencing hostile envy reported roughly equivalent levels of sympathy ( $\beta=-.05, NS$ ).

**Study 3:** 349 participants completed social anxiety and empathy measures in advance of the study. The main study followed a procedure similar to Study 2, utilizing only the strong self-brand connection condition. Although we anticipated replicating the same 4-class structure, focusing on the strong self-brand connection condition was intended to increase representation in the hostile and benign envy profiles, facilitating ability to predict hostile vs. benign reactions. Latent profile analysis suggested the same 4-class structure (hostile envy=83; benign envy=101; social injustice=78; pleasant indifference=87). Hostile envy participants experienced more schadenfreude than benign envy participants ( $\beta=.45, p<.05$ ) and less sympathy ( $\beta=-.35, p<.05$ ). As hypothesized, a higher-order social dysfunction factor (social anxiety and lack of empathy) predicted membership in the hostile (vs. benign) envy group ( $\beta=.53, p<.05$ ). Hostile envy among *strong* self-brand connection consumers, during upward comparison, mediated the link between dysfunctional traits and both schadenfreude and sympathy after product failure.

## ***Ray of Hope: Hopelessness Increases Electricity Consumption for Lighting***

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Electricity consumption brings heavy economic and environmental burden. Previous research highlights the importance of household characteristics such as family size and price consciousness (Heslop, Moran, & Cousineau, 1981), demography and meteorological factors (e.g., temperature and wind velocity; Valor, Meneu, & Caselles, 2001), and economic activities (Squalli, 2007), in predicting electricity consumption.

Based on the recent conceptual metaphor literatures, we propose a novel hypothesis that examines the impact of incidental emotion on energy consumption for lighting. Specifically, we contend that the emotion hopelessness (e.g., as a reaction to a depressing economy) is connected to our sensory perception of ambient lighting, which in turn may determine our preference of lighting and electricity consumption.

Hopelessness is a negative emotion characterized by the feeling that the future holds little promise or having no means to achieve one's goals (Melges & Bowlby, 1969). People experience some extent of hopelessness in almost every stage of their lives. Students may feel hopeless for a final examination that they have not prepared for after a weekend of partying; adults may experience hopelessness when facing a grim economy and suffering from major setbacks in life (e.g., joblessness, homelessness, and divorce).

In our daily use of language, hopefulness or hopelessness is often communicated through concepts linked to light and darkness. In metaphors such as *ray of hope*, for example, hope is represented as the sensory perception of light and hopelessness as darkness. But can the emotion hopelessness actually trigger the sensory perception of darkness? Early models of emotion seem to suggest that this is unlikely. The semantic network models of emotion (e.g., Bower, 1981; Ingram, 1984; see Niedenthal, 2008 for a discussion of relevant models), for example, represent emotional concepts as nodes in networks of abstract information. The activation of emotional nodes may activate abstract, amodal concepts related to light or darkness but should not induce actual sensory change.

However, drawing on the recent advancements in conceptual metaphor research (Lakoff & Johnson, 1980), people grasp concrete, lower level concepts such as up vs. down and close vs. far before they understand higher level, abstract concepts. In addition, rather than creating completely new conceptual systems for abstract concepts, people "recycle" their experience with and knowledge of lower level concepts. Thus, the abstract concepts of happiness and sadness are mentally represented as physical concepts of up and down (Meier & Robinson, 2004), importance as physical weight (Jostmann, Lakens, & Schubert, 2009), and morality as physical cleanliness (Zhong & Liljenquist, 2006).

Hopelessness concerns the prospect of achieving one's goals (Melges & Bowlby, 1969), which incorporate both a desirable end states (a destination) and the means through which goals can be completed (paths lead to the destination) (Kruglanski, 1996). In darkness, people are neither able to see the destination ahead nor the road leading to the destination, known as the "night myopia" phenomenon (Koomen, Scolnik, & Tousey, 1951). The physical inability to see into the distance is analogous to the experience of feeling hopeless when people are unclear about the means (the path) to reach their goals (the destination). Therefore, we expect that the emotional experience of hopelessness may be psychologically represented as the absence of light. In other words, we expect that people experiencing hopelessness might actually perceive their environment to be darker than it actually is. Furthermore, this perceptual bias should also lead them to prefer brighter lighting than otherwise.

Three experiments tested these possibilities. In Experiment 1, disguised as a life experiences study, participants were first asked to recall a past experience that gave rise to feelings of hopeless, hopeful, or sad (to test whether sadness can also darken people's light perception). Moreover, we included a baseline control condition in which participants described their typical day experience. After that, participants proceeded to an ostensibly unrelated task, in which they were asked to evaluate the lab room for the building management office along the following three dimensions: brightness, comfortableness, and temperature. Participants' response on the lighting evaluation was our main dependent variable. Results suggested that participants who recalled a hopeless situation perceived the room to be dimmer than those in hopeful, sad, or neutral conditions (the comfortableness and temperature ratings were not differed), thus providing initial evidence for the proposed metaphorical mapping between hopelessness (but not general sadness) and reduced lighting.

Experiment 2 was conducted to test if the visual bias as a result of feeling hopeless would lead people to prefer brighter ambient lighting. We first measured participants' hopelessness toward the economy and job market prospects using a 9-item scale ( $\alpha = .92$ ). Then in an unrelated study, participants indicated their preference for bright lighting. To get a better sense whether this can transfer into potential electricity use, we took pictures of an actual light fixture installed with incandescent bulbs with varying wattages and asked participants to indicate their ideal lighting ambience. Correlation results suggested that preference for lighting was positively correlated with the averaged hopelessness about the economy and career prospect. These results suggest that the more hopeless participants feel about the current economy, the more they prefer bright lighting.

Experiment 3 demonstrated the reverse of Experiment 2. Specifically, participants were randomly assigned to either a bright or a dim lab, and then they indicated their perceived prospects of job search. Results suggest that participants staying in a dimmer (vs. brighter) room indeed felt more hopeless about their job search prospect.

This research makes important theoretical contribution to embodiment literature by showing that a common emotion of hopelessness can reduce people's visual perception of ambient light and increase people's electricity (lighting) consumption. It enriches the emerging body of recent research showing that people's psychological states can affect sensory perceptions. For instance, nostalgia increases perceived ambient temperature (Zhou et al., 2012), and violations of interpersonal justice elicits moral disgust which triggers stronger taste and smell reactions to gustatory and olfactory stimuli (Skarlicki et al., 2013). Moreover, our work contributes to the literature on energy conservation by offering a new perspective that emotional factors such as hopelessness can affect electricity (lighting) use.

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***Pleasure for a Moment, Functionality for a Lifetime***

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The lifecycle of durable goods and the decision to replace them is often examined from a mental accounting approach (Okada, 2001; Park & Mowen, 2007; Guiltinan, 2010). Consumers have a mental book value for an owned good, which corresponds to the mental cost of retiring the product. The book value of a product equals the purchase price minus a reduction, which is determined by a mental rate of depreciation. Some determinants of mental depreciation are: inter-product compatibility (Prince, 2009), financial costs (Purohit, 1995) and product-attachment (Purohit, 1992).

The current paper proposes that consumers apply a different rate of depreciation for hedonic products than for functional ones. This

idea, which is consistent with the notion that consumers readily adapt to hedonic benefits (i.e. hedonic treadmill phenomenon; Frederick & Loewenstein, 1999), cannot be explained by the above-mentioned determinants of mental depreciation. We argue that an emotion, pain of paying, felt at moment of purchase determines a product's depreciation rate. Previous research shows that paying can induce a feeling similar to sensory pain (Knutson, et al., 2007). Pain of paying is reinforced by method of payment (Prelec & Loewenstein, 1998) and determines how a product is perceived (Chatterjee & Rose, 2012). We propose that pain of paying felt at the moment of purchase extends a product's lifecycle. Due to pain of paying felt at the moment of purchase consumers may want to maximize the product-lifecycle. Rephrasing, consumers want to put the pain of paying associated with a replacement purchase as far in the future as possible.

We propose that pain of paying is higher for functional products than for hedonic ones. This results from differences in perceived freedom in spending. Moreover, consumers spend money on hedonic products because they want to do it, and purchase functional products because they ought to do it (Roy & Ng, 2012). Higher freedom of spending for hedonic products should attenuate the pain of paying which should result in a higher rate of depreciation and a shortened lifecycle.

If consumers depreciate hedonic products differently because they cause less pain of paying, they should devalue faster. For study 1 we gathered information of 517 cars on a website for used cars. Price, age of the car and mileage was inventoried of a convertible (SLK by Mercedes Benz) and a van (VITO by Mercedes Benz). By analyzing cars of the same brand we hope to control for quality. Both models are manufactured and sold since 1996. A pretest confirmed that the cars differ significantly on the functional/hedonic dimension ( $F(1,62)=7.79, p=0.003$ ). We predicted the demand price on the website as a function of type of car, car's age, mileage and the interactions between type of car and the two continuous predictors (Table 1). Two significant interactions show that the value of the hedonic car depreciates faster than the value of the functional car. Specifically, the dropping price with increasing age is more pronounced for the hedonic car. Price also drops with increased mileage, again this relation is steeper for the hedonic car. These results confirm that hedonic products devalue faster.

Table 1: Predicting price

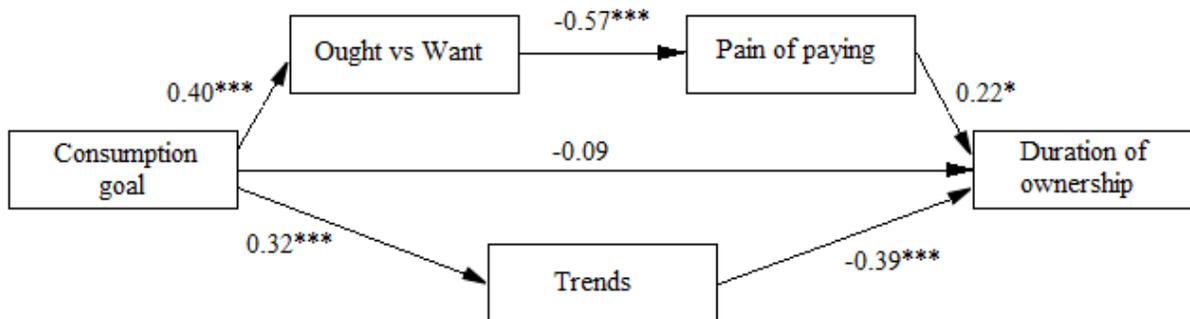
	<i>B</i>
Hedonic car	-0.552**
Mileage	-0.710**
Car's age	-0.603**
Hedonic car*mileage	-0.071*
Hedonic car*age	-0.300**
* $p<0.05$ ; ** $p<0.01$	$R^2=91\%$

Study 2 (conducted online using MTurk, N=144) wants to demonstrate that pain of paying extends a products lifecycle. Participants had to imagine buying a jacket for \$89.00. To manipulate pain of paying, they either paid in cash or used a credit card. Paying in cash hurts more than paying with a credit card (Raghubir & Srivastava, 2008). In the cash condition they selected denominations (\$10.00 and \$20.00 bills) at an ATM before paying. In the credit card condition they chose one of two credit cards (MasterCard or Visa) to pay with. Subsequently, all respondents were asked how long they would use the jacket before disposing it (1 very short; 7 very long) and when they would replace it (1 very soon; 7 very late). We used the average score of both measures as lifecycle measure ( $r=0.63, p<0.001$ ). The jacket's lifecycle is longer when the most painful method of payment is used, i.e. cash ( $F(1,143)=6.94, p<0.001$ ). These results demonstrate that pain of paying extends the lifecycle of a product.

Study 3 wants to demonstrate that hedonic products have a shorter lifecycle because they are bought out of free will, which attenuates

pain of paying. Ninety-six respondents participated in an online study (European panel) in which they had to imagine they were buying a bike for either hedonic (to practice their beloved hobby) or functional purposes (transportation device to go to work). After reading the scenario they had to indicate on 7-point scales whether they experienced the purchase as something they ought to do or as something they wanted to do (1 ought; 7 want) and how much pain they would feel paying (1 not at all painful; 7 very painful). To rule out susceptibility for trends (cf. Frederick & Loewenstein, 1999), we asked the respondents if they would replace their bike upon the release of a new model (1 definitely won't; 7 definitely will). Lifecycle-measure of the product was identical as in study 2 ( $r=0.59$ ,  $p<0.001$ ). We report path analysis but the process procedure by Preacher & Hayes (2008) yields identical results. The model (Graph 1) fits the data well:  $\chi^2/df=0.74$ ,  $p=0.57$ , RMSEA=0.00, CFI=1.00.

Graph 1: Predicting duration of ownership



\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.001$

A significant total effect of consumption goal (0 functional; 1 hedonic,  $B = -0.48$ ,  $p=0.034$ ) confirms that a product has a shorter lifecycle when consumed for hedonic reasons. The direct effect is mediated by two indirect pathways. First, hedonic products are kept for shorter period of time because they are bought out of free will which reduces pain of paying. Second, this process occurs irrespective of a higher susceptibility to trends for hedonic products which also shortens duration of ownership. Our results confirm that hedonic products' lifecycle is shorter because they are bought out of free will which results in less pain of paying. In sum, we find that hedonic products depreciate faster than functional ones. Higher freedom of will associated with a hedonic purchase lowers pain of paying and increases replacement rates.

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## 7.5 Individual Papers: The Construction and Properties of Attitudes

**Room:** ALHAMBRA

**Chair:** Omair Akhtar, Stanford University, USA\*

### *The Positive Effect of Negative Information: A Sleeper Effect Perspective*

Adrienne Foos, University of Manchester, UK\*

Kathleen Keeling, University of Manchester, UK

Debbie Keeling, Loughborough University, UK

### **Introduction**

Recently, there is a renewed interest in the notion of “the positive effect of negative information” (Ein-Gar et al. 2012). Though intuition suggests negative information should reduce favorability of a persuasive message, this research proposes that this is not

necessarily the case, and in fact the addition of negative information to a positive message has the potential to enhance persuasion. This hypothesis is based on a re-examination of the *sleeper effect*.

The sleeper effect describes an increased favorability towards the object of a persuasive message over time when the message is accompanied by a discounting cue (Gruder et al. 1978). The hypothesized explanation for the sleeper effect is that despite suppression of the initial impact of the persuasive message on attitudes by the discounting cue, the message and discounting cue become dissociated over time, rendering the message more acceptable (Kumkale & Albarraçin 2004). In the 1970s, two primary criticisms were leveled against the sleeper effect: the first, that difficulty in replicating the effect leaves support for the alternative hypothesis unreliable (Gillig & Greenwald 1974); and second, that the circumstances of the sleeper effect (a persuasive message accompanied by a discounting cue) are so rare, that the effect is rendered irrelevant (Shadish et al. 2002). The aim of this study is to address the reliability and relevance of the sleeper effect, as well as conditions that may enhance the effect, from a consumer perspective.

With the advent of interactive internet platforms, consumers face a variety of dynamic communications from multiple sources online, including messages advocating both for and against products, services, and social issues, often within close temporal proximity (Monga & John 2008). Given the ubiquity of conflicting information online and the relative lack of control over consumer access to this information by marketers, an effect in which information opposing a promotion can increase persuasion towards that promotion is ripe for revisiting.

## Study 1

Two experiments were conducted to address criticisms and to examine conditions hypothesized to increase the likelihood of finding the sleeper effect. For Study 1, the ordering of the messages was manipulated to determine primacy/recency effects (see Haugtvedt & Wegener 1994).

### *Method*

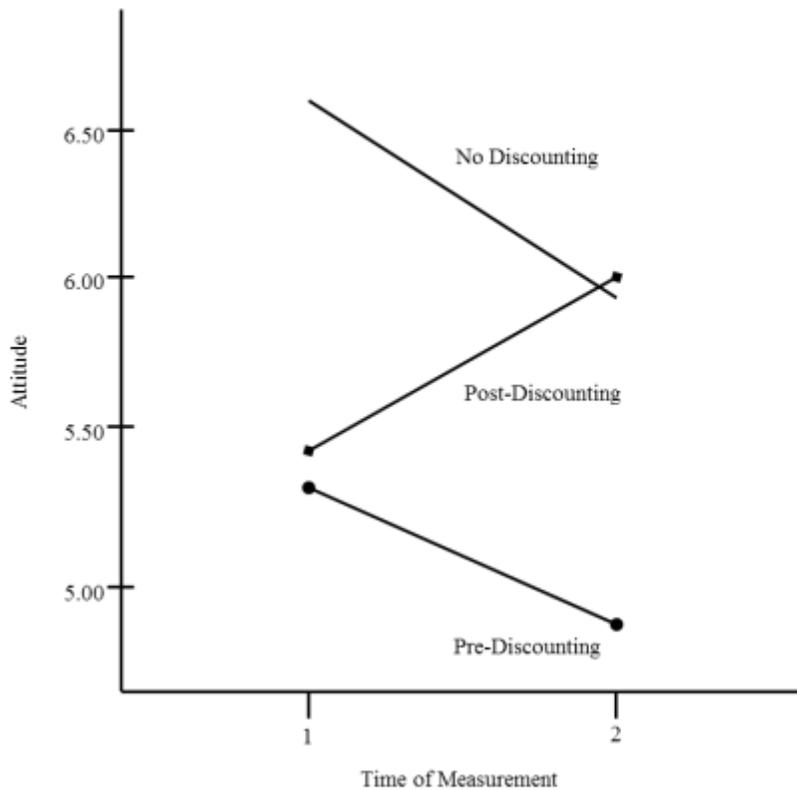
Participants ( $n = 73$ ) from a panel took part in an online survey ( $M_{\text{age}} = 51$ ; Male = 62%), and were randomly assigned to ordering conditions (discounting cue presented before the message- *pre-discounting*, after the message- *post-discounting*, or no-discounting cue).

The study was presented as a consumer response survey evaluating direct marketing on the internet. In the pre-discounting condition, participants were then asked to read a statement by a consumer protection group advocating against the product before being shown the advertisement for a fictitious brand of gluten-free pizza. In the post-discounting condition, participants read the statement by the consumer protection group after being shown the advertisement. The advertisement consisted of a picture with a description of the health and flavor benefits of the pizza. The statement from the consumer protection group discounted those claims. After receiving the manipulations, participants completed a series of dependent measures. The target dependent measure consisted of a scale with six, 9-point bipolar items (bad/good, unfavorable/favorable, etc.) to determine initial attitude towards the product ( $\alpha = .98$ ). Ten days later, participants were again asked to complete the same series of dependent measures.

A repeated measures ANOVA was conducted to determine the effects of the ordering manipulation on the attitude measurements across two time periods. There was a significant interaction between time and ordering ( $F(2, 70) = 4.57, p < .05$ ), with those receiving the discounting cue after the message having increased attitudes over time, with those receiving no discounting cue or a pre-discounting cue having decreased attitudes over time. The results show that the sleeper effect is more likely to occur when discounting follows the message (see figure 1).

Figure 1

Comparison of Order of Discounting Cue  
And Time of Measurement



## Study 2

The objective of the second study was to replicate the sleeper effect of the first study in order to increase the generality of the findings, and to investigate another potential mechanism hypothesized to enhance the sleeper effect. The 'self' is a rich encoding context (Mazursky & Schul 1988; Hannah & Sternthal 1984); therefore generating elaborate associations referencing the self with the object at encoding facilitates the availability of object rather than discounting cue information in later processing. Thus, self-referencing at encoding is expected to produce the circumstances that make the sleeper effect more likely. The following experiment manipulates self-referencing by asking participants to "imagine" themselves consuming the product while viewing the advertisement (Escalas 2007).

### Method

Participants ( $n = 245$ ) from an online pool took part in the survey ( $M_{\text{age}} = 22$ ; Male = 62%), and were randomly assigned to self-referencing conditions (self-referencing cue or no self-referencing cue) and discounting conditions (no-discounting or post-discounting). Besides changing the product to a fictitious brand of veggie burgers, the procedure for the second study was identical to the first.

There was a significant interaction between time and discounting ( $F(1, 241) = 4.77, p < .05$ ), with those receiving the discounting cue having increased attitudes over time, and those receiving no discounting cue having decreased attitudes over time (see figures 2 & 3). Though non-significant, self-referencing tended to improve attitudes over time for participants in the discounting group. The results of this experiment replicate the relative increase in attitudes over time when an advertisement is paired with information discounting its claims compared to the decrease in attitudes over time when an advertisement is presented alone.

Figure 2  
Study 2  
Group Comparison

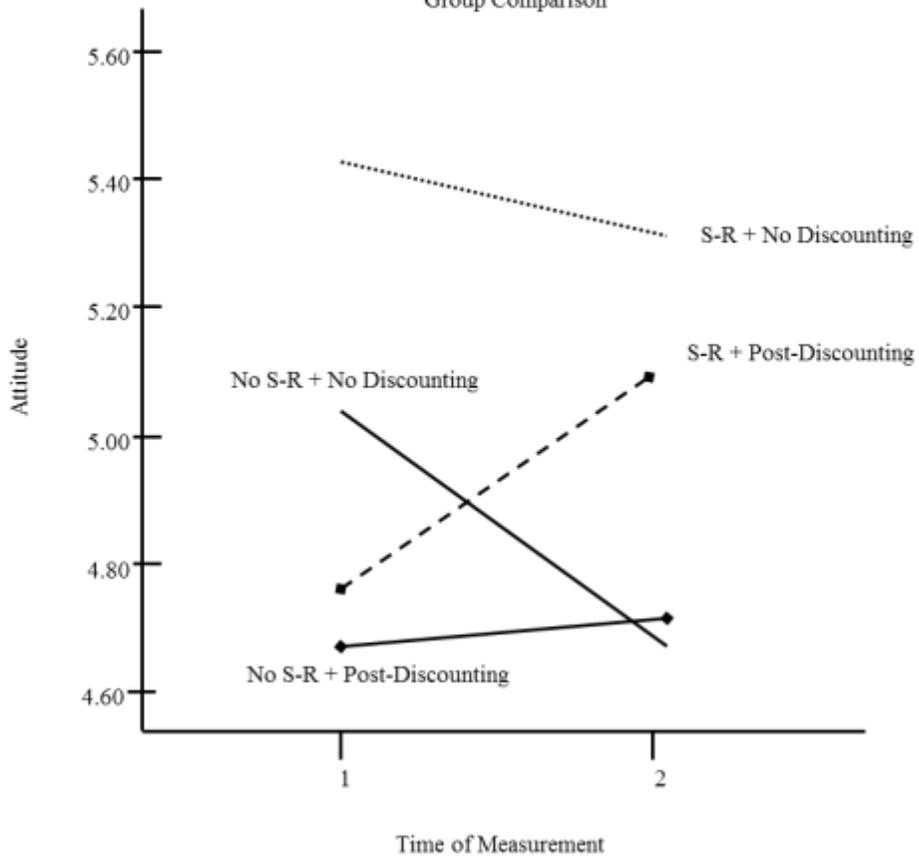
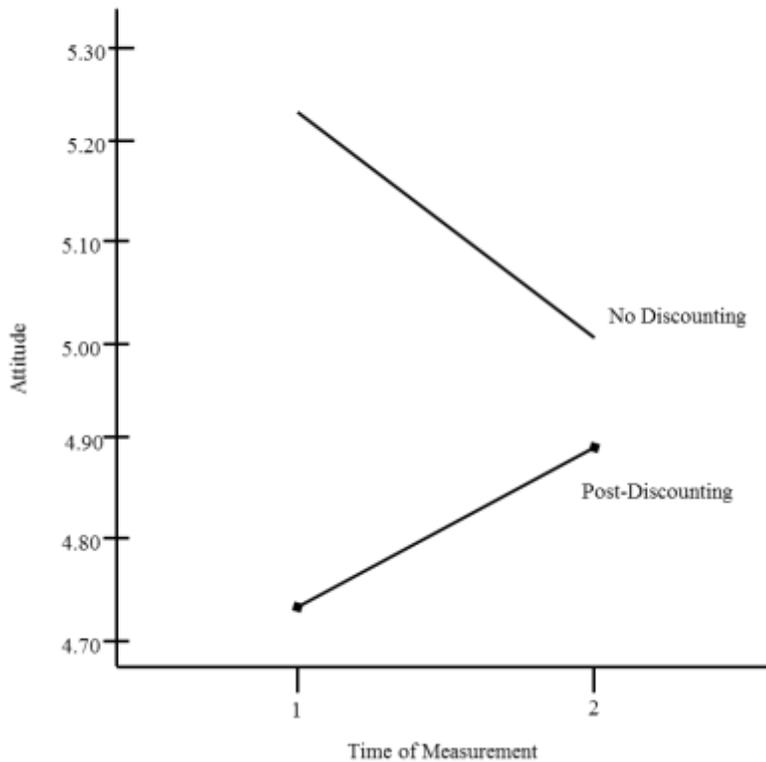


Figure 3

Study 2 Comparison of Discounting Cue  
And Time of Measurement



### Discussion and Conclusion

The studies show that: a) the sleeper effect is replicable; b) the sleeper effect can be found to occur in contemporary contexts; and c) the sleeper effect is more likely to occur when the discounting cue follows the advertisement. In addressing previous criticisms of the sleeper effect, the findings indicate the need for renewed interest in sleeper effect research.

Additionally, this research shows that negative information that completely suppresses the initial impact on attitudes of an advertisement can enhance product evaluations over time. Thus, in the face of uncontrollable negative communications to which consumers are exposed, marketers should perhaps consider embracing the temporal changes in attitudes that more accurately represent consumer evaluations.

Finally, though non-significant, self-referencing tended to improve the favorability of attitudes when discounting was present. If this effect is reproducible, it has potentially desirable implications for marketing. Future research may consider further examining the relationship between 'self' structures in memory and the processing of negative information.

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### *The Pleasure of Liking (or Disliking)*

Shiri Melumad, Columbia University, USA\*

Daniel He, Columbia University, USA

Michel Pham, Columbia University, USA

A major aspect of our lives as consumers is the evaluation of products available in the marketplace. The process of assessing whether one likes or dislikes products, which we call “preference assessment”, can be done internally, such as during online browsing or window-shopping, or can be expressed externally in the information one exchanges with others, as in the case of consumer-generated product reviews (e.g. Chernev & Gall 2011; Kim & Sherman 2007). A major assumption in consumer behavior theory and in marketing is that these evaluations are primarily formed for the purpose of informing subsequent choices (e.g. Howard & Sheth 1969; Engel, Blackwell & Miniard 1986). The main proposition of our research is that evaluating what one likes or dislikes fulfills another function – one that is purely hedonic. Specifically, we argue that there is an inherent pleasure in the mere assessment of one’s preferences. In other words, people derive experience utility from the process of assessing whether they like or dislike various product offerings. Results from four experimental studies support these propositions. Specifically, our findings show that (a) consumers expect the process of assessing what they like and dislike to be more pleasurable than comparable processes that do not involve their preferences; (b) consistent with these expectations, consumers indeed experience the process of preference assessment to be more fun than these alternative processes; (c) the inherent pleasure of assessing one’s preferences holds for assessments that are expressed externally as well as those that are formed privately; and (d) this phenomenon holds not just for products that are attractive but also extends to unattractive products.

Study 1 examines whether people expect the process of liking or disliking products to be more enjoyable than comparable tasks that are not based on their preferences. Participants were randomly assigned to one of four conditions in a single-factor between-subject design wherein they were exposed to a set of T-shirts and asked to imagine that they were to perform each of four possible tasks. In all conditions, participants were asked to imagine assessing whether they liked or disliked each T-shirt as well as three alternative tasks that differed according to the condition (e.g. some participants were asked to imagine judging whether each T-Shirt was age-appropriate, while others were asked to imagine judging whether each T-shirt was colorful). We find that people expected the task of assessing whether they liked or disliked a set of T-shirts to be more fun than the comparison tasks ( $p < .01$  for all alternatives), despite additional measures showing that all of the tasks were expected to be easy to perform. This finding holds across conditions, regardless of the set of alternative tasks presented alongside the preference assessment task.

In study 2 we test the prediction that this expected enjoyment of evaluating one’s preferences extends to the actual experience of preference assessment. Participants were randomly assigned to one of four conditions of a single-factor (task: *preference assessment* or *one of three alternative tasks*) between-subject design. In one condition, participants were asked to indicate whether they liked or disliked the set of T-shirts used in study 1 (*preference assessment*). In the other three conditions, participants performed one of three alternative tasks (e.g. Indicate whether the T-shirts are gender-appropriate). The results show that participants who assessed their preferences indeed experienced more fun than those who performed the alternative tasks ( $F(3, 136) = 2.83, p < .05$ ).

Study 3 examines whether the phenomenon is specific to preference assessments that are externally expressed or also extends to assessments that are privately formed. Participants were randomly assigned in a 2 (task: *preference assessment* or *alternative task*) x 2 (expression-type: *overt* or *covert*) between-subject design. Participants either indicated whether they liked or disliked T-shirts (*preference assessment*) or whether each T-shirt was more or less casual (*alternative*), and either expressed these judgments externally by indicating their responses on the screen (*overt*) or formed these judgments privately in their minds (*covert*). A main effect of expression-type shows that overtly expressing these judgments was more fun than forming the judgments covertly ( $F(1, 201) = 8.19, p < .01$ ). More importantly, an additional main effect of task showed that, regardless of whether the task was performed overtly or covertly, participants preferred to assess their preferences over the comparison task ( $F(1, 201) = 9.11, p < .01$ ).

Study 4 tests whether the phenomenon extends to the evaluation of products that are unappealing. We pretested a set of T-shirts and identified the six most and six least highly rated ones, thereby forming one set of “appealing” and another set of “unappealing” T-shirts. Participants were randomly assigned in a 2 (task: *preference assessment* or *alternative task*) x 2 (appeal: *appealing* or

*unappealing*) between-subject design. Participants either indicated whether they liked or disliked each T-shirt (*preference assessment*) or whether each T-shirt was more or less colorful (*alternative*). Moreover, participants performed one of these tasks while judging either the set of appealing or unappealing T-shirts. We find that participants who assessed their preferences had more fun than those performing the alternative task, regardless of whether they evaluated the set of appealing or unappealing T-shirts ( $F(1,117) = 7.07, p < 0.02$ ).

In summary, while past work has recognized the functional value of assessing one's preferences – namely, the ability to make an educated choice – this research proposes that preference assessment provides an additional benefit: Evaluating what one likes and dislikes is inherently pleasurable. Our findings suggest that people indeed enjoy the process of assessing whether they like or dislike products, regardless of the attractiveness of the products being evaluated or the manner in which these preferences are expressed. We speculate that two processes drive this effect. For one, people may feel a heightened sense of certainty and confidence as they assess what they like and dislike; further, people may feel that they are learning about themselves as they evaluate their preferences.

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### ***Belief in the Immutability of Attitudes Both Increases and Decreases Advocacy***

Omar Akhtar, Stanford University, USA\*

S. Christian Wheeler, Stanford University, USA

Research on implicit theories (i.e. the beliefs people have about human characteristics) shows that people with a fixed mindset about attitudes (i.e. the belief that attitudes are relatively stable and unchanging) are more certain of their attitudes (Petrocelli, Clarkson, Tormala, & Hendrix, 2010) than are people with a growth mindset (i.e. the belief that attitudes are malleable). Separately, research on the relationship between attitude certainty and advocacy generally shows that people with greater attitude certainty are more willing to express their opinions and try to persuade others (Visser, Krosnick, & Simmons, 2003; Akhtar, Paunesku, & Tormala, 2013). A synthesis of these literatures would suggest that people with a fixed mindset about attitudes are more certain of their own attitudes and consequently more willing to try to persuade others to their beliefs. However, it is also conceivable that people with a fixed mindset about attitudes may be more likely to perceive others' attitudes as difficult to change, rendering people with a fixed mindset less willing to try to persuade others. Across four studies, we show that both of these countervailing effects occur simultaneously, resulting in the absence of an overall direct relationship between implicit theories of attitudes and advocacy. By shifting whom people focus on (themselves or others) or how advocacy is framed (as sharing, persuading, or defending), implicit theories can directly influence willingness to advocate.

Study 1. Participants were told that we were conducting public opinion research on a variety of issues. All participants reported their attitude, likelihood of trying to persuade others, and perceived persuadability of others regarding the death penalty. After completing a ten-minute filler task of personality scales, participants completed the eight-item implicit theory of attitude stability (ITAS) scale (from Petrocelli et al, 2010). Results indicated that a higher score on the ITAS scale (i.e. a fixed mindset) was inversely correlated with perceived persuadability of others but uncorrelated with likelihood of trying to persuade others. However, as expected, there was a negative indirect effect of ITAS on advocacy through perceived persuadability of others. These results provide initial correlational evidence that a fixed mindset leads to lower likelihood of trying to persuade others because of lower perceived persuadability of others, but that another, opposing mediator may be canceling out the direct effect.

Study 2. Study 2 was designed to (1) allow for causal claims by manipulating implicit theories, (2) replicate the indirect effect from Study 1, (3) replicate the effect of implicit theories on attitude certainty from Petrocelli et al. (2010), and (4) simultaneously identify

attitude certainty as an opposing mediator contributing to the nonsignificant direct effect of implicit theories on advocacy. Participants were told that they would be completing two unrelated tasks. The first task was an implicit theories of attitudes manipulation under the guise of a reading comprehension test (adapted from Chiu, Hong, & Dweck, 1997). For the second task, participants reported their attitude, attitude stability, attitude certainty, perceived persuadability of others, and willingness to try to persuade others regarding the death penalty. First, replicating previous research, we confirmed that a fixed mindset led to greater perceived attitude stability, which led to more certainty of one's own attitude. Replicating Study 1, we also found that a fixed mindset decreased perceived persuadability of others but had no direct effect on willingness to try to persuade others. A bootstrapped multiple mediation analysis (Preacher & Hayes, 2008) confirmed that implicit theories indirectly impacted advocacy through the opposing forces of attitude certainty and perceived persuadability of others. Thus, people with a fixed mindset are simultaneously more likely to advocate because they are more certain of their attitudes and less likely to advocate because they perceive others to be less persuadable, rendering the direct impact of implicit theories on advocacy inert.

Study 3. Participants were involved in a 2 (mindset: fixed vs. growth)  $\times$  2 (focus: self vs. others) between-subjects design in which they wrote about life experiences in which they (or others) have changed (or have not changed) their attitudes over time. Participants then completed an ostensibly unrelated second task in which they reported their attitude and willingness to try to change the opinions of others regarding the death penalty. Results showed a significant interaction. Consistent with the notion that people with a fixed mindset are motivated to advocate because of their own attitude certainty, people with a fixed mindset were more willing to advocate when they focused on their own attitudes rather than others' attitudes. Those with a growth mindset, on the other hand, were more willing to advocate when they focused on others' attitudes rather than their own.

Study 4. After completing the same implicit theories manipulation from Study 2, participants reported their attitude and willingness to advocate regarding the death penalty. However, before reporting their willingness to advocate, we exposed participants to one of three frames. Advocacy was framed in terms of sharing views, changing each other's views, or defending one's own views. Results indicated a significant interaction. When advocacy was framed as sharing views or trying to change each other's views, people with a growth mindset were more willing to advocate. However, when advocacy was framed in terms of defending one's own views, those with a fixed mindset were more willing to advocate.

Discussion. Taken together, these findings reveal that implicit theories can play an important role in motivating advocacy, even if there appears to be no direct relationship between the two. A fixed mindset about attitudes simultaneously motivates and demotivates advocacy through greater certainty in one's own attitudes and lower perceived persuadability of others, respectively. Thus, although greater attitude certainty generally leads to greater advocacy, this is not necessarily the case when that certainty is derived from a fixed mindset about attitudes. However, people with a fixed mindset actually can become more or less willing to advocate than people with a growth mindset, depending on whom they focus their attention or how advocacy is framed. Implications for understanding implicit theories of attitudes, multiple mediation analysis, and determinants of advocacy are discussed.

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#### ***Attitudinal Ambivalence: Do Consumers Manage It?***

Amitkumar Surendra Singh, The Ohio State University\*

H. Rao Unnava, The Ohio State University

When consumers simultaneously evaluate an attitude object both positively and negatively, they are said to be ambivalent (Kaplan 1972; Priester and Petty 1996; Locke and Braun 2009; Rudolph and Popp 2007; Jewell 2003; Zembrain and Johar 2007; Armitage

and Arden 2007). Such consumers may hold an overall attitude that is positive or negative (dominant reactions), but will also carry with them feelings that are opposite of their dominant reactions (conflicting reactions). Ambivalence appears to be quite common in consumers and has been reported in purchase behaviors of wedding products (Otnes *et al.* 1997), fashion products (Thompson and Haytko 1997) and technological products (Priester, Petty and Park 2007). At least two consequences of ambivalence have received significant support in the literature—a reduction in attitude-behavior correlation and a sense of discomfort in the holder of an ambivalent attitude.

Research shows that people prefer attitudes to be in accordance with each other, as well as attitudes with behavior, and so, ambivalence is experienced as unpleasant and leads to discomfort (Harreveld, Pligt and Liver 2009; Newby-Clark, McGregor and Zanna 2002). Because ambivalence is unpleasant, people, unsurprisingly, have been shown to reduce their ambivalence using different strategies (e.g., Harreveld, Pligt and Liver 2009). Harreveld *et al.* developed a Model of Ambivalence-Induced Discomfort (MAID), which illustrates how ambivalent attitude holders go through different stages that can help them get rid of ambivalence.

We propose that there are situational variables that prompt people to anticipate future decision-making involving an attitude, and therefore adjust their attitudes at the formation stage to be less ambivalent. That is, people may employ ambivalence-reduction strategies as they form their attitudes rather than resort to such methods when they retrieve those attitudes. For ambivalence reduction to occur during the formation of attitudes, it is critical that people believe they will use that attitude in the future. We focus on the existence of choices as a moderating variable for ambivalence reduction to occur during attitude formation. Thus, when people are exposed to positive and negative information about a choice alternative, which they will be interacting with in the future, and know they have no other choices available, they see no value in being ambivalent about it. Therefore, they will encode the information in a way that will reduce ambivalence; such encoding may involve biased interpretation of ambivalence-causing information.

In contrast, when people know they have choices in future, they see no anticipated discomfort in the future because of an ambivalent attitude about one of the choices, and therefore will not distort their interpretation of information to stay less ambivalent. They will encode information as presented and will report ambivalent attitudes. Thus, the existence of choice in a decision-context is an important moderator of whether people store ambivalent attitudes or whether they will reduce their ambivalence during attitude formation. In that sense, ambivalence appears to be strategically managed by people rather than something that is passively experienced.

Three studies are conducted to examine the effect of availability of choice alternatives on ambivalence during attitude formation. The first study used a 3(Experience: positive, negative, mixed) X 2(Choices: one, multiple) design. The stimulus consisted of a scenario about a Chinese restaurant in a new town that the study participant will be living in, and there is either only one Chinese restaurant or several Chinese restaurants in town. In the positive (negative) experience condition all attributes of the restaurant were stated positively(negatively). For mixed experience, both positive and negative attributes of the restaurant were presented. . After exposure to the stimulus, attitudes, beliefs, and attitudinal ambivalence were measured. Our prediction was that participants will express higher levels of ambivalence about the Chinese restaurant in the mixed condition when they are told there are multiple Chinese restaurant choices than when they know there is only one Chinese restaurant, in town. The results of the study are supportive of our expectation. Ambivalence was unaffected by availability of choice in positive and negative conditions; but in mixed experience condition, ambivalence in one choice condition (Mean=5.61) was significantly less than in multiple choice condition (Mean = 6.77). The average attitude in one choice (Mean =1.18) was higher than multiple choice condition (Mean= 0.30). Simultaneously, average beliefs in one choice (Mean = 1.43) were stronger than multiple choices condition (Mean = 0.77).

Study 2 was designed to: a) see whether ambivalence changes occur without changes in attitude, and b) see whether the attitude adjustment in the mixed condition is relatively sub-conscious. To test the latter, information about choice (one vs. multiple restaurants in town) was given either before participants read the scenario or after. If ambivalence adjustment is sub-conscious, then telling

participants about choice restriction after reading the message should eliminate the effect found in study 1. The results supported a sub-conscious adjustment view - ambivalence in one choice scenario (Mean= 4.76) was significantly less than in multiple choices scenario (Mean= 5.79), but only when choice information was presented before participants read the scenario. Further, no difference was found in beliefs about the restaurant or attitude toward it.

Study 3 tested whether the choice effects can be mitigated if participants knew they would not be making choices in the future. A new mixed scenario about a hair salon was presented in one vs. multiple choice conditions, but participants read it either as potential tourists or future residents of the town. As expected, there were no effects in the tourist condition, supporting our reasoning that anticipation of future consumption is responsible for ambivalence adjustment. A final study is being run to examine the processes behind ambivalence adjustment; if it is not attitudes or beliefs that are adjusted, what are the psychological processes behind ambivalence adjustment?

In summary, we believe this is the first stream of research which shows that people adjust their ambivalence to be lower during attitude formation stage itself if they expect to consume the product in the future.

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## **7.6 Special Awards Session: SCP Fellow Awards and Distinguished Scientific Accomplishment Addresses**

**Room: MICHELANGELO**

**BREAK**

**3:30 pm - 3:45 pm**

**BALLROOM FOYER**

**SESSION 8**

**3:45 pm - 5:00 pm**

## **8.1 Symposium: Earmarking Money in Mental Accounts**

**Room: BALMORAL**

**Chair:** Cynthia Cryder, Washington University in St. Louis, USA

### ***Sacred Savings: The Role of Mental Accounting in Emergency Spending Decisions***

Abigail Sussman, University of Chicago, USA\*

Rourke O'Brien, Princeton University

Maintaining savings is an important financial goal. Nonetheless, there are times when savings should be spent; for example, when people face unavoidable costs and spending savings means avoiding high-interest rate debt. However, economic research has found that people commonly take on additional debt to avoid drawing down savings. Over 90% of credit card borrowers hold liquid assets and one-third of individuals carrying credit card debt simultaneously hold more than one month's worth of income in liquid savings (Gross & Souleles, 2002). Given savings accounts yielding 1-2% interest and credit card interest charges averaging over 16%, this behavior can be financially costly. Here, we examine how mental accounting (e.g., Thaler 1985, 1999) contributes to this pattern.

Specifically, we explore whether people will spend their savings when they need money most: emergencies. Across four studies, we find that people are reluctant to draw down their savings in favor of borrowing from higher interest rate credit cards. Importantly, this propensity varies as a function of non-economic features of the savings accounts such as account labels and history.

In study 1a, 1,005 people recruited from a nationally representative sample were told to imagine that they needed \$1,000 “for an emergency”. They had (an unspecified amount of) money in a savings account earning 1% interest, as well as access to credit. Participants chose whether they would be more likely to use savings or borrow from a credit card. The experiment varied the interest charged on the credit card (2%, 10%, or 20%) as well as the ultimate goal for the savings account (an unspecified savings account, an account for the purchase of a car, or an account for the participant’s child). As expected, participants were more likely to take money from savings as the interest rate increased ( $p < .001$ ). Participants reported being least likely to draw down their savings when the account was labeled for their child ( $p < .001$ ), a finding consistent with research demonstrating that reminders of children can increase savings rates (Soman & Cheema, 2011). They were also less likely to draw down their savings from a generic account than from an account labeled for a car purchase ( $p < .01$ ). Note that in each case, reluctance to use money from savings means resorting to a more costly alternative. There was no interaction between interest rate and account type ( $p > .40$ ).

To begin to quantify financial consequences, study 1b again examined spending for an emergency from the same three types of accounts. However, rather than varying interest rates, 164 participants responded to a series of titration questions, selecting whether they would be more likely to use money from their savings account or borrow from their credit card at each of 10 different credit card interest rates. Regardless of the savings account label, participants reported requiring the interest rate charge on their credit card to be significantly higher than the 1% they were earning from their savings before they would draw down their savings (all  $ps < .01$ ). Participants were again most reluctant to draw down savings from an account labeled for their child ( $ps < .01$  relative to the other savings account types), requiring the credit card to charge more than six times the interest that they were earning on their credit card (6.2% vs. 1%) before they would do so. This compares to a 2.8% interest rate for the generic account and a 1.8% interest rate for the car account.

Study 2 examined how an account’s history might similarly influence people’s willingness to spend money from an account given identical financial terms. 117 participants chose between spending from savings earning 1% and using a credit card for an emergency, again answering a series of titration questions to determine the interest rate switch-point. The experiment varied how hard people believed it was to build the savings initially, between-subjects. Participants reported that they would use their savings if the credit card was charging at least 2.0% interest in the easy condition, but credit cost needed to be significantly higher (3.3%,  $p < .05$ ) for them to draw down their savings when it had been difficult to build. Perceptions of how hard it would be to replace the money in savings mediated the observed effect.

To better understand how account labeling and history interact with each other, study 3 varied both in a 3 (label: emergency, generic, child) x 2 (history: hard vs. easy to build) between-subjects design. Additionally, this study examined a new account label to determine whether people would be less reluctant to spend from an “emergency” savings account in the event of an actual emergency. 322 participants reported the likelihood they would spend their savings versus borrowing on credit, using a similar response scale as in study 2. Patterns replicated such that there was a main effect of both label ( $p < .001$ ) and history ( $p < .05$ ), and there was no interaction between the two. Participants required a higher interest rate on the credit card before they would spend down savings for their child than savings for either the generic or emergency savings accounts ( $ps < .001$ ). There was no difference in the propensity to spend down savings for an emergency when the account was specifically labeled for an emergency versus unlabeled ( $p > .4$ ), but the credit card interest rate had to be significantly higher than the amount earned on their savings for participants to spend from either account over borrowing (2.7% emergency, 3.0% generic vs. 1% savings, both  $ps < .001$ ).

The findings reported above suggest that labels on spending accounts influence people's willingness to spend from these accounts. People are reluctant to spend down savings for emergencies, even when money has been designated specifically for that purpose. Not only are people violating principles of fungibility, but they are also making costly financial decisions to preserve savings that they care about the most.

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### ***Mentally Accounting for Restricted Funds: How Gift Cards Change Consumer Preferences***

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Gift cards are a common form of restricted funds: Billions of dollars are loaded on to gift cards annually. "Closed-loop" gift cards, cards offered by and restricted in use to specific retailers, have become a ubiquitous component of the consumer landscape. In this paper, we explore the consequences of shopping with a gift card through the lens of mental accounting. Unlike acquiring cash, which can be aggregated with existing funds and forgotten without consequence, acquiring a gift card brings with it a challenge: The recipient must find a desired, yet eligible, purchase in order to redeem the value. For closed-loop (i.e., retailer-specific) gift cards (e.g., a Levi's gift card), the recipient must find something she wants at the specific retailer (e.g., a Levi's store). We argue that the restriction inherent to earmarked gift cards leads consumers to form specific spending goals (e.g., purchase something at Levi's) for the restricted funds, thereby initiating a mental account through which the consumer evaluates potential purchases.

Our approach to mental accounting borrows heavily from Brendl, Markman, and Higgins (1989) who make two propositions: (1) mental accounts are formed around active goals and (2) gains and losses are booked to a given account based on their representativeness to the active goal. For closed-loop gift cards, the mental account is formed around the active goal of purchasing from the issuing retailer. Consequently, the more representative a potential purchase is of the issuing retailer, the more likely it will be booked to the mental account. In these studies, we examine whether shopping with closed-loop gift cards increases preferences for items typical (vs. atypical) of the retailer. For example, a consumer shopping at Levi's with a Levi's store gift card might show a greater preference for jeans (typical) relative to sweaters (atypical) compared to a consumer shopping with a less restricted form of payment (e.g., an American Express gift card).

Study 1 consisted of an extensive norming study to obtain a measure of purchase typicality for products from a variety of retailers/brands. This study found that the purchase-typicality structure for well-known retailers is consistent across people. This replicates previous research examining how brands function as categories (Joiner, 2007). Further, we identified pairs of retailers that offer similar products, but have significantly different product-typicality associations. For example, Levi's and J.Crew both offer jeans, jackets, khakis, and sweaters. For Levi's, jeans are seen as very typical, followed by jackets, khakis, and sweaters. In contrast, for J.Crew there is little difference in the perceived typicality of these four products. We use these retailer pairs in our studies to show that closed-loop gift cards have differential effects on product-type preferences depending on the product-typicality associations of the specific retailers. In the case of Levi's and J.Crew, we would expect customers shopping with a closed-loop gift card to show a greater relative preference for jeans when shopping at Levi's, but not when shopping at J.Crew.

In Study 2, we tested this basic prediction. We randomly assigned participants to either a Levi's or J.Crew condition. Within these conditions, we manipulated whether participants imagined owning a closed-loop store gift card from the target retailer (Levi's or J.Crew) or an open-loop American Express gift card. Participants were then asked to imagine shopping in the target store and to

indicate their preferences across the four pretested product categories (jeans, jackets, khakis, and sweaters). For Levi's, participants reported a greater likelihood to purchase more typical products when they were endowed with a Levi's gift card (vs. an American Express). Participants with a Levi's gift card indicated significantly stronger purchase intentions for jeans, the most typical product from Levi's, and significantly weaker purchase intentions for khakis and sweaters, the two least typical products from Levi's. In contrast, all the products were nearly equally associated with J.Crew and, thus, we neither expected nor found an effect of gift card type on product preferences for those shopping at J.Crew.

In Study 3, we expanded the design from the previous study by adding two additional brand pairs (Fossil and Target, Whole Foods and Safeway) and measuring participants' familiarity with their target retailer. As predicted, participants with closed-loop store gift cards showed a greater preference for typical products compared to participants with open-loop American Express gift cards. Further, we found a moderating effect of brand familiarity, such that the effect was strongest amongst those most familiar with the target retailer. In other words, brand experts were more influenced by product typicality when shopping with a closed-loop gift card. This is expected from a brand-as-categories perspective, as brand experts should have stronger preexisting typicality associations between products and the brand (Barsalou, 1995).

Finally, in Study 4, we assessed the alternative possibility that the findings of Studies 2 and 3 were produced by simple conceptual priming. To do this, we used a fictional retailer/brand and, instead of relying on previously learned product-typicality associations, provided product-typicality cues during the preference measurement task. In the experiment we asked participants to imagine having dinner at a (fictional) Italian restaurant. We manipulated whether they would be paying for their meal with a store gift card or an American Express gift card. We then provided participants with a menu and asked them to rate their preferences for the different possible main courses. We included a typicality cue in this menu: one dish (randomized across participants) was described as "world famous," implying it is a common and representative purchase, and a second (also randomized) as "today's special." As predicted, those shopping with a store gift card (vs. an American Express gift card) showed a stronger preference for menu items described as "world famous" compared to those described as "today's special." This result cannot be explained by simple conceptual priming (as there cannot be an existing associative link between an unknown fictional brand and the phrase "world famous"), but is consistent with the mental accounting processes we believe underlie our previous findings.

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### ***As Good as Spent: Earmarking Money Leads to a Sense of Spending***

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When does the moment of spending effectively take place? Is it when money changes hands, when goods are consumed, or at some other time? We propose that earmarking funds for specific uses leads consumers to feel that the money has been psychologically spent prior to the actual transaction. In other words, available funds are treated as already spent once earmarked.

The literature on earmarking has shown that money set aside for specific uses is less fungible (Shefrin & Thaler, 1988); that earmarking can act as a form of self-control and can be viewed as a concrete, specific form of mental budgeting (Heath & Soll, 1996); and that earmarking and partitioning can create goals for consumers and increase savings behavior (Cheema & Soman, 2011).

One possible underlying reason for each of these effects is that earmarking advances the psychological feeling of spending. If earmarked funds have already been mentally spent, they are not available to be spent on other purchases, they decrease the total

amount of money available for other purchases, and they increase the probability of making the earmarked purchase. In four studies, we show that earmarking funds effectively moves up the moment of psychological spending. In particular, we argue that (1) earmarking funds increases constraint and therefore decreases spending from other, non-earmarked funds, and (2) earmarking funds increases the likelihood of purchasing the target product, even if the price increases or the act of earmarking is incidental.

*Study 1.* In our first study, we examine the effect of earmarking on spending non-earmarked funds. Participants (N=131) were told they received \$200 as a gift from an extended family member. Half of the participants were told they set aside \$100 to spend on new clothes (Earmarked condition), whereas the other half were told they considered spending \$100 on new clothes, but hadn't committed to anything yet (Control condition). Subsequently, all participants were asked whether they would use \$100 of their gift money to repair their computer, which had recently broken. Even though both groups had \$100 in non-earmarked funds, 75% of participants in the Control condition were willing to spend the \$100 to fix their computer whereas only 59% of those in the Earmarked condition said they would do so ( $p < .05$ ). This suggests that participants view earmarked money as spent and thus have a smaller budget for other expenditures from the same account, even though no money has actually been exchanged.

*Study 2.* In our second study (N = 131), we examine the effect earmarking has in the face of increasing costs. If earmarking is no different from general mental budgeting, individuals should be hesitant to purchase goods when costs are higher than expected: if earmarked funds represent the totality of the account, then increased costs would take individuals "into the red" (Heath 1995). However, if individuals view earmarked funds as already spent, then increased costs a) represent a smaller marginal cost to acquire the good, and b) are in addition to funds that are already psychologically, if not economically, sunk. As a result, earmarking increases the likelihood of purchase in the face of increasing costs. Indeed, individuals that earmarked funds for a specific purchase were significantly more likely to purchase the good after the price increased than individuals that had not earmarked funds (60% vs. 41%;  $p < .05$ ).

*Study 3.* In Study 3, rather than telling participants that they had earmarked funds, earmarking was incidentally manipulated by making a specific opportunity cost salient for some participants. Participants (N = 100) imagined winning \$800 and shopping for a new television. They were given the choice between two similar options, one of which was internet-ready and 3D and cost \$600 and one of which was neither and cost \$400. Using a variation on Frederick et al.'s (2009) manipulation, for half of the participants (salient condition), the cheaper option was labeled "\$400, leaving you an extra \$200 that you could spend on movies"; for the other half of the participants (non-salient condition), it was simply labeled "\$400". Participants were then given an unexpected choice of whether they would buy a \$225 Amazon Movies gift card for \$200. Of those participants who rejected the larger TV (which did not differ between conditions; 32/50 for salient, 33/50 for non-salient), those who had previously seen salient opportunity costs were more likely to buy the gift card (15/32) than those who had not seen salient opportunity costs (5/33;  $p < .01$ ). This suggests that considering a specific opportunity cost at one point can lead to earmarking funds for a particular purchase, increasing the likelihood of making a purchase at a second point in time.

*Study 4.* Study 4. In our first three studies, we showed that, consistent with our proposal, consumers who earmarked money behaved as though that money was already spent. In Study 4, we examine how this feeling of spending changes as the timing of the transaction approaches. Participants (N = 50) viewed a calendar showing a target car purchase date and rated feelings of already having spent the money for the twelve weeks leading up to the purchase. There was a significant linear trend such that feelings of having spent the money increased as the date of purchase approached ( $ps < .01$ ). The linear trend was positive for 28 out of 50 participants and negative for only 11 out of 50 participants. These results imply that earmarking leads to greater feelings of having spent money, and those feelings increase as the time of purchase approaches.

At the root of each of these effects is the proposal that earmarked money is treated as if it has already been spent. Consumers who earmark money feel more constrained when considering a given, finite mental account and escalate commitment in the face of

increasing costs. Ultimately, our results suggest that the specific intentions that consumers form for how they will use their money affects the perceived value of that money and how that money is used across competing purchases.

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### *Accounts Are More Evaluable Than Dollars*

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The Mental Accounting literature contains several instances where consumers place greater weight on accounts than on dollars in their transaction decisions. For example, people tend not to maximize total dollars saved, however, with an earmarked savings account in place, they save more by leaving the earmarked account untouched (Soman and Cheema 2011). In the case of “debt account aversion”, consumers prioritize closing an individual debt account instead of reducing total dollars of debt (Amar et al. 2011). In this project, we propose that one reason why consumers focus on accounts is that accounts are easier to evaluate than are non-categorized dollars.

Evaluability describes how easily someone can size up a particular attribute without directly comparing it to another option (Hsee 1996). For example, in the case of dictionaries, a torn cover is easy to judge as problematic without comparison to another dictionary, however, the number of words within the dictionary (e.g., 10,000) is difficult to evaluate without direct comparison to another dictionary alternative.

In the realm of consumer finance, we propose that accounts are primary in the decision maker’s mind because they are easier to evaluate than are the dollars themselves. Without a context for comparison, it is difficult for a consumer to judge whether or not she is harming her savings progress by spending (and not saving) an extra \$50. If the consumer must dip into her earmarked savings account to spend that \$50, however, the failure of savings progress is clear. We investigate the connection between accounts and evaluability in 4 studies.

Study 1A asked participants to rate how unhappy they would be with one of two different debt portfolios. Portfolio 1 contained three different debt accounts in amounts of \$800, \$400, and \$400 (total=\$1600). Portfolio 2 contained a single debt account of \$1800. In two “separate evaluation” conditions in which participants evaluated only one debt portfolio, participants indicated greater unhappiness with three debt accounts totaling \$1600 than with one debt account of \$1800. In a “joint evaluation” condition where participants evaluated both portfolios simultaneously, participants reported equal unhappiness with both portfolios (with directionally greater unhappiness in the \$1800 condition and a significant JE/SE interaction). Attributes that are difficult to evaluate receive greater weight in joint versus separate evaluation (Hsee 1996; Hsee et al. 1999), and in this case, total dollars of debt received greater weight in participants’ joint judgments.

Study 1B mirrored Experiment 1A in the savings domain. In two separate evaluation conditions, participants indicated equal happiness with a portfolio with three savings accounts totaling \$1600 compared to a portfolio with one savings account of \$1800 (reporting directionally greater happiness in the three-accounts condition). In a joint evaluation condition where participants evaluated both portfolios simultaneously, participants were significantly happier with the single \$1800 account than with the three accounts totaling \$1600 (results showed a marginally significant JE/SE interaction). Similar to Study 1A, dollars received greater weight in joint versus separate evaluation.

In Studies 2 and 3 we manipulated evaluability to observe its effects on allocation choices.

Deliberation has been shown to heighten evaluability, or value sensitivity (Hsee & Rottenstreich, 2004). In Study 2, we hypothesized that increasing deliberation should increase overall evaluability, boosting the relative weight that dollars receive in allocation choices. Previous research shows that consumers prioritize closing a small, but low-interest, debt account over reducing a large, but high-interest, debt account in a tradeoff highlighting a focus on accounts over dollars (Ayal et al. 2011). In Study 2, participants chose whether to allocate a \$100 rebate check to close a small low-interest debt account, thus minimizing the number of debt accounts, or to reduce a large high-interest debt account, thus minimizing total dollars of debt. Disfluent, or difficult to read, text intensifies deliberation (Alter et al. 2007) and participants read this \$100 rebate scenario either in fluent or disfluent text. Participants in the disfluent, or deliberation, condition allocated significantly less money to the low-interest debt account, suggesting that heightening overall evaluability increases the relative weight placed on dollars.

If consumers focus on accounts because they represent easy-to-evaluate categories, making the accounts even easier to evaluate should further increase the weight that they receive. Labeling accounts in meaningful ways provides context, which increases ease of evaluation (Hsee & Jiang, 2010; Morewedge et al. 2009). In Study 3, participants allocated \$10000 to three credit card debts worth \$10000, \$6000, and \$4000. The largest debt had the lowest interest rate and the smallest debt had the highest. In the control condition, participants simply allocated payment to unlabeled accounts. In the “labeled” condition, participants allocated the payment to the same accounts with meaningful identities added: Visa, Mastercard, or American Express. Consistent with predictions, participants in the labeled condition allocated significantly more money toward closing the small but low-interest debt account rather than reducing total dollars of debt. In short, increasing the evaluability of accounts further increased the focus placed on accounts relative to dollars.

A common explanation for effects such as savings partitioning and debt account aversion is that there is increased hassle associated with accessing an earmarked savings account or managing multiple debt accounts. While these bookkeeping costs likely do play a role in account-centric judgments, the current investigation highlights an important psychological force behind these and related mental accounting phenomena: Consumers’ decisions are highly influenced by the financial accounts that they transact because these accounts are more easily evaluated than the dollars that comprise them.

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## ***8.2 Individual Papers: Brains and Brands: Cognitive Perspectives on Branding***

**Room: SANDINGHAM**

**Chair:** Julian K. Saint Clair, Loyola Marymount University, USA\*

### ***The Effect of Number versus Letter Cognition on Consumers’ Evaluations of Alphanumeric Brand Names***

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Alphanumeric brand names (ABNs) consist of combinations of letters and numbers either in digit or word forms (Pavia and Costa 1993), such as Coke Zero and Audi A4. This research investigates the differences in consumers’ processing of number and/or letter changes in ABNs to understand consumer reactions to each branding approach in the light of theoretical reasoning. Specifically, we examine how variations in letter vs. number parts of existing ABNs influence consumer perceptions of the newly introduced products

relative to the existing ones. For example, given an existing product Samsung H300, would it be more beneficial for Samsung to change its brand name to Samsung H400 or I300 when introducing a brand name product and improving one or more of the product attributes. How would these different branding strategies impact consumer expectations, perception, judgments and choices of the new product?

literature on number cognition suggests that there are differences between letter/word and digit/number recognition from both behavioral (Hamilton, Mirkin and Polk 2006; Jonides and Gleitman 1972) and neuropsychological perspectives (Park, Hebrank, Polk and Park 2011). Specifically, digits allow processors to rapidly access numerical magnitude, and, consequently, conceptual codes, whereas words allow rapid access to phonological codes (Damian 2004). Specifically, because numbers are processed like pictures, unlike words, and they bypass the phonological translation, processors have direct access to their meanings (Fitoussi 2010). Furthermore, the literature in this domain is explicit that number processing is automatic in terms of reaching semantic meaning, the magnitude (Dehaene and Akhavein 1995). In light of the differences between number and letter cognition, we propose that changing the number parts of ABNs will result in larger perceptions of improvement and more positive evaluations of the new product compared to the existing product than changing the letter parts of ABNs. Additionally, we also incorporate the “size effect”, which states that “comparison of two numbers is easier for small than for large numbers (e.g., 1 and 2 vs. 8 and 9)” (Verguts and Opstal 2005, p. 925), and introduce a similar effect for letters as boundary conditions. Based on “the size effect” in the comparison of two numbers in the numerology literature and our proposed “letter difference” framework for comparison of two successive letters, we suggest that the degree of similarity between the letters and between the numbers of ABNs in extensions should be a boundary condition to the main effect. In other words, for very similar number and letter pairs in ABNs, we propose that consumers will not evaluate the new product more favorably than the existing product when the number of the ABN changes than when the letter of the ABN changes. Finally, we combine the findings of the brand/line extension literature and the number/letter cognition literature to propose that consumers will evaluate the brand extension as a multidimensional improvement of the existing product when the number part of the ABN changes, whereas they will evaluate the brand extension as a unidimensional improvement of the existing product when the letter part of the ABN changes.

In Study 1, participants evaluated a new Canon digital camera, compared to an existing product, the Canon A70. The new brand was either a B70, that is, a letter change, or an A80, that is, a number change. In all cases, it slightly outperformed the existing brand on one less important dimension (digital zoom), but the existing brand was superior on all other attributes. Our results revealed stronger relative preference, greater purchase intention, and the inference of higher attribute values for the new product in the number change condition (Canon A80) than in the letter change condition (Canon B70). Specifically, in contrast to buying the A70, in the number change condition (A80), 27.08% of the participants chose to buy the new product; whereas only 9.76% of participants did in the letter change condition (B70) ( $\chi^2 = 4.3$ ,  $p < .05$ ), despite the fact that the new product was inferior on all but one attribute.

Study 2 replicated the results of Study 1 with different number pairs (e.g., 20 and 30) letter combinations (e.g., M and N) in the ABN and with a different dependent variable (e.g., price perception). In addition, it took the findings one step further by demonstrating that the differential effect of number vs. letter change on evaluation of ABNs is not observed with perceptually similar letters (e.g., M and N according to the results of pilot study), and numbers (70 and 80 compared to 20 and 30) (Verguts and Opstal 2005). In a 2 (change in ABN: number change vs. letter change) x 2 (letter pairs: A-B vs. M-N) x 2 (number pairs: 20-30 vs. 70-80) between subjects study, participants evaluated a new Canon digital camera. As anticipated, the number change in ABNs resulted in a higher price expectation for the new brand than the letter change. However, this effect was not observed when the numbers used in ABNs were more similar (e.g., 70-80) and the letters used in ABNs were perceptually similar (e.g., M and N).

In Study 3, we explored the type of improvements consumers discern in the new product depending on the type of change in brand name (number change vs. letter change). The product category and the letter-number combinations were identical to that of Study 1, but the existing brand name was changed to Sony CyberShot A70. Participants were randomly assigned to letter change (Sony

CyberShot B70) or number change (Sony CyberShot A80) conditions, and were asked to comparatively evaluate the two products in terms of their perceptions of newness, product advancements and new product prices. Changing the letter part of the ABN resulted in perceptions of unidimensional improvements of the product such as a better value on one attribute or addition of a new attribute; whereas changing the number part resulted in perceptions of multidimensional differences such as an overall improvement in the whole product or advancements in various product attributes. This expectation of multi-dimensional shifts is consistent with our theorization that number (vs. letter) changes are associated with larger improvements.

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### ***When Negative Valence is Good***

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Conventional wisdom suggests consumers' attitudes toward brands will be more positive when brands are paired with positively valenced stimuli than when paired with negatively valenced stimuli. Indeed, a standard finding in associative learning literature is that the positive (negative) properties of a positively (negatively) valenced stimulus transfer to neutral stimuli when the valenced and neutral stimuli are presented together – an evaluative conditioning effect also referred to as affect transfer. As a consequence, extant literature prescribes that marketers place ads within contexts that are positively valenced (e.g., featuring images of dream travel destinations) rather than within contexts that are negatively valenced (e.g., featuring images of garbage and dirty rats). Drawing on goal pursuit literature (Custers & Aarts, 2010; Dijksterhuis & Aarts, 2010; Labroo & Kim, 2009), the present research updates theory on associative learning by demonstrating that pairing a brand with negatively valenced images can actually lead to favorable consumer outcomes, a finding that is at odds with standard evaluative conditioning effects.

During goal pursuit, consumers often engage in unpleasant activities (Custers, Maas, Wildenbeest, & Aarts, 2008; Labroo & Kim, 2009; Oettingen, Grant, Smith, Skinner, & Gollwitzer, 2006) such as studying difficult material to achieve academically, taking an ill-tasting medicine to become healthier, or engaging in rigorous exercise to increase fitness. We argue that these activities facilitate an association between goal-instrumental activities and unpleasantness. Further, we argue that the association may be bidirectional, such that consumers might make the reverse inference where unpleasantness implies inherent instrumentality.

An “unpleasant equals instrumental” association suggests that brands paired with negative images will seem more instrumental than brands paired with positive images. When a goal is active, individuals have increased preferences for behaviors that are instrumental in achieving the goal (Ferguson, 2008; Ferguson & Bargh, 2004; Fitzsimons & Shah, 2009; Labroo & Kim, 2009; Veltkamp, Aarts, & Custers, 2008). Therefore, during goal pursuit, consumers should prefer a “negative” brand to a “positive” brand because it seems more instrumental. We test this prediction in three experiments.

In experiment 1 (n = 77), we assessed the effect of evaluative conditioning and goal pursuit on choice in a mixed design. First, we manipulated brand valence (i.e., evaluative conditioning) within-subjects by pairing two fictitious brands (T Brand and V Brand) with either negative images (garbage, dirty rats, prisoners, car wreck) or positive images (puppies, a wedding, a beach, mickey mouse) as part of a “simulated magazine-reading” task. As a replicate factor, we manipulated which brand was negative between-subjects. Next, we randomly assigned participants to either a health-goal prime condition or a neutral condition where we asked participants to unscramble health-related or neutral sentences (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001; Srull & Wyer, 1979). After a 1-minute filler task, participants chose between vitamins offered by the two fictitious brands. Results showed only a significant

interaction between brand valence and goal condition where priming a health goal increased the probability of choosing the negatively valenced brand's vitamin ( $\beta = 1.12$ ;  $\chi^2(1) = 4.73$ ,  $p = .03$ ).

Experiment 2 ( $n = 149$ ) provides process evidence. A bidirectional association stems from the idea that goal pursuit frequently involves engaging in unpleasant activities. Experiment 2 repeated the design of experiment 1, but added a single-item measure to the end of the study that asked participants' agreement with the statement "Activities that are the most useful for achieving goals are sometimes the most unenjoyable." Agreement should be positively related to bidirectional association strength, making this an indirect measure of association strength. Results showed only the predicted significant main effect of goal priming on probability of choosing the negative (vs. positive) brand's vitamin ( $\beta = -2.17$ ;  $\chi^2(1) = 4.54$ ,  $p = .03$ ) qualified by a significant interaction with association strength, where stronger association increased choice of the negative brand ( $\beta = .04$ ;  $\chi^2(1) = 5.73$ ,  $p = .02$ ).

Experiment 3 ( $n = 127$ ) explores boundary conditions. It may be the case that novices in a given domain are more likely than experts to make the reverse inference (i.e., unpleasant = instrumental) both because the experience of unpleasantness decreases over time and because experts are savvy of pleasant means to achieve the goal. Thus, the effect of goal priming on preference for negatively valenced brands should be attenuated for consumers with more proficiency in the domain. Repeating experiment 1's design, experiment 3 added a measure of goal pursuit proficiency to the end of the experiment. The single-item measure asked participants' agreement with the statement "I am good at engaging in healthy activities." Additionally, marketers may be reluctant to pair their brands with negative images. Experiment 3 replaced the negative images from experiments 1 and 2 with pre-tested neutral images (rubber bands, a spinning top, empty wine barrels, a bread rolling pin). This second change also makes for a stringent theory test because of a smaller difference in valence between the two brands. Results showed only the predicted significant main effect of goal priming on probability of choosing the neutral (vs. positive) brand's vitamin ( $\beta = 2.97$ ;  $\chi^2(1) = 3.99$ ,  $p = .05$ ) qualified by a marginally significant interaction with proficiency, where greater proficiency decreased choice of the neutral brand ( $\beta = .04$ ;  $\chi^2(1) = 3.55$ ,  $p = .06$ ).

Counter to marketers' intuition and prior literature, this research demonstrates that more negatively valenced brand associations actually become desirable during goal pursuit. This effect stems from a bidirectional association between unpleasantness and goal-instrumentality, and is stronger for novice consumers than for experts. The present findings may apply to both promotion goals (e.g., approach fitness) and prevention goals (e.g., avoid sickness), but may not generalize to domains where consumers expect only pleasant goal pursuit activities (e.g., some indulgence goals). Whereas marketers may hesitate to present their products in conjunction with images of garbage, it may be prudent to garner more innocuous non-positive associations with their products. For example, a health supplement may benefit from product reviews where customers mention that the supplement has some negative side effects (e.g., poor flavor), but is very effective.

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### ***When a Reputation for Innovativeness Confers Negative Consequences for Brands***

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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, recent research on brand associations suggests that the positive effect of a brand reputation for innovativeness may be exaggerated. Sonnier and Ainslie (2011) find that general brand associations (e.g., brand affect) can bias measurements of the consequences of specific brand associations, such as innovativeness. Therefore, it becomes difficult to disentangle the extent to which the positive consequences of a reputation for innovativeness discussed in prior work result directly from a reputation for innovativeness as opposed to more general, positive brand associations. The main objective of the present research is to test whether, results from past research notwithstanding, a reputation for innovativeness can confer negative consequences for brands' new products.

Associations between certain brand attributes and/or outcomes may be formed in one (or both) of two ways. First, such associations can be formed based on external and environmental cues (Morris, Menon, and Ames 2001). Specifically, after repeated exposure to external sources promoting this link between innovation and malfunction, people may adopt an association between the two concepts. For example, the popular press often discusses the malfunctions and glitches associated with product innovations, ranging from new technologies (e.g., the iPhone 4; Apple, Inc. 2010) to durable goods (e.g., laundry machines, Gerrish and Moron 2013) and even to food and beverages (e.g., Crystal Pepsi, Flaim 2007). As a consequence, the majority of consumers are likely to have been exposed to examples highlighting when and how innovations have failed or malfunctioned in the past.

Second, associations can be generated through personal experiences and observations (Ross and Nisbett 1991). The experience of using a new product and experiencing a malfunction may form the basis for the link between innovation and failure. Even if that malfunction is not the fault of the product but rather due to user error (Wood and Lynch 2002; Thompson 2008), such perceived product malfunctions can contribute to this link. As with other cognitive associations (e.g., the link between guilt and pleasure, Goldsmith, Kim and Dhar 2012), a link between innovation and malfunction may become automatic and nonconscious over time due to repeated internal co-activation (Bargh and Chartrand 1999; Ramanathan and Menon 2006).

Based on the proposed link between innovation and malfunction, we predict:

H1: Consumers are more likely to expect malfunctions from new products associated with innovation, as compared to other attributes.

H2: Consumers perceive new products to be lower in quality when they come from a brand with a reputation for innovativeness, as compared to other attributes.

H3: Consumers are less likely to purchase a new product from a brand with a reputation for innovativeness, as compared to other attributes.

Across a series of four experiments, we test our central proposition that associating a brand with a reputation for innovativeness decreases consumers' perceptions of new product quality. Experiment 1 demonstrates that consumers' expectations of new product malfunction increase when the product is associated with innovation, as opposed to other attributes. In it, we describe a hypothetical new product (a refrigerator that connects with a phone to report food levels) and measure participants' expectations for the refrigerator's malfunction. We create three conditions—Innovation, Convenience, Excitement—by prefacing the description of the new product to emphasize either the product's innovativeness (“promises to revolutionize the entire refrigerator category”), its convenience (“promises to add convenience to the lives of refrigerator users”), or its excitement (“should be exciting for new refrigerator buyers”). Participants in the Innovation condition anticipated significantly more malfunction than did participants in the Convenience and Excitement conditions.

Experiment 2 shows that consumers have lower expectations of quality for new products introduced by brands that are explicitly associated with innovativeness, as compared to other attributes. We create three conditions—Innovation, Quality, or Control—by associating an existing brand (furniture maker Crate and Barrel<sup>TM</sup>) with innovation, quality, or control. In the Innovation/Quality condition, we inform participants that Crate and Barrel recently won an award for innovation/quality. Participants in the Control condition were told that the company has 170 stores. Participants then evaluated six furniture pieces from Crate and Barrel on both anticipated malfunction and perceived quality. Participants in the Innovation condition perceived lower quality for the furniture than did participants in the other two conditions. Further, we found a significant indirect effect of condition on quality perceptions through anticipated malfunction, indicating that anticipated malfunction mediated quality perceptions.

Experiment 3 provides a conceptual replication for Experiment 2 by nonconsciously associating a product with innovation using a priming technique. Participants unscrambled sentences that either primed innovation, quality, or both concepts before evaluating a new technology product (NetVision TV, video streaming from the internet to the TV). Participants in the Quality condition perceived the new technology to have higher quality than participants in either the Innovation or Both condition, indicating that a reputation for innovativeness can decrease quality perceptions even with an accompanying reputation for quality.

Finally, Experiment 4 demonstrates an important boundary condition for the observed effects by showing that a brand's reputation for innovativeness affects perceptions of its new products but not of its existing, mature products. Further, Experiment 4 demonstrates that a reputation for innovativeness can decrease consumers' purchase intent. We describe a hypothetical shoe company that is known for either (1) quality, (2) quality and fashion, or (3) quality and innovativeness. Participants in the Innovation condition perceived lower quality and reported lower purchase intent for the company's new product line than did participants in the other two conditions. However, participants' perceived quality and purchase intent for their mature product line was unaffected by condition, as brand reputation affects perceptions of new products more than mature products.

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### ***Partner versus Servant Relationship and Its Influence on Brand Evaluation: The Moderating Role of Warmth versus Competence Trait***

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Marketers often employ the strategy of positioning their brands based on distinct social roles. For instance, Allianz (one of the world's leading financial organizations) emphasizes its core mission of being a *trusted partner* to their customers whereas Scrubbing Bubbles stresses its role of being a *dependable servant*, as reflected in its advertising taglines "We work hard so you don't have to".

Subsequent to Fournier's (1998) influential paper on brand relationships, research has highlighted the effect of a brand's role or perceived relationship with consumers in impacting consumers' expectations and evaluations of the brand, for example, in the context of communal versus exchange relationships (Aggarwal 2004) and close relationships (Aaker, Fournier, and Brasel 2004). Yet, little research has investigated the effect of other specific relationship types between a consumer and a brand. In this research, we explore two relationship contexts: promoting the brand as a partner versus a servant, and examine how they influence consumers' attribution process, expectations, and brand evaluations.

Specifically, we rely on a distinction made in social psychology literature between partner relationships (e.g., friend, Clark and Mills 1993) and master-servant relationships (similar to the authority ranking relationship in Fiske 1992) to make predictions about how the

relationship type influences consumer evaluations. Bolton et al. (2008) suggest that patients treat drugs as servants since drugs cure the ailment with little effort from the patients but they treat nutritional supplements as partners since they also have to adopt other healthy behavior to address the health problem. Indeed, in a partner relationship, people often share the workload with their partners, and thus they would share the credit for the achievement when positive outcome occurs (Henderson and Argyle 1986). Moreover, they also share the responsibility and blame under negative outcome conditions. For instance, people are tolerant of each other's transgressions and are willing to forgive their partner for wrongdoing (McCullough et al. 1998; see Goodwin 1996; Tax, Brown, and Chandrashekar 1998 for similar findings under service failure situations).

In contrast, in a master-servant relationship, there often exists clear vertical/hierarchical ordering that is task driven. In such relationships, the masters expect their subordinates or servants to be able to take care of the work and get things done independently and efficiently (Aggarwal and McGill 2012). Behavior that succeeds to meet such expectations is appreciated but behavior that fails to meet these expectations is viewed as unacceptable and elicits negative reactions (Yukl and Fu 1999), thus leading to polarized evaluations toward servants.

Drawing on the above discussion on how people evaluate their social relationship partners, we propose analogous effects in the context of brand evaluations. Specifically, we expect that when brand performance is positive, consumers will give more credit to a servant brand who performs the task independently, while they only give partial credit to a partner brand who performs the task in conjunction with the consumer. Similarly, when the brand performance is negative, consumers evaluate the servant brand more unfavorably since they are assigned more blame compared to the partner brands who are assigned only partial blame.

Experiment 1 tested our basic intuition. It followed a 2 (brand role: partner vs. servant)  $\times$  2 (brand performance: positive vs. negative) between-subjects design. Specifically, we first described a laptop brand (Lenovo) as either a brand that "works with you to help you take care of what's important to you" (partner) or a brand that "works for you to take care of what's important for you" (servant). To strengthen our manipulation, participants were asked to elaborate their thoughts regarding the advertisement tagline and the brand (Aggarwal and McGill 2012). Subsequently, participants were asked to imagine using the computer to complete an onerous assignment. Participants in the positive (negative) condition were further told that when they finished this assignment, they were surprised (upset) to see that they had finished the assignment much faster (slower) than expected. Lastly, participants provided evaluation for Lenovo brand. As expected, when the performance was positive, participants evaluated the brand more favorably if it was positioned as a servant than as a partner. However, the reverse was true when the performance was negative. The effect of brand role on evaluations was mediated by the consumers' relative tendency to attribute the performance to the brand (vs. the self).

However, do servant brands always experience a polarizing evaluation compared to partner brands? Note that our predictions in Experiment 1 were based on consumers' different expectations from the two relationships. Social relationship literature suggests that people expect warmth from their partners but competence from their servants (Clark and Mills 1993; Fiske 1992). Therefore, we expect that the domain of the brand's performance being judged – warmth versus competence – will moderate the proposed effect.

Before testing the moderating role of judgment domain, we first verified our assumption that consumers tend to seek warmth from partner brands but competence from servant brands in Experiment 2A. Moreover, Experiment 2B demonstrated the reverse: a brand positioned as warm (competent) is more likely to be seen in a partner (servant) role, implying a bidirectional relationship between partner (servant) brand and warmth (competence) trait. Finally, Experiment 2C confirmed this bi-directional association using 20 real brands.

Subsequently, Experiment 3 tested the moderating role of warmth/competence domain on the brand role  $\times$  brand performance interaction effect in the context of a fitness club. This experiment replicates Experiment 1 and extends it by suggesting that when the brand is positioned as a partner, it enjoys more favorable evaluation if the brand does well on warmth (vs. competence) features. On

the other hand, a partner brand that performs negatively on the warmth (vs. competence) dimension is evaluated more negatively. The results for the servant brand are quite the opposite. Further, these effects are mediated by the perceived warmth and competence for partner and servant brand respectively.

Taken together, this research reveals the theoretically meaningful role of consumers' expectation from partner versus servant brands in shaping their attributions, inferences, and brand evaluations, and offers new insights for marketers to manage their brands and its relationship role more effectively.

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### **8.3 Symposium: Imagined Experiences: The Impact of Experiential Imagery on Consumer Attitudes Intentions and Food Consumption**

**Room: WINDSOR**

**Chair:** Ryan Elder, Brigham Young University, USA

#### ***So Close I Can Almost Sense It: The Impact of Differences in Sensory Imagery Distance on Consumer Attitudes and Intentions***

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Sensory experiences, including sensory images (e.g., visual and haptic imagery), are difficult to compare to one another as they share few common dimensions. However, one underlying dimension that sensory experiences share and uniquely differ on is the distance from the stimulus required for perception (Rodaway 1994). Thus, for a stimulus to be perceived by the sense of touch it must be close to the individual, whereas for the same stimulus to be perceived visually, it may be further away. We propose and show that sensory imagery follows a similar pattern to actual perception on this distance dimension. Across four studies, we specifically highlight how images evoked using different sensory modalities affect both the perceived physical and psychological distances between the consumer and the stimulus, ultimately affecting attitudes and intentions. In general, more proximal (closer) sensory images lead to higher attitudes for physically or psychologically close experiences, whereas more distal (farther away) sensory images lead to higher attitudes for physically or psychologically distant experiences.

*Pilot Study.* With the pilot study we test whether the five senses differ in their imagined distance from a given stimulus. Forty participants were told to imagine a steak skillet using each of the five senses in randomized order (we chose food as it can be experienced with all of the senses). They then rated how far the skillet was away from themselves in their image (0-10 feet).

As hypothesized, taste was rated as the closest sensory image, followed by touch, smell, vision, and sound. The imagined distance for hearing did not differ from that of vision or smell. However, hearing, smell, and vision each significantly differed in distance from both touch and taste. Touch and taste did not differ from one another. Thus, the results from the pilot study suggest that hearing, vision, and smell may be classified as more distal sensory experiences, with touch and taste classified as more proximal sensory experiences. We use this classification of sensory experiences in the subsequent studies.

*Study 1A.* In study 1a, we randomly assigned participants to use their sense of taste (proximal) or sense of vision (distal) to imagine all of the experiences they would have while visiting a restaurant. Our dependent variable measured how far the imagined restaurant was perceived to be from where participants lived (0-200 miles).

We found that when participants were told to imagine a proximal sensory experience, they reported the distance of the restaurant to be significantly closer than those told to imagine a distal sensory experience ( $M_{\text{proximal}}=13.67$ ,  $M_{\text{distal}}=29.96$ ;  $p<.05$ ).

*Study 1B.* In study 1b, participants read a restaurant review that contained either proximal (taste and touch) or distal (vision and sound) sensory experiences. Participants were shown a six-month calendar and were asked to indicate when they would like to make a reservation for the restaurant. This measure served as our dependent variable. We also measured attitudes toward the restaurant to ensure that any differences in temporal distance weren't attributable to differences in attitudes.

There was no difference in attitudes resulting from the reviews ( $p>.5$ ). However, there was a difference in the reservation date. When participants read the proximal review they made reservations significantly closer in the future than when they read the distal review ( $M_{\text{proximal}}=5.62$  weeks,  $M_{\text{distal}}=9.50$  weeks;  $p<.05$ ).

*Study 2.* In study 2 we establish conditions of congruence and incongruence between sensory imagery and physical distance, and then explore the impact of the level of congruity on attitudes. We hypothesize that congruence between sensory imagery and physical distance will lead to higher attitudes than incongruence.

One hundred and seventy-five participants were told that they would be imagining a restaurant experience. Participants were randomly assigned to one of two physical distance conditions (city in which they live or different state). Next, they were randomly assigned to imagine all of the taste or visual experiences they would have at the restaurant. We captured attitudes toward the restaurant as our dependent variable.

We conducted a 2 x 2 ANOVA with attitudes as the dependent variable and sensory imagery and physical distance as the independent variables. As hypothesized, the interaction between sensory imagery and physical distance was significant ( $p=.02$ ). Planned follow-up contrasts reveal that within the same-city condition, proximal imagery led to higher attitudes than distal imagery ( $M_{\text{proximal}}=8.06$ ,  $M_{\text{distal}}=7.64$ ;  $p=.09$ ). Within the different-state condition, distal imagery led to higher attitudes than proximal imagery ( $M_{\text{proximal}}=7.32$ ,  $M_{\text{distal}}=7.78$ ;  $p=.07$ ).

*Study 3.* One of the natural consumer contexts in which differences in sensory imagery proximity may be consequential is when comparing online versus in-person purchase decisions. In study 3, we explore this context. We propose that for an in-person (online) presentation proximal (distal) sensory imagery will lead to higher attitudes.

One hundred and fifty-seven undergraduates were told that they would be providing product evaluations for a toy football. Participants were randomly assigned to read one of two advertisements: a proximal advertisement focused on the touch experience of the football, or a distal advertisement focused on the sound the football made when squeezed. Next, participants were randomly assigned to either view the football in person, by opening a box to the side of the computer (but not to touch or move the football inside), or to view a picture of the football online. We captured their attitudes toward the football as our dependent variable.

We conducted a 2 x 2 ANOVA with attitudes as the dependent variable and advertisement sensory imagery and presentation as the independent variables. The interaction is significant ( $p < .005$ ), and follow-up contrasts provide support for our hypotheses. Specifically, when the football was presented in-person, the proximal advertisement led to higher attitudes than the distal advertisement ( $p<.01$ ). However, when the football was presented online, the distal advertisement led to higher attitudes than the proximal advertisement ( $p=.13$ ).

Our findings across a pilot study and four additional studies suggest that the specific sensation consumers use to form their images can have important consequences on attitudes and intentions.

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### ***Experiential Imagery Through Suggestive Associations in Message Cues***

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Several marketing communications today include suggestive associations between the consumer and the product, the consumer and another person, or even between products, whereas others do not. For instance, within the context of price promotions, a few Broadway shows advertise “buy 1 adult ticket, bring 1 child for free” (associating the consumer to another person) while many others have a “50% off” deal. Some clothing stores give consumers a discount if they “try on” the product (linking the consumer to the product), whereas others offer “free gloves with purchase of hats and scarves” (connecting products). In this work, we argue that these subtle differences in marketing communications, in terms of suggestive associations between components of the consumption experience, affect how much experiential imagery is spontaneously generated by the consumer. Further, the imagery generated then impacts the effectiveness of the communication.

MacInnis and Price (1987) describe imagery as a “*process* by which *sensory* information is represented in working memory”. It is accepted as qualitatively different from a logical and cognitive (Bone and Ellen 1992) analysis of a message or a set of stimuli. Existing research on imagery processing presents consistent evidence that greater mental imagery helps improve critical consumer responses like memory, attitude, and preference within the marketing communications context (MacInnis and Price 1987). Still, while we know quite well that mental imagery matters, we know much less about *what* people actually imagine (i.e., imagery content) and *how* imagery may affect consumer responses in different ways.

We build on Holbrook’s (1983) conceptualization of imagery as a process that “...involves the simultaneous apprehension of a whole pattern so that the various components are presented all at once, as a totality, and we can perceive this as one configuration of elements.” Accordingly, we show that everyday verbal price promotions which include suggestive associations between multiple components of the same consumption instance present greater opportunity for such simultaneous and holistic processing, and hence can result in increased *experiential imagery* (i.e., imagery related to a single consumption instance). As such, we add to the existing theories on mental imagery and marketing communication effectiveness in four important ways. First, we focus on the *content* (and *valence*) of imagery generated; second, we propose another *method to generate imagery* – through *associative* cues in *verbal* messages (as opposed to the usually studied precursors of imagery: pictures, concrete words, instructions to imagine); third, we introduce the concept of *experiential imagery* to reflect consumers’ mental representation of specific consumption instances; lastly, we look at *imagery in the domain of price promotions*.

Four experiments illustrate the potential of various verbal stimuli to evoke increased experiential imagery when the message includes suggestive associations between consumption components of product, self, and other person. Studies 1 and 2 focus on associations between self and other person, and between multiple products respectively. These studies provide evidence for the underlying mediating effect of experiential imagery on communication effectiveness with similar one-way designs. Price promotions which include subtle associations between multiple components of a single consumption instance (second person eats for free, price discount for ‘matching’ products) are shown to increase the extent of experiential imagery generated, which in turn, increases consumer attitudes toward the promotion in the form of deal attractiveness.

Study 3 focuses on spontaneous versus deliberate generation of imagery, again, using associations between multiple ('matching') products for the spontaneous condition. The results show that the self-generated nature of experiential imagery through associative message presentation improves its effectiveness compared to deliberate imagery generation through advertiser-dictated stimulus. This is even further exacerbated under cognitive load. As such, we show that the subtle imagery-eliciting strategies suggested in this work (which are also more readily applicable in real practice in line with their subtleness) are even more effective than previously suggested explicit strategies in terms of persuasiveness.

Study 4 focuses on the effect of consumer self-perceptions on the valence of imagery generated when the suggestive association in message presentation includes the component of self. Many marketing communications today include a reference to the consumer, and our results show that such a strategy is more effective when the self-perceptions of the consumers are more favorable within the context of that consumption experience.

Overall, our findings are informative for managers in the sense that we demonstrate the effectiveness of specific methods that can be used in the design of verbal message stimuli which enhance imagery and the evaluation of the communication. Future research should try to identify and classify other such subtle imagery-eliciting strategies in verbal and also visual communications.

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#### ***Satiation from Sensory Simulation: Evaluating Foods Decreases Enjoyment of Similar Foods***

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Within the present research we propose and show that such repeated exposure to pictures of food items can lead to satiation, reducing consumers' enjoyment of actual consumption. We draw upon the theoretical framework of grounded cognition (Barsalou, 2008), focusing on how visual stimuli can automatically trigger simulations that seem much like actual consumption. Additionally, we build on recent findings exhibiting the effects of deliberate, conscious simulation on habituation (Morewedge, Huh, & Vosgerau, 2010). Whereas the prior research required a specific designed series of actions to induce habituation, we show that satiation can occur from repeated exposure to pictures of similar food items—something that can happen naturally in our advertisement-prolific world.

We expect that participants who receive repeated exposures to salty (vs. sweet) foods will show signs of satiation to salty foods in the form of decreased liking for salty peanuts. We employed a 2 (number of pictures: 20, 60) × 2 (food: sweet, salty) between subjects factorial design. If viewing food pictures indeed induces satiation, then those who view 60 pictures should satiate more than those who view only 20 pictures. This factor was crossed with picture type. Half of the participants saw pictures of sweet foods like cake, truffles, chocolates, etc. The other half of participants saw pictures of salty foods like chips, pretzels, french fries, etc. (but no nuts of any type). We hypothesized that participants exposed to pictures of salty foods would show decreased enjoyment of a salty food (peanuts) they subsequently ate.

After the 63 participants completed all food ratings, they were told to inform the research assistant that they had completed the first study, whereupon participants were given a Ziploc bag containing three peanuts. Participants then began the next survey, which instructed them to eat the three peanuts. The survey then asked them to rate their enjoyment of the peanuts on a sliding scale anchored again by the labels "Not at all" and "Very much."

As hypothesized, participants who viewed pictures of salty foods enjoyed the peanuts less than participants who viewed pictures of sweet foods ( $M_{\text{salty}} = 47.3$ ,  $M_{\text{sweet}} = 62.1$ ;  $t(61) = -3.23$ ,  $p = .002$ ). Also as hypothesized, this main effect was qualified by a significant interaction ( $t(61) = 2.22$ ,  $p = .03$ ). Within the salty picture condition, participants who viewed 60 pictures enjoyed the peanuts less than those who viewed 20 pictures ( $M_{60 \text{ pictures}} = 39.1$ ,  $M_{20 \text{ pictures}} = 55.5$ ;  $t(61) = 2.52$ ,  $p = .01$ ). There was no main effect of picture number in the sweet picture condition ( $t(61) = .63$ ,  $p = .53$ ).

We propose that each exposure to a food item induces automatic simulation of the taste of the stimuli. Thus, in our studies, when instructed to evaluate how appetizing the food images are, participants access perceptual knowledge of the taste experience. However, should attention be paid instead to the non-consumption-relevant visual characteristics of the food images (e.g., brightness), participants should access visual perceptual knowledge to a greater extent than taste. This should inhibit mental simulations of the taste of the food, thereby resulting in less satiation from exposure to the food pictures.

The 169 undergraduate participants in Study 2 randomly assigned to one of three conditions: (1) food rating, (2) food choice, or (3) brightness rating. In the food rating condition, participants rated how appetizing they found 60 food pictures. Participants in the food choice condition were asked to “choose the picture you find more appetizing” from 60 pairs of food pictures. In the brightness rating condition, participants rated “how bright/dark you find this picture.” Because participants in both the food rating and food choice conditions are focused more on consumption-related aspects of the food pictures (i.e., appetizing characteristics are evaluated based on taste), their simulations of the food should be more vivid, leading them to satiate more than participants in the brightness rating condition.

Each participant was situated at a computer station in a behavioral research lab. At each computer station, participants found a small paper cup with 30 grams of peanuts and a small Ziploc bag containing three peanuts. Participants were first instructed to eat three peanuts from the cup. They then reported their enjoyment of the peanuts they just consumed.

Participants were then instructed to continuously snack on the remaining peanuts in the cup one at a time as they completed the remainder of the study. After rating foods, choosing between foods, or rating the brightness of food pictures, participants were instructed to eat the three peanuts from the small Ziploc bag, whereupon they again reported their enjoyment of the peanuts they just consumed on the same sliding scale as earlier. We additionally captured the amount, ease, and vividness of their mental simulations while viewing the food pictures (adapted from Bone & Ellen, 1992).

We hypothesized that participants in the food rating and food choice conditions would show greater satiation than participants in the brightness rating condition. The mean decrease in enjoyment in the food rating, food choice, and brightness rating conditions were, respectively, 21.1, 18.6, and 14.3.

We modeled the second enjoyment rating as a function of condition with the first enjoyment rating as a covariate. As hypothesized, participants in the brightness rating condition satiated less than participants in the food rating and food choice conditions ( $t(165) = 1.65$ ,  $p = .05$ , one-tailed).

The level of mental simulation of eating the food items shown in the pictures was significantly higher for participants in the food ratings ( $M = 5.8$ ) and food choice ( $M = 5.9$ ) conditions than for participants in the brightness rating condition ( $M = 4.8$ ;  $t(165) = 3.57$ ,  $p < .01$ ). Thus, we found support for our manipulation of mental simulation, such that the amount of mental simulation is indeed lower in the brightness ratings condition than in the food rating or food choice conditions.

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## *Imagine There's No Calories: Simulation Underlies the Effects of Hunger on Serving Size Estimates*

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In the past decade, the concept of mental simulation has received increasing attention in consumer research (Escalas and Luce 2004, Elder and Krishna 2012). MacInnis and Price (1987) presented a comprehensive review of earlier imagery research, pointing out the overall beneficial effects of imagery. Imagery in general, and imagination of product interaction in particular, has been found to increase persuasion, product ratings and intentions to buy (Keller and McGill 1994, Nowlis et al. 2004, Petrova and Cialdini 2005, Shiv and Huber 2000).

Pertinent to the current work, simulation has also been shown to be involved in the process of functional perception. In Proffitt's work on distance perception, simulation has been implicated as the mechanism underlying distortions in distance perception due to reduced physical capacities (Proffitt 2006, Witt and Proffitt 2008). Distances seem further away to people when their capacity to traverse them is reduced. This is because in such situations distance *feels subjectively* longer. This functional alteration in perception depends on simulation (Witt and Proffitt 2008).

We argue for a similar dependency on simulation of the functional effects of hunger and burden on size and calorie judgments (Tal and Wansink 2013a, Tal and Wansink 2013b). Simulation allows the consumer to experience how their physical state alters product experience. This alteration in subjective experience is in turn reflected in subsequent judgment. Because one's needs are greater when hungry or burdened, food is experienced as subjectively smaller, and consequently appears smaller. That is because the food is smaller relative to one's needs. Simulating eating when hungry makes this alteration in functionality apparent. In other words, simulating eating when hungry makes one see a food as being smaller.

Our first study was intended to support the role of simulation in reducing estimated food quantity due to hunger. Participants (N = 62) were asked to fast for five hours prior to the study. They were then asked to estimate the weight of three baked goods: muffin, bagel, and cookie. Half the participants were asked to vividly imagine eating each item before giving their evaluations. The other half was not asked to simulate eating the items. We eliminated observations over 3SD from the mean. Participants who simulated eating estimated lower average weight per item (7.03 ounces) than did participants who did not (9.39 ounces):  $F(1,56)=5.16, p=.03$ .

The second study attempted a conceptual replication with both weight and energy as our dependent variable (Tal and Wansink 2013b). In this case, we relied on naturally occurring hunger rather than fasting instructions. Participants (N=59) estimated how many ounces each of three snack packages contained, as well as the number of hours of energy they provided. There was a significant effect of simulation on estimated weight, such that participants who simulated eating estimated fewer hours of energy (3.46) than did participants who did not simulate (4.88):  $F(1, 57)=4.7, p=.03$ . There was a similar effect for estimated weight: participants who simulated eating estimated lower weight (21.2 ounces) than did participants who did not simulate (30.28 ounces):  $F(1, 57)=6.65, p=.01$ .

Simulations occur spontaneously as well as deliberately (Barsalou 2003, 2008). If simulation is indeed the crucial mechanism behind physical states' influence on judgment, we should see the effects disappear under conditions that prevent spontaneous simulation. Having brain circuits occupied with the enactment of particular actions should block simulation of competing actions (Witt and Proffitt 2009). Specifically, chewing would prevent automatic simulation of other actions with the mouth (Topolinski and Strack 2009).

If simulation is indeed responsible for the reduced estimation of energy due to hunger shown earlier, such blocking given competing action would eliminate reduced energy estimates due to hunger. Size, as well as energy estimates, should seem subjectively smaller when one's need (hunger) is greater (Tal and Wansink 2013b), but such effects should depend on the conditions for simulation (no chewing).

Participants (N=52) were asked to rate six different food items divided into two groups. Each participant chewed gum while rating one group of four items, and did not chew gum for the other group. The product group for which participants chewed gum was rotated between participants, such that some participants chewed gum while rating item group 1 (Wheat thins, cookies, Tostitos), and others chewed gum while rating item group 2 (cereal, donut, potato chips). Participants were asked to evaluate the percentage of daily energy each food-item provides, as well as estimating food size by estimating how large a bowl would be required to serve the product. Participants then reported their hunger level on a scale of 1 (= not at all hungry) to 9 (= very hungry).

Analyses used a continuous measure of hunger, but reported means employ a median split of reported hunger level. One extreme outlying observation (over 10 SD beyond the mean) was eliminated. Hungry participants rated items as containing less of the daily calorie requirement (12.52%), on average, than non-hungry participants (17.9%). However, these effects only occurred for items during the evaluation of which participants were not chewing gum. The interaction between chewing and hunger was significant at a .03 level:  $F(1,40) = 4.77$ . Non-chewing participants also estimated size as smaller when hungry (5.04) than when not hungry (5.53), but no such effect occurred for items for which participants were chewing gum. The interaction between chewing and hunger here was significant at a .04 level:  $F(1,40) = .04$ .

The current study provides further support for the role of spontaneous simulation in generating effects of physical state on product judgment. The effects of hunger on estimated energy in study 1 were replicated, but only for items for which participants were not chewing gum. When participants chewed gum, hunger did not lead to reduced evaluations of energy. Similar patterns were found for estimated product size. This is ostensibly because chewing gum precluded the spontaneous generation of simulation of eating. Overall, the three studies demonstrate the role of simulation in generating the effects of physical states on judgments relating to product serving size.

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## ***8.4 Individual Papers: New Perspectives on Self-Control***

**Room:** ESCORIAL

**Chair:** Catherine Wiggins, Cornell University, USA\*

### ***Indulge Like There's No Tomorrow: The role of perceived opportunity scarcity in impulsive consumption***

Catherine Wiggins, Cornell University, USA\*

#### **Introduction and hypotheses**

The past two decades have seen a dramatic rise in the prevalence of overweight and obesity in the United States, with 60% of adults classified as overweight, and over 30% meeting the criteria for obesity (Flegal et al., 2010). Yet Americans appear to desire healthier lifestyles, spending some \$60 billion on weight-loss products and services each year (cnbc.com). While consumers clearly acknowledge the value of good health, such long-term rewards are often forsaken in the face of smaller ones promising immediate

gratification (e.g., a decadent dessert). Rather than a lack of desire to be healthy, these alarming statistics likely reflect the manifestation of impulsive behavior on a nationwide scale.

One hitherto unexamined driver of impulsive consumption is the capacity for temptations to influence individuals' perceptions of an expansive vs. limited future. We adopt a construct from Socioemotional Selectivity Theory—a lifespan theory of motivation—which argues that age-driven changes in perceptions of how much time remains in life have important consequences for individuals' goals and decision-making. This future time perspective (“FTP”) ranges from a “limited” future (only a short time remains) to an “expansive” future (an entire life still lies ahead) (Lang and Carstensen, 2002). While thoroughly investigated within the domains of emotion regulation and social preferences (e.g., Carstensen, Isaacowitz, and Charles, 1999), to our knowledge no prior research has examined the role of this construct within the focal domain of unhealthy food consumption.

Shifts in future time perspective are likely to influence inferences about the availability of future reward seeking opportunities, with important consequences for impulsive behavior. Specifically, we argue that exposure to tempting (relative to healthy) foods leads to a reappraisal of one's future as being limited in scope. Because a limited future implies that later reward seeking opportunities are numbered, we hypothesize that a narrow FTP should be associated with a preference for immediate gratification over delayed rewards. We further predict that manipulations to contract (expand) future time perspective should increase (decrease) impulsive consumption.

We predict our hypotheses to hold only among a subset of eaters: “restrained eaters”, also known as chronic dieters (Herman and Polivy, 1980). While restrained eaters are able to maintain their dieting intentions in a “cool” state, their high sensitivity to external food cues such as the smell, sight, or taste of tempting food often derails their efforts (Fedoroff, Polivy, and Herman, 1997). We propose that these individuals will perceive heightened opportunity scarcity upon exposure to temptation and predict a moderating effect of eating restraint (assessed using Herman and Polivy's (1980) Revised Restraint Scale) across our studies.

## **Methodology and Results**

We examine our hypotheses across three studies. In Study 1, participants were offered the hypothetical choice to consume a particular food, presented pictorially. For half of the participants, this food was indulgent (chocolate chip cookie) while for remaining participants this food was healthy (fruit salad). Immediately after viewing the assigned food, but prior to indicating their decision, participants completed Lang and Carstensen's (2002) 10-item Future Time Perspective scale, the dependent variable of interest. Following assessment of FTP, we measured participants' level of eating restraint, the covariate age, and perceived self-regulatory success in dieting.

The results revealed a significant restraint x food-type interaction ( $p < .05$ ): restrained eaters exhibited a significantly narrower future time perspective following exposure to unhealthy, relative to healthy food. No effect of food-type emerged among unrestrained eaters. We next sought preliminary evidence for a role of FTP in self-control by examining a proxy for this construct—perceived self-regulatory success in dieting (Fishbach et al., 2003). To this end, we regressed FTP on food type, self-regulatory success, and their interaction. Among successful dieters, there was no difference in FTP between food types ( $p > .8$ ). However unsuccessful dieters who were exposed to an indulgent food perceived a significantly narrower future compared to those exposed to a healthy item ( $p < .05$ ).

Studies 2 and 3 served as a more causal test of our hypotheses by expanding or constraining participants' perception of future consumption opportunities through either a broad manipulation of FTP (Study 2) or a more targeted domain-specific approach (Study 3). In Study 2, participants either wrote about why the opportunities ahead of them were unlimited (expansive manipulation); limited (limited manipulation); or wrote about their favorite animal (control condition). They then completed the cookie scenario and decision. The effect of our manipulation on consumption likelihood was moderated by eating restraint ( $p < .05$ ). Among restrained eaters, the expansive manipulation led to a significantly lower likelihood of cookie consumption relative to the control and limited

conditions. The control and limited conditions did not significantly differ, which is unsurprising given Study 1's demonstration that exposure to temptation alone is sufficient to contract FTP among restrained eaters.

In Study 3, participants were randomly assigned to a control condition or an expansive manipulation that was embedded within the cookie scenario itself (following the results of Study 2, the limited condition was omitted). Participants either viewed the cookie scenario used in Studies 1-3 (control) or, following the pictorial presentation of the cookie, were asked to contemplate and write about all of the chances to eat cookies that lay ahead of them (expansive condition). In line with our previous findings, a significant restraint x condition interaction ( $p < .05$ ) emerged such that among restrained eaters, simply taking a moment to consider future consumption opportunities decreased current impulsivity.

## **Conclusion**

Across three studies, we demonstrate that a previously unexamined factor, the breadth of future opportunities, has important implications for self-control. By illuminating a novel mechanism—perceived “opportunity scarcity”—this research not only enhances our theoretical understanding of the drivers of impulsive consumption, but also allows for specific interventions to improve self-regulation. As we attempt to demonstrate, even a gentle reminder that dessert can be had tomorrow may be sufficient to prevent indulgence today.

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### ***Control over What? A Theoretical and Empirical Examination of General and Domain-Specific Self-Control***

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Recent research underscores the importance of better understanding how differences in self-control impact a wide range of behaviors. However, the plethora of related constructs and measures, the variety of self-control domains and manipulations, and the numerous and radically different ways in which self-control is captured as a dependent measure suggest there are challenges involved with self-control research. Furthermore, there is still a lack of clarity in the conceptualization and operationalization of self-control by psychologists and consumer researchers. On the one hand, extant theory, in particular the “self-control as resource” framework or the “strength model” (Muraven, Tice, and Baumeister 1998), views self-control as a general resource that is applicable and transferable across multiple domains (Pocheptsova et al. 2009). When self-control is exercised in one domain, it is consumed or used up and is therefore shown to be available to a lesser degree in another domain or even an additional task in the same domain. On the other hand, many consumer behavior studies implicitly or explicitly utilize a domain-specific conceptualization for measuring self-control, for example, the consumer's self-control regarding spending (Haws et al. 2011; Rick et al. 2008) or compulsive buying (e.g., Ridgway, Kukar-Kinney, and Monroe 2008), followed by an assessment of the person's behavior within the same domain. Such studies usually remain silent on the potential impact of prior or subsequent acts of self-control outside the specific behavioral domain being examined. One can even argue that by their very existence, domain-specific analyses and measures of self-control reject its general nature.

Therefore, the objective of the present research is to explicitly consider a variety of contexts in which self-control has been examined in consumer research and to scrutinize the relations between general and domain-specific measures of self-control. We examine how well various self-control measures correlate with one another and the extent to which they predict a series of associated consumer

attitudes and behaviors specifically in the area of financial decision making, eating control, and control over the use of one's time. We then examine these issues in two studies, the first of which involves a 5-phase, 3-month long behavioral laboratory study, and the second of which utilizes credit card transaction data in conjunction with matched survey responses from a large financial institution. Our results reveal that although there is considerable supporting evidence for self-control as a general resource, a domain-specific approach to conceptualization and measurement is necessary to account for and predict a variety of consumer behaviors.

Study 1 consisted of a fairly complex, longitudinal study in which the 178 participants completed various tasks in the lab over the duration of a semester. This study allowed us to compare the various types of self-control as captured by a series of validated measures, and to examine whether or not the individual difference measures were able to predict a series of behaviors in a very conservative way in which these behaviors were assessed over a period of time. Specifically, would the more general measures tend to predict a wider range of behaviors than the more domain-specific measures? Favoring the general self-control account, results revealed moderate correlations in the expected directions both between general measures among themselves and between many of the general and domain-specific measures. However, on the negative side, only 6 of 28 possible predictions of behavioral outcomes in the longitudinal study are significantly achieved by the general measures. In contrast, the domain-specific measures are able to predict more than twice as many (13 of 28) outcomes in the expected directions. Furthermore, the correlations between the domain-specific measures are strong within domains, but weak across domains, supporting the domain specific account.

Study 2 was conducted to generalize the results of study 1 with an entirely different consumer sample, and using a combination of subjective and objective outcome variables. Consequently, we conducted this study with 600 adult customers belonging to a large financial institution with a consumer credit card business. First, survey responses, each of which included both general and specific self-control related measures, were collected from three separate groups of 200 customers. Then, credit card data history was provided by the financial institution and matched to the survey respondents. As such, this study included real financial consequences as well as a series of more subjective consequences included in the surveys. To summarize the results, as a whole this data provided some support to both the general and domain-specific views of self-control. In favor of the general view, the GSC is associated with domain-specific measures and predicts outcomes across domains. There are some cross-domain effects with domain-specific chronic measures (e.g., CSSC) predicting outcomes in other domains (e.g., eating and body-weight). However, by and large, the intra-domain effects are stronger, and the domain specific self-control measures predict the actual financial outcomes to a greater degree than general measures.

Across both studies, our results consistently show a *duality*, whereby some aspects support the general perspective on self-control and others favor a domain-specific view. Overall, we conclude that while examining self-control as a general construct that applies across a variety of contexts has merit, it is also useful to consider more domain specific self-control constructs, and in fact, this domain-based approach may indeed be more valuable in helping to understand how to improve consumers' decision making abilities in various meaningful arenas of consumption. Simply put, general self-control does not always translate into decision making considered to be relevant to self-control.

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### ***Jiu-Jitsu for Compulsive Buyers: Arousal in Shopping Situations Can Be Utilized to Strengthen Self-Control***

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Compulsive buying is a serious problem that affects a significant number of consumers and has harmful consequences (Ridgway, Kukar-Kinney, & Monroe, 2008). Self-control failure plays an important role in compulsive buying (Faber & Vohs, 2004). Compulsive buyers, for instance, are less successful in shielding themselves against distracting stimuli (Büttner et al., 2013). But compulsive buying is not just a lack of self-control: For compulsive buyers, shopping is linked to stronger affective responses (Babin et al., 1994). In the present research we examine whether compulsive buyers can use this stronger affective response in a “Jiu-Jitsu” way. Jiu-Jitsu (“the gentle art”) is an ancient Japanese martial art. Its principle is to reroute an attacker’s force against the attacker. The Jujutsu technique that we propose for compulsive buyers is to use their stronger affective response as a cue that triggers self-control.

We address two questions. First, we examine whether compulsive buyers experience stronger affective arousal in shopping situations. The present research is the first to directly examine this question by using a physiological measure of affective arousal: pupil dilation (Bradley, Miccoli, Escrig, & Lang, 2008). Second, we test whether forming implementation intentions can help compulsive buyers to strengthen their self-control. Implementation intentions are a highly effective technique (Gollwitzer & Sheeran, 2006). Basically, they are if-then plans, in which consumers specify a critical cue and a goal-directed response. In the present research, we use the increased arousal of compulsive buyers as critical cue.

Study 1 examined the hypothesis that compulsive buyers show stronger affective arousal in shopping situations compared to prudent shoppers. Participants watched pictures containing neutral and shopping scenes. The luminosity of the pictures was standardized to control for confounding effects on pupil dilation. During picture presentation, we used an SMI RED 500 eye tracker to measure pupil dilation. Pupil dilation (i.e., pupil diameter minus baseline) was used as measure of affective arousal. Compulsive buying tendency was measured using the GCBS (Scherhorn et al., 1990).

General linear model analysis with pupil dilation for both picture types (neutral and shopping context) as dependent variables, and compulsive buying tendency as continuous predictor yielded a significant Context x Compulsive Buying Tendency interaction. Simple slope analysis showed that compulsive buying tendency significantly predicted pupil dilation for the shopping pictures, but not for the neutral pictures. These findings support our hypothesis: The higher the compulsive buying tendency, the stronger the affective arousal. Importantly, this effect was limited to pictures of a shopping context.

Study 2 had two objectives: First, to replicate the relationship between compulsive buying and arousal in a more realistic task (simulated shopping task). Second, to examine whether the increased arousal can be used for triggering self-control. We measured eye movements and pupil diameter using a SMI RED 500 eye tracker with female participants, who performed a simulated shopping task on the computer. They watched pictures of groceries on the screen and decided whether the items were on a shopping-list they had memorized before. On each of the 42 trials, one grocery-item was presented together with two distracting stimuli (decoration and cosmetics) for 3,000 ms. The time participants focused on task-related grocery-items (aggregated across all trials) served as measure of self-control. Higher values indicate that participants are better in shielding themselves against distracting products.

To examine whether implementation intentions with affective arousal as critical cue are effective, participants were randomly assigned to one of three groups: implementation intention, goal commitment, and control group. In the implementation intentions group, participants formed implementation intentions that specified arousal as “if”-component and staying focused on the task as “then”-component: “When my affective arousal increases, I concentrate on my task.” To demonstrate that the effect depends on the “if” component, we introduced a goal commitment group in which participants simply repeated the sentence: “I concentrate on my task.” Participants completed the interventions (implementation intentions or goal commitment) before the simulated shopping task. Participants in the control group did not receive any intervention prior to the shopping task.

The findings on pupil dilation replicated the results from study 1: The higher the compulsive buying tendency is, the more dilated the pupil. This underlines that compulsive buyers experience stronger affective arousal in shopping situations.

Regressing attention-focus in the control group on compulsive buying tendency showed that compulsive buyers are less successful in shielding themselves against distraction. To examine whether forming implementation intentions helps with staying focused, we conducted a general linear model analysis with experimental groups (dummy-coded) and compulsive buying tendency (z-standardized) as predictors, and focus on task-related products as dependent variable. The interaction between the contrast (implementation intention = 1, else = 0) and Compulsive Buying Tendency was significant. Spotlight analyses showed that compulsive buyers (1 SD above mean) who had formed implementation intentions were more successful in focusing on the task-related products compared to compulsive buyers in the control group, and compared to compulsive buyers in the commitment group. For prudent shoppers (1 SD below mean), visual attention in the implementation intentions group did not differ significantly from the control, or the commitment group.

Overall, both studies show that compulsive buyers experience stronger arousal in shopping situation. However, there is good news. Study 2 demonstrated that this stronger arousal provides a “Jiu-Jitsu” way to address the self-control problem of compulsive buying: By forming implementation intentions with arousal as critical cue, compulsive buyers were able to shield themselves against distracting products.

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### ***Ego Depletion: A Feeling-as-Information Perspective***

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The ego depletion model posits that exerting self-control in an initial task reduces ability to control oneself in subsequent tasks because self-control relies on a limited resource of the self (Baumeister et al. 1998). Nonetheless, recent findings (e.g., Agrawal and Wan 2009; Clarkson et al. 2010) suggest that people can overcome the ego depletion effect and that self-regulatory failure due to depletion may depend on how people interpret their experience of depletion. We build on these findings by proposing that when resources are depleted, the feeling of depletion serves as a source of information that resources are low, causing the self-control system to reduce subsequent self-control. Hence, effects of depletion can be moderated by altering the extent to which people rely on its experience as a source of information. If so, the influence of prior self-control on subsequent self-control should depend on how intensely people experience the feeling of depletion and how informative the feeling of depletion is perceived to be for judgment. Hence, we hypothesize that the more (or less) intense the feelings of depletion the greater (or lower) the depletion effect. We also hypothesize that discrediting the informational value of the feeling of depletion would undermine the standard depletion effect.

Experiment 1 tested hypothesis 1 using preference for a compromise option as a dependent measure. The compromise effect has been shown to decrease under depletion because the process of deliberating trade-offs is more demanding on self-regulatory resources than choosing extreme options (Pocheptsova et al. 2009). All participants typed a passage as quickly as they can in five minutes; those in the depletion condition were given additional instructions to refrain from using the letter “e” and space bar. Next, participants chose between three portable grills: one superior on cooking area but inferior on weight; another superior on weight but inferior on cooking area; one medium on both attributes. Then they filled out the affect intensity measure which reflects chronic differences in the strength with which people experience feelings (Larsen and Diener 1987). A significant interaction emerged between depletion and affect intensity on compromise ( $\beta=-1.53$ , Wald=5.50,  $p<.05$ ). Among participants with high affect intensity, those depleted compromised less than those not depleted ( $\beta=-1.35$ , Wald=7.07,  $p<.01$ ). However, among participants with low affect intensity, this difference was not significant ( $\beta=.36$ , Wald=.54,  $p=.46$ ).

Experiment 2 tested our second hypothesis using a 2(depletion) x 2(discredit feelings) between-subjects design with persistence on an unsolvable anagrams task as the dependent measure. We predicted that the ego depletion effect would be mitigated among participants induced to question the credibility of their feelings. Participants did the same depletion manipulation as in experiment 1. Next, half of them were exposed to a discrediting manipulation in which they were asked to rate the extent to which their current feelings were affected by the typing task (Wilcox, Kramer, and Sen 2011). Others did not see this question. All participants were then given 10 unsolvable anagrams to solve. A significant two-way interaction between depletion and discrediting emerged ( $F(1,255)=4.85, p<.05$ ). The ego depletion effect was replicated in the no-discredit condition: depleted participants spent less time on the anagrams than non-depleted participants ( $F(1,255)=5.09, p<.05$ ). However, there was no difference in time spent between depleted and non-depleted participants in the discredit condition ( $F(1,255)=.70, p=.40$ ).

Experiment 3 tested the hypothesis 2 using an individual difference measure: propensity to focus on and acknowledge one's feelings. People who are more likely to acknowledge their feelings are less likely to be influenced by incidental feelings because they understand the meaning of their feelings and recognize that incidental feelings may not be relevant for judgment (McFarland, White, and Newth 2003). Hence, we predicted that the ego depletion effect would be weaker (stronger) among depleted individuals who are more (less) likely to acknowledge their feelings. Depletion was manipulated using a thoughts-listing task; those in the depletion condition were told to suppress any thoughts about a white bear. Then, they were given the same portable grill choice task from experiment 1. Next, they filled out the mood acknowledgment measure which reflects the extent to which people acknowledge and accurately interpret their feelings (Salovey et al., 1995). A significant interaction emerged between depletion and acknowledgment of feelings on compromise ( $\beta=1.56, Wald=4.82, p<.05$ ). Among participants low in acknowledgement of feelings, those depleted compromised less than those not depleted ( $\beta=-1.35, Wald=4.35, p<.05$ ). However, among participants high in acknowledgement of feelings, this difference was not significant ( $\beta=.61, Wald=1.18, p=.28$ ).

Finally, experiment 4 tested our second hypothesis using a 2(depletion) x 2(acknowledge feelings) between-subjects design with willingness-to-pay for products as the dependent measure. Ego depletion has been shown to enhance people's willingness to pay for products because it limits their ability to control their spending (Vohs and Faber 2007). The same thoughts-listing task in experiment 3 was used to manipulate depletion. Next, half of the participants were prompted to acknowledge their feelings by selecting four mood adjectives from a list of adjectives to describe how their feelings have changed from before they began the first study (McFarland et al. 2003). The other half selected four mood adjectives from the same list to describe how they feel on their typical day. Then they were asked to indicate the price they would be willing to pay for 18 products (WTPs for each were normalized and averaged to form an index). As predicted, a significant interaction emerged between depletion and acknowledgement on the pricing index ( $F(1,196)=5.60, p<.05$ ). As expected, the control condition demonstrated the ego depletion effect whereby depleted participants indicated higher WTP compared to non-depleted participants ( $F(1,196)=3.87, p=.05$ ). The same difference was not significant in the acknowledge-feelings condition ( $F(1,196)=1.92, p=.17$ ).

We provided evidence for the proposed depletion-as-information hypothesis by manipulating and measuring people's reliance on the feeling of depletion as a source of information in four experiments. Results indicate that the experience of depletion plays an essential role of giving feedback to the self-control system that resources are low and that one should minimize self-regulatory effort.

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## **8.5 Individual Papers: Engaging the Senses: Sights and Scents in Consumer Research**

**Room: ALHAMBRA**

**Chair: Ravi Mehta, University of Illinois at Urbana Champaign\***

## ***Brand Type As a Determinant Of Brand-Scent Pairing Benefit***

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David Sprott, Washington State University, USA

Dominique Braxton, Washington State University, USA

In the past decade marketers have become more aware of the role that scents can potentially play in the marketplace (Morrin, 2010). Application of olfactory cues can be used as a marketing tactic to differentiate, position, and strengthen a brand and its associated image.

The review of scent marketing literature shows a predominant research focus on product and ambient scent effects on consumers' evaluations, time perceptions, purchase intentions, and spending patterns (cf. Morrin, 2010). More recent work has focused on exploring boundary conditions of olfactory cues' effects, such as scent congruency with the environment, or another sensory stimulus (Krishna, Elder, & Caldara, 2010; Spangenberg et al. 2005, 2006). Literature on the use of olfactory cues in a branding context is scarce, and fails to address a real consumer-marketing trend—branding through fragrance (Hultén et al., 2009). We present four pretests and an empirical study that shed new light on those brand characteristics, and situations, where brand-scent associations are most beneficial to the brand. Specifically, this paper demonstrates the role brand familiarity plays in determining the effectiveness of scent as a brand element, and the influence of brand familiarity on attitudes toward the brand, as well as experience with the brand.

### *Pretest 1-4*

First, a pretest was conducted to determine the product category for which association between scent and product is unusual, but would enhance product enjoyment. A sample of undergraduate students ( $N = 108$ ) was asked to list five such product categories. A total of 118 different product categories were listed; electronics product category ranking second (19% of participants) and thus chosen for the subsequent study.

In the second pretest, a fictitious brand name was determined to ensure that it (1) elicits a neutral affective response by itself, and (2) is dissimilar to existing brands within the product category. Twenty-six brand names were pretested ( $N = 301$ ) using seven-point semantic. Brand name CELESIO was not perceived as pleasant ( $M = 4.11$ ,  $t(54) = .515$ ,  $p > .05$ ), positive ( $M = 4.26$ ,  $t(54) = 1.398$ ,  $p > .05$ ), likable ( $M = 4.15$ ,  $t(54) = .698$ ,  $p > .05$ ), good ( $M = 4.27$ ,  $t(54) = 1.352$ ,  $p > .05$ ), attractive ( $M = 4.29$ ,  $t(54) = 1.416$ ,  $p > .05$ ), interesting ( $M = 4.27$ ,  $t(54) = 1.172$ ,  $p > .05$ ), exciting ( $M = 4.30$ ,  $t(52) = 1.343$ ,  $p > .05$ ), unfamiliar ( $M = 3.09$ ,  $t(54) = -4.589$ ,  $p < .001$ ), and dissimilar ( $M = 2.96$ ,  $t(54) = -5.115$ ,  $p < .001$ ).

Next, a scent eliciting positive affective responses was determined. Three scents were tested (i.e., vanilla, passion fruit, and pear) on seven-point semantic scales. Each participant ( $N = 94$ ) was asked to evaluate one scent paired with the brand CELESIO. Pear scent was perceived as pleasant ( $M = 5.47$ ,  $t(18) = 5.715$ ,  $p < .001$ ), positive ( $M = 5.32$ ,  $t(18) = 5.427$ ,  $p < .001$ ), likable ( $M = 5.26$ ,  $t(18) = 4.150$ ,  $p < .001$ ), and attractive ( $M = 4.84$ ,  $t(18) = 3.437$ ,  $p < .01$ ), unfamiliar ( $M = 4.68$ ,  $t(18) = 1.689$ ,  $p > .05$ ), uncommon ( $M = 4.32$ ,  $t(18) = 1.000$ ,  $p > .05$ ), and not novel ( $M = 4.47$ ,  $t(18) = 1.924$ ,  $p > .05$ ).

In pretest 4, brands manufacturing electronics were compared to determine their relative popularity within the product category ( $N = 52$ , Leclerc et al., 1994); Sony being most liked ( $\alpha = .96$ ,  $M = 5.52$ ,  $t(49) = 9.202$ ,  $p < .001$ ) and Acer being least liked among all tested brands ( $\alpha = .96$ ,  $M = 4.37$ ,  $t(51) = 2.111$ ,  $p = .04$ ).

## Study

A 2 (Brand Scent: Scent vs. No-scent) x 3 (Brand Type: Non-existent Brand vs. Existing-Less-Popular Brand vs. Existing-Popular Brand) full factorial design was used. The sample consisted of 225 undergraduate students (55.6% male). Participants were exposed to information about a brand via a print advertisement containing the brand name, logo, product picture and advertising claims. In the scent condition, a rub-and-smell sticker was applied to the ad. Participants answered questions regarding brand attitudes ( $\alpha = .86$ ; Leclerc et al., 1994) and brand experience ( $\alpha = .86$ , Brakus et al., 2009). Finally, manipulation check (Spangenberg et al., 1996), and demographics question answers were collected.

Hypothesis H1 predicted that brand type and scent presence would interact in predicting brand attitudes such that the positive relationship between scent presence and brand attitudes should be stronger for nonexistent brands (vs. existing brands). To test this hypothesis, a two-step regression analysis was performed. On Step 1, brand type contrast coded (Contrast 1: Nonexistent brand = -2, Less-popular-existing brand = 1, Popular-existing brand = 1; Contrast 2: Nonexistent brand = 0, Less-popular-existing brand = -1, Popular-existing brand = 1) and scent presence were entered. On Step 2, the interaction between scent presence variable and Contrast 1 as well as the interaction between scent presence variable and Contrast 2 were entered into the model. Results on Step 1 revealed a main effect of Contrast 1 ( $\beta = .25, p < .001$ ) and Contrast 2 ( $\beta = .29, p < .001$ ). Results on Step 2 revealed that the expected Brand Type x Scent Presence interaction is significant for Contrast 1 ( $\beta = -.36, p < .001$ ), but not for Contrast 2 ( $\beta = .15, p > .05$ ). Planned comparison analyses revealed that the positive relationship between scent presence and brand attitudes is significant for a nonexistent brand ( $M_{no-scent} = 4.22$  vs.  $M_{scent} = 4.98, p < .05$ ) but not for an existing popular brand ( $M_{no-scent} = 5.62$  vs.  $M_{scent} = 5.52, p > .05$ ). However, when an existing brand is less popular the relationship between scent presence and brand attitudes becomes negative ( $M_{no-scent} = 5.15$  vs.  $M_{scent} = 4.50, p < .05$ ).

Hypothesis H2 predicted that brand type and scent presence would interact in predicting brand experience such that the positive relationship, between scent presence and brand experience, should be stronger for nonexistent brands (vs. existing brands). Similar as above, a two-step regression analysis was performed and similar results were obtained.

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## ***The Change You Don't See Coming: Nonconscious Consequences of Dynamic Transference in Consumer Contexts***

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Change blindness, the term referring to the phenomenon in which individuals fail to notice even substantial disruptions between an original stimulus and a subsequent altered version of that stimulus, is a well-researched and documented effect (for a review see Simons and Rinsink, 2005). Although the majority of change blindness studies have focused on substantial visual differences, such as adding or removing features to an image or the infamous "invisible gorilla" task in which someone in a gorilla suit walks across a room while others toss a ball in the foreground (Simons and Chabris, 1999), recent research has shown that even *gradual* changes (e.g., slowly fading an item out of a picture) go undetected by participants (Simons, Franconeri, and Reimer, 2000). Humans, it seems, are often consciously oblivious to change regardless of whether or not the disruption is instant or gradual.

However, despite this rich and interesting literature on change blindness, very little research has explored the *consequences* of change blindness and, to date, only one article has considered consequences of change blindness on consumer behavior (Shapiro and Jespire, 2013). In that study, the researchers found that moving a logo to a different location on an advertisement led to increased preference for the advertisement compared to a control condition in which the logo remained in the same location. Given the ever-increasing

demands on consumer attention and the common lay belief of consumers that they can selectively attend to only the marketing messages they want, the purpose of the current research is to explore further consequences of change blindness in consumer contexts, specifically with respect to subjective ratings.

To motivate the current research, we draw upon a recent finding within the change blindness literature regarding “visual sensing,” which is described as the *feeling* of change in the absence of a consciously perceived visual experience of change (Rensink, 2004). Integrating this finding with the vast literature on constructed preference—the idea that consumers often create their preferences on the spot based on often irrelevant, misattributed contextual factors (Reber, Schwarz, and Winkielman, 2004; Schwarz, 2004; Schwarz and Clore, 1996)—we propose the “Dynamic Transference” effect in which exposing participants to a subtle experience of change will result in participants misattributing that *feeling of change* to subsequent, unrelated tasks, such as subjective rating tasks. Furthermore, following dynamic constructivist theory, we propose that this misattributed influence holds only for subjective ratings (*architectural*, for which no set answers yet exist), and not for objective ratings (*archaeological*, for which there are definitive answers; Gregory, Lichtenstein, and Slovic, 1993).

In study 1, participants completed a 10-question, free-response survey about their Starbucks habits (e.g., “What do you typically order when you go to Starbucks?”). Each question appeared on a separate screen, and above each question was a picture of a cup of Starbucks hot chocolate that either decreased in size by 10%, increased in size by 10%, or stayed the same size (control) in each frame (note: across all five studies no participant reported conscious acknowledgement of the change manipulation in funneled debriefing). Per our theoretical explanation, we collapsed the increasing/decreasing conditions into one Dynamic Transference (DT) condition. Results showed that participants in the DT condition were more likely to buy hot chocolate and rate the quality and intensity of Starbucks hot chocolate higher than the control group.

Study 2 was identical to study 1 except a North Face jacket replaced the Starbucks cup. After the North Face survey, participants rated five winter-related products (North Face jacket relevant) and five non-winter-related products (North Face jacket irrelevant), to see if relevance of the objects evaluated mattered. We also asked participants about a relevant, timely topic—Christmas. Results showed that DT participants rated products higher overall, with ratings being highest for winter-related product ratings (suggesting relevance mattered). DT participants also reported they would spend more money and expected to receive more presents at Christmas.

In study 3, participants completed a 10-question survey regarding footwear, but instead of varying product size, the color saturation of a print ad on the screen decreased/increased by 10% or stayed the same on each consecutive screen. Participants then rated 21 randomly-presented items, none relevant to footwear. DT again influenced results: participants in the DT condition liked the products more compared to control. Studies 2 and 3 suggest DT affects subjective ratings, in general, but is implicitly applied more towards relevant items when such items are included.

In study 4, participants watched a 60-second commercial for SeaWorld from the early 1990s. The commercial demonstrated SeaWorld’s role in saving sea life and mentioned Anheuser-Busch (SeaWorld’s former parent company). The commercial’s color saturation either increased from 0% or decreased from 200% in 20% intervals every six seconds or remained constant. Participants then responded to a series of seven questions, five objective (e.g., “How much more expensive are Anheuser-Busch products on average compared to 20 years ago?”) and two subjective (e.g., “How much do you care about sea life?” and “What do you think of Anheuser-Busch as a company?”). Results showed that DT affected subjective, but not objective, responses: DT participants said they cared more about sea life and thought more highly of Anheuser-Busch as a company.

Four studies demonstrate how subtle experiences of change are misattributed to subjective preferences, in both relevant and irrelevant contexts, bolstering the extent to which individuals like products, perceive quality, and intend to spend. The findings contribute to both the constructed preference and metacognitive experience literatures by illustrating 1) how experiences beyond those of fluency

subtly influence preferences, 2) how the objective/subjective nature of a task lends itself to less/more influence from situational experiences.

### SUMMARY OF RESULTS

<b>Study 1: Starbucks</b>	Likelihood of Purchasing Hot Chocolate	$M_{DT} = 5.24, SD_{DT} = 2.72$ $M_{Control} = 3.67, SD_{Control} = 2.48$	$F(1,79) = 6.70, p < .01$
<b>Study 1: Starbucks</b>	Perceived Intensity of Hot Chocolate Flavor	$M_{DT} = 6.37, SD_{DT} = 1.36$ $M_{Control} = 5.50, SD_{Control} = 1.57$	$F(1,79) = 6.95, p < .01$
<b>Study 1: Starbucks</b>	Perceived Quality of Hot Chocolate	$M_{DT} = 6.65, SD_{DT} = 1.60$ $M_{Control} = 5.20, SD_{Control} = 1.79$	$F(1,79) = 14.17, p < .001$
<b>Study 2: North Face</b>	Liking of Relevant North Face Products	$M_{DT} = 4.48, SD_{DT} = 1.38$ $M_{Control} = 4.10, SD_{Control} = 1.51$	$F(1, 166) = 2.77, p = .10$
<b>Study 2: North Face</b>	Estimated Spending on Christmas Gifts	$M_{DT} = 4.35, SD_{DT} = 1.89$ $M_{Control} = 3.79, SD_{Control} = 1.71$	$F(1,166) = 3.54, p = .06$
<b>Study 3: Nike Print Ad</b>	Average Liking of Products	$M_{DT} = 5.39, SD_{DT} = .53$ $M_{DT} = 5.13, SD_{DT} = .51$	$F(1, 91) = 5.09, p < .03$
<b>Study 4: Sea World Commercial</b>	How Much You Care About Sea Life	$M_{DT} = 4.84, SD_{DT} = 1.01$ $M_{Control} = 4.35, SD_{Control} = 1.35$	$F(1, 149) = 4.93, p < .03$
<b>Study 4: Sea World Commercial</b>	What Do You Think of Anheuser-Busch	$M_{DT} = 4.84, SD_{DT} = .94$ $M_{Control} = 4.46, SD_{Control} = 1.12$	$F(1,149) = 4.10, p < .05$
Note: As predicted, participants in the Dynamic Transference (DT) condition provided higher ratings than participants in the control (no experience of change) condition.			

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#### ***When Red Means Go: The Non-Normative Effects of Color Red***

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Color has long played a significant role in human perception, cognition and behavior (Varichon 2006). Color theorists propose that the influence of color stems from learned associations. That is, when people repeatedly encounter situations where different colors are accompanied by particular experiences and/or concepts, they form specific associations to colors (Elliot et al. 2007; Mehta and Zhu, 2009).

The color red is often associated with dangers and mistakes (e.g., errors that are circled with a red ink pen, stop signs, and warnings) and an exposure to red color has been shown to induce avoidance motivation (Mehta and Zhu 2009). That is, red is perceived as a warning signal for danger and failures. Hence, individuals when exposed to red color tend to engage in normative behavior rather than challenging accepted norms (Elliot et al. 2007). Indeed, previous literature has found that an exposure to the color red (as compared to other colors) leads to the highest level of compliance (Braun and Silver 1995; Williams and Noyes 2007).

Another set of literature examining the effects of sensation seeking suggests that high sensation seekers when exposed to instructional messages perceive these messages as a threat to their freedom to choose (Quick and Stephenson 2008). This perceived threat to one's freedom has been shown to induce reactance, which then leads to behaviors aimed at reasserting this freedom (Brehm 1966; Wicklund 1974). For instance, shoppers who receive unsolicited advice from recommendation agents tend to react by making choices that contradict the recommendation (Fitzsimons and Lehmann 2004). In summary, a state of reactance has been shown to induce non-compliant behavior.

Combining these two lines of reasoning we argue that the widely accepted effect of red color leading to compliant behavior may not be as universal as has been previously proposed. Specifically, we suggest that although under normative conditions exposure to red color will lead to higher compliant behavior, under high sensation seeking conditions an opposite pattern of results will emerge. That is because red color can be perceived as instructing to control one's action. Thus when people in high sensation seeking mode are exposed to red color, the instructional perception flowing from the red color will induce reactance towards even the normative messages thereby leading to higher non-compliance behavior.

We test our hypothesis in a set of four studies. The first study examines the proposed basic effect, that is, whether an exposure to red color will have a differential effect on compliance behavior under different levels on sensation seeking. The sensation seeking (SS) was manipulated by making participants' ( $N = 96$ ) trait SS salient at the beginning of the study. The participants were then presented with five pairs of sentences on either red or white colored background on computer screen. One of the sentences in each pair indicated acceptance while the other ridiculed the simple acceptance of the social norms. As hypothesized when the background color was red, high (vs. low) SS people indicated significantly higher agreeableness with the sentences indicating non-compliance with the social norms ( $M_{HSS} = 4.19$ ,  $M_{LSS} = 2.83$ ;  $t=5.48$ ,  $p < .001$ ). However, no difference was found between high and low sensation seekers on their ratings when they were exposed to a white background screen color ( $M_{HSS} = 3.66$ ,  $M_{LSS} = 3.28$ ;  $t=1.44$ ,  $p = 0.15$ ). These contrasts were qualified by a significant two way interaction between color and SS ( $\beta = 1.46$ ,  $t = 2.74$ ,  $p < .01$ ).

Study 2 examined the role of reactance as the mechanism underlying the effect observed in study 1. Participants ( $N = 112$ ), under HSS vs. LSS, were presented a public health message announcement encouraging them to exercise regularly, on either white or red computer screen background and were asked to indicate feelings of reactance on 5 items and their motivation to exercise on 3 items. Under red color HSS (vs. LSS) indicated lower exercise intentions ( $M_{HSS} = 2.70$ ,  $M_{LSS} = 3.59$ ;  $t=2.25$ ,  $p < .05$ ). These results were qualified by a significant two way interaction and were mediated by the feelings of reactance ( $\beta = 1.19$ ,  $t = 4.06$ ,  $p < 0.01$ ). Further, the response on the reactance scale mediated the subject relationship, such that high (vs. low) SS under red lead to higher reactance, which then led to more non-compliant behavior (95% bootstrap CI (.06, .44)).

Next experiment demonstrated that the subject effect is only specific to the color red. We manipulated sensation seeking through a sentence completion task and then asked people to allocate part of their money pot to an unknown partner in the ultimatum game under red, blue or white color conditions. As expected, people exposed to the red color under high (vs. low) sensation seeking engaged in higher non-normative behavior by allocating lower percent of the pot to others ( $M_{HiReactance} = 33\%$ ,  $M_{LoReactance} = 56\%$ ;  $t=3.23$ ,  $p < .01$ ). No such difference was however observed for blue and white color conditions.

The final study tested our proposition in a real life setting in partnership with a child helpline. Children in need chat online with counselors through the NGO's website, the background of which was changed to white, blue or red in color. We captured data from N = 4,152 chatters and found that a higher percentage of prank chats, which are made as a result of high sensation seeking, was observed when the background color was red ( $M = 22\%$ ), as compared to when it was blue ( $M = 16\%$ ;  $t(4149) = 3.78, p < .001$ ) or white ( $M = 17\%$ ;  $t(4149) = 3.33, p < .01$ ). No difference was observed in the percentage of prank chats under white and blue color conditions ( $t < 1$ ).

Overall, these results show that for people in a high sensation seeking mode red induces reactance towards normative messages leading to higher non-compliant behavior. Thus current work further refines our current understanding of widely accepted effect of red color leading to compliance.

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## **8.6 Conversations: The Effect of Affect**

**Room: MICHELANGELO**

**Discussion Leader:** Jim Bettman, Duke

Michel Pham, Columbia

Patti Williams, Wharton

**SATURDAY NIGHT ROOFTOP EXTRAVAGANZA Sponsored by: University of Miami School of Business Administration, The Wharton School, University of Pennsylvania, and University of Washington Foster School of**

**6:30 pm - 11:00 pm**

**FIFTY Lounge—50th Floor of the Viceroy Hotel**

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