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SOCIETY FOR CONSUMER PSYCHOLOGY
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SCP SOCIETY FOR CONSUMER PSYCHOLOGY

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Saturday, 02 March 2013

Working Papers: Working Paper Session 1

Perceptions of Control and the Affect Heuristic

Jesse King, Oregon State University – Cascades, USA*

Joan Giese, Kansas State University, USA*

Jane Sojka, University of Cincinnati, USA

The affect heuristic is based on the premise that people often turn to their feelings as an efficient source of information when forming other judgments. This research explores how control over a risky situation may influence how people apply the affect heuristic and their subsequent judgments of risk and benefit. Across two studies, perceptions of increased control are found to correspond with increased benefit judgments and reduced risk judgments regarding potential hazards. This preliminary evidence suggests that control may influence use of the affect heuristic. However, more research is needed to identify underlying mechanisms and boundary conditions.

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The Effect of Belief in a Just World on Visual Appeal: Moderating Roles of Symmetry

Aparna Sundar, University of Pennsylvania, USA*

Keisha Cutright, UsPenn

When consumers are faced with an unfair ordeal such as a theft, loss, an accident, or any other unpredictable event, it often causes them to rethink their view of a "fair" world. This research investigates the appeal of visual stimuli when individuals differ in their beliefs of whether the world is a "fair" or "unfair" place. Across two studies, we measure and manipulate individuals' beliefs in a just world and assess the appeal of visual stimuli (e.g., simple patterns and facial features).

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Physician Perceptions of Direct-to-Consumer Pharmaceutical Advertisements and the Impact on Doctor-Patient Interaction

Maria L. Cronley, Miami University, USA*

Kelly Wood, Missouri State University, USA

While much research has been conducted on consumers' perceptions of direct-to-consumer pharmaceutical advertisements, less has focused on physician perceptions of these ads, and how they relate to conversations with patients. This exploratory survey examines physicians' willingness to discuss advertised medications, content and perceived tone of typical conversations about advertised medications, reported prescribing behavior, and physicians' attitudes toward these advertisements.

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Regardless of the Places, Eastern Consumer is a King: A Perspective of Confucianism

Chang Soo KIM, Hankuk University of Foreign Studies*

The five cardinal principles of Confucianism between relationships (e.g., superior versus subordinate) lead Easterners to do different behavior, according to their positions (e.g., shopper versus seller). Eastern consumers tend to extend a relationship between sellers and themselves in different situation that is not related to the relationship in service. Eastern service providers also are likely to show

Confucian behave like the extended relationship regardless of the locations. By contrast, Western consumers and service providers tend less to show the Confucian behaviors. Accordingly, the findings provide some implications.

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M&M's are Tastier in Mini Packs: Effects of Low Calorie Beliefs and Spontaneous Inferences of Taste on Sub-Packaging Preference

Aparna Sundar, University of Cincinnati, USA*

Wei Pan, Duke University, USA

Sara Baskentli, University of Cincinnati, USA

Sub-packaging has the potential to influence how much we eat. We show that lay theories of healthiness, taste, and spontaneous inferences that are caused by sub-packaging influence consumer choice when price and quantity of the snack product are held constant. We document the existence of an inference process as an extension of the "unhealthy = tasty" lay theory. Consumers who believe that low-calorie foods are part of a healthy diet infer less taste associated with sub-packaging and this impacts purchasing decisions.

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Place Brand Love

Katie Swanson, Doctoral Student, Manchester Business School, UK*

Research indicates that outcomes of brand love in consumer products categories are loyalty, positive word-of-mouth, and resistance to negative information. There is limited research in the area of brand love for service brands and a research gap in the specific area of brand love for tourism destination brands. The aim of the doctoral research is to explore the concept of brand love within the context of a place. Pilot study results addressing this aim will be presented at the conference.

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Applying Multilevel Modeling to Consumer Neuromarketing Research

Ernest Hoffman, University of Akron, USA*

Terry Daugherty, University of Akron, USA

Neuromarketing methodologies purport to objectively measure advertising effectiveness by means of neurological assessment techniques that provide an intriguing alternative to more subjective approaches used in consumer research. Nevertheless, neuromarketing paradigms pose unique and sophisticated challenges to data analysis and interpretation. Our work tests the notion that multilevel modeling (MLM) is poised to address a number of these challenges. We measure consumer emotional responses to standardized images and brand logos using dense-array electroencephalography (dEEG). MLM is then used to (a) scrutinize the validity of several neuro-metrics and (b) test the fit of various models predicting consumer emotional response.

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Consumers' Response to Visual Brand Identity
Barbara Phillips, University of Saskatchewan, Canada*

Edward McQuarrie, Santa Clara University, USA

Glenn Griffin, University of Alabama, USA

Visual Brand identity (VBI) refers to the unique look and feel maintained by a brand over time across its advertisements and other visual expressions. A theoretical and practical problem in advertising is how a consistent VBI can be maintained, even as individual elements (typefaces, colors) are swapped in and out. Psychological theory suggests that a balance must be struck between maintaining consistency, and thus fluent processing, while introducing novelty and incongruity, thus promoting pleasurable arousal. Interviews with art directors, projective exercises with consumers, and an experiment are used to examine these trade-offs.

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What's In a Name? Anthropomorphism and Naming
Jennifer Stoner, University of Minnesota, USA*

Barbara Loken, University of Minnesota, USA

This work investigates the role of names and naming in the anthropomorphism of inanimate objects. We propose that it is the action of naming rather than just having a name that causes the ascription of human traits to non-human agents. In four studies, we show that when participants are asked to assign a name to an object, they anthropomorphize the object more than with no name. However, when a name is assigned to that object by the experimenter, the participants do not anthropomorphize the object more than when the object does not have a name.

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Construal Level and Value Importance Effects on Brand Dilution in Franchise Partnerships
Sally Williams, University of Minnesota, USA*

Barbara Loken, University of Minnesota, USA

This research examines the effects of value importance and mind-set (psychological distance) on parent brand dilution when a franchise partnership exists between brands with highly inconsistent images (Bally Fitness Center and McDonald's). Participants who placed a higher value on health demonstrated greater dilution of the Bally's brand under an abstract mind-set (distant construal) than under a concrete mind-set (close construal). Participants with lower value on health showed more generalized dilution across brands and attributes. The abstract representations and heightened salience of values in distant construals and the detailed processing and sensitivity to context in close construals might underlie the effects.

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The Impact of Sensory Versus Cognitive Attributes on Effectiveness of Metaphors in Advertising
Yixia Sun, The Chinese University of Hong Kong, China*

Robert S. Wyer, The Chinese University of Hong Kong, China*

The use of a metaphor to communicate information about a product is a common advertising strategy. However, the conditions in which the strategy is effective are not clear. This study suggests that its effectiveness depends on not only the type of attribute to be

conveyed but also whether the metaphor itself is communicated verbally or visually. We investigated these contingencies in the use of metaphors to convey three types of attributes: visual, other sensory, and cognitive.

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Financial Constraint Induces a Preference for Material Versus Experiential Purchases through Long Term Focus

Stephanie Tully, New York University, USA*

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Research shows that experiences provide greater retrospective happiness than material purchases, but how people choose between such purchases is largely unknown. The present paper suggests that consumers shift towards material over experiential purchases (for discretionary spending) when considering financial constraints due to the belief material purchases provide longer lasting happiness. Correlational evidence demonstrates that in years of higher unemployment, when consumers are likely exerting financial self-control, consumers purchase relatively more material goods. In a lab study, participants imagining being on a budget or having a reduction in income are more likely to choose material over experiential purchases and to list duration as the reason for their choice.

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There is such a Thing as a Free Lunch: Introducing the Consumption Practice of Market Failure Utilization

Andreas Plank, University of Innsbruck, Austria*

Nicola Stokburger-Sauer, University of Innsbruck, Austria

This paper introduces the consumption practice of market failure utilization and investigates its manifestation dumpster diving. Based on findings from two qualitative studies we conceptualize market failure utilization as consumer behavior that emerges due to system immanent defects in the neoliberal version of market economy. We show that these defects offer individuals consumption opportunities and resources for identity construction. We discuss implications for consumer culture theory and critical consumer research.

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The Unseen Exchange: An Investigation into the Social Ingredient of Customer Satisfaction

Pabitra Chatterjee, Grenoble Ecole de Management*

Though much consumption is shared by groups, e.g., family, colleagues, unexpectedly little is known about the effect of fellow consumers on customer satisfaction. This may be rectified by considering the consumer's experience as a whole. Using episodic interviews and thematic coding, this research finds consumers exchange different types of social support during a typical consumption experience (restaurant meal with friends); and suggests that the fulfillment of social and utilitarian needs have both complementary and moderating relations in determining overall gratification.

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Advertising the Unexpected: Does Increased Attention Improve Attribute Recall?

Nobuyuki Fukawa, Missouri University of Science and Technology, USA*

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To increase attention and subsequent memory for advertisements, researchers have increasingly suggested the use of unexpected stimuli. Although the recommendation has merit, we argue increased attention does not necessarily enhance memory. In this research, we propose that although unexpected information receives greater attention, it also requires more cognitive resources to encode, maintain, and retrieve than does expected information. Consistent with our proposition, we found that although unexpected attributes received greater attention at encoding, the negative effects of attribute number and cognitive load on attribute recall were significantly stronger for unexpected attributes than for expected attributes.

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Look, Puppies! Distraction in DTC Advertising

Jesse King, Oregon State University – Cascades, USA*

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The Federal Drug administration (FDA) requires pharmaceutical firms running direct to consumer (DTC) advertising to disclose information about the most important risks in a "Major Statement." However, the visual information shown onscreen during the Major Statement is not currently regulated. In many DTC advertisements, the presentation of the Major Statement is accompanied by distracting visual elements that may prevent consumers from understanding important risk information. The present research examines a currently running DTC advertisement and finds preliminary evidence that these visual distractions do affect risk judgments.

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The Effect of Multi-Sensory Semantic Congruence between Color and Music on Product Evaluation

Chang Yeop Shin, Hongik University, Korea*

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In this study, we document the amplifying effect of multisensory semantic congruence between color and music. In the context of e-book site and cosmetic store environment evaluation, the semantic congruency between color and music led to more favorable brand attitudes. Customer evaluation was more favorable when the semantic meaning elicited from color matches with the semantic meaning induced from music than when it does not match. Processing fluency mediated the synergistic effect of semantic congruency between music and color and led to enhanced product evaluation.

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Not at all Attitudes are Created Equally: A Comparison of Attitudes Formed in Response to Narrative and Informational Messages

Anne Hamby, Virginia Tech, USA*

Kim Daniloski, University of Scranton

David Brinberg, Virginia Tech, USA

Recent work on persuasion acknowledges the impact of narratives. We employ a response latency approach to examine the accessibility of attitudes formed in response to differences in format (narrative, informational) and message valence (positive, negative). Results suggest that attitudes formed in response to positive narratives are the most accessible, while those formed in response to negative, informational messages are least accessible.

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Activating Inclusion of the Brand in the Self through Consumer-Brand Relationships

Suzanne Rath, University of Guelph, Canada*

Tanya Mark, University of Guelph, Canada

Consumer-brand relationship literature alludes to the accomplishment of goals; however, no research has demonstrated the connection between consumer-brand relationships and goal-directed behaviors. Additionally, the specific underlying mechanism of this connection remains elusive. Drawing from the Self Expansion Model (Aron & Aron, 1986), this research examines the mechanism underlying consumer-brand relationships' abilities to activate an unconscious goal to include the brand in the self and gain the brand's social resources resulting in a cognitive merging of the brand and the self. This research contributes to consumer psychological literature and it provides information for marketers to enhance consumer-brand relationship management strategies.

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Consumer Participation and Price Perceptions: How Bad News is Still Good News for Marketers

Lisa E. Bolton, Pennsylvania State University, USA

Ashley Stadler Blank, Pennsylvania State University, USA*

Two experiments investigate how consumer participation in firm activities affects perceptions of price fairness and subsequently, how participation interacts with experience valence to impact customer satisfaction. Experiment 1 examines the impact of different types of participation and experiment 2 delves more deeply into the process by investigating different methods by which firms may facilitate participation. Results demonstrate that the type of consumer participation, as well as how firms facilitate such participation, drives price fairness perceptions and satisfaction outcomes. Specifically, consumer participation offers both drawbacks and advantages to the firm (undermining price fairness perceptions but increasing satisfaction with a negative experience).

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The Impact of Comparisons with Others on Creativity

Ke Tu, University of Alberta, Canada*

Jennifer Argo, University of Alberta, Canada

We attempt to investigate the impact of others on the outcome of creativity in co-creation. Using social comparison theory as a theoretical framework, we investigate the effects of comparisons on creativity outcomes when consumers compare with others involved in the same or different tasks and whether or not they expect their creativity will be evaluated. We propose that when evaluation is expected from them, the type of tasks (same vs. different) that others are involved in would lead to social comparisons

that occur at two different levels (i.e., outcome-oriented comparison, individual-ability-oriented comparison), and hence, influence the outcome of creativity differently.

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Talking to a Stranger Helps

Inés López, Miguel Hernández University, Spain
Salvador Ruiz, University of Murcia, Spain*
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Consumers' tendency to share their consumption experiences with others is especially salient in the event of a negative episode. In this paper, we argue that the type of addressee consumers share the consumption episode with and whether he/she is interested in the product or not are key factors to understand consumers' satisfaction response. Our findings reveal that satisfaction is higher when the addressee is in the market, while anger mediates the effect of addressee and market on satisfaction. Additionally, results also show that the desire for revenge acts as a moderator in the relationship between anger and satisfaction.

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Size Matters - The Influence of Floor Tiles Size on Consumer Behavior in a Retail Environment

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Some supermarkets vary the size of their floor tiles, with smaller tiles in areas with more expensive goods with the idea that, as you roll your trolley along and the clickety-click-click sound of the tiles becomes quicker, you instinctively slow down and, hopefully, look more intensively at the merchandise. This study empirically tests this assumption and, contrasting to what practitioners believe, shows that although customers do not have the feeling of walking faster in small tiles aisles, they actually spent less time walking along small tiles compared to big tiles/no tiles aisles leading to lower brand recall and brand recognition.

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Balance Theory in eWOM: Even if You Red-Flag this Product, I Like it, as I Dislike You.

Michael Dorn, University of Bern, Switzerland*
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Social information in web-product reviews, e.g. the user picture of the reviewer, can induce an attitude towards the reviewer. Drawing on balance theory we predict that this induced attitude moderates the influence of the review on the evaluation of the product. Utilizing either positive or negative user pictures and presenting either positive or negative reviews resulted in the predicted moderation. Consumers rated a negatively reviewed product more favorable when the reviewer used a negative user picture, compared to a positive user picture. The present research discusses this application of balance theory to eWOM in reference to perspective taking accounts.

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Optimizing Targeting Effectiveness: The Reversed U-Shape Relationship between Target Market and Consumer Attitude

Shuoyang Zhang, University of St. Thomas, USA*

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In the current research we propose a reverted U-shape effect of targeting strategy. Our findings show that compared with mass marketing and personal targeting, the optimal consumer attitude is achieved when product recommendations are provided to a small group of similar people. This implies that extreme personalization can actually backfire.

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Don't Tell Me What to Do! Consumer Reviews Are Valued Less for Experiential Purchases

Hengchen Dai, University of Pennsylvania, USA*

Cindy Chan, University of Pennsylvania, USA

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Consumer reviews can be found for almost any purchase, but do shoppers consider these reviews useful for all types of purchases? This research reveals that when contemplating a future experiential (vs. material) purchase, shoppers discount the usefulness of consumer reviews and intend to spend less time reading them. However, shoppers of experiential and material purchases equally value information provided by companies. The tendency to undervalue consumer reviews for experiential (vs. material) purchases is driven by the belief that other consumers' evaluations of experiential (vs. material) purchases are less representative of one's own evaluation.

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When Two Become One: Examining the Effect of Brand Identity Fusion in Consumer-Brand Relationships

Jhih-Syuan Lin, University of Georgia, USA*

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While existing literature describes strong brand relationships along several dimensions, this research sheds light on the identity perspective of consumer-brand relationships through the lens of brand identity fusion. Specifically, this research provides theoretical and empirical support for the discriminant validity of brand identity fusion and shows that, compared with brand identification, fusion is more predictive in explaining consumers' endorsement of pro-relationship behaviors. Considering that brand identity fusion is applicable for understanding connections between consumers and the brand relationship partner in consumer-brand relationships, directions for future research are discussed.

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Please Don't Interrupt Me Now! The Role of Need for Cognitive Closure in Interrupted Consumers' Decision Processes

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This research investigates the effect of interruptions on on-line vs. memory-based consumer judgments and the role of need for cognitive closure as a moderator of this effect. Our findings from one experiment suggest that the timing of an interruption may

differently impact the evaluation of individual products and product bundles. We also found a significant moderating effect of need for cognitive closure. Overall, our research contributes to the understanding of the cognitive effect of interruptions on consumer behavior by providing a new theoretical framework based on the impression formation theory.

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The Effects of Loneliness on Product/Service Failure Attribution

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Almost everyone feels lonely at certain moments, loneliness is a powerful feeling (Ernst & Cacioppo, 2000). Loneliness influences people's health and general well-being (Cacioppo et al., 2002; Eisenberger, Lieberman, & Williams, 2003; MacDonald & Leary, 2005). Loneliness is an important topic in consumer psychology but still has been relatively understudied. Will lonely consumers blame themselves or the product/service more when they are facing a product/service related failure? For example, when a lonley person fails to find a partner from an online dating website, will he blame himself or blame the online dating website? This paper examines the role of loneliness and consumer's attribution on a product/service related failure. Two studies show that lonely (versus no-lonely people) are more likely to assign the failure reasons to themselves rather than the product/service. Our study contributes to the understanding of loneliness and attribution theory, which has great practical implications toward helping lonely consumers to copy with failure-an outcome that is beneficial to both consumers and public policy.

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The Contrasting Effects of Perceived Control: Implications for Sequential Decision-Making

Maggie Y. Chu, The Chinese University of Hong Kong, Hong Kong*

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Extant evidence on the effects of perceived control is contradictory. One's perception of control can offset the effect of a negative experience. Meanwhile, it may aggravate negative reactions when the outcome of exercising control is undesirable. This research attempts to resolve such controversy by analyzing the impact of perceived control in the context of sequential decision-making. In particular, we examine how the perception of control over one decision influences reactions to later ones and how the control at each point in the sequence of decisions influences evaluative judgments.

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Discriminating Between Regret and Cognitive Dissonance: What Do Consumers Experience When a Purchase Goes Awry?

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This working paper attempts to investigate whether cognitive dissonance and regret are essentially the same emotion that are given different names or whether they are two distinct emotions with their own respective characteristics. No empirical research has verified the distinction between the two emotions. A study was developed to test for discriminant validity between the two constructs. The

overall model showed a poor fit. Breaking the model into its component parts indicated that cognitive dissonance, as originally operationalized, was problematic. Currently we are attempting to procure a good model fit to test the new model.

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Psychological Influences of Celebrities in the Vaccine-Autism Debate

Natalie Mitchell, University of Texas at Austin, USA*

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In this working study, the potential implications of celebrity culture and its psychological impact -envy and social comparison - on consumers are explored. We propose consumer mimicry occurs because of celebrity admiration and consumers' psychological influences. Consumption could be goods bought or behavior adopted. Mimicry is studied through consumers' consideration and possible adoption of similar personal health beliefs of celebrities who promote them in the media. Specifically, mimicry will be examined based on the vaccine-autism alleged causal link. Using in-depth interviews will determine the impact of celebrities who are either pro- or anti-vaccination on consumers' decision to vaccinate their children.

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Effects of Social Ostracism on Conspicuous Consumption and Helping

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Ostracism has been shown to produce a variety of responses and to threaten both relational needs (belonging, self-esteem) and efficacy needs (control, meaningful existence). Two experiments examined the effects of ostracism on consumer preferences for conspicuous consumption and helping behaviors. Preliminary findings suggest that ostracism may increase not only conspicuous consumption but also helping behavior. The findings also suggest that these effects may be eliminated when fundamental needs are bolstered.

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What Information do Consumers Focus on when Doing Online Shopping: An Eye Movement Study

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This preliminary study explores what information consumers will focus on when doing online shopping. We use E-prime2.0 to present visual stimulus and RED4 to collect the corresponding eye movement data. The results show that when the information of goods in the same product category looks similar, participants will be more concerned about the contextual information than focal information. Within contextual information, participants are more affected by normative social influence than informational social influence. In addition, the study also shows product familiarity moderates the effect of information type.

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Falling Back on Numbers: Numerical Information as a Source of Control

Christophe Lembregts, Ghent University, Belgium*

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In three studies, we demonstrate that when personal control is threatened, consumers may have a stronger preference for numerical information than when no control threat is present. In addition, we demonstrate that consumers who recently lost control rely more on numerical information in their decisions. In a first study, we offer preliminary evidence for the relationship between lack of control and preference for numerical information. In addition, consumers prefer a product that is superior on numerical attributes when control is threatened (study 2). In study 3, we replicate this pattern of results using a different control manipulation.

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Smart Shopper Metacognition and Judgment Biases

Kamila Sobol, York University, Canada*

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The concept of a "smart shopper" is surprisingly understudied in the consumer literature. It is generally assumed that smart shoppers seek deals and make rational consumption choices. In the present paper, we suggest and find preliminary evidence that consumers have naïve theories about what smart shopping entails, and ironically these metacognitive beliefs can sometimes undermine consumers' ability to make accurate "smart" decision. More specifically, across two studies, we show that priming the concept of a smart shopper can leads to errors in judgment, such as misattribution and sunk cost bias.

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In Search of Homo Economicus: Uncovering the Self-control Mechanisms that Underlie Rational Behavior

Sachin Banker, MIT*

While a great deal of evidence has established that human behavior often deviates from the predictions of the standard rational economic model, less is known about the conditions under which people actually behave in line with rationality. Here we explore how self-control resource availability contributes to the tendency to exhibit transitive preference patterns. We find that in complex product categories, preference consistency relies on self-control but in familiar product categories, preference consistency is actually compromised by the ability to control impulses.

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Hard to Ignore: How Compulsive Buyers React to Distracting Stimuli in Shopping Situations

Oliver B. Büttner, University of Vienna, Austria   Matthew A. Paul, University of Vienna, Austria

Arnd Florack, University of Vienna, Austria*   Anna Maria Schulz, University of Vienna, Austria

Helmut Leder, University of Vienna, Austria

This research examined whether compulsive buyers show an attentional bias in shopping situations. We hypothesized that compulsive buyers are more likely than noncompulsive buyers to get distracted by products that are unrelated to their shopping goal. The study applied a 2 (compulsive buying tendency low vs. high) x 2 (shopping vs. nonshopping context) between-subjects design. Visual

attention was measured via eye tracking. The results showed that compulsive buyers allocated less attention to a focal product and more attention to distracting products than noncompulsive buyers. This attentional bias emerged only when the task was framed as a shopping situation.

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The Structural Value of Memory Networks

James Mead, University of Kentucky, USA*

Emerging research details the role of momentary goal activations in memory as key inputs to the consumer decision-making process. Temporary goal activations, such as various environmental cues e.g., an image, scent, or advertising slogan, may provide a transient boost to the perceived importance or desirability of a goal pursuit, thereby influencing goal directed behavior. Fluctuations in goal activations within consumers' memories influence a variety of behaviors, including goal pursuit, the valuation of goal facilitating means, and product choice. This research explores consumers' responses to the activation of certain associative network patterns in memory.

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1.1 Symposium: Why Stumble on Happiness When You Can Stride Towards It? Understanding how to Increase Consumer Happiness

Room: Espada

Chair: Lauren Cheatham, Stanford University, USA

Kelly Goldsmith, Northwestern University

The Pursuit of Happiness: Can It Make You Happy?

Kelly Goldsmith, Northwestern University, USA

David Gal, Northwestern University, USA

Raj Raghunathan, University of Texas at Austin, USA

Lauren Cheatham, Stanford University, USA*

"Ask yourself whether you are happy and you cease to be so" (Mill, 1909).

It is often thought that happiness cannot be pursued, but is a fortuitous byproduct of engagement in other activities. Indeed, in a short-term lab setting, people explicitly asked to maximize their happiness are less happy than those not asked to do so (Schooler et al. 2003). Such findings may be intuitively appealing as most recognize that certain goals cannot be pursued too directly. For example, trying too explicitly to fall asleep can be counter-productive. However, most of us also recognize that the likelihood of achieving a goal is greater when we accord it higher priority. Thus, a person who consciously (re)arranges aspects of his life so as to get a good night's sleep will sleep better than one who does not. By the same token, it stands to reason that individuals who accord higher priority to the goal of being happy might make more happiness-enhancing choices, thereby becoming happier.

The main objective of the present research is to test whether, results from past research notwithstanding, it is possible to increase happiness by explicitly pursuing the goal of happiness. We contend that one critical factor that predicts whether happiness goals will be effective at increasing happiness is if such goals direct one's focus towards monitoring their affective state (i.e., their current level of happiness) or their behavior. In line with prior work (Mauss et al. 2011), we argue that when happiness goals direct one's focus towards monitoring their affective state, happiness will decrease as compared to a control condition. We build on this work by suggesting that when happiness goals instead draw one's focus towards their behavior, such goals can be effective for improving happiness.

Study 1 tests this using a three group between-participants design, where a happiness-related query (state-focused vs. behavior-focused vs. control) was the manipulated factor. All participants completed an initial set of questions, including a baseline happiness measure. Next, they were told that the experiment would involve fifteen minutes of "free time," during which they could engage in the activities of their choice. Prior to beginning their "free time," participants in two experimental conditions (state-focused and behavior-focused) were exposed to a manipulation that made the goal of happiness salient, by presenting them with a question about their happiness and asking them to keep this question in mind. The question in the state-focused condition was designed to direct attention towards monitoring their current affective state ("How happy are you?" Mauss et al. 2011). The question in the behavior-focused condition, in contrast, was aimed at directing focus towards happiness goal-directed behavior ("Are you doing your best to be happy?"). Those in the control condition were not given any question to keep in mind. At the end of the study, participants completed a final set of questions, which included the same happiness measure administered previously. Our main dependent measure was the change in happiness. In line with prior work, we observe that those in the state-focused condition showed a significant decline in happiness as compared to the control ($M_{state-focused}=.145$, $M_{control}=.453$, $p<.05$). However, in line with our predictions we find that those in the behavior-focused condition increased their happiness significantly as compared to both the state-focused and control conditions

(M$_{behavior-focus}$=.775, p's<.05). In support of our proposed process, we find behavioral change mediates the effect of condition on the change in happiness.

Having demonstrated our predicted effect, it is important to note that study 1 shares a limitation common to prior studies on happiness, in that it examines how happiness related goals affect happiness in a short-run, relatively controlled, experimental context. In order to better understand the longer term implications for happiness goals, study 2 was designed as a longitudinal field-study in which participants were prompted on a daily basis, over the course of several weeks to reflect on their happiness. The happiness-related query (state-focused vs. behavior-focused vs. control) was the manipulated factor. Participants in two experimental conditions received a question everyday via email (state-focused: "How happy were you today?"; behavior-focused: "Did you do your best to be happy today?"). Those in the control condition were not given a daily question. At the end of the study, all participants received a dependent measure designed to assess how their happiness had changed throughout their study participation (-3–much less happy to +3–much more happy) along with additional measures designed to test for behavior change as the proposed mechanism and rule out alternate accounts.

We observed that participants' self-reported happiness-change scores were significantly higher in the behavior-focused condition than in the state-focused condition (M$_{behavior}$=0.62; M$_{state}$=0.37, p<.03) and those in the control condition (M$_{control}$=.09; p <.001). Additionally, those in the state-focused condition improved more than those in the control condition (p<.05). A mediation analysis supported the hypothesis that it is a change in one's behavior, and not other factors, which causes an improvement in happiness after completing the experiment. Study 3 utilized the same experimental design employing a control condition where participants received a daily question that was not related to happiness. The pattern of results was consistent and significant. Taken together, these findings demonstrate that, in contrast to prior work, happiness goals can be effective at improving happiness when they direct focus towards one's behavior and motivate behavioral change, and further even happiness monitoring can have positive effects on happiness under certain conditions, such as longer durations. We will present additional data that supports these findings and conclude by discussing the theoretical and practical implications.

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What Experiences Make Us Most Happy, The Ordinary Or The Extraordinary?

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What brings us happiness in life? This age-old question has enjoyed recent empirical attention within consumption contexts (e.g., Dunn, Gilbert and Wilson 2011; Mogilner and Aaker 2009). One influential stream of literature finds that experiential purchases bring greater happiness than material purchases (Carter and Gilovich 2010; Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003). But what types of experiences resonate most with consumers and lead to greater happiness? Prior research has not yet begun to distinguish among different types of experiences.

The current research investigates one important distinction: the extent to which an experience is ordinary versus extraordinary. While ordinary experiences are common, frequent, and within the realm of everyday life, extraordinary experiences are uncommon, infrequent, and go beyond this realm (Sussman and Alter 2012). For instance, will consumers enjoy greater happiness from a lovely dinner with a close friend at a favorite neighborhood restaurant, or from a once-in-a-lifetime, gastronomically inventive feast at elBulli? Because ample work has demonstrated the connection between experiential happiness and time (e.g., Kurtz 2008; Mogilner and Aaker 2009; Mogilner, Kamvar and Aaker 2011), we predicted that the answer to this question would depend on one's perspective on time. The results of five studies suggest that extraordinary experiences are more self-defining and lead to greater happiness among

those with an extensive future. Meanwhile, when time is seen as limited, ordinary experiences are increasingly self-defining and linked to happiness.

An initial study, designed to mirror Van Boven and Gilovich's (2003) work, asked participants to recall and describe a happy experience that was either ordinary or extraordinary, and to report their resulting level of happiness. Content analysis of participants' recalled experiences suggests that engagement in social relationships and indulgence in comforts accounts for most happy ordinary experiences. Conversely, life milestones or cultural travel are most representative of happy extraordinary experiences. To serve as a proxy for future time perspective, we examined experiential happiness by participant age. Among younger participants (whose future is more extensive), extraordinary experiences resulted in greater happiness than ordinary experiences ($M = 7.86$ vs. 6.69, $F(1,217) = 13.20$, $p < .001$); however, among older participants (whose future is more limited), no difference in reported happiness emerged ($M = 7.84$ vs. 7.59, $F < 1$). In other words, while happiness from extraordinary experiences did not vary with age ($F < 1$), ordinary experiences led to greater happiness for older (vs. younger) participants ($F(1, 217) = 7.72$, $p = .006$). A moderated mediation analysis found that the interactive effects of experience and age on happiness were driven by self-definition ($\beta = .01$, $t = 2.56$, $p = .01$). To further investigate whether people naturally recognize and distinguish between ordinary and extraordinary experiences, a separate group of participants rated 20 randomly selected experiences generated in the first study. This group was able to distinguish between others' described experiences, rating extraordinary experiences as significantly more extraordinary than the ordinary experiences ($M = 6.61$ vs. 3.62, $t(120) = 19.60$, $p < .001$). As before, younger participants reported that extraordinary experiences would lead to greater happiness than ordinary experiences ($M = 6.96$ vs. 6.24, $F(1, 119) = 27.34$, $p < .001$), whereas older participants' reports of happiness did not differ by experience ($M = 7.01$ vs. 6.83, $F(1, 119) = 1.57$, $p > .10$).

Next, we examined our proposed mechanism more directly by measuring psychological time perspective. Building on our findings for self-definition, our third study examined the types of experiences that people share on Facebook, a virtual representation of the self. A sample of Facebook users reported their last five status updates that reflected personal experiences and completed a measure of future time perspective (Lang and Carstensen 2002). They then rated and categorized their experiences as ordinary or extraordinary. Results indicated that future time perspective predicted both ratings ($\beta = .16$, $t = 2.11$, $p = .04$) and categorizations ($\chi^2(1) = 4.81$, $p = .03$) of reported experiences: those who saw time as extensive made more extraordinary updates, and those who saw time as limited made updates reflecting more ordinary experiences.

A fourth study tested for potential differences between past and future (planned) experiences. Participants described past happy experiences or future experiences they expected to be happy, then rated these experiences on how ordinary or extraordinary they were. Finally, they reported their future time perspective. Regression results indicated only an effect of future time perspective: regardless of past or future status ($t < 1$), those with a more extensive perspective reported more extraordinary experiences, while those with a limited perspective reported more ordinary experiences ($\beta = -.28$, $t = -2.90$, $p = .005$).

A fifth study further examined our proposed mechanism by manipulating time perspective: participants were led to view their lifespan as either extensive or limited. A second goal of the study was to examine how associating a brand with consumer experiences would affect brand attitudes. Participants viewed an advertisement for a Flip video camera that urged them to "Capture life's everyday [extraordinary] moments." Results revealed a significant interaction of experience x time perspective on brand attitudes ($F(1, 210) = 5.74$, $p = .02$). In particular, those with an extensive time perspective viewed the brand more positively when it highlighted extraordinary (vs. ordinary) moments ($M = 5.60$ vs. 5.12, $F(1, 210) = 5.79$, $p = .02$). However, brand attitudes did not vary by experience among those with a limited time perspective ($M = 5.46$ vs. 5.66, $F < 1$). That is, while highlighting extraordinary experiences led the brand to be perceived similarly regardless of time perspective ($F < 1$), highlighting ordinary experiences was seen more positively among those who viewed their future as limited rather than extensive ($F(1, 210) = 7.29$, $p = .007$). Results were fully consistent for purchase likelihood.

Together, our findings highlight a previously unexamined dimension of experience, distinguishing ordinary from extraordinary experiences. Results suggest that this distinction is meaningful, resonates with people, and matters for brand attitudes as well as subsequent happiness.

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The Rewarding Nature of Matchmaking

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At some point, most people have made matches between others, from grabbing two strangers by the arm at a party and introducing them to each other to brokering romantic connections; even if not matchmakers themselves, many people can think of a friend or acquaintance who is notorious for their efforts to make such introductions – even if sometimes awkwardly unsuccessful. We investigate this proclivity to make matches between others, demonstrating that such matchmaking – creating ties between others – has a causal impact on their happiness.

Certainly, a great deal of evidence suggests that people enjoy connecting themselves to others and that having such social connections is strongly and consistently associated with higher well-being. Indeed, humans spend some 80% of their waking hours in the company of others (Emler 1994; Kahneman et al. 2004). Social interactions and social support impact both subjective and objective well-being, with social relationships both serving as a buffer against and hastening recovery from negative events ranging from depression to physical illness (e.g., Berkman and Syme 1979; Cohen and Janicki-Deverts 2009; Cohen and Syme 1985; Seeman 1996; Uchino 2004).

We explore the emotional impact of making matches not between oneself and others, but between two other people. In one view, such matchmaking should have no impact on happiness, because matchmakers are by definition introducing people they already know and this does not enlarge their own circle of social support. In another view, matchmaking could have a negative impact; research in social networks has noted that "brokers" – people who stand between two other actors in a social network – derive power from those two people *not* knowing each other (Burt 1998; Simmel 1955), such that an introduction would *decrease* one's social capital. Why then do we predict a positive impact of matchmaking on happiness? We propose that creating connections between others – closing gaps in one's social networks – is rewarding because it helps to meet people's general and fundamental need for closure (Kruglanski 1989); indeed, previous research shows people high in need for closure are more likely to *assume* ties between other individuals (Flynn, Reagans, and Guillory 2010). We suggest that people high in need for closure are more likely to not just assume but actually create connections between others and that meeting this "need for network closure" is associated with increased happiness for the matchmaker.

Across three studies, we examined the psychology underlying people's proclivity to play "matchmaker". In Study 1, we first documented the causal impact of matchmaking on happiness in a lab setting by assigning people (N = 128) to match individuals to each other and measuring their happiness pre and post-matching. We also investigated whether the type of match matters by randomly assigning people to one of three tasks: making matches on the basis of who would get along well (*match*), who would get along poorly (*mismatch*), and who had the most similar social security numbers (*random*). We hypothesized that matching people with the goal of creating connections (*match*) would lead to greater happiness than matching on other dimensions (*mismatch* or *random*). As expected, participants in the *match* condition experienced a significant increase in pre to post-matching happiness while happiness declined in both

the *mismatch* and *random* conditions. In sum, Study 1 offered initial evidence that assigning people to matchmaking increases their happiness – but only when that matching is done in the service of creating connections between others.

In Study 2, we assessed the benefits of matchmaking using a different methodology: Rather than measuring happiness directly, we measured the intrinsic reward of matchmaking by examining people's persistence on one of two computer tasks: matching which of three people a target individual would either get along with best (*match*) or looks most like (*appearance*). We also varied whether participants completed each trial of the task for free, for 1¢, or for 2¢, a design that allowed us to document the intrinsic reward of matchmaking. Participants ($N = 168$) came to the lab and were informed that they would be completing fifty trials of computer tasks and could choose how to split these fifty trials between two tasks. In the first task, participants were shown a photo of a target individual and asked to match the target with one of three potential matches. The second task – designed to be boring – consisted of finding a target letter in a pull-down menu of four letters. Our dependent variable was the number of matchmaking trials completed before switching to the boring task. As expected, participants in the *free* conditions completed more than twice as many trials of the *match* task than the *appearance* task, suggesting that connecting others in terms of liking is intrinsically more rewarding than connecting others for physical similarity.

Our second means of demonstrating intrinsic liking for the *match* task was to examine how additional monetary incentives would differentially impact people's desire to complete additional trials of both the *appearance* and *match* task. As predicted, incentives increased the number of trials participants completed of the *appearance* task, in a significant linear trend from *free* to *1¢* to *2¢*. In contrast, providing incentives for the *match* task resulted in a significantly *decreased* willingness to complete trials both for participants in the *1¢* and *2¢* conditions compared to those in the *free* condition. These results suggest that while payment increased motivation for the less intrinsically appealing *appearance* task, incentives crowded out motivation for the more intrinsically appealing *match* task.

In Experiment 3, we examined the moderating effects of NFC on the relationship between condition and the number of trials completed. Participants ($N = 179$) were given the same task as in Experiment 2. They then completed the 47-item NFC scale (Webster and Kruglanski 1994; Cronbach's $\alpha = .85$). We found that people high in "need for network closure" are most likely to find connecting others to each other rewarding, with that reward being particularly pronounced when making matches with the goal of social connection (*match*) which involved closing a gap.

Taken together, these experiments provided evidence for a causal relationship between matchmaking and happiness. Inducing people to make matches between strangers increased happiness in the moment, and people found creating meaningful matches to be more intrinsically rewarding than other types of matching. We documented that having a "need for network closure" enhanced the intrinsic reward of matchmaking. Our investigation offers a model for how matches at the micro level can translate into social capital at the macro level. We suggest that people who make matches do not necessarily suffer from losing their broker status, but in fact can reap rewards from matchmaking and that this reward value of matchmaking feeds into increases in social capital at the group level.

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Leave Them Smiling: How Small Goals Create More Happiness than Large Goals

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A growing body of research has demonstrated that behaving prosocially creates a "helper's high" (Luks, 1988) and increases subjective well-being (Anik et al., 2009; Lyubomirsky et al., 2004; Post, 2005; Thoits & Hewitt, 2001). But, do certain prosocial pursuits more effectively increase personal happiness? We explore this question, examining one factor linking prosocial acts and happiness: How the goal of the act is framed.

Goals can be framed at various abstraction levels (Emmons & Kaiser, 1996; Oettingen & Gollwitzer, 2001), and striving for concrete (versus abstract) goals has been correlated with less psychological distress and greater well-being (Carver et al., 1988; Carver & Scheier, 1990; Emmons, 1992). Building upon these results, we hypothesize that prosocial acts lead to greater giver happiness when the act's goal is framed concretely (e.g., make someone smile) versus abstractly (e.g., make someone happy).

Why might a prosocial goal's abstraction level influence personal happiness? When a goal is concretely-framed (versus abstractly-framed), one's expectations of achieving the goal may be better calibrated (due to greater focus on the "how" and logistics versus the "why" and broader meaning of goal-directed actions; Torelli & Kaikati, 2009; Vallacher & Wegner, 1987, 1989).

Moreover, the outcome of goal-directed actions may be perceived more favorably (due to concrete goals having clearer standards of success; Emmons, 1992; Locke & Latham, 1990). Importantly, these characteristics should enable concretely-framed (versus abstractly-framed) prosocial goals to shrink the gaps between people's expectations of success and reality (Kopalle & Lehmann, 2001; Ojasalo, 2001; Schwartz, 2003; Walker & Baker, 2000)—and smaller expectation-reality gaps are associated with greater satisfaction and well-being (Davis, 1981; Michalos, 1985; Schwartz, 2003; Thomas, 1981; Vermunt et al., 1989). Therefore, we predicted that concretely (versus abstractly) framing a prosocial goal increases personal happiness by reducing the gap between givers' expectations of accomplishing the goal and the actual outcome of their goal-directed acts. Because people routinely incorrectly predict how much happiness things in life will bring (Aknin et al., 2009; Brickman et al., 1978; Buehler & McFarland, 2001), including the hedonic benefits of performing prosocial acts (Dunn et al., 2008), we also predicted that people would not recognize that concretely-framed (versus abstractly-framed) prosocial goals cultivate more personal happiness.

Experiment 1 instructed participants to perform an act of kindness within 24 hours. Manipulating the abstraction of the prosocial goal of the act, participants randomly assigned to the concrete [abstract] condition were asked to do something to make someone else smile [happy]. Twenty-four hours later, in a follow-up survey, participants reported the extent their act created happiness in their own life, how well the outcome of their act met their expectations for accomplishing their assigned goal (i.e., their expectation-reality gap), and the specificity of the goal they had in mind when performing their act.

Manipulation checks confirmed concrete (versus abstract) condition participants had a more specific goal in mind when performing their act. Two ANOVAs then revealed concrete (versus abstract) condition participants felt the outcome of their act better met their goal achievement expectations and felt their act created more personal happiness. Importantly, a mediation analysis demonstrated that these shrunken expectation-reality gaps are what increased the personal happiness of those in the concrete (versus abstract) condition.

Experiment 2 ruled out several alternative accounts and began investigating the accuracy of people's prosocial goal predictions. Participants were pairs of friends—one friend served as the "giver," the other the "receiver." Placed in separate rooms, the friends answered questions about their friendship and were then told they would get a three-minute-long break (in a room with their friend) before completing another survey (in separate rooms). At this time, givers randomly assigned to the concrete [abstract] condition were asked to do something to make their friend (i.e., the receiver) smile [happy] during this break. After the break, the givers reported their current happiness, their beliefs (before the break) about their assigned (i.e., how challenging it would be, their ability to accomplish it, and their expectations for succeeding at it), how well their act actually met their expectations for accomplishing their assigned goal, and their perceptions of the size and concreteness of their act. The receivers reported their current happiness and their happiness (and smiling) during the break.

Manipulation checks confirmed givers in the concrete (versus abstract) condition viewed their prosocial goal as more concrete (versus abstract). ANOVAs then revealed concrete (versus abstract) condition givers felt happier after performing their act and that the outcome of their act better met their expectations. As in Experiment 1, a mediation analysis demonstrated that their increased personal happiness was driven by these smaller expectation-reality gaps. Additional ANOVAs showed these effects could not be explained by differences in the type of receiver (e.g., a friend), closeness of the giver-receiver relationships, givers' perceptions of their act's size, or receivers' actual happiness (or smiling) during and after the break—as these factors did not differ across conditions. Three final ANOVAs revealed givers in both conditions had (before the break) viewed their goal as equally challenging, their ability to accomplish it equally great, and their expectations for success equally high—initial indications that people would not recognize the hedonic advantage of pursuing concretely-framed (versus abstractly-framed) prosocial goals.

Experiment 3 directly tested whether people would correctly predict which prosocial goal was better for personal happiness. Participants, assigned to the concrete or abstract condition, imagined taking part in Experiment 1 and predicted their responses to the follow-up survey. Subsequently, the two experimental conditions (i.e., prosocial goals) were described, and participants rated each condition (from 1-100) on how much personal happiness it would create.

An ANOVA revealed concrete (versus abstract) condition participants did not correctly predict their act would create more personal happiness. Furthermore, repeated measures ANOVAs, with the experimental condition ratings as the within-subjects factor, revealed participants (within and across conditions) incorrectly rated the goal of making someone happy (versus smile) as able to create more personal happiness.

Conclusion. We extend the prosociality literature, showing that, contrary to people's intuitions, an act of kindness with a concretely-framed (versus abstractly-framed) goal leads to greater personal happiness—an effect driven by shrunken expectation-reality gaps.

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1.2 Individual Papers: Go Figure! (Self) Signaling Effects on Product Preferences

Room: San Jose

Chair: Guang-Xin Xie, University of Massachusetts Boston, USA

Customized Assembly: How Does Effort Influence the Value of To-be-assembled Products?

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Consumers often invest effort by participating in the production of products. Customized product assembly, for example, involves making a series of product composition choices while investing physical effort in assembling a product (e.g. Build-a-Bear). How does this expended effort influence the valuation of the product?

Economic theory predicts that effort expended during the design and assembly process should be subtracted from the value of the co-produced product (Bendapudi and Leone 2003; Dellaert and Stremersch 2005; Etgar 2008; Meuter and Bitner 1998). On the other hand, many researchers find that consumer participation in the production of products leads to a greater valuation of the finished product (Dahl and Moreau 2007; Deng et al. 2010; Norton et al. 2012). This increased valuation has been attributed to an increased fit between the final product and consumer preferences (Delleart and Stremersch 2005; Franke and Piller 2004), feelings of competence

(Dahl and Moreau 2007; Norton et al. 2012), and feelings of pride/accomplishment (Dahl and Moreau 2007; Deng and Hutchinson 2011).

In light of these opposing predictions and findings, it is reasonable to assume that there are conditions under which effort expended during product production leads to perceptions of more or less value. To understand the utility from customization and assembly efforts that is independent from product fit, pride and accomplishment, we assess how customized assembly influences the perceived value of the components of the to-be-assembled product. This approach assumes consumers will assign more value to the components (e.g., the parts at Build-a-Bear) that provide a better customized assembly experience.

We hypothesize that assembly effort increases the perceived value of the components of the to-be-assembled product when the assembly experience is positively engaging, whereas assembly effort decreases the perceived value of the to-be-assembled product when the assembly experience negatively engaging (i.e., tedious). A customized assembly experience is more positively engaging when customization and assembly are integrated (i.e., the experience is creative, rewarding, and fun) as opposed to segregated (i.e., the experience is tedious).

We tested our predictions in four experiments using simple craft activity kits. Participants in our experiments were asked to create holiday themed figures by (1) choosing adornments from different adornment options (e.g. two different ears, mittens, shoes), (2) cutting out the adornment pieces and (3) assembling the figures by pasting these pieces onto a line-drawing of the figures. In all our experiments effort expended to create the figure was manipulated by the number of adornments participants selected (3 vs. 8). Our dependent variable was their valuation of the craft activity kit (i.e. the to-be assembled-product).

Study 1 manipulated whether customization decisions and assembly actions were integrated or separated. In an integrated "assemble-as-you-go" condition, participants were asked to pick the first adornment (e.g. ears) from two options, cut them out and paste them on the figure. Then they were asked to pick the second adornment (e.g. mittens), cut them out and paste them on the figure, and so forth. In a separated "assemble-at-the-end condition" participants chose their adornments and cut them out but did not paste them on the elf (i.e. assemble) until all choices were made and all pieces were cut out.

In the 'create-as-you-go" condition more effort (i.e. more choices and more pasting) led to a higher valuation of the components of the to-be-assembled product. Mediation analysis revealed that this higher valuation was a consequence of participants being positively engaged in the assembly task (i.e., being engaged and finding the task interesting). In the "assemble-at-the-end condition, more effort led to a lower valuation of the components of the to-be-assembled product. This lower valuation was a consequence of participants being negatively engaged in the assembly task (i.e., being engaged, but finding the task tedious).

Study 2 used the "create-as-you-go"condition from study 1. To separate the customization decision from the assembly process, half of the participants in this study created a plan of their choices before creating the figure "as they were going". As in study 1, in the "no-plan-create-as-you-go" condition more effort led to a higher valuation of the components of the to-be-assembled product. In the "plan-create-as-you-go", more effort led to a lower valuation of the components of the to-be-assembled product.

Study 3 again used the "create-as-you-go" conditions from study 1. To provide evidence that customization is necessary for positive engagement to occur, the opportunity of customization was removed for half of the participants by providing only one option per adornment (i.e one pair of ears, mittens). In the "customized create-as-you-go" condition, more effort led to a higher valuation of the components of the to-be-assembled product. In the "un-customized-create-as-you-go" condition, more effort led to a lower valuation of the components of the to-be-assembled product.

Study 4 used the "assemble-at-the-end" condition from study 1. To make this negatively engaging assembly process more positively engaging, half of the participants' mindset was manipulated by having these participants think about what it was like to be young, create art at school and bring it home to share it with the family during the assembly process. As in study 1, in the "no-mindset-assemble-at-the-end" condition, more effort led to a lower valuation of the components of the to-be-assembled product. In the "positively-engaging mindset assemble-at-the-end" condition, more effort led to a higher valuation of the components of the to-be-assembled product.

In summary, we show that the effort associated with customized assembly can add or detract from the perceived value of the components of the to-be-assembled product. By focusing on the value of the craft kit (or the-to-be-assembled-product) we show an influence of the customized assembly experience that is independent of the consequences of the customized assembly (i.e., the finished product).

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It's the Thought that Counts: The Effects of Intentional Reasoning on Consumer Preferences

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When Anheuser Busch released its new aluminum bottle for their top-selling beers, the company downplayed its considerable environmental benefit. Would the beer have been even more popular had Anheuser Busch marketed it as more environmentally-friendly? While conventional marketing wisdom suggests that adding desirable features should increase the overall appeal of a product (Mukherjee and Hoyer 2001; Thompson, Hamilton, and Rust 2005), we argue that communicating the intention to improve a product (e.g. make it more environmentally friendly) may have a counterintuitive effect, leading consumers to infer that the product is lower in quality and, in turn, to want to purchase it less than when an environmental improvement arises as an accidental by-product.

Consumers tend to make compensatory inferences about products. That is, they assume that a product which is superior to competitors on one dimension must be inferior on other dimensions (Chernev and Carpenter 2001). We propose that consumers tend to make this inference when a firm intentionally makes an improvement to a product, but less so when the improvement arises unintentionally as a by-product of another change to the product. We demonstrate this effect across three studies and investigate the mechanism behind it, showing that this inference stems from a belief that a company that makes an environmental enhancement to a product does so by diverting resources away from product quality.

In Study 1 we tested the central hypothesis that consumers perceive products with an unintended green enhancement to have higher quality and are more willing to purchase them than products with an intended green enhancement. We further predicted that participants' inferences about how the firm allocates its resources would drive this effect. Participants read descriptions of two new products (dish soap and drain cleaner) whose environmental quality a firm had improved either intentionally or as an accidental by-product. In the control condition, the firm's intentions were not mentioned. Participants rated product quality, purchase intent, and the extent to which they believed that the firm had taken resources away from quality in making the product better for the environment. As predicted, both product quality ($M = 5.90$ vs. 5.38 and 5.45, planned contrast $p = .006$) and purchase intent ($M = 5.65$ vs. 4.77 and 5.12, $p = .005$) were higher in the unintended than in the intended or control conditions. Further, participants reported that the firm had diverted fewer resources away from product quality in the unintended than the other two conditions, $M = 3.91$ vs. 5.05 and 4.68, $p < .001$. A serial mediation model with resource diversion and quality as mediators revealed a positive indirect effect (.134, CI: .041 to

.282), indicating that differences in firm intentions led consumers to make different inferences about the firm's diversion of resources away from quality, which in turn changed perceptions of product quality and ultimately purchase intent.

Study 2 replicated this effect and aimed to rule out a signaling alternative explanation: that the mere fact that a firm would choose to focus on environmental features may signal to consumers that its products are lower in quality. To rule out this alternative, we added a "care about both" condition, in which participants read that the company aimed to improve both the product's (a household cleaner) efficacy and its environmental benefit. As predicted, participants reported higher product quality and purchase intent, and lower belief in resource diversion in the unintended than the other three conditions. Belief in resource diversion and product quality again serially mediated the effect of firm intentions on purchase intent. Most important, contrary to the signaling alternative account, participants in the "care about both" condition still inferred that the company diverted more resources away from quality than in the unintended condition ($M = 4.33$ vs. 2.84, planned contrast $p = .001$) and, as a result, thought the product was lower in quality ($M = 6.09$ vs. 6.28, $p = .026$,) and expressed lower purchase intent ($M = 5.57$ vs. 6.22, $p = .001$.)

Study 3 ruled out another alternative explanation for our findings. In previous studies exactly what the company was doing that led to the unexpected green enhancement was unspecified in the unintended condition, and participants may have inferred that the company was seeking to improve product quality. In other words, whereas both conditions explicitly described the one environmental improvement, the unintended condition may have implied a second improvement. To address this alternative, we added two new conditions which both described two improvements. Participants in the new unintended condition read that a company sought to improve the viscosity of its drain cleaner and that the environmental enhancement arose as an unintended side-effect, whereas those in the new intended condition read that the company intended to improve both viscosity and environmental quality. Participants were thus randomly assigned to one of four conditions in a 2 intention (intended/unintended) x 2 focal attribute (viscosity/unspecified) design, read about a new drain cleaner, and answered the same questions as before. Replicating the previous results, we found a main effect of firm intention on purchase intent, such that participants were more likely to purchase the drain cleaner when the green enhancement was unintended than when it was intended, $M = 5.20$ vs. 4.64, $p = .004$. Equally important, the ANOVA revealed no main effect of focal attribute and no intention x focal attribute interaction, p's > .2, failing to provide support for the inference account. As in the previous studies, participants reported that the firm diverted fewer resources when the green improvement was unintended than when it was intended, $M = 3.56$ vs. 4.56, $p < .001$, and belief in resource diversion significantly mediated the effect of firm intentions on purchase intent.

In sum, we show a surprising effect of firm intentions on consumer preferences, demonstrating that consumers rate a product with an environmental enhancement as higher in quality and are more likely to purchase it when the enhancement arises unintentionally as compared to when the firm intentionally improves the product.

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The IKEA Effect: Signaling and Restoring Feelings of Competence
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Prior work has shown that consumers are willing to pay more for self-made products than for identical products made by someone else (Franke, Schreier, and Kaiser 2010; Norton, Mochon, and Ariely 2012), an effect labeled the IKEA effect (Norton et al. 2012). In the current work we examine the underlying process behind this effect. We suggest that this premium is due to the role that self-created products have in fulfilling two deep identity-related desires of consumers: their desire to signal to themselves an identity that they are

competent and have effectance, and their desire to display that identity to others. Self-assembly of products fulfills both of these needs: by building things myself I am controlling and shaping my environment, proving my own competence, and by displaying my creations I am demonstrating my competence to others. In support of this theory, we demonstrate that feelings of competence mediate the premium attached to self-made products (Study 1); that allowing consumers to affirm their competence another way reduces the magnitude of this effect (Study 2); and that threatening people's sense of competence in one domain, increases their desire to assemble goods, and thus reestablish their competent self-view (Study 3).

In study 1 we examine whether feelings of competence mediate the IKEA effect. In this study participants were presented with a Lego car. *Builders* were given the pieces for the car with the instructions that come with the product, and were asked to assemble it accordingly. *Non-Builders* were given the car already assembled, and were asked to examine it. Participants were then asked to give their maximum willingness to pay using an incentive compatible BDM procedure. We then measured the feelings of competence associated with the product, as well as participants' overall mood. Replicating prior work on the IKEA effect, the builders were willing to pay more for their car ($M = \$1.20$, $SD = 1.35$) than the non-builders ($M = \$0.57$, $SD = .76$; $p < .05$). Builders also associated higher feelings of competence with their creations ($M = 4.39$, $SD = 1.48$) than non-builders ($M = 2.81$, $SD = 1.34$; $p < .001$). Importantly, the feelings of competence associated with the product fully mediated the effect of build condition on WTP (Sobel $Z = 2.08$, $p < .05$). Moreover, while builders ended up with a more positive mood than non-builders, mood did not mediate the IKEA effect.

In study 2, we test our account by both measuring, and also directly manipulating participants' need to feel competent. If our theory is correct, participants who are allowed to affirm the self another way (Aronson, Cohen, and Nail 1999; Steele 1988) may no longer need to signal competence through the products they create, and therefore should not show the IKEA effect. Participants in this study were randomly assigned to one of four conditions of a 2 self-affirmation condition (no affirmation vs. self-affirmation) x 2 build condition (pre-built vs. build) between-subjects design. Participants were first presented with a manipulation where they either did or did not affirm their values (Sherman, Nelson, and Steele 2000). Following the self-affirmation manipulation, participants were presented with an IKEA Kassett storage box. *Builders* were given the parts necessary to assemble the box, as well as the instructions from IKEA to assemble it, and assembled the box. *Non-Builders* were presented with a box that was already built, and were asked to examine it. We then measured participants maximum WTP using an incentive compatible procedure as well as the feelings of competence associated with the product.

The results showed no significant main effect of the self-affirmation or build conditions. However, we found the predicted significant interaction between these two factors ($F(1,115) = 3.90$, $p = .05$). In the no affirmation condition, we replicated the standard IKEA effect: builders ($M = \$0.72$, $SD = .45$) were willing to pay significantly more than those who received a box pre-built ($M = \$0.46$, $SD = .50$; $p = .05$). This effect was eliminated for participants in the self-affirmation condition, where there was no significant difference between builders ($M = \$0.49$, $SD = .46$) and those who received a pre-built box ($M = \$0.58$, $SD = .46$; $p = .48$). Thus, providing participants with an opportunity to affirm the self eliminated the IKEA effect. We further tested a model of moderated mediation to examine whether the indirect effect of competence on WTP depends on self-affirmation (Preacher, Rucker, and Hayes 2007). The results suggest that, as in the previous study, competence acts as a mediator of the effect of building on WTP, but that this effect was moderated by the self-affirmation manipulation. Indeed, the analyses revealed a significant conditional indirect effect of the competence mediator in the no affirmation condition ($Z = 2.80$, $p < .01$), and a non-significant conditional indirect effect of the mediator in the self-affirmation condition ($Z = 1.34$, $p = .18$).

In study 3, we examine whether threatening consumers' sense of competence increases their propensity to create their own products. In this study participants were first presented with a short math test which was either very difficult (Low Competence Condition) or easy (Control Condition). Participants were then asked to imagine that they had just bought a bookcase from IKEA, and were asked

whether they would prefer to assemble it themselves, or would prefer for it to come pre-assembled. While only 33% of participants in the control condition said that they would prefer to assemble the bookcase themselves, 58% of participants in the low competence condition indicated that they would prefer to do so (p < .05).

The above results provide convergent evidence that the IKEA effect is driven by consumer's desire to signal competence to themselves and others. Moreover, these results suggest important practical implications for firms, by demonstrating that consumers can be encouraged to participate in co-creation by appealing to their desire to signal competence.

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Vive La (Petite) Difference! Numerical Precision and Perceptions of a Company's Competence in Green Advertising

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An important characteristic of green advertising is its extensive reliance on scientific research findings or projections (Carlson, Grove, & Kangun, 1993). Emerging from quantitative measurement of the impact of human activities on the environment, green advertising claims are oftentimes substantiated with numerical information, because of the quantifiable environmental benefits and the association with scientific evidence (Nakajima, 2001). Despite the ubiquitous presence of numbers in green advertising, no prior work has examined the effect of numerical information regarding environmental claims, especially with regard to the level of precision. The present research addresses this void exploring the mechanisms whereby numerical precision influences consumer perceptions of the advertised companies.

When advertising green attributes of a product, such as reduced carbon emissions of a car, advertisers face a dilemma whether to employ finer or more rounded numerical information. Presenting more precise numbers may make the communication more complex, distracting consumers from focusing on the claim (Mader, 1973) and reducing positive attitudes towards the advertised product due to lack of fluency (Alter & Oppenheimer, 2006; King & Janiszewski, 2011; Shah & Oppenheimer, 2007). Further, to achieve salient presence, advertisers may choose to use simple and straightforward messages, employing more round numbers (Cummins, Sauerland, & Palmović, in press; Sigurd, 1988). However, literature on the signaling effect of message complexity demonstrates an inverted effect whereby more complex communication implies greater seriousness and competence of the source (Burke, 1954; Suau-Jiménez, 2005; Wei, 2003).

In the context of pro-environmental advertising claims, the above inconsistency can be explained by individual differences in ad skepticism. It is likely that, when facing numerical precision, consumers are torn between believing the seriousness of the advertised company and their inherent skepticism which leads them to believe the precise numbers are merely part of a selling gimmick. Following this reasoning, we predict that the effectiveness of numerical precision in green advertising is moderated by ad skepticism: For low-skeptics more precise numbers would elicit higher evaluations of the company's competence, because more precise numbers are perceived as more scientific and informative. However, highly skeptical people will not be affected by numerical precision.

Furthermore, research indicates that topic knowledge can elevate distrust towards advertising claims (Boush, Friestad, & Rose, 1994; Main, Dahl, & Darke, 2007). We therefore predict that the moderation of ad skepticism can be mitigated by topic knowledge. Namely, when the topic is less familiar to consumers (e.g., thermal efficiency of a car's engine), highly skeptical people would be as susceptible to numerical precision as low skeptics. We test these predictions in the following set of experiments.

Study 1 explored consumer inferences about numerical information. We employed a 2 (green-ness of attribute: carbon emission/internal noise) X 4 (degree of precision: 20%, 19%, 19.2%, 19.24%) between-subject design (online panel, N = 239, 138 females, average age 33.1). Participants read a text-only catchphrase: "Introducing the green (quiet) car, 20% (19%, 19.2%, 19.24%) reduction in carbon emission (internal noise)". Results suggest precise numbers are perceived as more informative and scientific, which mediates the effect of numerical precision on positive perception of company competence.

Study 2a explored the moderation effect of ad skepticism on susceptibility to numerical precision (N = 132, 76 females, average age 36.2). We created a fictitious print advertisement promoting an environmentally-friendly aspect of a car (10% vs. 10.2% reduction of carbon emissions). Ad skepticism was measured implementing Obermiller and Spangenberg's scale (1998). We found that low skeptics rated the advertised company more competent when the numerical information was more precise. High skeptics, by contrast, were not affected by numerical precision. We also found that perceived trustworthiness of the green claim accounts for the observed effect.

Study 2b replicated the results of study 2a in another product category (mattresses), with a different set of attributes (soy-infusion vs. density of foam), using different numbers (i.e., 19.41% vs. 20%) and inverting the direction of numerical change so that the more precise number is smaller. The catchphrase read "greener foam, better sleep; 20% (19.41%) soy-infused organic foam" or "better foam, better sleep; 20% (19.41%) high density memory foam".

Study 3 examined the extent to which topic knowledge influences the moderation effect of ad skepticism on susceptibility to numerical precision. We used a 2 (Numerical precision: 15% vs. 15.32%) x 2 (Topic knowledge: high vs. low) between-subject design and measured ad skepticism as an individual difference (N = 180, 79 females, average age 33.9). The catchphrase read "introducing the green car, 15% (15.32%) higher fuel (thermal) efficiency". We chose 15% rather than 20% or 10% to extend our results to less round percentage numbers (i.e., numbers that do not end with a zero). The topic knowledge manipulation was proven effective in a pretest with another sixty online panel participants (23 female; average age 34.7). The results show a significant 3-way interaction between numerical precision, topic knowledge, and ad skepticism (p = .015). When the claim was about fuel efficiency (i.e., high knowledge condition), the moderation effect of ad skepticism was replicated. When the claim was about thermal efficiency (i.e., low knowledge condition), less knowledgeable high skeptics rated the advertised company's competence as positively as the low skeptics and significantly more positively than knowledgeable high skeptics.

This work pioneers research on the effect of numerical precision in marketing. The findings suggest that precise numbers have a strong positive signaling effect on consumer perception of the advertised company's competence. This effect is especially manifested among individuals less skeptical towards advertising in general. However, more skeptical consumers who are not knowledgeable about the topic may be as susceptible to numerical precision as the less skeptical consumers are. The perception of more precise numbers as more scientific and informative mediates the effect of numerical precision on company perceptions.

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1.3 Individual Papers: Me and My Brand: Consumer Brand Attachment and Evaluation
Room: Madero A
Chair: Elina Halonen, University of Turku

Brand Extension or Self Extension? The Role of Self-image Congruence During Brand Extension Evaluation
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In the 1970s, major changes to the world's economic and technological landscapes forced many companies to develop more creative and cost-efficient ways to enter new markets. With competition steadily increasing, advertising became substantially more expensive and the logistics involved in the distribution processes were becoming more difficult to manage. In reaction to these changes, some of the more established and successful corporations began to adopt a business expansion strategy that involved leveraging the positive equity inherent in their brand names as they ventured into new product categories. The intuition behind this approach was that consumers would subconsciously transfer their positive affects (related to the brand) onto the new product, thereby lowering the cost and lessening the complexity associated with introducing a completely new brand. In 1981, Edward M. Tauber termed this phenomenon "brand franchise extension", better known today by its abbreviated name: brand extension (Tauber 1981).

In today's marketplace, brand extensions flood our grocery stores and deluge our shopping malls. Arm & Hammer toothpaste, Jell-O pudding, and Nike sweatshirts are just a few examples that demonstrate the prominence of brand extensions. In fact, brand extensions accounted for 89% of all the new products introduced in the United States in the 1990s (Keller & Aaker 1998). Furthermore, in 2009, the entire Top 10 list of new food/beverage packaged goods products consisted of brand extensions (Information Resources Inc. 2010). As brand extensions continue to dominate the current marketplace, it is imperative that marketers strive towards a complete understanding of the process that consumers undertake when evaluating a brand extension.

Theoretical Framework

Past brand extension evaluation research has focused primarily upon the fit, or level of congruity, between the extension and the parent brand, i.e., Brand Extension Congruence (Aaker & Keller 1990; Monga & John 2007). Prior studies strongly suggest that extensions should not match too closely with the previously established schema of the parent brand. Subsequently, extensions that are moderately incongruent to the parent brand typically receive more positive evaluations from consumers than both highly congruent and highly incongruent extensions (Meyers-Levy & Tybout 1989; Boush & Loken 1991; Park et al. 1991; Broniarczyk & Alba 1994). This customary finding is known as the Moderately Incongruent Hypothesis, or Mandler's Hypothesis (Mandler 1982). These past studies, however, do not account for the impact that a consumer's self-image has on the brand extension evaluation process.

The relationship between consumer self-image and brand image has been thoroughly investigated (Dolich 1969; Part et al. 1986; Cheng et al. 2011; Malär et al. 2011; Reimann et al. 2012). One of the more pertinent findings suggests that consumers tend to prefer brands that they perceive as highly similar, or highly congruent, to their own self-image (Birdwell 1968; Kassarjian 1971; Aaker 1999). Also, consumers are inclined to have a more positive attitude toward brands that are highly congruent to themselves compared to brands that are moderately or highly incongruent (Sirgy 1982; Graeff 1997; Wheeler et al. 2005; Sirgy 2008). The level of similarity/dissimilarity between the images of a consumer and a brand (as perceived by the consumer) is known as Self-Image Congruence (Dolich 1969; Sirgy et al. 1997).

In this paper, we addressed the disconnection between the brand extension evaluation and self-image congruence literatures. Following previous self-image congruence research, we predicted that if a consumer perceives high self-image congruence, then the consumer will favor highly congruent brand extensions over moderately and highly incongruent extensions (contrary to Mandler's Hypothesis). The intuition behind this prediction is that as an extension becomes less congruent to the parent brand, it also becomes less congruent to consumers with self-images highly similar to the brand's image. Therefore, the level of self-image congruence decreases, which negatively affects the consumer's evaluation of the extension.

Method

Study 1 used a 2 (Brand Extension Congruence: Highly/Moderately) x 3 (Self-Image Congruence: High/Moderate/Low) design. The dependent variable was Attitude towards the Extension. Based upon the results of previous studies, highly incongruent extensions were not expected to outperform highly congruent or moderately incongruent extensions; thus, highly incongruent extensions were

excluded from the study. The results suggested that high self-image congruence consumers indeed favor highly congruent brand extensions, while moderate and low self-image congruence consumers tend to favor moderately incongruent extensions. Furthermore, high self-image congruence consumers evaluated moderately incongruent extensions less positively than both moderate and low self-image congruence consumers. It is important to note that this study only used products that are typically consumed in a public context.

The consumption context, whether private or public, has been shown to moderate the effect that self-image has on consumer behavior (Graeff 1996). Due to their socially visible nature, publically consumed products tend to have a stronger impact on self-image compared to privately consumed products (Sirgy 1982; Ratner & Kahn 2002). Therefore, Study 2 followed the same methodology as Study1, but used products that are normally used in a private setting. The results for Study 2 supported the findings in Study 1 (highly congruent extensions were evaluated more positively than moderately incongruent extension); however, the difference between the mean attitude scores of highly congruent and moderately incongruent extensions was not statistically significant. Furthermore, high self-image congruence consumers evaluated highly congruent extensions more positively than moderately incongruent extensions. However, the mean attitude scores reported by moderate and low self-image congruence consumers were not statistically different. The authors attribute these non-significant findings to the private consumption context applied in Study 2.

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Positive Brand Inferences from Processing Disfluency

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Processing fluency or the subjective ease of processing information has been found to influence judgments across a wide range of domains (Schwarz, 2004). With respect to evaluative judgments, fluency has been associated with more positive evaluations of a target object. This is because the ease of processing fluent information creates positive affect which is often misattributed to the target (Reber, Winkielman, & Schwarz, 1998). Contrary to these classic findings, the current research investigates whether processing disfluency can generate positive evaluations of a brand.

Recent research has shown that disfluent stimuli are perceived as being physically farther away and are described in abstract terms (Alter & Oppenheimer, 2008). Förster (2009) has also shown that frequently exposed items induce detail-oriented, local perception whereas less exposed stimuli induce gestalt-like, global perception. Building on this stream of research, we argue that the difficulty of processing a brand name elicits the impression that a brand is "distant," which in turn, positively influences the evaluations of attributes that are associated with social distance. This prediction follows research which suggests that when people encounter information that is consistent with an existing mental representation, they are likely to "feel right" about the information, which subsequently heightens the evaluations of target information (e.g., Kim, Rao, & Lee, 2009; Higgins et al., 2003; Reber, Schwarz, & Winkielman, 2004). When a brand name is disfluent, attributes that are associated with social closeness are experienced as "unfit" with the distant representation of the brand, and therefore, are expected to be less positively evaluated in comparison.

In study 1, we employed a 2 (fluency: fluent vs. disfluent) x 2 (attribute type: close vs. far) within-subjects design. Participants were presented with a list of five-letter acronyms disguised as organization names. Intermixed in the list of acronyms were four acronyms that were pretested as being difficult to pronounce (e.g., CCDPC) and four acronyms that were pretested as being easy to pronounce (e.g., CATSA). Participants in the pretest indicated no prior knowledge of the acronyms. They were instructed to give their impressions of each organization on five attributes, two of which, were pretested as being representative of socially distant relations (i.e., competent, competitive) while the remaining three were pretested as being representative of socially close relations (i.e.,

approachable, warm, friendly). The "distant" and "close" attributes were pretested as being equally attractive qualities to a brand. Each attribute was presented as a seven-point scale in a fixed order for every acronym. A repeated measures ANOVA on participants' attribute evaluations revealed close attributes were more positively evaluated when the acronym was fluent than disfluent, replicating classical findings in fluency research. However, attributes that were associated with distant relations were rated more positively when the acronym was disfluent than fluent.

In study 2, we adopted a 2 (fluency: fluent vs. disfluent) x 2 (attribute type: close vs. far) mixed design with the latter factor as within-subjects variable. All participants were presented with a five-letter acronym that represented a home security company (i.e., A.C.A.A.F.). Participants in the disfluent condition saw the brand name alone, while those in the fluent condition were presented with a cue below the acronym that facilitated its pronunciation (i.e., [a-caf]). All participants were asked to give their impressions about the brand name on four attributes, two of which were pretested as being representative of socially distant relations (i.e., proficient, skilled) while the other two were pretested as being representative of socially close relations (i.e., loyal, caring). They were asked to evaluate the likelihood that the brand were to be reflect each description on a seven-point scale (1 = not at all, 7 = very likely). After providing their attribute evaluations, participants were asked to indicate how attached they would become to the company if they were to become its customer (1 = not at all, 7 = very much). This measure was included to test whether disfluency (vs. fluency) created a sense of psychological distance which subsequently affected attribute evaluations of the brand. Finally, participants were asked to rate the extent to which they used their feelings to evaluate each of the attributes (1 = not at all, 7 = very much).

A repeated measures ANOVA on participants' attribute evaluations with fluency as a between-subjects factor revealed a significant interaction between attribute type and fluency. Once again, close attributes were more positively evaluated when the acronym was fluent than disfluent. However, attributes that were associated with distant relations were rated as equally positive when the acronym was fluent or disfluent. This is a weaker effect than that found in study 1 where distant attributes were rated higher in the disfluent than fluent condition, perhaps owing to the manipulation of fluency between (vs. within) subjects. Nevertheless, it is inconsistent with traditional findings of fluency as a factor that increases the evaluations of positive features. A mediational analysis was conducted on the close attributes to confirm whether the difference in evaluations between the fluent and disfluent conditions was due to a difference in psychological distance. Disfluency negatively predicted the evaluations of close attributes as well as feelings of attachment or closeness to the home security company. When feelings of psychological closeness were included as a predictor along with disfluency on close attribute evaluations, the effect of disfluency was significantly reduced, indicating that a difference in psychological closeness fully mediated the effect. For both the close and distant attributes, participants' indicated that they used their feelings to a similar extent to evaluate the brand, ruling out an alternative explanation that different processing styles (emotional vs. cognitive) were instigated by fluency and disfluency respectively.

Across two studies, we find that when a brand name is disfluent, individuals perceive the brand to be distant, which enhances the evaluations of matching attributes while lowering evaluations of mismatching attributes. Our findings have practical implications for brand positioning as well as theoretical implications for brand personality research (Aaker, 1997). Whereas brand personalities such as competence can be promoted through disfluent communication, personalities such as sincerity are likely to become more salient through fluent communication.

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The Impact of Fear on Brand Attachment

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Brand attachment has been defined as the strength of the bond connecting the consumer to the brand (Thomson, MacInnis and Park 2005). Consumers who feel strong attachment to a brand will be more loyal and less price sensitive. Because of its relevance to marketers, factors that increase brand attachment have become an important focus of research (Lastovicka and Sirianni 2011; Park et al. 2010; Thomson et al. 2005). Most of the research to date has demonstrated that the attachment process develops over time as consumers have numerous experiences with the brand. However, day- to-day life is filled with affective experiences that may not be directly associated with a particular brand but still involve them to some degree (e.g., fear caused by the horror movie and the brand of potato chips). Although not the cause of the experienced emotion, it stands to reason that the brand attachment process could potentially be influenced by these experiences. Prior research in affect transfer (MacKenzie, Lutz, & Belch, 1986) has demonstrated that the experience of negative affect can transfer to unrelated objects such as a brand. This transfer can lower brand attitudes and evaluations (Goldberg and Gorn 1987). This concern has led marketers to avoid associated their brand with negative content (e.g., timing of advertisements within T.V. shows or placement of products within movies).

However, literature on social psychology suggests that some negative experiences, specifically fear, are unifying; causing people to seek out affiliation with others. (Schachter 1959; Sarnoff and Zimbardo 1961). In some situations, these "others" could be brands. Consumers have been known to treat brands as if they were people and form relationships with and expectations of them (Fournier 1998). Therefore, it is possible that fearful experiences may have a positive impact on brand attachment.

The current research investigates the aforementioned question. In so doing, we make several unique contributions to the literature. First, our research provides the first empirical evidence indicating not all negative experiences are detrimental to the consumer-brand relationship, and fear in particular can have positive implications for consumers and brands. Specifically, we show how fear-inducing experiences increase initial consumer-brand attachment. Second, we identify perceived affiliation with the brand as the causal motivation for the increase in brand attachment. Finally, we show that the increase in consumer brand attachment subsequently increases longer-term brand loyalty.

In Study 1, we experimentally tested whether fear increased brand attachment. In addition, study 2 tested perceived affiliation with the brand as the underlying mechanism for the studied relationship. Using movies to prime an emotional experience (Andrade and Cohen 2005), participants were told that they would be completing two unrelated studies: a movie experience and a brand experience study. For the movie experience study, participants watched clips from one of four movie genres (action, comedy, horror, and drama). Prior to beginning, participants were given the unknown brand to try out prior to the brand study. Participants answered questions about brand attachment and perceived affiliation. Analysis revealed that participants in the fear condition felt more attached to the brand than those in any of the other conditions. In addition, fear participants reported a higher perceived affiliation with the brand during the experience. This perceived affiliation significantly mediated the impact of emotion type on brand attachment.

In Study 2, we further tested perceived affiliation as the underlying mechanism by showing that when affiliation is satiated, fear did not significantly increase brand attachment. In this study, we primed participants through a word search to either feel affiliated or not (Jiang et al. 2010). Once primed, participants completed the movie and brand experience study as outlined in study 2 with the exception of only using horror and action clips. In addition to brand attachment, participants also completed measures of brand attitude. Results revealed that only when affiliation was not satiated did fear lead to an increase in brand attachment. When affiliation was satiated, there was no significant difference between fear and excitement. Contrary to an affect transfer story, for fear participants who were not primed with affiliation, brand attitude was as high as those participants in the excitement conditions. When affiliation was satiated, participants in the fear condition rated the brand lower than those in the excitement condition, a result consistent with an affect transfer story.

Study 2 not only supported perceived affiliation as the underlying mechanism, it also showed how the perceived affiliation associated with fearful experiences may have a positive countervailing impact on the negative influence of affect transfer on brand attitudes.

Finally, Study 3 examined the potential long-term impact of fear on behavioral outcomes such as loyalty. As brand attachment can be an important predictor of behavioral outcomes (Park et al. 2010), we predicted participants who underwent a fearful initial experience with a brand would show initial brand attachment and increased loyalty at a later time. Using a longitudinal design, participants went through the procedure from study1 at Time 1. After completing the initial study, participants were given samples of the brand to taken home to try and answered a questionnaire about brand attitude and loyalty three days later (Time 2). Results revealed that those participants who underwent the initial fearful experience not only felt higher brand attachment but also showed higher brand loyalty at a later date. In addition, there was a significant serial mediation such that emotion condition → perceived affiliation →brand attachment → brand loyalty. Thus, it appears that fear not only increased initial brand attachment, but also has longer term behavioral outcomes.

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Understanding Consumers' Self-brand Congruence Across 11 Countries

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Introduction, theory and hypotheses

Understanding consumers' perceptions of themselves is an important part of consumer psychology because these self-images significantly influence their attitudes and purchase behaviour. Existing consumer psychology research has provided support for the relationship between a consumer's self-concept and brand personality. Specifically, researchers have focused on the extent to which brand imagery is linked with consumers' self-concepts and how brands are used by consumers to create and communicate them (e.g. Aaker, 1997; Belk, 1988; Escalas & Bettman, 2003; Sirgy, 1982). The underlying hypothesis, often referred to as self-brand congruity, is that consumers prefer brands with personalities that are congruent with their perceptions of themselves.

However, the majority of the empirical research over the past decades has been conducted on consumers in the United States and while there have been some attempts to investigate the impact of culture on the relationship between consumers' self-construals and their evaluations of brands (Aaker & Schmitt 2001; Sung & Choi 2010), more research is needed to explore the self-brand congruity hypothesis in different cultural contexts.

The assumption underlying self-brand congruity is that consumers use possessions and brands as symbolic resources to construct and reflect their identities (McClelland 1951; McCracken 1987; Elliott & Wattanasuwan 1998; Trump & Brucks 2011). Whilst widely accepted, this concept of the extended self has been questioned as a masculine and Western metaphor (Belk 1988). Recent research in cross-cultural psychology (Heine et al. 2009) has also suggested that the similarity/attraction effect where we are most attracted to people similar to ourselves is weaker in non-Western cultures: this suggests the appeal of a brand with a personality perceived as similar to ours could also be weaker in non-Western cultures.

Additionally, extensive research from cross-cultural psychology suggests that the nature and structure of the self is influenced by cultural contexts (e.g. Markus & Kitayama 1991): for example, individuals in a collectivistic culture tend to construct a self that is more interdependent than those individuals from individualistic cultures. However, the majority of research on self-brand congruity has been conducted in Western cultural contexts and particularly in the United States with few studies exploring the impact of culture on the relationship between perceptions of the self and perceptions of the brand. Additionally, as cognitive consistency of the self is

less important in collectivistic cultures (Triandis 2001), the effects of self-brand congruity may also be limited in these cultural contexts.

Furthermore, Ng and Houston (2006) suggested that those with independent self-views will find it easier to access abstract brand associations due to emphasizing the traitedness of behaviour and seeing the self as separate from context. This is particularly crucial when brand personality (a set of human characteristics associated with a brand) is measured with a set of abstract attributes as developed by Aaker (1997) originally based on the Big Five theory of personality.

As possessions are often perceived as part of the extended self (Belk 1988), one form of the expression of individuality and uniqueness is through the selection and use of products and brands. Expressing uniqueness via consumption behaviour is a safe way to achieve a different sense of being without damaging an individual's sense of social assimilation (Ruvio 2008). However, empirical research for scales used to measure need for uniqueness (Tian, Bearden, & Hunter 2001) has mainly been conducted in the United States, which also supports its inclusion into this research.

Material and methods

The present study builds on and replicates the work of Sung and Choi (2010) by interviewing consumers (n=5000) in 11 countries across North America, Europe, Asia and Africa. The survey data was collected in collaboration with a commercial online research sample provider with quotas to ensure the sample reflected the demographic profile of each country. Each respondent rated themselves and two global self-expressive brands (Nike and Adidas) on a list of personality attributes, followed by an evaluation of how much they liked the brand and how likely they would be to purchase it if they were shopping for sports clothing. In addition, consumers were administered scales assessing their the self-construal type (Singelis 1994) as well as scales for consumer need for uniqueness (Ruvio et al. 2008) and material values (Richins 2005) to control for the potentially confounding effect of culture-independent individual level psychological determinants of purchase behaviour.

The aim of this research was to understand whether brands with personality traits congruent with consumers' self-concept evaluated more positively than brands with incongruent personality traits and how this might vary in different countries. Additionally, the research also aimed to uncover what role self-construals and consumer need for uniqueness play in these brand evaluations.

Results and discussion

On a total level, the study replicates findings from existing literature with self-brand congruency and appeal of a brand being good predictors of purchase intent across all countries studied. The results suggest that brands with distinct personality traits congruent with consumers' self-concepts are evaluated more positively than brands with incongruent personality traits across cultures. However, the findings also suggest that self-brand congruency effects are significantly less salient in China and India where interdependent self-construals are more prevalent than independent ones. This supports indications from the existing literature that there might be less emphasized need for self-consistency in these cultural contexts. Overall, higher levels of congruency were found to be linked with independent self-construals across all countries which suggests a more salient self-concept is beneficial for the self-brand congruency concept. Furthermore, while independent self-construals are strongly linked with higher levels of consumer need for uniqueness across countries, self-brand congruency is still the best predictor of positive brand evaluations.

Conclusions

The findings suggest the predictive ability of commercial brand personality measurement could be considerably improved by incorporating consumers' self-evaluations into the research. This type of measurement also works better for consumers with independent self-construals because it is a better fit with how they think about themselves. However, the underlying concept does not

work as well for certain big emerging markets. This fundamental issue with this type of measurement has potentially significant practical implications for marketers.

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1.4 Individual Papers: Go Get It: Golden Strategies for Goal Pursuit

Room: El Capistrano

Chair: Luxi Shen, University of Chicago

Be Smarter and Fitter: The Influence of Perceived Goal Progress on Consumer Perception and Preference for Multifinal versus Unifinal Means

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William M. Hedgcock, University of Iowa, USA

Motivation

Consumers often choose between products that satisfy a single goal (a nutrition bar for weight control) and products that satisfy multiple goals (a nutrition bar for both weight control and mental acuity). Since single products can serve multiple functions, marketers need to decide whether to position their product as a means to satisfy either a single goal or multiple goals. The present research explores how perceived goal progress affects the way people construct various goals and how this influences their perception and preference for multifinal versus unifinal means.

Theoretical Background

Goal system theory posits that goals are organized into associative structures, whereby a certain goal is interconnected to its corresponding means of attainment as well as to alternative goals (Kruglanski et al. 2002). For example, the goal of losing weight may be connected to the means of doing physical exercises and the goal of enjoying tasty foods. According to the structural property of goal systems, a single means can be linked to a single goal (unifinal means) or multiple goals (multifinal means). Furthermore, research indicates that the choice between multifinal and unifinal means depends on the preference for associative strength versus value (Orehek et al. 2012).

As the use of multifinal means can serve alternative goals in addition to a focal goal, other things equal, people seek out multifinal means to maximize overall value (Orehek et al. 2012). However, a dilution model of self-regulation (Zhang, Fishbach, and Kruglanski 2007) indicates that the associative strength between a means and each individual goal is weakened as the number of goals linked to the means increases. Thus multifinal (vs. unifinal) means are perceived as less effective for attaining each goal. However, because of this trade-off between value and instrumentality, we expect that preference for means may depend on situational factors, such as perceived goal progress. We develop our hypothesis on how perceived goal progress affects the preference for multifinal versus unifinal means based on action identification theory.

Action identification theory posits that individuals can construe the same action at different levels of abstraction (Vallacher and Wegner 1985). Furthermore, it contends that individuals adopt lower-level identities to the extent that actions are complex, difficult, or unfamiliar (Vallacher and Wegner 1987), suggesting that people may construe goals at lower levels as they perceive lesser progress. Förster (2009) has examined the influence of abstract (global) versus concrete (local) processing on people's perception of the relation between objects. He showed that global (vs. local) processing leads people to focus on structural relations between objects, thus enhancing a search for similarities and inclusion processes. Based on this research, we hypothesize that greater perceived goal progress will lead people to construe multiple goals in a more inclusive way, perceiving them as more similar to each other.

We further expect that perceived goal progress will subsequently influence the preference for multifinal versus unifinal means by affecting how people structure goals. According to Zhang et al.'s (2007) study, dilution effects are undermined when goals linked to a single means are similar to each other. If inclusive structures of goals resulting from greater progress allow people to perceive multifinal means as instrumental as unifinal means to each individual goal, we predict that people will prefer multifinal means to unifinal means to maximize overall value.

Methodology

We examined the direct effects of unifinal versus multifinal means on the perception of means (Study1), the influence of goal progress on the perception and preference for multifinal versus unifinal means (Study2), and the effect of goal progress on the way people construct goals (Study3).

Study1

Participants read an article on the benefits of regular exercise. Depending on condition, the article described regular exercise to be vital for achieving either fitness goals (unifinal means) or both fitness and academic goals (multifinal means). Results showed that compared to participants in the multifinal means condition (M=5.24), those in the unifinal means condition considered regular exercise more effective for achieving fitness goals (M=6.30; $F(1,75)=13.07$, $p<.01$).

Study2

Participants were asked to indicate the amount of time they spent exercising over the past week either in a wide scale (12-hour endpoint) or narrow scale (60-minute endpoint). As predicted, participants in the narrow scale condition reported greater perceived progress towards their fitness goal (M=4.13) than those in the wide scale condition (M=2.51; $F(1,74)=15.55$, $p<.01$). Next, participants reported their preference for nutrition bars and their effectiveness for attaining fitness goals. One bar was instrumental to primarily managing weight, whereas the other was instrumental to both managing weight and facilitating cognitive functions. Compared to participants in the low progress condition, participants in the high progress condition had a greater preference for multifinal means (M=3.57 vs. M=4.97; $F(1,74)=10.30$, $p<.01$). Moreover, participants in the high progress condition did not rate either means as more effective for achieving their fitness goals ($t(38)=.66$, $p=.51$), whereas participants in the low progress condition rated the unifinal means relatively more effective than multifinal means ($t(36)=-3.75$, $p<.01$).

Study 3

To manipulate goal progress, we provided participants with an article on Americans' workout habits. Depending on goal progress conditions, the article said that the majority of Americans exercise more than five days (low progress) or less than two days (high progress) a week. Then, participants classified 30 behaviors into groups that serve the same goals. Participant in the high progress condition reported greater progress toward their fitness goals (M=4.52 vs. M=3.28; $F(1,56)=8.75$, $p<.01$) and also classified the behaviors in more inclusive ways using a smaller number of goals (M=3.31 vs. M=3.93; $F(1, 56)=7.44$, $p<.01$) than participants in the low progress condition.

Contributions

Whereas goal system theory assumes that the associative strength between goals and means is determined by the number of links, we show that the associative strength is malleable and dependent on goal progress. This finding extends our understanding of people's perception of means and the interconnected structure of goals. The research also helps marketers better position their products. If marketers wish to target customers who have made sufficient progress, they should emphasize overall value by framing their products as multifinal means rather than as unifinal means.

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Goal Disengagement Via "Vicarious Affect": Why Visualizations of an Ideal Self Demotivate Consumer Behavior

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Empirical evidence in the consumer literature suggests that using imagery-inducing persuasion tactics yields various benefits. More specifically, visualizing product use and benefits improves consumer recall, enhances brand evaluations and purchase intentions (Escalas 2007; Petrova & Cialdini 2005; Zhao et al. 2011). However, little attention has been paid to the motivational outcomes of goal visualizations in the consumer field. One important way in which people visualize their futures is by envisioning themselves reaching a self-relevant goal, conceptualized as an ideal end-state to which they aspire (Markus & Nurius 1986). In the present research, we investigate how imagining oneself having attained an important self-goal influences goal congruent actions and choices, and demonstrate that mental imagery can ironically impair consumer self-regulation.

In the broader mental imagery literature (specifically in education and sport psychology), it is generally agreed that visualizations of task or goal completion enhance motivation and performance (e.g. mental rehearsals improve athletes' performance and advance students' academic achievements) (e.g. Mamassis & Doganis 2004; Oyserman et al. 2004). While the benefits of mental imagery are well documented, relatively little is known about the processes that drive the effect. Past evidence suggests that such mechanisms are cognitive or motivational in nature (Oettingen et al. 2009; Pham & Taylor 1999). Furthermore, in recent years, new evidence suggested that mental imagery is not always beneficial, and while some visualizations improve performance, others have no reliable effects on self-regulation (e.g. Pham & Taylor 1999; Vasquez and Buehler 2007). In the present research, we first demonstrate that not only are some visualizations less beneficial than others, but that mental imagery can actually impair self-regulation. We also identify an additional process (i.e. affective) that explains how mental imagery influences consumer choice and behavior.

Study Hypotheses and Rationale

In the present research, we provide evidence that visualizing the achievement of a self-relevant goal can impair consumer self-regulatory tendencies by inducing feelings of self-satisfaction, thereby creating exaggerated perceptions of progress towards the goal, and ultimately leading to premature goal disengagement (Fishbach & Dhar 2005). However, this ironic effect is contingent on how the goal is visualized – namely it is only apparent when envisioning goals in abstract not concrete terms. More specifically, envisioning the attainment of goals in an abstract way (e.g., achieving one's ideal body appearance in a general sense) triggers a focus on desirability rather than feasibility concerns (Trope et al. 2007), whereby the individual vicariously experiences the end state (e.g., life as a beautiful individual). This assimilation process enhances feelings of self-satisfaction, which are used to infer greater progress towards the goal, which ultimately demotivates goal-congruent action. Conversely, envisioning the attainment of the same goals in a concrete way (e.g., achieving one's ideal body appearance by losing 10 lbs.) focuses attention on feasibility issues (i.e. what still needs to be done to reach the goal), which makes salient the discrepancy between one's current and desired state. This contrast effect should generate feelings of self-dissatisfaction, signaling the need for greater progress, and thereby motivate goal-congruent behavior.

Study Methods and Results

We have completed three experiments to test our propositions. In Study 1, we showed that, compared to control and concrete-goal conditions, participants who were asked to envision the attainment of their ideal body appearance in a general sense subsequently spent less time engaging in a second exercise task (e.g. visualizing doing sit-ups, push-ups, etc.) (M_{viz}=59.70; $M_{control}$=73.53, p<.05), providing preliminary evidence that visualizing goals abstractly can demotivate goal-congruent activities. On the other hand, mental imagery of goal attainment viewed in concrete terms encouraged participants to spend more time on the subsequent mental exercises, but not to a significant level (p<.10). In Study 2, participants engaged in the same initial visualization task as in study 1, and in an ostensibly unrelated study, reported their purchase intentions for various healthy consumer goods. Mediational analyses confirmed

that self-satisfaction and perceived progress (in respective order) accounted for the relationship between abstract (concrete) mental imagery and lower (higher) interest in purchasing healthy goods (ps<.05). Finally, in Study 3, a moderation approach was used to further confirm our affect-based mechanism. Our findings revealed that visualizing achieving professional goals in an abstract sense reduced intentions to look for internships or participate in future case competitions (i.e., behaviors that facilitate professional achievement). Importantly, this finding was only present when subjects focused on their feelings during the visualization task, not when they instead focused on the content of the mental simulation ($M_{feeling}$=-.30; $M_{content}$=.10, p<.05). Further, concrete goal visualizations increased participants' interest in goal-congruent behaviors when focusing on feelings rather than imagery content, however this effect was modest in size (p>.10). In sum, our studies provide consistent evidence that visualizing the achievement of goals in abstract terms can actually impair self-regulation and goal-congruent decisions. In contrast, imagining the achievement of goals in concrete terms had less consistent, statistically unreliable, positive effects on goal related behaviors.

Contributions and Future Research

Our findings contribute to the literature in at least three ways. First, while past consumer research on mental imagery has typically examined how visualizations of product use and benefits influence consumer judgments, we provide evidence that mental imagery also has motivational effects on consumer self-regulatory behaviors and decisions, and that these effects can be negative. In fact, unlike most visualization studies which advocate the merits of mental imagery, visualizing goals in abstract terms can ironically harm goal pursuit initiatives. Second, we specify a distinct, affective mechanism explaining how visualizations influence consumer choice and behavioral intentions. Our results suggest feelings of self-satisfaction that follow abstract mental imagery are inferred as signals of progress towards the goal, which in turn cause goal disengagement. These findings contribute to the goal literature by providing evidence that perceptions of progress do not necessarily result from cognitive or perceptual processes, but rather can be inferred from one's affective state. Consistent with the feelings-as-information perspective (Schwarz & Clore 1983), our mediation/moderation evidence provides empirical support that positive affect, more specifically feelings of self-satisfaction, not only derive from perceptions of goal completion, but can also inform future progress needs (e.g., Carver 2003). Finally, these results have noteworthy implications for marketing practitioners. For instance, our findings imply that imagery-inducing ads should avoid stimulating abstract mental imagery because such a strategy could backfire and demotivate subsequent consumer behavior directed at acquiring the advertised product or service. In comparison, concrete visualizations are less likely to demotivate consumers.

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How Do Functional Innovations Affect Goal Pursuit?
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A frequent practice in marketing is the introduction of products with new functionality; that is, a product is modified with attributes that afford consumers with additional opportunities for action (Dourish 2001; Ziamou and Ratneshwar 2003). Such innovations in functionality make a novel set of benefits available that support one or more functional goals, even if the base product or functional components are not themselves new to the market (Ziamou and Ratneshwar 2003). Examples include functional foods (e.g. omega-3 ice cream) and green products (e.g. natural detergents) that provide benefits over their traditional counterparts, and which represent substantial portions of their respective consumer markets (Price Waterhouse Coopers 2009).

The present research examines how functional innovations may unexpectedly and ironically undermine the very goals their novel functionality is intended to support. Although prior research has deeply studied factors which influence preference for (Hirschman and Holbrook 1982, Naylor, Droms, and Haws 2009, Park, Milberg, and Lawson 1991) and categorization of (Moreau, Markman and Lehmann 2001; Moreau, Lehmann, and Markman 2001) functional innovations, research is sparse examining the downstream

consequences of consuming these products. We propose a model consistent with passive goal-guidance (Laran and Janiszewski 2009) in which consumption of a functional innovation passively activates and spontaneously releases relevant utilitarian goals, followed by involuntary emergence of hedonic goals (Carlson, Meloy, and Miller 2012) that subsequently operate outside of awareness to guide behavior. For example, consumption of functional foods (eco-products) primes and releases health (environmental) goals, thereby activating hedonic goals that increase engagement in less healthy (environmentally responsible) consumption. The result is a so-called "boomerang" that undermines overall utilitarian goal progress and the functional benefits of the utilitarian product. Furthermore, we propose a method to interrupt this process and thereby mitigate the "boomerang" by priming a utilitarian goal beforehand—which re-enforces and precludes release of the functional goal.

The results of six real behavior and scenario studies support the proposed model and intervention, while ruling out alternative explanations. Study 1 explored in a real-behavior context whether consumption of a functional innovation undermines pursuit of the functionally relevant goal. A 2 (Functional/Non-Functional) group design was employed. As part of a "taste test" cover story, participants first consumed a real pre-packaged cookie labeled as either "chocolate chip cookie" (control) or "chocolate chip cookie with antioxidants" (functional innovation) and reported product evaluations. Following a brief distractor task, participants next spent exactly fifteen minutes watching trailers of upcoming movies. During this time, each participant had access to a pre-measured container of M&Ms candy. The amount of M&Ms consumed served as the primary measure of hedonic goal activation. A significant effect of product functionality emerged. Consistent with our predictions, individuals consuming a functional innovation subsequently ate more grams of candy. Subsequent studies explore the passive goal-balancing process that underlies this effect.

Study 2A was conducted to i) evaluate whether functional innovations influence goal pursuit in the form of subsequent product choice, ii) provide process evidence for hedonic goal activation and utilitarian goal suppression, and iii) rule out conscious licensing (Fishbach and Dhar 2005) of chronic utilitarian goals or a health "halo" (Chandon and Wansink 2007) as alternative explanations. Participants first imagined consuming at a restaurant a healthy (fruit yogurt) or unhealthy (chocolate cake) dessert that was either functional (with anti-oxidants and omega-3s) or non-functional, then provided choices, likelihood ratings, and health ratings for other menu items. A significant effect of functionality upon product choice confirmed our predictions. Individuals consuming a functional innovation chose more hedonically satisfying menu items, regardless of manipulated healthiness of the base product. The importance of health in menu choices was calculated for each individual by regressing consumption likelihood against health ratings. As predicted, participants consuming a functional (vs. non-functional) dessert placed less weight on health when selecting menu choices, regardless of product base. Furthermore, alternative explanations of satiating chronically salient health goals or general inferences of product health are inconsistent with the pattern of results observed for base product healthiness. Study 2B supported generalizability by providing consistent results among an adult, non-student population.

Study 3 provides further evidence for the proposed process by demonstrating that prior activation of a utilitarian (vs. hedonic) goal moderates the effect of functionality upon subsequent consumption, and in doing so introduces a method for "undoing" the functional boomerang. A 2 (Functional/Non-Functional) x 2 (Health Prime/Hedonic Prime) design was employed. Participants first completed a sentence unscramble task designed to prime either a utilitarian health or hedonic taste goal (Chartrand et al. 2008) before completing a restaurant scenario similar to studies 2A-B. As predicted, a significant two-way interaction emerged. Priming a health (hedonic) goal mitigated (enabled) the hedonic boomerang. Consistent with predictions, exposure to the functional food re-enforced a pre-existing health goal, thereby mitigating the release of that goal when the functional food was consumed. Thus prior utilitarian goal activation may inoculate consumers against the functional boomerang.

Studies 4A-B extended findings to the domain of environmental innovations. Study 4A replicated the results of study 3 in an eco-product category. Study 4B directly measured involuntary hedonic goal activation without soliciting conscious choice. Following consumption of a functional (non-functional) product, participants were exposed to a 15x18 letter word matrix containing an equal

number of utilitarian (e.g. "responsible") and hedonic (e.g. "convenient") words. As predicted, functionality significantly increased (decreased) the number of hedonic (utilitarian) words found in the puzzle, consistent with activation of a hedonic goal that subsequently guides attention outside of conscious awareness.

In summary, this research is, to our knowledge, the first effort to understand the downstream consequences of consuming functional innovations. Consumption of a functional innovation intended to support a goal is demonstrated to inhibit behavior supporting that functional goal. This unintended consequence occurs because the functional innovation spontaneously releases a utilitarian goal, resulting in the emergence of conflicting hedonic goals. Beyond theoretical contributions to the functional innovation and motivation literatures, this work has substantive implications for managers and consumer welfare, particularly given the focus of multiple (e.g. mobile technology, health food) industries upon product hybridization as a source of growth.

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The Uniqueness Heuristic: A Preference for Unique Options for a Single Goal

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When painting their bedroom, will homeowners select spring tulip red or beige? Would they make a different choice when painting their living room? This research explores people's preferences for unique versus non-unique choice options.

Previous research has examined several factors that contribute to a preference for non-unique options, including a desire to reduce risk (Simonson & Tversky, 1992), to make an easily justifiable choice (Shafir, Simonson, & Tversky, 1993; Simonson, 1989), and to conform to a perceived social norm (Asch, 1955; Simonson & Nowlis, 2000). In contrast, other research has documented people's need for uniqueness (Ariely & Levav, 2000; Berger & Heath, 2007; Tian & McKenzie, 2001), which leads to a preference for unique options.

In light of the existing research, we identify a "uniqueness heuristic" -- a stronger preference for unique options when choosing for a single goal than when choosing for multiple goals. We explain the uniqueness heuristic as the trade-off between multi-finality (i.e., how many goals one option serves) and instrumentality (i.e., how well one option serves each of the goals) in the cognitive network of goal system (Kruglanski et al., 2002; Zhang, Fishbach, & Kruglanski, 2007). According to our analysis, unique options appear highly instrumental to a few goals, whereas non-unique options appear less instrumental but can serve many goals.
We further predict a preference reversal: What people choose for each single goal alone differs from what they choose for all the single goals together. For example, people may choose a unique restaurant either to dine with friend A or to dine with friend B, but choose a non-unique restaurant to dine with both friends, A and B.

In seven studies involving different choice contexts, we tested the uniqueness heuristic with subtle and naturalistic goal activation, ruled out alternative explanations such as risk aversion, and explored the underlying mechanism.

In Study 1, we adopted the conceptual definition of uniqueness -- atypicality, that is, how remote one option is from the prototype of its category. Specifically, we designed a list of ice-creams with unique flavors (orange dark chocolate ice-cream and rosy vanilla ice-cream) and non-unique flavors (chocolate and vanilla). In the weeks around the Valentine's Day, we asked customers at a campus café to think of a female friend who might be telling her feelings to her crush and to choose an ice-cream for one of the following purposes: (single Goal A) to celebrate entering a new relationship, (single Goal B) to comfort receiving a rejection, and (multiple Goals A and

B) to either celebrate or comfort because the outcome is unknown yet. We found that the atypical (unique) ice-cream flavors were preferred in both single goal cases but the typical (non-unique) ice-cream flavors were preferred in the multiple goal case.

The rest of the studies experimentally manipulated the uniqueness of an option by configuring different choice sets. The same option can be of low frequency and thus appears unique in one choice set (e.g., a French restaurant among many Italian restaurants), but be of high frequency and thus appears non-unique in another choice set (e.g., the French restaurant among many other French restaurants). In Study 2, participants chose a restaurant for dinner with one friend (single goal) or five friends (multiple goals). We found a preference for the unique restaurant in the choice set (either one French restaurant among Italian restaurants or one Italian restaurant among French restaurants) for one friend but not for five friends.

Similarly, in Study 3, participants preferred a unique suitcase (either soft-sided among hard-sided, or hard-sided among soft-sided) for one upcoming trip (single goal) but not for multiple upcoming trips (multiple goals).

In Study 4, we examined choices with real consequences. Participants chose and sent a card to their family members. This experiment again confirmed the uniqueness heuristic and suggested a preference reversal: Participants preferred the uniquely-shaped card for their aunt alone or for their uncle alone, but not for both their aunt and uncle.

In Study 5, we ruled out risk aversion as an alternative explanation by comparing the choice for one goal versus the choice for multiple goals. Participants selected the unique wine (either Californian among Australian or Australian among Californian) when shopping for one future occasion (single goal) but not when shopping for one out of four potential future occasions (multiple goals). The real outcome risk for experiencing a unique option was equal in both conditions, and thus our finding suggested that the uniqueness heuristic cannot be explained by risk aversion.

In Study 6, we adopted a 2 (number of goals: single vs. multiple) x 2 (goal content: special vs. normal) between-subjects design to test sematic priming as an alternative explanation. Participants elicited one occasion (or four occasions), either special or normal, at which they would open a red wine, and selected a wine from the selection in Study 5. We found evidence for the uniqueness heuristic in the case of both special events and regular dinners, and no effect for the content (i.e., special or not) of the event. This finding suggested a semantic association between a unique option and a single goal is unlikely to underlie the uniqueness heuristic.

Finally, in Study 7, we examined the underlying mechanism of the uniqueness heuristic. Participants chose apples, either red among green or green among red, for one person (single goal) or for one of six people (multiple goals) and made predictions on how much the apples would be enjoyed either before or after choosing. We found that participants used the uniqueness heuristic when choosing before predicting but not after. We also found that participants based their choice for single goals on their predictions regardless of whether they chose before or after predicting and based their choice for multiple goals on their predictions only when they chose after predicting. These findings confirmed the uniqueness heuristic, revealed its mechanism, and suggested that thinking about the instrumentality of each option before choosing can prevent the preference reversal caused by the uniqueness heuristic.

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1.5 Symposium: For Love and Money: Sex, Relationships, and Financial Decisions
Room: Concepcion

Chair: Kristina Durante, The University of Texas, San Antonio, USA

Money and the Monthly Ovulatory Cycle: Hidden Hormonal Influences on Women's Financial Decisions
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Vladas Griskevicius, The University of Minnesota, USA

Stephanie M. Cantu, The University of Minnesota, USA

Jeffry A. Simpson, The University of Minnesota, USA

People make financial decisions multiple times each day. In the current research, we examine whether women's financial decisions might be influenced by a universal biological event that occurs for all women – the monthly ovulatory cycle. We examined the underlying mechanism behind why women's financial choices might systematically change in the 1-week ovulatory phase of the menstrual cycle.

Emerging research in evolutionary biology shows that women's psychology and behavior changes when they are fertile—the days around ovulation. These hormonally-regulated shifts have traditionally been believed to be linked to mating. For instance, women's mate preferences non-consciously shift around ovulation toward desiring men who show classic biological indicators of male genetic fitness, such as facial symmetry and social dominance (Gangestad and Thornhill 2008).

In addition to successfully attracting a mate, enhancing reproductive fitness also involves successfully outcompeting same-sex individuals for status and access to mates (Campbell 2004; Kenrick et al. 2010). Hence, ovulation is not only expected to alter women's mating psychology; it should alter women's competitive psychology as well. We refer to the idea that ovulation should amplify women's competitive tendencies as the *ovulatory competition hypothesis*.

Although relatively little research has considered how the ovulatory cycle affects outcomes not directly related to mating, the ovulatory competition hypothesis has received some initial support. For example, near ovulation women are more likely to choose competitive compensation schemes and place higher bids in competitive auctions (Buser 2012) and derogate other women through gossip (Fisher 2004). Experiments have also found that ovulation leads women to desire sexier clothing not to look sexier for men, but to outcompete and be more attractive than other women (Durante et al. 2011).

The *ovulatory competition hypothesis* suggests that during the ovulatory phase women should have a higher appetite for risk and confrontation. But the increased competitiveness associated with ovulation should be directed toward some types of individuals rather than others. Specifically, the fertile phase of the cycle should have different effects on women's decision making depending on whether those decisions have consequences for other women versus men.

In the primate literature, for instance, ovulation leads females to become more aggressive and confrontational specifically against other females but not males (Wallen 2000; Mallow 1981). In humans, ovulating women derogate other women not men (Fisher 2004). The notion that ovulation should amplify competition against same-sex individuals makes sense from the perspective of reproductive fitness, which suggests that individuals should seek to outcompete individuals of the same sex in order to gain access to desirable individuals of the opposite sex.

We predicted that ovulating women should make financial decisions that make themselves better off relative to other women, but not necessarily relative to other men. When decisions directly impact another person, ovulation should have a different effect on women's decisions depending on the sex of the impacted person, with ovulating women becoming more competitive with other women but not men.

Study 1 tested this prediction by having ovulating and non-ovulating women play the Dictator Game using real money. Female participants were assigned to the role of Proposer in the Dictator Game. They were given $5, and their task was to dictate how to split

the money between themselves and another person. The women would get to keep the amount of money they left for themselves, and this amount was not contingent on the other person, meaning that they could give as much or as little as they wanted.

Women were paired in the game either with a woman or a man. Ovulation had profound effects. When playing with a man, ovulating women gave over 60% of their endowment, meaning that some women gave more than half of the money to the man. In contrast, when playing with a woman, ovulating women's giving went down to 27% of their endowment. Ovulation drastically altered women's decisions commonly studied in behavioral economics. When playing the dictator game with real money, ovulating women gave substantially less money to other women, while giving substantially more money to men.

Study 2 tested the prediction that ovulation should bias women's decision making to maximize relative rather than absolute gains in relation to other women. Women made product choices between an option that would maximize their individual gains versus an option that would enhance competition with other women. For example, women chose between receiving a $25,000 car or a $20,000 car. However, if women chose the more expensive $25,000 car, other women would get even nicer $40,000 cars. If women chose the cheaper $20,000 car, other women would get even less desirable $12,000 cars. Thus, women's choices involved either taking more for oneself regardless of what others received or taking relatively more compared to other women.

As predicted, ovulating women were more likely to choose the competitive option for each product. Further, as fertility increased, so did the probability of selecting the competitive choice.

Study 3 examined how ovulatory effects might be suppressed. Whereas reproductive effort is linked to the ovulatory hormone estrogen and is associated with increased risk-taking, parenting effort is linked to the hormone oxytocin, which is associated with nurturance, generosity, and trust (Kosfeld et al. 2005). Given the established biological trade-off between parenting and reproductive effort, we hypothesized that priming ovulating women with baby faces might dampen reproductive effort and, therefore, suppress the ovulatory effect on risky decision making. To test this prediction, women made choices on incentive compatible measures of risky gambles and investment portfolio allocations that differed in risk.

Findings replicated previous research whereby ovulation increased risk on both incentive compatible gambles and investment portfolio allocations. Moreover, when women were exposed to photographs of babies the ovulatory phase did not increase financial risk preferences supporting the idea that photographs of babies suppressed the reproductive effort believed to be amplified by sex hormones associated with ovulation.

This research demonstrates robust novel effects regarding how ovulation changes women's decision making and provides managerial implications for how to correct for these ovulatory biases.

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The Financial Consequences of Too Many Men: Sex Ratio Effects on Spending, Saving, and Borrowing
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People make financial decisions multiple times each day. In the current research, we examine whether women's financial decisions might be influenced by a universal biological event that occurs for all women – the monthly ovulatory cycle. We examined the

underlying mechanism behind why women's financial choices might systematically change in the 1-week ovulatory phase of the menstrual cycle.

Emerging research in evolutionary biology shows that women's psychology and behavior changes when they are fertile—the days around ovulation. These hormonally-regulated shifts have traditionally been believed to be linked to mating. For instance, women's mate preferences non-consciously shift around ovulation toward desiring men who show classic biological indicators of male genetic fitness, such as facial symmetry and social dominance (Gangestad and Thornhill 2008).

In addition to successfully attracting a mate, enhancing reproductive fitness also involves successfully outcompeting same-sex individuals for status and access to mates (Campbell 2004; Kenrick et al. 2010). Hence, ovulation is not only expected to alter women's mating psychology; it should alter women's competitive psychology as well. We refer to the idea that ovulation should amplify women's competitive tendencies as the *ovulatory competition hypothesis*.

Although relatively little research has considered how the ovulatory cycle affects outcomes not directly related to mating, the ovulatory competition hypothesis has received some initial support. For example, near ovulation women are more likely to choose competitive compensation schemes and place higher bids in competitive auctions (Buser 2012) and derogate other women through gossip (Fisher 2004). Experiments have also found that ovulation leads women to desire sexier clothing not to look sexier for men, but to outcompete and be more attractive than other women (Durante et al. 2011).

The *ovulatory competition hypothesis* suggests that during the ovulatory phase women should have a higher appetite for risk and confrontation. But the increased competitiveness associated with ovulation should be directed toward some types of individuals rather than others. Specifically, the fertile phase of the cycle should have different effects on women's decision making depending on whether those decisions have consequences for other women versus men.

In the primate literature, for instance, ovulation leads females to become more aggressive and confrontational specifically against other females but not males (Wallen 2000; Mallow 1981). In humans, ovulating women derogate other women not men (Fisher 2004). The notion that ovulation should amplify competition against same-sex individuals makes sense from the perspective of reproductive fitness, which suggests that individuals should seek to outcompete individuals of the same sex in order to gain access to desirable individuals of the opposite sex.

We predicted that ovulating women should make financial decisions that make themselves better off relative to other women, but not necessarily relative to other men. When decisions directly impact another person, ovulation should have a different effect on women's decisions depending on the sex of the impacted person, with ovulating women becoming more competitive with other women but not men.

Study 1 tested this prediction by having ovulating and non-ovulating women play the Dictator Game using real money. Female participants were assigned to the role of Proposer in the Dictator Game. They were given $5, and their task was to dictate how to split the money between themselves and another person. The women would get to keep the amount of money they left for themselves, and this amount was not contingent on the other person, meaning that they could give as much or as little as they wanted.

Women were paired in the game either with a woman or a man. Ovulation had profound effects. When playing with a man, ovulating women gave over 60% of their endowment, meaning that some women gave more than half of the money to the man. In contrast, when playing with a woman, ovulating women's giving went down to 27% of their endowment. Ovulation drastically altered women's

decisions commonly studied in behavioral economics. When playing the dictator game with real money, ovulating women gave substantially less money to other women, while giving substantially more money to men.

Study 2 tested the prediction that ovulation should bias women's decision making to maximize relative rather than absolute gains in relation to other women. Women made product choices between an option that would maximize their individual gains versus an option that would enhance competition with other women. For example, women chose between receiving a $25,000 car or a $20,000 car. However, if women chose the more expensive $25,000 car, other women would get even nicer $40,000 cars. If women chose the cheaper $20,000 car, other women would get even less desirable $12,000 cars. Thus, women's choices involved either taking more for oneself regardless of what others received or taking relatively more compared to other women.

As predicted, ovulating women were more likely to choose the competitive option for each product. Further, as fertility increased, so did the probability of selecting the competitive choice.

Study 3 examined how ovulatory effects might be suppressed. Whereas reproductive effort is linked to the ovulatory hormone estrogen and is associated with increased risk-taking, parenting effort is linked to the hormone oxytocin, which is associated with nurturance, generosity, and trust (Kosfeld et al. 2005). Given the established biological trade-off between parenting and reproductive effort, we hypothesized that priming ovulating women with baby faces might dampen reproductive effort and, therefore, suppress the ovulatory effect on risky decision making. To test this prediction, women made choices on incentive compatible measures of risky gambles and investment portfolio allocations that differed in risk.

Findings replicated previous research whereby ovulation increased risk on both incentive compatible gambles and investment portfolio allocations. Moreover, when women were exposed to photographs of babies the ovulatory phase did not increase financial risk preferences supporting the idea that photographs of babies suppressed the reproductive effort believed to be amplified by sex hormones associated with ovulation.

This research demonstrates robust novel effects regarding how ovulation changes women's decision making and provides managerial implications for how to correct for these ovulatory biases.

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Savers are Sexier than Spenders, Unless You're Craving Excitement

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Who is more appealing as a romantic partner: a saver or a spender? Presumably, savers have accumulated more financial resources than spenders, and prior work suggests that financial resources can be important when judging potential mates (e.g., Griskevicius et al. 2007; Sundie et al. 2011). Thus, savers may generally prove more attractive than spenders. However, there is more to romance than money, and saving money might require missing out on some of the exciting (and expensive) aspects of life. Thus, when potential mates crave excitement, they may find spenders more attractive than savers. Our work examines the conditions under which people are attracted to savers versus spenders.

In Experiment 1, we examined whether savers are generally viewed as less exciting, but more attractive overall, than spenders. We presented all participants with a "target's" dating profile (female participants saw a male's profile, and vice versa), and manipulated how the target described his or her own spending habits. Participants were randomly assigned to one of nine conditions. In four Saving

conditions, the target said "I guess people would say I'm a big saver," "I love saving money," "I hate spending money," or "I have a hard time getting myself to spend money." In four Spending conditions, the target said "I guess people would say I'm a big spender," "I love spending money," "I hate saving money," or "I have a hard time getting myself to save money." In the Control condition, the target did not discuss his or her spending habits. Participants then reported how attracted they were to the target, and how exciting and adventurous they thought the target was. Regardless of how spending habits were described, savers were viewed as significantly more attractive than spenders. (Targets who did not discuss their spending habits were less attractive than savers, but more attractive than spenders.) Participants also viewed savers as significantly less exciting and adventurous than spenders. However, the present results suggest that interest in potential mates' financial resources may outweigh interest in potential mates' excitement level.

Of course, individuals may differ in the extent to which they are willing to sacrifice excitement for financial security. People who are especially prone to experience boredom may be less attracted to (potentially boring) savers. We tested this hypothesis in Experiment 2 by presenting participants with the same opposite-sex dating profile used in Experiment 1. The target described themselves as either a saver or a spender, and then participants reported their attraction to the target. Later, following unrelated tasks, participants completed Zuckerman's (1979) Sensation-Seeking Scale, which includes a 10-item Boredom Susceptibility subscale (BSS). The BSS identifies individuals who dislike repetitive experiences and dull people (e.g., "I prefer friends who are excitingly unpredictable"). Replicating Experiment 1, there was a significant main effect of the target's spending habits: savers were viewed as significantly more attractive than spenders. This main effect was qualified by a significant interaction between the target's spending habits and the participants' boredom susceptibility (see Figure 1). Participants who are not susceptible to boredom (1 SD below the BSS mean) found the saver to be significantly more attractive than the spender. However, participants who are very susceptible to boredom (1 SD above the mean) found the saver and spender equally attractive. Thus, people who are especially prone to experience boredom appear to have less tolerance for the boredom associated with savers.

We next examined whether situationally inducing a desire for risk would also decrease the natural appeal of savers. Prior research suggests that one's construal level (Trope and Liberman 2003) may influence one's taste for risk. Specifically, prior work suggests that a high-level construal (thinking abstractly) increases attention to the desirability of outcomes, whereas a low-level construal (thinking concretely) increases attention to the feasibility of outcomes (Sagristano, Trope, and Liberman 2002). Thus, inducing a high-level construal may increase the desire for high-risk, high-reward outcomes and may also increase attraction to (risk-seeking) spenders. To test whether construal level affects risk preferences, we conducted a pre-test where we first induced a low- or high-level construal mindset using a word categorization task validated by Fujita et al. (2006). Participants were then given a hypothetical choice between receiving $100 for sure or flipping a coin to win $200 or $0, and asked which alternative their ideal romantic partner would prefer. As predicted, high-level construers prefer a partner who is willing to take more risk for greater reward than low-level construers.

Experiment 3 examined whether inducing a high-level construal mindset would decrease attraction to savers and increase attraction to spenders. Participants were first induced to adopt either a high- or low-level construal mindset using the word categorization task (Fujita et al. 2006). We then presented the opposite-sex dating profile, manipulating whether the target described themselves as a "saver" or a "spender," and asked participants to report how attracted they were to the target. Consistent with our previous experiments, low-level construers found savers to be significantly more attractive than spenders (see Figure 2). (Prior work suggests that a low-level construal mindset tends to be the default mindset; Malkoc, Zauberman, and Bettman 2010). However, consistent with our pre-test, and the notion that abstract thinking increases the desire for risk, a high-level construal mindset eliminated the natural preference for savers.

Although prior research suggests that episodes of lavish spending can help to attract mates (e.g., Griskevicius et al. 2007), our work suggests that people who chronically save are generally more attractive than people who chronically spend. However, there is more to

romance than financial security. Dispositional and situational forces that reduce the tolerance for boredom or increase the desire for risk also increase the appeal of spenders. Thus, savers are generally more attractive than spenders, but only if potential mates do not crave excitement.

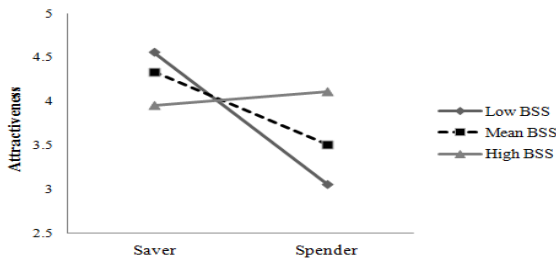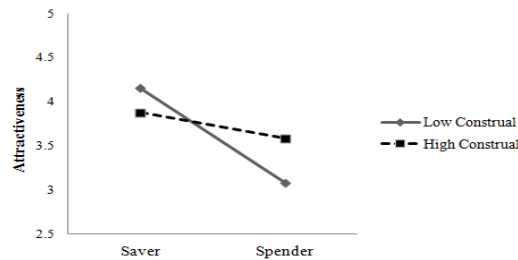**Figure 1:** Spending habits by BSS

Figure 2: Spending Habits by Construal

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The Functionality of Risk-Taking: Mating Motivation, Relationship Status, and Sex Differences

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The degree to which people are comfortable taking financial risks is an important piece of information for researchers in many fields. However, little work has looked at the impact of important social variables, such as relationship status, on risk-taking. It makes sense for single men to engage in financially risky behaviors when seeking mates for several reasons: Risky behaviors can signal to potential mates one's genetic fitness, may facilitate success in status competition with other men, and may be a necessary strategy for gaining sufficient resources to offer potential mates. Women who choose risk-taking males as mates thus increase their odds of obtaining good genes and resources for their offspring. When it comes to short-term mates, women tend to prefer risk-prone over risk-averse men (Bassett and Moss 2004; Kelly and Dunbar 2001).

Once in a relationship, however, the same financial riskiness may be problematic for males, potentially suggesting to partners an interest in (extra-curricular) mate-seeking and placing in jeopardy existing resources available to the partner and the relationship. In line with this argument, Basset and Moss (2004) found that, though men and women are attracted to riskiness in potential casual partners, neither sex is attracted to risk-takers in the context of marriage. Similarly, Sylwester and Pawlowski (2010) showed that women rated risk-avoiders as more attractive than risk-takers for long-term, but not short-term, sexual partners. In addition, correlational data suggests that factors related to life stage, such as age, desire for marriage, and parenthood are negatively correlated with risk-taking (Willoughby and Dworkin 2009). These data suggest mating motives may elicit very different reactions depending on whether the participant is currently in a long-term relationship.

In the current research, we employed guided visualization scenarios to activate either a mating motivation or no motivation in single and attached men and women. Experiment 1 asked participants whether they wanted to get a certain amount of money for sure (e.g. $100) or a chance to get more money accompanied by a chance of getting nothing (e.g. 50% chance of getting $200, and a 50% chance of getting $0). As predicted, mating motivation led single men to become more risky and attached men to become less risky. These results make sense in light of theory and previous research. Interestingly, women exhibited a very different pattern: mating motivation led attached women to become more risky.

Since men also find riskiness a positive trait in potential mates (Bassett and Moss 2004; Sylwester & Pawlowski 2010), there are several possible explanations for why women in relationships may be more risky when primed with a mating motivation. The first is that women may be using riskiness as a strategy for "mate-switching", trading up from their current partners to a higher quality mate. If this is the case, women who perceive themselves to be in subpar relationships should be the most risk-taking. Another possibility is that women engage in financial risk-taking because they have a "safety net" to fall back on. The wealthier one's partner is, the larger the financial safety net and the more risky one can be. The next two studies were designed to explore these two alternative hypotheses. Study 2 recruited women who were currently in relationships to be randomly assigned to the control or mating-motivation conditions. They were asked the same risk-taking questions as Experiment 1. They were also asked to rate the extent to which they agreed with statements about how wealthy their partner would be in the future, e.g. "my partner will be a good financial provider in the future", and "my partner will make a good future salary". A regression analysis revealed that women who perceived their partners to be poor in the future were the most risky, lending support to the mate-switching hypothesis.

Whereas Study 2 used a self-report measure of partner quality, Study 3 actually manipulated this variable. Study 3 also had the benefit of using an older population of mostly married women, rather than women who were still in the dating stages of their relationship. Partner quality was manipulated by asking participants to report their partner's annual income on a scale of "$50,000 or less" to "$300,000 or more" in $50,000 increments, or a scale of "$10,000 or less" to "$60,000 or more" in $10,000 increments. Previous research finds that, when participants respond toward the top or bottom of a scale, they tend to make corresponding inferences about their circumstances (Schwarz 1999). Thus, participants in the $300,000 condition tended to think their partners were relatively poor, while those in the $60,000 condition tended to think their partners were relatively wealthy. Participants then engaged in the same guided visualization scenarios and answered the same set of risk-taking questions as in the previous studies. Results show that mating-minded women primed to think their partners were poor took more financial risks than women primed to think their partners were rich.

Overall, results show that dating status affects when and why men and women take financial risks. These nuanced findings make sense in light of the cost-benefit ratios that men and women face when deciding whether to take risks for signaling value. The only result that needed further exploration was greater risk-taking by mating minded women in relationships. Thus, Studies 2 and 3 investigated potential mechanisms for this effect by proposing and testing two alternative hypotheses. Results suggest women may use risky behavior as a mate-switching strategy. Future research on financial risk-taking should take into consideration important social variables, such as relationship status and quality of the relationship.

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1.6 Individual Papers: Perceiving Time: The Malleability and Consequences of Time Perception

Room: Madero B

Chair: Nira Munichor, Hebrew University of Jerusalem

Do Tortoises Make Better Friends than Hares? Speed and Social Connection

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The pace at which we live our lives seems to be speeding up. Prior to the dawn of the machine era, speed any faster than a horse or a sailboat was impossible. Now we travel at the speed of airplanes, trains, and cars, and communicate at the rate it takes to click "send" on an email. This ever increasing speed facilitated by technological innovations is generally considered to be positive in our culture, as reflected in consumer products and advertisements. For instance, products such as smart phones and broadband Internet are promoted as helping speed up everyday tasks to ostensibly free up time for the things that are truly important to us. But does the speeding up of tasks actually allow for a slower paced enjoyment of the pleasures in life? Could the obsession with "fast" influence behavior as fundamental as the way individuals connect with each other?

The fundamental relation between social connection and subjective well-being has been well-documented (Diener & Seligman, 2002; Ryan & Deci, 2001). People are happiest when connecting with others, and least happy when engaged in individual activities (Csikszentmihalyi & Hunter, 2003; Kahneman, et al., 2004). Determining what factors influence people to connect with others is crucial in understanding how to increase consumers' well-being.

Activating the general concept of time has been shown to increase motivation for social connection (Mogilner, 2010), but time has multiple dimensions. For example, Carstensen and Frederickson (1998) focused on the amount of time left in life, demonstrating that those who view less time in their lives preferred to spend more time with close others. Speed is another critical dimension of time. Several previous studies have looked at the consequences of priming fast or slow speed on attitudes and behavior. For example, Zhong and DeVoe (2010) found that incidental exposure to fast food can make people generally more impatient, and inclined to prefer time-saving products. The effects of speed have also been studied in domains including subjective-time estimates (Zakay, Nitzan, & Glicksohn, 1983), purchasing behavior (Caldwell & Hibbert, 2002; Milliman, 1982, 1986), risk-taking behavior (Chandler & Pronin, 2012), and positive mood (Pronin & Jacobs, 2008; Pronin, Jacobs, & Wegner, 2008; Pronin & Wegner, 2006). To our knowledge, the current work is the first to examine how the implicit activation of the benefits of speed can influence emotions, preferences, and behavior in the domain of social connection.

Across five laboratory experiments, we examine how implicitly activating fast versus slow time systematically affects individuals' connection with others finding that focusing on fast can have a negative effect on social connection, in terms of feelings, time spent interacting, and content of interactions. Because implicitly activating fast time makes individuals focus on speeding up (e.g., Zhong & DeVoe, 2010) they feel rushed, which increases their inclination to seek efficiency and reduces their inclination to take time to connect with others. Implicitly activating slow time, however, makes individuals focus on slowing down (e.g., Milliman, 1982, 1986), and induces a state of calmness that allows individuals to relax and engage in activities that help satisfy their important need to belong.

In a pilot study, we manipulated speed and measured participants' subsequent emotions and experience of time. Participants viewed an advertisement for Starbucks coffee, and the slogan of the ad read, "Time to speed up?" in the fast condition, and "Time to slow down?" in the slow condition. The results reveal that compared to those in the slow condition, participants in the fast condition felt more stressed and experienced time as being more rushed.

The subsequent studies directly test the effect of fast and slow primes on social connection. Study 1 manipulated speed by asking participants to list benefits of either being fast or slow and then measured participants' feelings of interpersonal connection. The results show that when focused on the positive consequences of speeding up as compared to slowing down, participants generally felt less connected to others.

To then examine the effect of incidental exposure to speed on the extent to which people feel connected to another, Study 2 manipulated speed through background music tempo and measured participants' feelings of connection to an interaction partner. The

results demonstrate that compared to those who heard slow-tempo music, those who listened to fast-tempo music reported feeling less connected to their interaction partner.

To determine whether speed has the same effect on different types of social connection, Study 3 examined the effect of priming speed on connection among both strangers and friends. Participants were asked to make a cup of coffee, but the technology used to brew the coffee was either fast (instant coffee) or slow (French press coffee). After making a cup of coffee, participants interacted with another person who was either a friend, or a randomly-assigned stranger. The amount of social connection was measured by the amount of time participants spent talking to their partner. The results reveal that those in the slow condition interacted for more time than those in the fast condition, and this effect was especially strong among strangers.

Study 4 tested for the effect of speed on the quality or content of interpersonal interactions. Participants were asked to write a letter that would be delivered slowly (by postal mail) or quickly (by email), and the positivity of the letter was measured. The results show that compared to those in the fast condition, those in the slow condition wrote more positive letters, displaying a greater motivation to connect, and this effect did not differ by letter recipient or length.

Together, these results suggest that a greater focus on being fast (vs. slow) can have a detrimental effect on social connectedness by making people feel more rushed. So, even though products are developed and promoted to speed up obligatory tasks so as to give consumers more time to enjoy life, this increased focus on speed seems to carry through to impact behavior that is potentially most enjoyable—connecting with others.

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Enjoying the Stuff we Consume: It's Just a Matter of Time

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What makes the stuff we consume – from iPhones and kitchen gadgets to dinner parties and family vacations – enjoyable? This simple question may be of great interest to both researchers and lay people alike, given that the ultimate goal of many consumption experiences is, after all, to enjoy them (Frederick, Loewenstein, & O'Donoghue, 2002; Shiv & Fedorikhin, 1999). Of course, some products and events might seem objectively more pleasant than others; most people prefer fresh pints to skunky swill, and spending time with friends to making small talk with in-laws. In many situations, however, the *same* experience can be perceived as more or less enjoyable depending on our moods, drive states, and other contextual forces (see Lichtenstein & Slovic, 2006).

This talk highlights the diverse and powerful influence of one specific force – time. All consumption experiences necessarily occur within a temporal context, which here is defined as the dynamic combination of 3 components: duration, location, and orientation. First, it is impossible to consume something without the simultaneous flow of minutes and seconds, and thus how quickly or slowly time is perceived as passing can influence how enjoyable the experience seems ("duration": Studies 1-2). Second, people consume things in chronological sequence, such as meeting one's *first* speed-date or eating dessert at the *end* of a meal, and thus our sense of "when" we encounter something can influence how much we enjoy it ("location": Studies 3-5). Finally, our minds are not blind while we consume; rather, people keep rich histories of related experiences from the past and forecast similar experiences in the future. Accordingly, the extent to which we compare current consumption to recalled or imagined experiences can influence enjoyment in the present ("orientation": Studies 6-7). Empirical evidence for each component is reported below.

Studies 1-2: Duration

Although clock time is constant, psychological time is shaped by various factors. For example, people with greater capacities for attention and novelty-seeking perceive time more quickly (Block & Zakay, 1997), whereas people who feel socially rejected or physically exhausted perceive time more slowly (Twenge, Catanese, & Baumeister, 2003; Vohs & Schmeichel, 2003). Two studies tested an ubiquitous but unexplored dimension: the degree to which people value themselves over others. Indeed, time is "the most precious of all resources" and "surely the least replaceable" (Levine, 1997, p. 37). As such, people who feel entitled to material resources (Campbell et al., 2004) might also feel entitled to the precious resource of time. Confirming this possibility, participants who scored highly on trait entitlement (Study 1) or were primed to feel entitled (Study 2) perceived their time as more valuable. Compared to control, they thought that laboratory tasks took longer to complete and moved slower, and rated them as less enjoyable and as a greater waste of time. Thus, how much we enjoy a given experience depends on how quickly (enjoyable) or slowly (dull) it seems to pass, which can be predicted by whether we generally feel "owed" or "deserving."

Studies 3-5: Location

"When" something or someone is evaluated can powerfully influence how we respond. Despite a wealth of findings on *first* impressions (see Willis & Todorov, 2006), less research focuses on the power of *lasts*. The handful of existing studies suggests that significant endings to major life events promote more positive evaluations of them. For example, students become fonder of university life as they approach graduation (Kurtz, 2008). Three studies extended this concept to everyday domains. Participants ate five different chocolates (Study 3), evaluated five different online dating profiles (Study 4), and smelled five different nasty cat foods (Study 5). Items were evaluated one-by-one, and participants were unaware of how many items were in the series. Before the 5th item, participants were either told "This is your *last* chocolate [profile] [smell]", or "This is your *next*" one. In all studies, the 5th item was rated much more positively (i.e., tastier, sexier, less smelly) when it was framed as the "last" item versus just another item in the series. These findings suggest consumers exhibit a *positivity bias* toward end experiences: they enjoy the same product more simply when they believe it is the final one available.

Studies 6-7: Orientation

Many people spend many moments mentally travelling in time, journeying beyond the here-and-now to retrace what once was and to entertain what might be (Gilbert & Wilson, 2007; Trope & Liberman, 2003; Tulving, 2002). But the person we remember being is not the same as who we imagine becoming. When asked to rate their past or future selves' "experiential" traits (e.g., capacity to feel emotions) and "agentic" traits (e.g., capacities to plan, think, act rationally), participants demonstrated a robust asymmetry across tense (Study 6). Past selves were perceived as exhibiting greater emotionality and less rationality than present selves, but future selves were perceived as exhibiting greater rationality and less emotionality. Surprisingly, this subtle distinction was enough to change people's real-time consumption experiences (Study 7). Participants were induced to feel connected to their past or future self by reading a bogus article about how much students' traits change from before college to after college (adapted from Bartels & Urminsky, 2011). Then, they watched a series of fun viral YouTube videos. Participants who felt connected to past selves enjoyed the videos more than all others, an effect that was mediated by self-reported increases in capacities to experience emotions. These findings show that temporal orientation influences consumption enjoyment: consumers who feel close to past selves derive more enjoyment in the present.

Summary

Time is inescapable, and its impact on hedonic consumption experiences is no exception. When time crawls, we enjoy things less, particularly if we feel that our time is exceptionally special (Studies 1-2). When products are evaluated at the ostensible "end" of a series, we enjoy them more (Studies 3-5). And when we connect to our pasts, our presents become more enjoyable (Studies 6-7).

These diverse findings converge in revealing a powerful psychological answer to the opening question: time. Duration, location, and orientation each make the stuff we consume more or less enjoyable.

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How Time Flies When We Think "Downwards" versus "Upwards"

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When people think downwards of an event, they are commonly expecting the present moment fleets. For instance, when doing gym exercises, one might mainly focus on the amount of exercises to take, rather than those having been done. Besides, business people often stimulate others to think downwards to undermine their time duration perception. When a season sale begins, for example, salespersons usually hang up an advertising board in the store, with "Season Sale! Only 5 Days left!" on it, to convey a constrained time interval and attract consumption. In this article, we examine whether it is the case that a downward vs. upward thinking style subjectively makes time flow by.

Compared with upward thinking style, downward thinking directs attention to the thoughts about how much time left till the end of an event, making the endpoint more vivid. Previous research suggests that people are highly sensitive to the temporal end of an experience, even need not involve significant experiences (O'Brien and Ellsworth, 2012). One possible reason is that once the "last" is frequently reminded, the mere imagination that "this event is almost lost" may foster a reluctance to be over with the event. In other words, the anticipated loss aversion (Ariel and Simonson, 2003; Kahneman, Knetsch and Thaler, 1991) promotes people's attention to the "ending" of the event (to maximize savoring, Loewenstein, 1987). Given that great attentions result in more efficient information processing (e.g., Celsi and Olson, 1988), people's sensitivity to "lasts" may foster the accessibility and vividness of the endpoint in their mind. Just as increased vividness is often taken as a cue to increased physical proximity in visual perception (Pratt, Radulescu, Guo and Hommel, 2010), the increased psychological vividness of the endpoint may similarly be taken as a cue to increased perceived temporal proximity, with the endpoint under downward condition seeming nearer than that under upward one to the extent that the time interval marked with the downward processing style seeming shorter than that marked with the upward style.

Drawing from anecdotal evidence as well as previous research, therefore, we hypothesize that people would subjectively feel an event flies by when they think downwards of the event, whereas feel time drags on when they think upwards. Three studies examined this possibility.

In the first study, we stimulated participants to think downwards or upwards, by showing them a progress bar that describes either the jobs to do or jobs done. Specifically, participants leant that they were taking part in a figure recognition test (adopted from Kim and Markus, 1999). To deliver different thinking styles, we created a progress bar on the bottom of each page of the test, marking either the questions they had answered to elicit an upward thinking (e.g. 50% finished) or the questions left for them to complete to produce a downward thinking (e.g., 50% to finish). Upon completing the test, participants were asked to estimate how much time they took to complete the test, and report how difficult and positive they felt about the test. As expected, downward-thinking participants perceived shorter time duration than those upward-thinking ones. Furthermore, thinking styles did not exert a significant effect on either their perceived difficulty or their general attitude of this test, eliminating other alternative explanations of the observed effect.

To provide direct evidence that downward (vs. upward) thinking style directs attention to endpoint, in the second study, we stimulated different thinking styles by either counting up or down several questions. Specifically, participants were asked to complete a bogus personality test (adopted from Anderson and Galinsky, 2006), by indicating to what extent they dis/agree with 8 statements. Under the downward-thinking condition, the eight statements were numbered from No. 8 to No. 1 (i.e., in reverse order), whereas from No. 1 to No. 8 (i.e., in order) under upward-thinking condition. In fact, statements under both conditions were exactly the same in terms of content. Upon completing the test, they answered the same questions employed in Study 1. As expected, participants reported shorter time duration under the downward condition than those under the upward condition, replicating the effect observed in Study 1.

In the final study, we wanted to gain insight into the practical implications of this downward-thinking effect under an online-auction context. As a time duration marked with downward thinking style is subjectively perceived as shorter than that marked with an upward style, we implied that bidders of an online auction could thereby perceive an undermined time duration and subsequently estimate a smaller number of bidders for this auction and perceive a higher difficulty that that he or she will win this auction in the first condition than in the second one.

To examine these implications, we asked the respondents of our survey to attend a bogus seven-day ascending online auction, in which several bidders have previously made a bid. Participants under the downward (versus *upward*) condition were asked to imagine they accidentally found that, except for today, there would be six days left before the end of this auction (versus *today happens to be the first day of this auction*). After that, they indicated how long the auction period seems to them, how difficulty they would win the auction, and how many bidders the auction might attract till the closing day of the auction. Results revealed that participants assigned to the downward condition subjectively perceived shorter auction duration than those assigned to the upward condition. Correspondingly, they felt less difficult in winning the auctioned object, and estimated a smaller number of bidders who would participate in the first condition than in the second one.

Across three studies, we found that time duration could be subjectively undermined when a downward (rather than upward) thinking style is employed. We obtained similar effects by employing multiple operationalizations, including marking participants' work progress upwards or downwards (in Study 1), varying participants' attention to starting point or ending point (in Study 2), and counting up or counting down the auction days (in Study 3).

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The Influence of Time-Interval Descriptions on Goal-Pursuit Decisions

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A diet ad proclaims, "Sign up today and lose 25 pounds in 2 weeks!" What would influence someone's decision to pursue this diet? Although many factors might play a role (e.g., Aarts et al. 2004; Freitas et al. 2002; Zhang et al. 2007), this paper focuses on one unexplored factor in particular: the description of the *time interval* allowed for goal completion. We suggest that whether the interval is described by extents ("in 2 weeks") or dates ("between today and September 18") influences goal-pursuit decisions.

Although how a time interval is described may seem unimportant, it can affect how people plan for the future (LeBoeuf & Shafir, 2009) and how they evaluate future transactions (LeBoeuf, 2006; Read et al., 2005). We suggest that time-interval descriptions may also affect whether people initiate goal pursuit, with people being more likely to pursue goals with completion intervals described by extents than dates. We suggest that changes in construal level might underlie such effects. For example, an interval described as "in 2 weeks" may prompt a higher, more abstract, construal than does an interval described as "between today and September 18." That is,

whereas extent descriptions may lead to a focus on the interval as a whole and its general properties, date descriptions may prompt a focus on the day-by-day passage of time and may conjure considerations such as what one will do each day. Based on construal level theory (Trope & Liberman, 2003), we predict that, if extent descriptions entail more abstract thinking, people will focus more on goal desirability (and less on obstacles to goal accomplishment) when contemplating extent-described intervals. This may result in greater willingness to pursue desirable goals.

Study 1a tested the effect of interval description on people's willingness to diet. Participants indicated whether they would be willing to lose 1.5 pounds in two weeks, with time described either by extents or dates. Participants also reported how long the target interval seemed. More participants were willing to diet when the interval was described by extents than dates (65% vs. 44%, respectively, $\chi^2(1)=4.06$, $p=.04$), but interval description did not affect perceived interval length. Study 1b replicated these results using a savings goal. Thus, people are more likely to pursue a goal when the allocated time interval is described by extents, rather than dates, and this effect seems not to be driven by a change in the interval's perceived length.

In study 2, participants indicated whether they would be willing to read three books in one month (described by extent or date) and indicated how many books they would commit to reading within that interval. Study 2 also examined construal level as a possible mechanism by collecting ratings of the goal's desirability. When the interval was described by extents, versus dates, participants pursued reading at a higher rate (35% vs. 10%, respectively, $\chi^2(1)=4.74$, $p=.03$), were willing to read more books ($M_{extents}=1.84$ vs. $M_{dates}=0.93$, $t(53)=2.62$, $p=.01$), and found the goal more desirable ($M_{extents}=4.31$ vs. $M_{dates}=3.26$, $t(53)=2.19$, $p=.03$). Desirability mediated the relationship between interval description and goal pursuit (95% CI: .040, 1.51). These results hint at construal level as one underlying mechanism: extent descriptors lead to greater perceived goal desirability and to greater goal pursuit, perhaps because extent descriptions trigger higher-level construals.

Study 3 further examined whether extent descriptors produce higher-level construals than do date descriptors. Construal level theory holds that high-construal thinking focuses people on the distant future, whereas low-construal thinking focuses them on the near future. Hence, if extent descriptors entail high-level construal, they should only increase willingness to pursue goals with *positive* long-term consequences, such as studying, and not goals with *negative* long-term (but positive short-term) consequences, such as watching television. The reverse should be true for date descriptors. To test this hypothesis, participants considered pursuing one of two goals—watching television or studying—for one month.

The effect of time-interval descriptor depended on the type of goal ($\chi^2(1)=5.38$, $p=.02$). Participants were more likely to pursue the television goal when time was described by dates versus extents (45% vs. 26%, respectively, $\chi^2(1)=4.38$, $p=.04$). For studying, however, dates yielded less goal pursuit than extents (4% vs. 14%, respectively, $\chi^2(1)=3.17$, $p=.075$). Thus, people are more likely to pursue goals with positive long-term consequences when time is described by extents, but they are more likely to pursue goals with positive short-term consequences when time is described by dates. These findings suggest that extents lead to higher-level construals, whereas dates lead to lower-level construals.

Study 4 explored another boundary condition: interval length. People usually construe the distant future on a high level (Trope & Liberman, 2003), which may cause them to focus on whether a specific means to goal accomplishment is helpful in fulfilling the end goal or not, and to ignore nuances such as goal description (Goodman & Malkoc, forthcoming). Thus, the effect of interval description may be lessened when a very long interval is allowed for goal completion. That is, a mere change in description is unlikely to influence decisions to pursue goals with a very long completion interval in the way that it influences decisions that involve an interval of more moderate length. Participants read an article about adverse effects of dairy consumption and indicated the chances that they would reduce their dairy consumption within either one month or three years. The effect of interval descriptor depended on interval length ($F(1,131)=4.80$, $p=.03$). Participants were more likely to reduce consumption within one month when the interval was

described by extents than dates ($M_{extents}$=3.03 vs. M_{dates}=2.23, $t(64)$=2.29, p=.03). For three years, however, there was no such difference ($M_{extents}$=3.00 vs. M_{dates}=3.52, $t(67)$=1.06, p>.2).

In summary, even small nuances in how a goal and the time interval allocated to its pursuit are described can alter the decision to pursue that goal. An interval described by amounts of time is represented at a higher level than an interval described by dates. This consequently increases people's willingness to initiate goal pursuit during that interval, as long as goal pursuit has positive long-term consequences and a relatively short duration.

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2.1 Symposium: Self-identity Motives in Consumer Behavior: When Initial Focus on the Self Ironically Leads to the Opposite of Self-Absorption

Room: Espada

Chair: Sara Kim, University of Hong Kong, Hong Kong

Ann McGill, University of Chicago

"Calm but Cruel": How Self-Affirmation Changes Word-of-Mouth Intentions for the Self versus Others

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Ann McGill, University of Chicago, USA

The present research examines how self-affirmation (e.g., reflecting on one's core values) influences consumers' decision to generate WOM communication, depending on whether they are focused on their own experiences or the experiences of others. For example, when you had a bad restaurant experience with your partner on your anniversary, your willingness to write a negative online review about the restaurant will depend on whether you're focusing on what you felt or on what you think your partner might have felt. In addition to spreading WOM, we also explore how self-affirmation influences interpretation of other consumers' WOM communication (e.g., estimation of emotional states of review writers). We find that self-affirmation influences these judgments by changing how strongly consumers feel about their own experiences and their estimates of others' feelings.

We propose that self-affirmation can broaden one's perspective. By definition, self-affirmation task is to remind people of their broader identity (Sherman and Cohen 2006). In a broader identity, people feel more secure and stable about self-integrity and less pressure to defend a particular aspect of the self. We suggest that possessing a broader, more stable sense of self through self-affirmation may allow people not to be narrowly focused on the self but to have a broader perspective. As a result, self-affirmation may render individuals less self-absorbed, less consumed by the feelings engendered by passing stimuli. This broader view, thus, may mute the intensity of people's own feelings from product/ services failure because each event is "just one thing" in a broader view. That is, the affirmed individual is not whipsawed about each passing event. However, we also propose that the broader view also incorporates the feelings of others, leading affirmed individuals to estimate more extreme emotional profiles in others' affective reactions. Affirmed individuals will be more attentive to others' feelings, more deeply appreciating the intensity of their emotions.

If self-affirmation indeed generates less extreme emotional profiles for the self, affirmed consumers will be less angry after experiencing product or service failures. In turn, when they have a chance to spread negative WOM, they will be less likely to do so. However, when affirmed consumers consider the emotions of others, such as a dining companion, a broadened perspective of others' emotions will lead them to estimate more extreme affective reactions from others who experienced product or service failures. As a consequence, affirmed consumers will be more willing to complain on behalf of those others. We call this the Consumer Champion Effect. This effect seems to be ironic because it means that in certain situations less (personally) angry consumers might be more likely to complain when they consider the emotions of others.

In the first experiment, we used a scenario study. Participants were asked to imagine various situations and asked to estimate either their own emotional reactions or others'. Self-affirmation was manipulated using a classic essay writing task (Sherman and Cohen 2006). Participants in the high self-affirmation condition wrote an essay about their most important value while those in the low self-affirmation condition wrote an essay about the least important value. We show that when participants were asked to imagine a situation in which they had negative consumption experiences, such as bad service at a restaurant, self-affirmation led to lower willingness to generate negative WOM for the self but greater willingness to generate negative WOM on behalf of others such as their dining companion.

In experiment 2, we explored a moderating role of anonymity in order to further investigate the Consumer Champion Effect. We observed a stronger Consumer Champion Effect when participants had to identify themselves, presumably because protesting under their own names led them to become more ego defensively self-focused and less other-directed, but self-affirmation made them become more other-directed, transforming them into a consumer champion for others. When anonymity was guaranteed, self-affirmation was less effective.

In the last experiment, we examined listening to WOM. In this experiment, instead of manipulating self-affirmation with a traditional essay writing study, we measured individual differences in self-affirmation tendency. We measured self-concept clarity. Also, to more generalize our findings, unlike the two previous studies that focused on negative emotions, this study examined both positive and negative emotions. Using both positive and negative reviews, we tested whether affirmed individuals amplify the intensity of review writers' emotions regardless of their valence. We observed that participants with high self-concept clarity estimated more intense emotions from both positive and negative reviews.

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Splitting the Decision: Increasing Donations by Recognizing the Differential Impact of Internal and External Considerations

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People are motivated to donate to charities for many reasons (Andreoni 1990; Batson 1990). We hypothesized that these motives can be classified into two distinct groups – those relevant to the self (e.g. self-identity, self-relevance) and those not relevant to the self (e.g. neediness of victims, organizational effectiveness). We then considered how these two classes of motivations may differentially influence the donation decision. In line with recent research (e.g. Smith, Kehoe, and Cremer 1995; Smith and Berger 1996; Dickert, Sagara, and Slovic 2011) we consider the donation decision a two-stage valuation process in which the decision-maker initially decides whether to donate (choice) and then considers how much to donate (amount). We hypothesized and found that donation choice is determined primarily by considerations relevant to the self while donation amount is determined primarily by external, non self-related, factors.

Additionally, we extended our findings by applying them to a different context and testing a new optimal structure for solicitations. Specifically, because providing excessive information may cause anxiety and poor decision-making (Reuters 1996; Shenk 1997), we hypothesized that an optimal solicitation structure explicitly separates the two decisions enabling different persuasive arguments to be offered for the choice and amount decisions, thus preventing information overload. Indeed our findings suggest that this solicitation structure maximizes both number and amount of donations.

In study 1a we manipulated moral-identity, a relevant aspect of the donor's self-perception, and hypothesized that our manipulation would influence donation choice but not donation amount. Participants first completed a brief questionnaire and received false feedback identifying them as having either a high or low moral-identity. They then considered a hypothetical donation appeal for a fictitious non-profit organization, Foster Support, described as providing clothing and toys to foster children. As expected, a larger percentage of participants in the high moral-identity condition made a donation than in the low moral-identity condition (High Moral-Identity = 91.7%, Low Moral-Identity = 50%, $\chi^2 = 6.84$, $p < .01$). Donation amount, however, remained unaffected by moral-identity; participants in the high moral-identity condition did not estimate a higher donation amount than participants in the low moral-identity condition ($M_{high} = \$35.51$ vs. $M_{low} = \$26.91$, $F(1, 58) = 1.02$, $p = .32$). In study 1b we manipulated self-relevance of the charitable cause by describing Foster Support as operating either within the participant's state-of-residence or across the nation. Results

replicated study 1a; self-relevance affected donation choice (High Self-Relevance = 81%, Low Self-Relevance = 52%, $\chi^2 = 4.22$, $p < .05$) but not donation amount ($M_{high} = \$24.93$ vs. $M_{low} = \$23.24$, $F < 1$).

Having shown that two self-related factors influence the decision of whether to donate but not donation amount, in study 2 we considered two factors unrelated to the self and predicted that the opposite would be true, that donation amount would be affected but not donation choice. First, in study 2a we manipulated seriousness of the cause. All participants saw a donation appeal for Project No Isiolo, a fictitious organization providing mosquito nets to individuals at risk of contracting Isiolo Fever. We manipulated seriousness of the cause by describing Isiolo Fever as resulting in either short-term discomfort (low seriousness) or death (high seriousness). In accordance with our predictions donation choice was not affected by the seriousness of the cause (High Seriousness = 74%, Low Seriousness = 63%, $\chi^2 = 1.19$, $p > .10$). In contrast, the decision of how much to donate was significantly influenced; participants reading the high seriousness appeal offered a higher donation amount than participants reading the low seriousness appeal ($M_{high} = \$28.58$ vs. $M_{low} = \$16.64$, $F(1, 139) = 8.46$, $p < .01$). In study 2b we manipulated the efficiency of the charitable organization by including information about Project No Isiolo's overhead expenditure. As in study 2a, donation choice was not influenced by our manipulation (High Efficiency = 73.7%, Low Efficiency = 61.1%, $\chi^2 = 0.67$, $p > .10$), while donation amount was ($M_{high} = \$44.45$ vs. $M_{low} = \$28.48$, $F(1, 56) = 5.52$, $p < .05$).

Having separately examined the influence of self-related and non self-related factors, in study 3 we combine the two by offering both types of persuasions and varying which type is paired with which donation decision, choice or amount. Participants considered one of two versions of a donation solicitation for a non-profit, Community-in-Schools (CIS). The two versions of the appeal letter varied in terms of the order of information presented while holding actual information content constant. In one version of the appeal, self-related factors – self-relevance and donors' self-view – were emphasized as participants considered whether to make a donation. The decision of how much to donate was then accompanied by information on external, non self-related factors. In the other version of the appeal the order in which the information was presented was reversed; external factors were emphasized prior to donation choice and self-related factors were emphasized prior to the amount decision. In accordance with our predictions the former version of the appeal led to both a higher rate of donations (54% vs. 37%, $\chi^2 = 4.32$, $p < .05$) and a higher average donation amount ($M = \$12.43$ vs. $M = \$9.37$, $F(1, 65) = 4.27$, $p < .05$). Study 4 was a field replication of study 3 where we varied the actual solicitation letter sent by CIS. In this context of real dollar donations, the effects both on donation choice and amount replicated prior studies.

Having established the discreet and differential effects of self-relevant and non self-relevant factors on donation decisions, in study 5 we extended our findings by testing the impact of explicitly splitting the two. Additionally, we use a new context, willingness to participate in an online educational program. We found that compared to the traditional solicitation structure which offers all information upfront, splitting the decisions and aligning the arguments with the decision they most influence maximized both adoption rate (choice) and predicted amount of effort (amount). Thus, this research offers an optimal set-up for a broad range of persuasive solicitations.

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"Letting Go" of Compensatory Consumption

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It is believed that compensatory consumption (the act of purchasing or consuming goods to address a threat to the self: Rucker and Galinsky forthcoming) can help counteract threats by symbolically compensating for the threatened aspect of the self (Gao, Wheeler, and Shiv 2009) or by distracting oneself from the threats (Heatherton, Herman, and Polivy 1991). However, past research suggests that compensatory consumption could yield harmful consequences, such as overeating and overspending (Tice et al. 2001). Moreover,

while compensatory consumption might temporally relieve emotional distress arising from self-threats, it can lead to renewed distress subsequently. For example, in a study of obese individuals, participants were shown to engage in binge eating to reduce the pain of anxiety and depression, but to experience guilt soon thereafter (Arnow, Kenardy, and Agras 1992).

Given compensatory consumption's potential for less-than-desirable financial, physical, and emotional consequences, this research investigates whether there is a healthier alternative to compensatory consumption as a means for consumers to cope with self-threats. Specifically, we propose that one alternative might be to "let go" of resistance to self-threats, and thereby accept unpleasant truths about the self. In other words, accepting rather than resisting undesirable aspects of the self can reduce the need to engage in consumption as a means of denying or avoiding self-threats.

According to contemporary psychotherapists (e.g., Chamberlain and Hagga 2001; Williams and Lynn 2010), self-acceptance refers to an abandonment of one's resistance to unpleasant/undesired aspects of the self, and not letting one's self-worth be affected by aspects of oneself with which one is dissatisfied. Importantly, self-acceptance in this literature implies that one recognizes that may be unsatisfactory attributes of the self, while not letting this fact dictate one's sense of self-worth. In this context, acceptance of an unpleasant fact is seen as the first step towards improvement rather than as a form of fatalism. Moreover, according to Williams and Lynn (2010), to achieve self-acceptance, one needs to "let go" of one's resistance to unpleasant aspects of the self and of the use of defensive biases as a means to control the impact of self-threats.

Experiment 1 tested whether "letting go" of one's resistance to threats would indeed reduce compensatory consumption as a means to avoid or escape the negative experience of a self-threat. Specifically, we examined how a threat to one's intelligence would affect consumption of products symbolic of intelligence (but which do not actually boost intelligence) when consumers either did or did not internalize the concept of "letting go." Prior research has shown that consumers tend to increase their willingness-to-pay for products symbolic of intelligence when their intelligence is threatened.

Participants were randomly assigned to one of 3 (letting-go vs. taking-control vs. no-internalization) x 2 (intelligence threat vs. no-threat), between-subjects conditions. Depending on condition, participants first meditated either on the theme of "letting go" or on the theme of "taking control," or did not meditate. In the second task, half of the participants played a game, supposedly designed to assess their intelligence, and received negative feedback (intelligence-threat) whereas the other half played the same game, introduced as a mere stimuli development, and did not receive any negative feedback (no-threat). Then, all participants were asked to indicate their willingness-to-pay for three intelligence-related products.

As predicted, participants who internalized the concept of "letting go" were not willing to spend any more money on products symbolic of intelligence when they experienced a threat to their intelligence than those who did not experience any threat at all. On the other hand, when participants did not engage in any type of internalization or engaged in the internalization of "taking control," they demonstrated compensatory consumption and were willing to spend significantly more money on products symbolic of intelligence. Thus, the results of experiment 1 bolster the account that "letting go" of resistance to self-threats can tamp down compensatory consumption.

Experiment 2 attempted to extend the findings of experiment 1 to a real consumption situation and to a different form of compensatory consumption, namely consumption intended to distract oneself from the threat rather than consumption intended to symbolically compensate for the threat. Specifically, we offered participants the opportunity to engage in actual consumption of a threat-unrelated product (M&M's) while experiencing a threat to their intelligence (using a different manipulation to that used in experiment 1). The study had a 2 (letting-go vs. no-internalization) x 2 (intelligence threat vs. no-threat), between-subject design. We found that

consumers who "let go" did not engage in consumption of M&M's in response to an intelligence threat, whereas consumers in the control condition ate more M&M's in response to a threat than in the no-threat condition.

In experiment 3, we used a different type of self-threat (threat to power: Rucker and Galinsky 2008) in a 2 (letting-go vs. no-internalization) x 2 (power threat vs. no-threat) x 2 (threat-compensatory product vs. self-improvement product), between-subjects design, to test whether consumers who volitionally forfeit their resistance to self-threats through "letting go" would not only reduce their reliance on post-threat compensatory consumption but would also be more open to directly addressing the self-threat by seeking improvement in the threatened dimension of the self. We found that those who "let go" were less drawn to products that symbolically compensated for the power threat, but were more drawn to products that would actually help them improve this threatened aspect of the self (viz., a book on increasing power and influence).

In three experiments, we introduce the notion of accepting unpleasant truths about the self as an alternative to compensatory consumption. It is shown that, by "letting-go" of one's resistance to self-threats, consumers can achieve self-acceptance, thereby reducing compensatory consumption and increasing the motivation to pursue self-improvement.

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Self-Verification through Identity-Association: The Effects of Publicly Versus Privately Communicated Social Identity Threats on Consumer Preferences

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Individuals' social identities (i.e., the various identities that are related to the groups to which a person belongs) have been shown to influence consumer behavior in a variety of ways. Past research demonstrates that consumers often *avoid* identity-linked products when that identity is threatened, such as when they receive negative feedback about their group identity (White and Argo, 2009). The present research extends past work which has shown individual difference factors (e.g., collective self-esteem) as moderators of consumer preferences under a social identity threat (White and Argo, 2009), to investigate a novel moderator of social identity threat—mode of communication. The present research also demonstrates that consumer's motives for self-verification can drive consumer responses to a social identity threat.

Notably, past research finds that consumers' baseline response to receiving threatening information about an aspect of social identity is one of dissociation, whereby they show decreased preferences for identity-linked options when that identity is threatened as opposed to not threatened. Such dissociative tendencies are magnified among those who are motivated to view the *individual self* in a positive light (White and Argo 2009). Importantly, though, this research has examined social identity threats that were made privately. In contrast to this research, self-verification theory holds that individuals are motivated to convey accurate and consistent self-images to others, rather than to only maintain a positive self-image (Swann et al. 1989). Following from research showing that self-verification motives are heightened in situations that are more public in nature (Baumeister and Tice 1992), we predict that a publicly communicated threat will activate self-verification motives, leading consumers to associate with identity-linked products. Across three studies we show that a publicly (vs. privately) communicated social identity threat leads consumers to self-verify and prefer identity-linked products, even when the products are negatively imbued.

In study 1, participants' university identity was used as the relevant social identity. We predicted that participants would show a preference for identity-linked products when exposed to a publicly (vs. privately) communicated social identity threat. Participants

received either information that threatened or was neutral towards their university identity. This information was either communicated by participants reading the information privately or communicated publicly aloud by the experimenter. The dependent variable was choice of a clipboard that either displayed the university identity or were neutral. As predicted, participants in the public condition were more likely to choose the identity-linked product under threat (81.6%) versus no threat (50%, $\chi^2 = 8.42$, $p < .01$). When communication was private, participants were less likely to select the university product when under threat (38.6%) versus no threat (60%; $\chi^2 = 3.84$, $p = .05$).

Study 2 seeks to show that self-verification motives drive consumer preferences for identity-linked products under public threat. A similar procedure as Study 1 was followed with two changes. First, participants completed items related to self-verification, impression management, and belongingness needs. Second, the dependent variable was computed by summing a series of hypothetical selections between identity-linked (e.g. a university t-shirt) and identity-neutral products (e.g. a movie pass). The results revealed that when the communication was public consumers showed greater preference for identity-linked products when identity was threatened versus not threatened. Bootstrapping tests of mediation further found that self-verification, but not self-presentation or need to belong, mediated the effects.

Study 3 further investigated the role of self-verification as the mechanism underlying the effects. Holding threat constant, participants received either the public or private communication. In addition, participants were exposed to a consistency motive prime, and inconsistency motive prime, or no prime. Under a no motive prime and public communication (vs. private communication), participants preferred identity-linked products (replicating studies 1 and 2). Further, as predicted, when consistency was primed, both the public and private conditions showed an associative preference effect. Finally, exposure to an inconsistency prime attenuated the associative effect in response to a publicly communicated threat. Results provide further evidence that self-verification motives underlie the effects.

The results of the current studies show a contextual condition under which consumers engage in an associative, rather than dissociative, response to a social identity threat. In particular, the studies show that consumers respond to publicly communicated social identity threats by showing greater preference to identity-linked products. Results extend the literature on consumer responses to a social identity threat by showing that self-verification motives can underlie consumer responses to a social identity threat.

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2.2 Individual Papers: It's an Ad, Ad, Ad World: Effects of Advertising Features and Product Presentations

Room: San Jose

Chair: Todd Pezzuti, University of Chile

Alliteration Alters Perceptions of Product Promotions and Pricing

Derick Davis, Virginia Tech, USA*

Rajesh Bagchi, Virginia Tech, USA

Lauren Block, Baruch College, USA

Alliteration is the repetition of the initial sound in a word across two or more consecutive and/or adjacent words in a sentence or phrase. Alliteration is common in brand and organizational names (e.g. Best Buy, Coca-Cola, Better Business Bureau), is used extensively in advertising copy, political speeches, poetry and prose, and can facilitate memory (Lea et al. 2008). Alliteration is one of

many rhetorical devices, which typically are used to persuade via effective communication (see McQuarrie and Mick 1996 for a framework; see also McGlone and Tofighbakhsh 1999). As noted by McQuarrie and Mick (1996), although rhetorical devices are widely used, little empirical work has been conducted to further theoretical understanding the cognitive processes by which rhetorical devices influence consumers. In the current studies, we present evidence that alliterative pricing presentations can positively influence price perceptions and also present process evidence for the observed effects.

We develop a theoretical framework to understand how alliteration can play a role in communicating pricing. We posit that alliteration can positively affect evaluations such that alliterative prices (9 for $.90) are evaluated more positively than objectively better nonalliterative prices, such as 9 for $.88. We provide process evidence suggesting this effect occurs because the alliteration imparts a rhythm to the presentation that "sounds" better and is easier to process. Additionally, we theorize that using alliterative names in pricing presentations can also influence perceptions. For instance, "3 Threybles $30" will be rated higher than "3 Fables $30" because the former presentation is completely alliterative and therefore "sounds" better. We also identify a boundary condition—cognitive load—and demonstrate that while these effects persist under low cognitive load conditions, increased load attenuates these effects by disrupting the alliterative rhythm. We present three studies (using adult participants) demonstrating this effect and provide systematic evidence supporting our contention that repetition of phonological units in alliterative prices "sounds" better, which in turn influences perceptions of the deal presented.

In study 1 ($n = 118$; $M_{age} = 30$ years) we compared two types of price presentations (a fictitious soap brand): one where the quantity, brand, and price were all alliterative, and one where quantity and brand were alliterative, the price was not (e.g. 10 Teven for $10 vs. 10 Teven for $9.70). Participants rated the fully alliterative presentation (10 Teven for $10) to be a more attractive offer, more attention grabbing, had higher purchase intentions, were happier with the deal, and thought the deal was a better value, than the alternate presentation (all $ps < .03$). In each case, the effects were fully mediated by participant's perceptions of whether the deal "had a ring to it" or "sounds right" (bootstrap mediation; Preacher and Hayes 2008).

In study 2 ($n = 244$; $M_{age} = 34$ years) we used a different product (fictitious shirt brands) and compared the price presentations used in study 1 with two additional presentations, one where quantity and price were alliterative, but the brand was not (e.g. 3 Fables $30), and one without any alliteration, but the product was less expensive (e.g. 3 Fables $29). Planned contrasts revealed that participants who saw the fully alliterative presentation (e.g. 3 Threybles $30) were more likely to buy the product, thought the deal was more attention grabbing, were happier with the deal, and thought it was a better deal than any other type of presentation (all $ps < .05$). As in study 1, all the effects were fully mediated by participant's perceptions of whether the deal "had a ring to it" or "sounds right" (bootstrap mediation; Preacher and Hayes 2008). Additionally, we rule out other potential process explanations including message recall, unit cost calculation difficulty, cost importance, attention, brand name typicality, and verbal/visual processing style (Childers, Houston, and Heckler 1985).

Study 3 ($n = 108$; $M_{age} = 36$ years) was designed to provide further process support by demonstrating cognitive load's disruptive effect on the repetitive rhythm of alliterative prices. We used a 2 (Price/Quantity Presentation: Alliterative vs. Nonalliterative) x 2 (Cognitive Load: High vs. Low) between-subjects experimental design. Nonalliterative price/quantity presentations (e.g. 2 for $19) always represented an objectively better deal than alliterative price/quantity presentations (e.g. 2 for $20). Cognitive load was achieved by asking participants to remember 7 words (high load) or 2 words (low load). We reasoned that rehearsal of the words in high load conditions would inhibit the positive effect of alliteration on price perceptions by disrupting the repetitive rhythm in the price presentation. Therefore alliteration effects should persist under low load, but not high load conditions. Analysis of the data revealed significant two-way interactions for six dependent variables (all $ps < .05$). Planned contrasts revealed that the means were in the predicted direction, individuals who read alliterative price/quantity presentations while experiencing low cognitive load thought the

offer was more attractive, thought the deal was more attention grabbing, had higher purchase intentions/more likely to buy, and thought the deal was better and presented more value than in any other condition (all ps < .05).

In summary, this work presents an empirical demonstration that alliterative price presentations can influence promotional perceptions. We contribute theoretically to the understanding of how rhetorical devices, such as alliteration, can influence consumers. Although we focus on pricing, our research is suggestive of the possibility that alliteration effects may emerge in other important marketing contexts, such as in the choice of brand names or in marketing communication (e.g., advertisement campaigns, choice of slogans). Thus this research may be of interest not only to those who study pricing, but also researchers interested in fluency, psycholinguistics, and rhetoric in marketing. While we provide initial insights, it may be instructive to identify other moderators and boundary conditions (e.g., individual differences in processing style [visual vs. auditory], cognitive ability, memory, price consciousness) for this effect. Finally, our research, situated at the intersection of phonological theories (e.g. Argo, Popa, and Smith 2010; Lowry and Shrum 2007; Yorkston and Menon 2004) and the use of rhetoric (McQuarrie and Mick 1996), extends both research streams and suggests avenues for future research.

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Consumer Response to Context Sensitive Advertising

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Context-sensitive advertising (CSA) is the practice of placing ads within a contextual environment in which the thematic content of the ad and its environment are related (e.g., the majority of advertisements broadcast during the recent Olympic Games coverage featured some type of athletic motif). We investigate the previously unexplored interactive effects of congruity between an ad's theme and its media context on the one hand and between the ad's theme and the advertised product on the other. Our interest is on how the combination between the initial contextual material and the subsequently viewed advertisement itself creates fluency via the fit between themes embedded in each. We argue that the level of fit describing the ad context-ad theme dyad is itself a source of fluency that might hinder or facilitate processing (depending on the fit between ad theme and promoted product).

Attention Effects

When the ad theme matches the media context, we expect assimilative effects, such that the contextual material and the advertisement material will be processed as a single representational unit due to their thematic congruity. Thus, consumers will process CSA at a deeper level and will remember it better than they will ads that are not context sensitive (H1).

Study 1a ($N = 165$) manipulated article context and advertisement theme. The context was a between-subjects factor with two levels: participants read an article on fashion designers or on coffee drinking habits. In a magazine mock-up, they were exposed to a focal ad for jeans that had a fashion or coffee theme. Participants responded to questions pertaining to the article and the magazine, followed by measures of memory and covariates. The two conditions in which the ad theme is related to the context are compared against the two conditions where there is no fit between the context and the ad theme. Memory for brand information was significantly higher when the context and ad theme were related than when they were unrelated ($M_{Related} = 4.61$, $M_{Unrelated} = 4.11$; $F(1, 164) = 14.01$, $p < .01$). Thus relating the theme of an ad to the context in which it is viewed increases consumers' attention.

Study 1b used commercially available data to establish the processing advantage of CSA. Starch data were collected for the ads and their editorial context in ten different magazines. The Starch Scores included *Noted* (i.e., the consumer remembered seeing the ad), *Associated* (i.e., the consumer looked at the ad long enough to remember what was being advertised), and *Read* (i.e., the consumer

read at least half of the ad's content). A total of 429 advertisements were evaluated. Two research assistants coded each ad in terms of whether its theme was context sensitive relative to the magazine topic. The 429 ads were grouped as follows: (a) context, theme, and product fit: the theme of the ad was related to both the promoted product and the magazine topic; (b) context and theme fit: the theme of the ad was tailored to the magazine topic while losing its congruity to the promoted product; (c) theme and product fit: the theme of the ad was related to the promoted product but not related to the magazine; finally, (d) no fit: the theme of the ad was an attention-getting effort that had little in common with either the product or the magazine. Conditions (a) and (b) displayed high congruity with the media context, while conditions (c) and (d) had low congruity. MANOVA was used to test our predictions, with each Starch score as the dependent measure and level of media congruity as the independent variable. In the CSA analysis, there was a main effect of congruity on processing such that for each measure high (vs. low) congruity produced better scores (M_{hi} = 54.77, M_{lo} = 51.03, $F(1, 383)$ = 10.19, $p < .01$ for *Noted*; M_{hi} = 48.50, M_{lo} = 44.90, $F(1, 383)$ = 8.52, $p < .01$ for *Associated*; and M_{hi} = 20.88, M_{lo} = 18.30, $F(1, 383)$ = 7.06, $p < .01$ for *Read*). Print advertisements that were related to their magazine context were thus better at attracting consumer interest (*Read*) and produced enhanced memory (*Associated, Noted*) relative to ads that were unrelated to their context, supporting H1.

Attitude Effects

We propose that whether deeper processing positively impacts attitudes depends on the fit between the ad theme and the advertised brand. Consumers will generate more favorable attitudes when the theme of the advertisement is congruent with the advertised product than when it is not (H2) and consumers will generate less favorable attitudes when the theme of a CSA advertisement is incongruent with the advertised product than when it is not (H3).

Study 2 (*N* = 373) manipulated article context and advertising theme. Participants were exposed to magazine content–either an article on hot fashion looks or open-air café dining, then to the focal Starbucks ad that had either a fashion or coffee theme. They provided attitudinal responses toward the focal ad. The design was a 2 (context: hot fashion looks or open-air cafés) x 2 (ad theme: hot-looking coffee or café-style brew) between subjects. A two-way ANOVA on A_{ad} with context and theme as factors found a main effect of the fit between ad theme and product ($F(1, 369)$ = 16.34, $p < .001$), such that ads in the conditions where the theme of the ad fit the promoted product were evaluated significantly more favorably than those where such fit lacked, supporting hypothesis 2. A main effect of the fit between ad theme and context ($F(1, 369)$ = 16.34, $p < .001$) also emerged, such that ads in the conditions where the theme of the ad fit its context were evaluated significantly more favorably than those where such fit lacked. The CSA message promoting a theme-incongruent product did significantly worse than the one promoting a theme-congruent product (4.21 vs. 4.75, $t(184)$ = -2.78, $p < .01$), as predicted by hypothesis 3.

Overall, results suggest that media placement issues need to extend beyond the matching of brand positioning to targeted media. CSA is processed more deeply but only improves attitudes when the ad theme is congruent with the product advertised. CSA is appropriate if the objective is to maintain or increase brand awareness. If the goal is to alter consumer attitudes, then the approach is not appropriate unless there is an innate fit between the brand and the theme.

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Predicting Visual Attention and Elucidating its Effects on Consumer Choice
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In today's cluttered world, attention is a scarce resource (Simon 1971). How consumers allocate their scarce attention has a profound effect on their choices (Janiszewski, Kuo, & Tavassoli 2013; Bettman 1979). Recently, a senior expert on consumer and shopper insights from a major global consulting company pointed out that consumers frequently engage in "zero second shopping" spending minimal amounts of attention as they make every-day purchases (Copeland 2011). Therefore, a major objective for marketers is to gain consumer attention (Atalay, Bodur, & Rasolofoarison 2012; Milosavljevic & Cerf 2008).

Two types of factors drive consumer attention at the point-of-purchase: bottom-up, visual features, such as the color or brightness of packaging (Milosavljevic, Navalpakkam, Koch, & Rangel 2012; Chandon, Hutchinson, Bradlow, and Young 2009; van der Lans, Pieters, & Wedel 2008; Rosbergen, Pieters, & Wedel 1997) and goal-dependent, top-down features, such as consumer goals or preferences (Chandon et al., 2009; Rayner, Miller, & Rotello 2008; Pieters & Wedel 2007). However, it is not clear what the relationship between bottom-up and top-down features is and how they affect attention and choice. Recently, Chandon et al. (2009; p. 16) suggested for future decision-making research to "directly measure the effects of brand accessibility and liking and to examine how they interact with in-store factors." This is the goal of the current research. The key questions are: 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 bottom-up and top-down features on attention allocation? And how does this allocation of attention influence consumer choices?

Research in marketing and economics suggests that top-down consumer preferences are a strong predictor of consumer choice. What is less well understood is how bottom-up visual features influence attention and decision-making. We here introduce a class of neuro-computational models of visual saliency from visual neuroscience (Nuthmann, Smith, Engbert and Henderson 2010; Walther and Koch 2006; Itti, Koch, and Niebur 1998) to measure the strength of bottom-up automatic attention. A typical model analyzes each pixel in a given image and assigns to it a set of values for a number of different visual features, such as color or brightness. Next, a complex algorithm groups visually interesting pixels into areas in the visual scene that are visually salient, i.e., different from the rest of the image. In this manner, a heatmap is created that identifies the key regions in the visual image where attention will be deployed automatically (Steger, Wilming, Wolfsteller, Höning, and König 2008; Itti, Koch, and Niebur 1998). In the current study, EyeQuant Attention Analytics software provides bottom-up attention analysis that we use to predict where bottom-up visual attention will be allocated during the decision-making process, and to examine how said visual attention influences consumer choices.

We present hungry subjects with high-resolution photos of store shelves filled with typical snack food items and investigate the extent to which top-down preferences vs. bottom-up visual features drive subjects' eye-movements as they search and choose a food item that they want to eat out of twenty-eight possible alternatives. During the entire decision-making task, we record moment-to-moment measures of attention, at a rate of 1000 times per second. We use the predictions of the neuro-computational model of visual saliency to measure bottom-up automatic attention to the images of store-shelves, and liking-ratings of 41 different snack food items, such as Doritos and Snickers, to measure subjects' preferences for each item.

The results show that consumers indeed choose their most preferred items most of the time. However, among the food items that they like (liking-rating of 4 or 5 out of 5), subjects are more likely to choose those that are visually salient, i.e., their packaging stands out compared to that of the alternatives, as predicted *a priori* by the neuro-computational model of visual saliency. Further, using eye-tracking with high temporal resolution, we demonstrate three distinct mechanisms of bottom-up visual attention that give rise to this effect of visual saliency on choice: subjects look earlier, more often, and longer at visually salient items than at visually less salient alternatives even if the latter are more liked.

To date, no systematic understanding exists of how visual features, such as color or brightness, affect consumer attention, and no recommendations are available for marketing practitioners on how to *a priori* design attention-grabbing materials. Further, no tool is

available as yet to measure visual attention and predict its effects on downstream marketing factors, such as consideration and choice, in the cluttered marketplace. Every year companies across the globe invest massive amounts of time and money – many millions of dollars annually – into eye-tracking studies and A/B testing of marketing materials. The neuro-computational model of visual attention introduced here offers concrete benefits to the industry in its quest for guidance on attention management, especially at the design and testing stages for marketing materials, including websites, magazine ads, video-game ads, and many more.

This methodology is further open to application in numerous other contexts to improve human behavior: to design visually optimal educational websites that provide easy access to relevant information, to optimize food menus that attract people toward healthy food alternatives, or to optimize weather maps that make the most important information easy to identify and thereby improve the accuracy of expert weather forecasts (Hegarty, Canham, and Fabrikant 2010).

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The Age of Cigarette Advertising Models and Adolescent Intent to Smoke.

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Public policy advocates have long argued for the importance of protecting adolescents from the influence of cigarette advertising. One reason to protect adolescents is that adolescents are more susceptible to advertising which makes them more vulnerable to advertisers' attempts to make addictive products more appealing (Pechmann et al. 2005). A second reason is that adolescence is a critical time for developing a smoking habit - more than half of adult smokers begin smoking as adolescents and those who do not smoke during adolescents are unlikely to smoke as adults (Kandel and Logan 1984). And most importantly, tobacco use is the leading cause of preventable death in the United States (Mokdad et al. 2004).

In response to criticism directed at the advertising practices of tobacco companies, the industry agreed to a voluntary cigarette advertising and promotion code to restrict the effects of marketing efforts on adolescents. To minimize the influence of advertisements on adolescents, the code states that cigarette models must appear to be 25 years of age or older (The Tobacco Institute 1990). The logic supporting this code is that consumers are influenced by models that are similar to themselves. This logic is supported by prominent theories in psychology. Festinger's (1954) social comparison theory suggests that individuals rely on similar others to determine what are appropriate attitudes and behaviors. Tajfel and Turner's (1986) social identity theory suggests that individuals understand themselves by comparing themselves with similar others and by contrasting themselves with dissimilar others.

In the present research, we test a competing view that is based on the symbolic function of consumer products. According to Solomon (1983), behavior is often guided by the social meaning inherent in products. Cigarettes are a consumer product steeped in social meaning. Cigarette smoking, for adolescents, relates to independence and maturity, so some adolescents smoke to signal independence and maturity (Rugkasa et al. 2001). With this in mind, young adult cigarette models may appeal most to adolescents since young adults possess an appealing and independent identity. If this is true, the mandate that models must look 25 years of age or older may actually increase adolescent intent to smoke. We tested this possibility in a series of four experiments with high school students. Our results support the view based on the symbolic function of products and suggests that current tobacco policy may have the unintentional consequences of increasing adolescent intent to smoke.

In the first experiment, we examined which age group of cigarette models adolescents feel most similar to. For this experiment, and all subsequent experiments, models were selected on the basis of extensive pretests that ensured the models looked equally attractive and

were judged to be children (approximately 10 years of age), teens (approximately 17 years of age), young adults (approximately 26 years of age), or middle age adults (approximately 45 years of age). In this experiment, 138 ninth graders viewed the cigarette models and then indicated the extent to which they felt similar to the models. The results indicate that the adolescent sample felt most similar to the teen cigarette models.

In the second experiment, cigarette ads were embedded in a mock magazine. Four hundred seventy nine ninth grade students were randomly assigned to view a magazine that featured cigarette ads with a specific model age group or to a control condition with neutral ads. Importantly, the results indicate that young adult cigarette models (26 years of age) increased adolescent intent to smoke, whereas teenage models (17 years of age) decreased intent to smoke. Child models (10 years of age) and middle age adult models (45 years of age) had no effect on intent to smoke.

In the third experiment, we examined whether the age effects were moderated by product category. In this experiment, 278 ninth grade students were randomly assigned to view a cigarette advertisement or an advertisement for a stylish t-shirt using teen or young adult models. There was a significant two-way interaction between model age and product type. The teenage vs. young adult cigarette ad models lowered purchase intent. In contrast, the teenage vs. young adult t-shirt models increased purchase intent.

In a fourth experiment, we randomly assigned 189 ninth graders to view an ad for a radio station that featured a smoker or a nonsmoker. We also measured emotional stability to determine if this moderates the effect of young adult models on adolescents' intent to smoke. Our results indicate that young adult cigarette models influenced the smoking intent of emotionally unstable adolescents, but not more emotionally stable adolescents. In summary, the results of four experiments indicate that current policy mandating the use of cigarette ad models who look 25 years of age or older may actually increase adolescents' intent to smoke. Our results are aligned with the literature on symbolic interactionism and contrast persuasion theories based on similarity.

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2.3 *Individual Papers:* Back to the Future: The Past and Future in Decision-Making

Room: Madero A

Chair: Mauricio Mittelman, Universidad Torcuato Di Tella

Forward versus Backward Planning: The Fit between Chronological Order of Planning and Mindset Abstraction

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While there is considerable agreement that planning enhances goal attainment by initiating goal directed behaviors and reducing tempting distractions, little work has been done to examine how different ways of plan construction affect goal pursuit (Kruger and Evans 2004). To deepen our knowledge on the role of plan construction, this research examined how different chronological order of plan construction affects perception of goal attainment and motivation. Considering that objects at different temporal distance elicit difficult levels of cognitive abstraction, we further investigated the fit effects of chronological order of plan construction and mindset abstraction.

How do people build plans? One common approach is forward planning, planning the steps for achieving a goal in chronological order, from the first step in the near future to the last step in the distant future. An alternative approach is backward planning, planning the steps in reverse chronological order, from the last step to the first step.

Ebert et al. (2009) suggest that people use different information and come to different predictions about their feelings in the future when they consider an impacting event in forward chronological (forecasting) versus reverse chronological (backcasting) order. They propose that backcasters, who first consider their feeling in the future (the referent) and then the effects of the prior occurrence of an impacting event (the subject), will weigh the impacting event more heavily than forecasters. This occurs because people generally consider the subject of a comparison more heavily than the referent of the comparison (Dunning and Parpal 1989). Forward planners first consider temporally proximate steps (the referent) and move to temporally distant steps (the subject); whereas backward planners first consider temporally distant steps (the referent) and shift to temporally closer steps (the subject). Since temporally close steps, compared to distant ones, are clearer and more feasible to execute, we predict that backward planners will consider their goals more attainable and feel less time constraint than forward planners. Furthermore, the mental simulation literature suggests that reflection on a goal pursuit process influences effort toward the goal (Pham and Taylor 1999). Accordingly, we expect the effects of chronological order of planning on motivation.

Construal level theory posits that people can identify the same action at different levels of abstraction, such that temporally distant objects are identified more abstractly (Liberman and Trope 1998). Liberman et al. (2007) extend the relation between temporal distance and mental construal by proposing a bidirectional association. They showed that construal level influences temporal perception of an object and temporal distance affects mental construal of an object. Based on previous research (Ebert et al. 2009), we expect that forward versus backward planning will lead people to focus on different subjects of comparison (i.e., temporally earlier vs. later steps), which may in turn affect construal level. Building upon this assumption and the relationship between temporal distance and mental construal, we further propose fit between chronological order of planning and mindset abstraction. Research on regulatory fit has shown that a match between the manner in which people pursue goals and their goal orientation leads to increased motivational intensity because of an "it-just-feels-right" experience (Avnet and Higgins 2006). Furthermore, fit between regulatory focus and construal level enhances engagement and intensifies reactions (Lee, Keller and Sternthal 2010). Accordingly, we hypothesize that when experiencing fit (concrete/abstract mindsets and backward/forward planning), people will consider their goals more important and behave in a way consistent with their goals.

Study1: Orders of Planning and Cognitive Perception

Participants were asked to imagine that they were taking a required course and to construct their study plans. Participants in the backward planning condition listed everything they needed to do to earn their desired grade in reverse chronological order, starting with the plan for the day before the final exam; whereas participants in the forward condition listed everything in chronological order beginning with the plan for the first day they would start studying for the course. After this planning task, participants indicated their goal expectancy and perceived time constraint. ANOVA analyses revealed that backward planners (M=5.56) showed greater expectancy of earning their desired grades than forward planners (M=5.07; $F(1,73)=3.42$, p=.07). Furthermore, backward planners perceived less time constraint (M=2.16) than forward planners (M=3.00; $F(1,73)=6.03$,p<.05). Additional analyses revealed that the influence of chronological order of planning on goal expectancy was mediated by perceived time constraint (p<.05).

Study2: Orders of Planning and Motivation

Participants were asked to construct their study plan forward or backward for an exam that they were actually taking in two weeks, and then they indicated their motivation. Compared to forward planners (M=5.52), backward planners intended to exert more effort toward achieving their desired grades (M=6.40; $F(1,41)=10.09$, p<.01).

Study3: Fit between Chronological Order of Planning and Mindset Abstraction

To test the proposed fit effect, we manipulated mindsets by asking participants to think of improving their physical health by focusing on "how" versus "why" (Freitas et al. 2004). Then, participants planned a trip in a forward or backward manner and reported the

importance of having a perfect trip and the extent to which they intended to learn a foreign language. A two-way ANOVA revealed that participants in concrete mindsets considered the goal of having a perfect trip more important than participants in abstract mindsets when planning backward. Conversely, participants in abstract mindsets considered the goal more important than participants in concrete mindsets when planning forward ($F(1,81)=3.96$, $p=.05$). We found the consistent pattern for intention to learn a foreign language ($F(1,81)=4.24$, $p<.05$).

This research demonstrates that different orders of plan construction lead to different cognitive perception of goal pursuit and that fit between mindset abstraction and chronological order of plan construction influences subsequent goal pursuit in academic and travel contexts. Given the fact that consumers frequently set plans for vacations and for health or financial goals, this research draws attention to the importance of considering the order in which people construct plans, a factor that has been overlooked in previous research. For instance, travel agents can enhance travelers' trip experience by fitting order of travel plan construction with their customers' mental construal.

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Savoring through Avoidance: Identity-based Strategic Memory Protection

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Today marketers are keenly aware that our memories of a consumption experience can greatly impact whether we will consume a product or experience again in the future. Yet, there is very little consumer research about how memories of identity-related experiences will impact consumers' future identity-related consumption choices. Here we build on the idea of strategic memory protection (Zauberman, Ratner and Kim 2008) and propose that consumers will often protect identity-relevant memories to help reinforce that identity. The protection of identity-related memories is very likely due to the critical role of identity in consumer self-conception. Salient experiences related to one's romantic identity, parent identity or friend identity are almost by definition special and valued. Moreover, consumers tend to revisit these memories when the relevant identity is activated, such as "interactions with important others (e.g., friends or loved ones) or momentous events (e.g., graduations, child birth)" (Wildschut et al., 2006). Therefore, it should hold that we do not just protect special memories but we protect the memories experienced with special people.

One method consumers use to protect strong and valued identities is to delay new experiences that could potentially weaken the link between memory and identity. Such delays allow consumers to savor the memory and thereby reinforce the identity. Although some consumer research has examined the effect of delayed consumption of products on evaluations of enjoyment through the process of savoring (Chew and Ho 1994; Lovallo and Kahneman 2000; Nowlis, Mandel, and McCabe 2004), and other research has begun to connect identity and memory (Mercurio and Forehand 2011), the identity reinforcement related motivation and process is important yet understudied (Reed II, Forehand, Puntoni and Warlop 2012).

To assess whether consumers with strong identities will indeed delay new experiences that might interfere with identity-linked memories (and thus savor the existing memory), we conducted two studies investigating behaviors related to consumer romantic identities. In study one, we asked married individuals to report the year and destination of their honeymoon and then measured their romantic identification using a 3-item spousal romantic closeness measure ($\alpha = .90$). Participants were then asked them to imagine that they were planning a vacation within the next year and had to choose between returning to their honeymoon destination and going someplace new (equally nice, but unspecified). We hypothesized that both weak and strong romantic identifiers will attempt to reinforce their romantic identity, but will use opposing methods of doing so. Weak romantic identifiers will be drawn to the

honeymoon locale to re-establish their identity and this desire should increase as their honeymoon became a more distant memory. In contrast, strong romantic identifiers will try to maintain their romantic by waiting a longer period of time to return to the honeymoon locale in order to not dilute the memory. Consistent with our hypothesis, a binary logistic regression showed a significant closeness (strength of identity measure) x year of honeymoon interaction ($\chi^2(1) = 4.2$, p = .04). We interpret this finding that those with strong and weak romantic identities are more likely to want to return to the original location but there may a process difference as to when they want to return and their motivations for returning. We predict that those with weaker romantic identities are more likely to want to recreate the consumption experience in order to strengthen the identity and will not protect the identity-based memories. However, those with strong romantic identities engage in behavior to savor and avoid behavior that may threaten their honeymoon memories. Psychology research has found increased savoring when memories of the past are shared with other people (Pasupathi and Carstensen, 2003).

To further investigate when consumers engage in behaviors to build or reinforce identities, we examined how consumers behave when faced with the choice to re-live consumption experiences tied to specific identities. For example, if a consumer with a strong romantic identity went on a honeymoon trip with their romantic partner to a hotel in Mexico, they may be less likely to want to return to the same hotel for a bachelor party. This protection effect would occur largely because the romantic identity has a stronger association to the self-concept than the friend identity and consumers want to protect and savor the memories experienced when the romantic identity is activated.

In Experiment 2(a) we manipulated who participants went on a trip with to Mexico (friends vs. romantic partner), how special the original trip was (special vs. not special) and who they were returning with on a future trip in 2 years (friends vs. romantic partner). We then asked if they would want to return to the original hotel or to go to a similarly rated new hotel in the same city. We found that after consumers experienced a special identity-linked vacation, they were more likely to choose to go to a new vacation location in 2 years if the return trip was linked to a new identity (F (1, 397) = 10.65, p <.01). We also find that a similar pattern of results whereby participants indicated that the original trip would be tainted if they returned (F (1, 399) = 13.616, p <.01). This suggests that consumers choose to protect their identity-based memories when they are faced with having to return to the same location when a different identity is activated. However, we found that those who had their romantic identity activated during the special hotel trip to Mexico were more inclined to return to the same hotel in 2 years when their romantic identity was re-activated (F(1,380) = 5.031, p < .05). The hedonic contingency model (Wegener and Petty 1994) suggests that when people feel good, they will select cognitions and behaviors to maintain their happy state or make them happier.

In Experiment 2(b) we examined a time variable in order to understand whether those with strong or weak social identities tend to savor and protect identity-linked memories. Using the same basic methodology as that used in Experiment 2a, we found that strong and weak romantic identifiers wished to return to their previous "special romantic getaway" at the same rates (presuming the upcoming trip was also for a romantic event). However, we found that those with strong romantic identities wanted to wait longer to return than those with weaker romantic identities (weak identity wait time to return $M = 3.2$ years; strong identity wait time to return $M = 4.73$ years; F (1,192) = 25.152, p < .00). This suggests that when an identity-based memory is good and the identity is an important aspect to the consumer's self-concept, consumers are more inclined to savor their memories. However, similar to experiment 1, the results also suggest that consumers who have social identities may want to return to the place where they created the original memory more frequently to recreate the experience and re-ignite the strength of the social identity.

We have demonstrated that when an identity-based memory is good and the identity is strongly connected to the self-concept, consumers are more inclined to savor their memories. In fact, consumers will put off consumption experiences in order to savor these memories. Consumers may be more inclined to re-experience the memory but they will push it off into the future as long as possible to savor how great the experience was and perhaps avoid an experience that could potentially weaken the identity in the future.

However, when an identity is less strong consumers are more inclined to relive the identity-based memory and relive that memory often. This may be because consumers want to "recapture" the experience in order to strengthen the social identity. As an example, when a marriage is going through tough times, many couples will try to reignite the experience and even relive first dates or honeymoon trips.

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The Valuation of Imagined Future Achievement

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Motivation / Conceptualization:

Why does child prodigy capture our imagination? Why do people clamor for paintings of young painters and value them highly only to watch their value crash if it becomes obvious their parents helped them paint? Why do YouTube performances of young people doing the exact same things as adults have, on average, roughly 10 times as many views? In a study of 240 matched YouTube clips, we found the mean views for young people's videos was 478,455 vs. a mean of 43,907 for adults ($p = .008$).

In this paper we predict that people do, in fact, prefer performances of young people (Study 1) but that the ability to project the performance into the future (i.e., to consume the 'potential' of the performer) is a critical aspect of the phenomenon (Study 2). However we also predict that this happens only for domains in which the performance is open to interpretation (e.g., hedonic domains) and that when the primary consumption experience is utilitarian, this tendency to prefer younger performers is eliminated (Study 3).

Methodology:

Study 1

This study was designed to simply test the idea that people not only like unambiguously poor paintings more when they are done by young painters, but that, they are willing to consume the artist's potential in ways they cannot cash in on it in the future.

We recruited 135 adults from Amazon.com's Mechanical Turk website for a study about art evaluation and showed participants two paintings: one unambiguously good and the other, unambiguously bad.

Participants were assigned them to one of three conditions with information that varied about the painters in the following ways: In condition 1, the good painter was described as 42 years old and the bad painter as 37 years old (similar age condition). In condition 2, the good painter was also described as being 42, but this time the bad painter was described as being 7 years old (age difference condition). Finally, condition 3 gave no age information about the painters (ageless condition). Participants were then asked to rate how much they liked the paintings and choose which painter's show they would rather attend.

We predicted that relative to both the similar and ageless conditions, participants would like the bad painting more when they thought it was painted by a 7 year old and would be more interested in attending an art show of the bad painter when he was described as being 7.

Study 2

Building on Study 1, we designed study 2 to show the enhancement in valuation in the first study is not simply due to a preference for artworks by young people, but that it relies on participants' ability to think about the artist in the future.

106 adults were recruited on www.mturk.com to participate in an opinion survey where they were to rate their interest in—and likely purchase of—a book of poetry. We described the author as being either prodigiously young, or an adult. Then participants were told the book had been released either recently or 20 years prior.

We predicted when the book was released recently, participants would be more interested in and report themselves as more likely to purchase the book of the 9 year old. However, merely moving this event into the past would nullify this effect.

Study 3

In the paper's final study, we aimed to show these effects would hold only for domains where the hedonic aspect of the product is the primary source of utility.

We recruited 177 adults on www.mturk.com to participate in a consumer opinions. Participants were told about six amateur artisans who were either described as being young or as adult. The artisans' then rated their likelihood of purchasing wares either in utilitarian or hedonic domains.

We predicted intent to purchase would not differ as a function of age for utilitarian domains. In contrast, we predicted that young (as opposed to older) artisans producing in hedonic domains would elicit more likelihood of purchase.

Major findings:

Study 1 found that when participants thought a poor painting was made by the hand of a 7 year old painter (as opposed to a 37 year old/control painter), they liked it more ($M = 5.00$ vs. $M = 4.25$; $t(134) = 2.93$, $p = .004$). Additionally, participants significantly increased their interest in going to the poor painter's art show (relative to interest in the skilled painter's show) when the poor painter was young ($M = 3.9$ on a 1-7 scale, 7 = preference for the poor painter) and not 37 or control ($M = 3.3$, $t(134) = 3.58$, $p = .001$).

Extending the findings of Study 1, Study 2 found an interaction between the age of a poet (young vs. adult) and the release date of his poetry book (recent vs. 20 years ago) on intent to purchase, $F(3,102) = 3.97$, $p < .05$. More importantly, when the poetry book was reported to have been released recently participants rate their likelihood of purchase higher for a young poet ($M = 5.2$ on a 1-7 scale) relative to an adult poet, $M = 3.2$, $F(1,102) = 23.14$, $p = 10^{-6}$. In addition, likelihood of purchase was higher for a young poet's recently released book ($M = 5.2$), than one released in the past ($M = 4.3$, $F(1,102) = 6.02$, $p = .02$.

Study 3

In order to assess a boundary condition of this effect, we show that in each of three utilitarian domains (car repair, boat assembly and pain medication making), there was no increased likelihood to purchase young artisans' wares compared to ones made by adults (all ps > .5). However, in hedonic domains (script writing, movie direction and music making), participants who understood the artist to be a young person reported themselves as more likely to buy than did participants who were told the artist was an adult, (ps = 10^{-7}, .05 and .02 respectively).

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Usage Frequency Neglect

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Most people will agree that, except for products like a sunroof whose mere ownership can be a source of enjoyment, consumers must consider how often they expect to use whatever they intend to buy. Yet we show that consumers may fail to do so.

It is well established that consumers often construct their preferences on the spot (Bettman, Luce, and Payne 1998). Now, usually there is nothing in the product itself or in the shopping environment to prompt consumers to consider usage frequency. Moreover, it is unlikely that consumers will spontaneously consider usage frequency, because research in psychology has shown that decisions are driven mostly by information that is explicitly presented (Legrenzi, Girotto, and Johnson-Laird 1993). Therefore, we suggest that consumers may neglect usage frequency when making a purchase decision. There is evidence that consumers can indeed neglect critical information when considering a purchase. For example, Frederick et al. (2009) reported several studies in which consumers neglected opportunity costs when making a purchase decision.

If, while making a purchase decision, consumers indeed neglect how often they expect to use the product they consider buying as we hypothesize, then interventions that bring to mind usage frequency shall influence their choices. We conducted three studies that supported our hypothesis.

Study 1

In study 1 we tested whether a simple reminder that a product is used often influences consumers' preferences. Participants (n=105) were asked to imagine that they went to a store to buy a new mattress and decided to read a brochure with "three points to consider when choosing a mattress." We randomly assigned them to one of two conditions: usage-frequency or control. The brochure had three points. The first two points were identical to both conditions and did not relate to usage frequency. The third point reminded them of the usage frequency ("Recall that you will be sleeping on it virtually every day.") in the usage-frequency condition, and was inconsequential ("Before making up your mind, first narrow down your choice to three or four options.") in the control condition. Then they were asked to choose an option from among three models available that varied in price and overall quality. As expected, those who were subtly reminded that one uses a mattress every day chose the premium model more often than those who were not (25% vs. 8% respectively; $\chi^2(1) = 5.48$, $p = .02$). This result provides initial evidence that people do not spontaneously account for usage frequency in making product choices.

Study 2

In study 2 we replicated the results of study 1 and addressed an alternative explanation. MBA students (n=122) were asked to imagine that they went to a store to buy a digital camera and decided to read a small brochure called "How to choose a digital camera." We randomly assigned them to one of three conditions: frequency, liking, or control. The brochure had two questions that were identical to all participants and a third question that was our manipulation. This third question read either "How often do you plan to take pictures using artistic features?" (frequency condition), or "How much do you like to take pictures using artistic features?" (liking condition), or "Are you going to take pictures mostly indoors or outdoors?" (control condition). We then asked participants to choose between two camera models that only differed in price and in the presence of an artistic feature allowing consumers to take pictures in black and white plus one other color (in a separate pretest consumers thought this feature would be used infrequently). Again as expected, the proportions choosing the model with the artistic feature that was thought to be used infrequently were 31% in the frequency, 61% in the liking, and 61% in the control conditions. The difference between the frequency and control conditions was statistically significant ($\chi^2(1) = 7.29$, $p < .01$), but that between the liking and control conditions was not ($\chi^2(1) = .0001$). Priming usage frequency had an effect as compared to the control group, but priming liking did not. This suggests that our intervention works only if people do not have the primed concept previously accessible in their minds. Moreover, given that the priming of liking had no effect, it is unlikely then that our manipulation simply caused people to exaggerate the importance of an attribute or that demand effects explain our results.

Study 3

In study 3 we not only primed but also manipulated usage frequency to implicate it unambiguously in the pattern of choices observed. Participants (n=242) were assigned to one of four conditions in a 2 (frequency priming vs. control) x 2 (usage frequency: high vs. low) between-subjects design to take two purportedly unrelated studies. In the first study they did a scrambled sentence task. The scrambled sentences were either related to frequency (priming frequency condition) or neutral (control condition). In the second study we asked participants to choose between two USB flash drives and manipulated usage frequency by suggesting they would work on files directly from the device or store a backup of their files. The models differed only in data-transfer speed, design, and price such that the more expensive model looked better and was faster. Consistent with our hypothesis, when we primed participants with usage frequency, those in high-frequency condition chose the model more appropriate for frequent users (faster, better looking) more often than those in the low-frequency condition (60% vs. 38%; $\chi^2(1) = 5.67$, $p = .02$), but not in the control condition (57% vs. 48%, $\chi^2(1) = .84$). Without a reminder frequency seems to have no influence in consumers' preferences.

Our studies show that in the absence of a reminder people tend to neglect usage frequency, which in turn might lead them to make suboptimal choices. Usage frequency neglect can make consumers buy less (studies 1 and 3) or more than they need (study 2). This research has important implications for consumer decision-making as well as consumer well-being by showing that consumers are neglecting an important aspect in their purchase decisions.

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2.4 Individual Papers: Take My Word For It: Social Influence and Decision-Making

Room: El Capistrano

Chair: Jayati Sinha, University of Arizona

When Anthropomorphism and Customization Prove to Be too Much: The Negative Role of an Anthropomorphized Recommendation Agent

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Joseph Rocereto, Monmouth University, USA

Hyokjin Kwak, Drexel University, USA

Anthropomorphism is defined as the process of attributing mind, intentions, effortful thinking, emotional states, consciousness, and behaviors to nonhuman entities (Aggarwal & McGill 2007). In a marketing context, researchers have primarily underscored the positive effects of brand anthropomorphization (Delbaere et al. 2011). However, the most recent work has begun to document adverse downstream effects of anthropomorphism. For instance, Kim and McGill (2011) show that consumers with high power perceive less physical risk from an anthropomorphized form of skin cancer. In the framework of our study, we posit that if a recommendation agent is anthropomorphized and the recommendation, itself, concerns a matter of personally sensitive exchanges, then people may experience disturbing feelings of unease. These unpleasant feelings may, then, extend to the attitude toward the source. In addition, prior research has suggested that consumers' awareness of being observed threatens their sense of control over their freedom and, in turn, results in a psychological reactance, that is, a motivational state to avoid the object of intrusion (White et al. 2008). Furthermore, if the presence of others' mental states is the source of constant scrutiny, then these others are also likely to form attitudes, impressions, and possess their own thoughts and intentions (Epley & Waytz 2009). Despite the fact that customization has significantly improved marketers' targeting, message selection, message framing, and promotion effects capabilities, the flip side of this is the increasing concern regarding invasions of privacy (Arora et al. 2008). In this regard, prior research has identified a broad

array of factors that are likely to facilitate or mitigate the negative effects of customization that may intensify concerns over the invasion of privacy. A general pattern of results from a multitude of academic studies shows that consumer perceptions of privacy violation decrease as a firm's reputation, trust, and prior consumer-firm relationships grow stronger (Tezinde et al. 2002). However, a general pattern that has emerged from several industry analysts confirms that consumers are concerned with what companies know about them, how the information is collected and utilized, and how accurate this information is (Stewart & Segars 2002). Overall, as consumers' privacy concerns escalate, such concerns are likely to translate to negative attitudes toward the advertiser and the brand (Sheehan & Gleason 2001).

H1: Anthropomorphism of a recommendation agent for a personally sensitive product leads to less favorable attitudes toward the advertisement, higher levels of reactance, and less willingness to provide personal information.
H2: The effect of anthropomorphism of a recommendation agent on attitude toward the advertisement is mediated by consumers' reactance and willingness to provide personal information.
H3: The effect of anthropomorphism of a recommendation agent for a personally sensitive product on attitude toward the advertisement, consumers' reactance, and willingness to provide personal information is moderated by the customization of a message.
H4: The moderating effect of a customized message on the impact of anthropomorphism of a recommendation agent for a personally sensitive product on attitude toward the advertisement is mediated by consumers' reactance and willingness to provide personal information.

Experiment
Ninety-one undergraduate students participated in the study in exchange for extra credit. An initial ad was used as a filler ad and was not a part of the experiment. The target website advertisement was presented after the initial ad in order to eliminate enhanced attention to it. After participants viewed the first ad and then responded to a questionnaire regarding that ad, they were asked to evaluate the marketing tactics used by a financial bank, Options Plus. The company was a fictitious bank that was described as offering a broad array of financial products and services to consumers and serving customers throughout the West Coast. Next, respondents were asked to imagine that they were a consumer, David, who keeps in touch with his friends and family through social networking sites while on vacation. They were then exposed to the Options Plus advertisement and asked to think about how David would respond to the advertisement. Four color Website ads for Options Plus' credit card offers were developed. In the ads, two factors were successfully manipulated: 1) anthropomorphized vs. non-anthropomorphized recommendation agent, and 2) customized vs. non-customized message. The effect of anthropomorphization on attitude toward the website ad, reactance, and willingness to provide low and high sensitive information was significant. The anthropomorphized, versus the non-anthropomorphized, recommendation agent created less favorable attitudes toward the website ad, higher reactance, and less willingness to provide personal information. Next, The Sobel test revealed significant results for both reactance and willingness to provide personal information. Finally, both reactance and willingness to provide personal information emerged as significant factors affecting attitude toward the ad. That is, the significant effects of the interaction between anthropomorphism and the customized message disappeared. Overall, the results support all of the hypotheses.

Discussion
We find that anthropomorphism can have negative repercussions on perceptions of recommendation agents when a product category is perceived as personally sensitive by consumers. People perceive anthropomorphized entities as possessing their own mind and, therefore, as being intentional regarding their actions. As such, when matters concern future interactions with recommendation agents for a personally sensitive product, consumer perceptions of being constantly monitored and scrutinized create unpleasant feelings and further transform into negative attitudes toward the advertisement of these interactive assistants. Our research also contributes to the

growing body of research that provides warnings regarding possible negative outcomes of customization via the potential triggering of enhanced perceptions of privacy invasions.

Ambiguity Aversion and Advice Taking

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Many important consumer decisions involve some uncertainty. Decisions to undertake a new medical treatment, to select a mortgage loan program, or to purchase a used car must be made in the absence of a priori knowledge about how successful the new treatment will be, whether a fixed or variable rate will be more effective in the long term, or whether the used car will perform as expected. Utility-based models of decision-making under uncertainty (von Neumann & Mogenstern, 1944) hold that only the judged probabilities of potential outcomes and the evaluations of these outcomes should affect an uncertain choice. The presence of vagueness or ambiguity in probabilities should have no influence on consumers' decisions. However, the famous Ellsberg paradox (Ellsberg, 1961) empirically demonstrates that ambiguity does matter to consumers. In its simplest illustration, the Ellsberg paradox involves two urns each containing red and black marbles. The first (ambiguous) urn has 100 red and black marbles in unknown proportions. The second (non-ambiguous) urn has 50 red and 50 black marbles. A person wins a prize if she can guess the color of the marble randomly drawn from one of the two urns. Which color and which urn should she choose to play the game? Ellsberg's findings indicate that although people are indifferent about betting on red or black, the majority prefer to bet on the second urn (non-ambiguous) as opposed to the first urn (ambiguous).

The tendency to favor precise over equivalent but vague probabilities has been termed "ambiguity aversion" and has since been widely replicated (see Camerer & Weber, 1992 for an early review). While a great deal of research has examined the conditions under which decision makers are more or less averse to ambiguous probabilities, surprisingly little is known about the consequences of ambiguity aversion. The present research addresses this important gap by examining how ambiguity aversion influences consumers' advice taking.

It is common for consumers to receive advice from other people before making a decision. Past research has shown that consumers consistently discount others' opinions, especially when they have their own (e.g., Yaniv, 2004). Nonetheless, the degree of receptiveness to advice is highly influenced by characteristics of the decision and the adviser. For example, people tend to be more receptive to advice proffered by experts than to advice received from non-experts (e.g., Harvey &Fisher, 1997). In this research, we examine the impact of decision makers' aversion to ambiguity on receptiveness to advice from both experts and non-experts. We reasoned that after receiving advice, consumers who are ambiguity avoidant would revise their judgments to a greater extent (i.e., would discount the advice less) than those who are ambiguity neutral/seeking. This is because ambiguity avoidant consumers feel less competent in predicting uncertain outcomes (Heath and Tversky 1991). Moreover, the effect of ambiguity aversion on advice taking is expected to be independent of risk aversion. We also predicted that ambiguity-averse consumers would extensively revise their judgment regardless of the advisor's expertise. Finally, we predicted that priming participants' general sense of competence would reduce the impact of ambiguity aversion on advice taking.

We tested our predictions in two experimental studies. In study 1, participants examined detailed descriptions of various real estate properties, and provided estimates of the list price of each property. Next, they made choices between different lotteries. They chose between a sure option and a lottery with a higher expected value. Those who selected the sure option were classified as risk averse.

They also chose between a lottery with known probabilities and an ambiguous lottery. Those who selected the first lottery were classified as ambiguity averse. Later in the study, participants were advised (shown list price estimates) by either a real estate agent or other students like them and were asked to indicate their final estimates of the list prices. The weight of advice (WOA; Yaniv 2004) reflects the weight that a respondent assigns to the advice relative to their initial judgment. WOA is computed as │final estimate – initial estimate│/│advice – initial estimate│. It is equal to 0 when the respondent discounts the advice entirely and is equal to 1 when the respondent shifts completely to the advice.

After controlling for risk aversion, ambiguity aversion had a significant positive effect on WOA ($F = 312.87$, $p <.01$). There was also a significant ambiguity aversion x advisor expertise interaction ($F = 58.61$, $p <.01$). Consistent with predictions, ambiguity averse consumers assigned equal weight to the advice they received in both expertise conditions ($M_{expert} = .67$ vs. $M_{non-expert} = .66$, $F = .04$, $p = .53$). In contrast, consumers who were not ambiguity avoidant assigned a much greater weight to the advice of an expert ($M_{expert} = .52$ vs. $M_{non-expert} = .26$, $F = 122.85$, $p < .01$).

Study 2 had a similar design to study 1 except that, prior to receiving advice, half of the respondents were asked to write about a situation in which they felt particularly competent, whereas the remaining respondents wrote about their day yesterday. Study 2 found a significant ambiguity aversion x advisor expertise x competence three-way interaction ($F = 14.56$, $p <.01$). In the control condition, the results were identical to those of study 1. However, in the high competence condition, ambiguity aversion had no effect on advice taking ($F = 1.13$, $p = .29$) and did not interact with expertise ($F = .13$, $p = .72$).

This research extends the scope of ambiguity research by showing that ambiguity aversion leads to greater acceptance of advice from others. Interestingly, they point out a potentially dangerous pattern in which ambiguity avoidant consumers are willing to act on advice received from relatively unreliable sources. While activating a sense of competence seems to mitigate this pattern, it also reduces acceptance of advice from more reliable sources.

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The Shoe that Allows me to "Just do it" and What Friends Say about it: The Implications of Framing Products as Experiences on Consumer Information Search

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Both researchers and practitioners argue there is a new trend: experiential marketing (Gallo 2009, Newman 2012, Pine and Gilmore 1999, Schmitt 2011). The move to sell products as experiences is based on findings that experiential aspects of consumption draw consumer affect (Holbrook and Hirschman 1982), are more seductive (Hoch 2002), and are better at advancing happiness (Van Boven and Gilovich 2003). The implication is that experiences, or products framed as such, are more valuable and desirable than products. We confirm the existence of this trend by comparing the use of experiential positioning in recent print advertisements (June 2012) versus twenty years prior (June 1992) of four of the most circulated magazines in the U.S. Ads in the 2012 issues were significantly more experiential than those in the 1992 issues, controlling for the number of experiential products advertised (movies, restaurants, etc.). Despite this trend, little is known about how describing products as experiences influences consumer decision-making. Here we examine how the use of product information from different sources varies between search and experiential products, between search and experiential attributes, and between products framed in search and experiential terms.

Consumers can access information from a variety of sources including the product description from the manufacturer (packaging, advertising), expert ratings, and recommendations from close others. Nelson suggested that, for experiential goods and attributes,

indirect experiences (ratings and reviews from experts and friends) will have a greater impact on choice than information provided by the manufacturer (Nelson 1970). We hypothesize that this is also the case for experiential attribute and for products framed as experiences, and we propose that the mechanism behind this effect is closeness to the self. Experiences are perceived by consumers as more self-defining (Carter and Gilovich 2012). This greater connection between experiences and the self helps explain the differential consumer behavior with respect to recommendations. Because experiences are perceived close to the self, consumers turn to others close to the self for recommendations. Also, because consumers talk about what they identify with (Carroll and Ahuvia 2006; Yeh and Choi 2011), consumers will be more likely to generate recommendations for experiences than for products.

Pretest

Participants were asked to rank the usefulness of six information sources for two search or two experiential products. Confirming Nelson's proposition, there was a significant interaction of product type and information source (figure 1) such that recommendations were ranked significantly higher for experiences than for products, while product description was ranked significantly higher for products than for experiences. We replicate these results at the attribute level also.

Study 1

Study 1 presents the first exploration to our proposed mechanism based on closeness to the self. Participants were presented with two products or two experiences which were either endorsed by a friend or an expert. Consistent with our hypothesis, there was a significant interaction of product type and endorsement source (figure 2). Participants reported liking the experience (product) better when it was endorsed by a friend (expert) ($F(1, 336) = 20.98$, $p < 0.001$; $F(1, 337) = 6.48$, $p < 0.05$). As in the pretest, we show this is the case also at the attribute level.

Study 2

Study 2 tests the impact of product framing (experiential versus not) on information sourcing, and formally tests for mediation. Participants saw one of two advertisements for a pair of running shoes. In the experience-framed condition, the shoes were described experientially. In the product-framed condition, the characteristics of the shoes were described with no imagery wording. Participants ranked different information sources. Finally, participants rated the shoes as "close to me and who I am" on a scale from 1 to 7. Recommendations from friends was ranked higher for the experience-framed shoes than for the product-framed shoes ($F(1, 23) = 7.08$, $p < 0.05$); while description of the product was ranked higher for the product-framed shoes than for the experience-framed shoes, although this effect was only marginally significant ($F(1, 23) = 3.54$, $p < 0.10$). Bootstrapping tests revealed that closeness to self mediated this interaction.

Study 3

Study 3 tests whether consumers are more willing to generate recommendations for experiences than for products. Participants were told to imagine having bought a pair of running shoes (from study 2) and being satisfied or dissatisfied with the purchase. Next, they were told that the manufacturer had asked them to submit a review of the product. Participants were asked to rate their likelihood of writing the review. Finally, we included the mediator variable. As hypothesized, consumers who saw the experience-framed shoes reported a higher likelihood of writing a review than those who saw the product-framed shoes ($F(1, 121) = 4.43$, $p < 0.05$). This result was mediated by closeness to the self. There was no effect of valence.

Study 4

Finally, to confirm the existence of an effect of experiential product framing on likelihood to review outside of the laboratory and with actual consumer behavior, we considered the reviewing behavior of consumers on Amazon.com. We examined the relationship between product framing and the number of consumer reviews provided for the top ten selling products in each of 30 product categories on Amazon.com. A coder applied the scale from our previous field explorations to the description provided for each of these 300 products. Controlling for category, average price, and average review rating, we find an effect of framing on number of consumer reviews. Products with more experiential product descriptions garner more consumer reviews ($F(3, 279) = 13.59$, $p < .001$).

Our understanding of the differences between experiential and non-experiential consumption has mainly focused on the consequences, rather than on the decision-making process. This research offers insight on an important influence on choice. In this experiential economy, these findings offer strong implications to those aiming to position their brand as an experience; sources of product information that the manager has the least control over become increasingly important.

Figure 1

Pretest A: Rank of Information Sources for Products and Experiences (reverse scored)
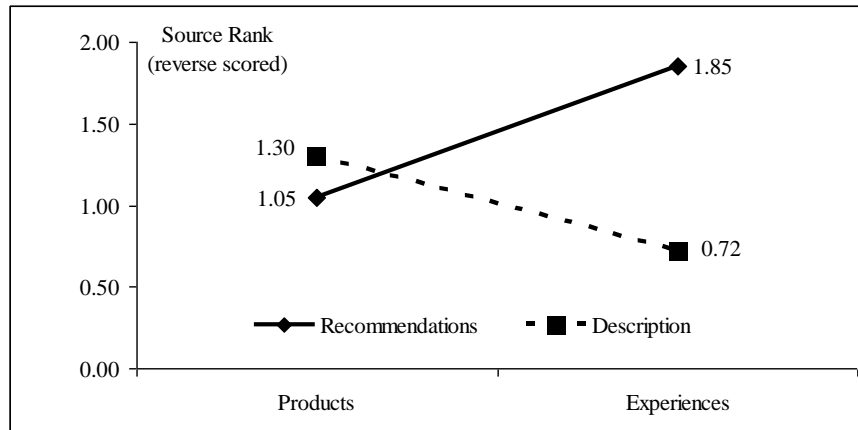
The interaction was significant ($F(1, 332) = 24.76$, $p < 0.001$). As predicted, participants considering experiences ranked recommendations from friends and family as more useful and informative than did participants considering products, controlling for expertise, importance, and regret ($M_{\text{Experience}} = 1.87$, $M_{\text{Product}} = 1.13$, ($F(1, 166) = 16.87$, $p < 0.001$). In contrast, participants considering products ranked the marketer-supplied description of the product as more useful and informative than did participants considering experiences. ($M_{\text{Experience}} = 0.88$, $M_{\text{Product}} = 1.39$, ($F(1, 166) = 8.50$, $p < 0.01$).

Figure 2

Study 1A: Preferences for Products and Experiences with Recommendations
from Experts or Friends Across Experiences and Products
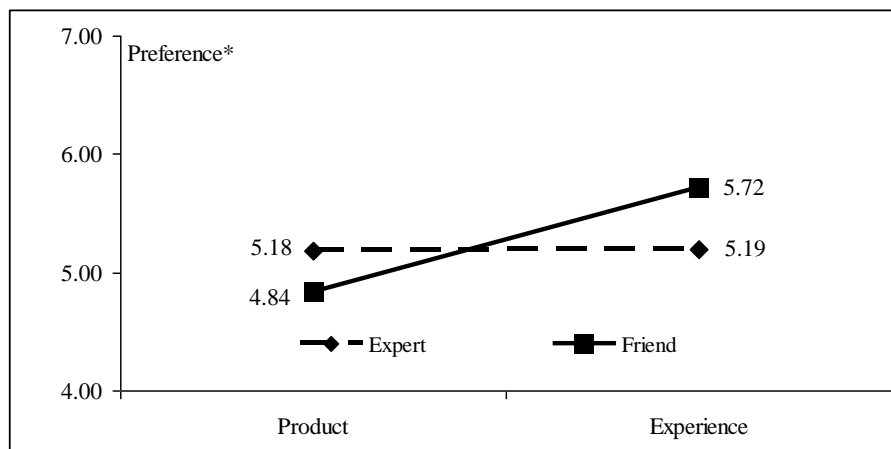
*Preference is defined as the average of ratings of appeal and likelihood of purchase both on 7-point scale ($\alpha = .85$).

The interaction between type of product and type of endorsement ($F(1, 676) = 23.91$, $p < 0.001$). Participants liked experiences endorsed by a friend more than those endorsed by an expert ($M_{\text{E Expert}} = 5.19$, $M_{\text{E Friend}} = 5.72$, $F(1, 336) = 20.98$, $p < 0.001$) and liked products more when endorsed by an expert than when endorsed by a friend ($M_{\text{P Expert}} = 5.18$, $M_{\text{P Friend}} = 4.84$, $F(1, 337) = 6.48$, $p < 0.05$).

Interaction is significant: ($F(1, 676 = 23.91, p < .001$). There is a significant difference in type of source for experiences ($M_{\text{expert}} = 5.19$, $M_{\text{friend}} = 5.72$; $F(1, 338) = 21.26$, $p < .001$), while the opposite was true for products ($M_{\text{expert}} = 5.18$, $M_{\text{friend}} = 4.84$; $F(1, 338) = 6.36$, $p < .05$).

Figure 3

Study 2: Rank of Information Sources for Experientially and Non-Experientially Framed Products (reverse scored)

** p < .10   * p < .05
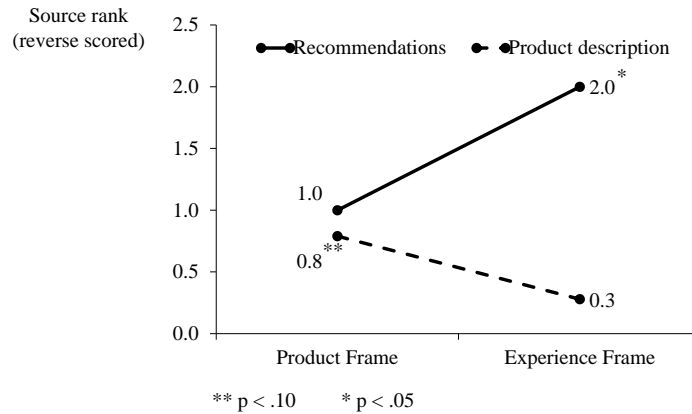
Interaction is significant interaction ($F(1, 50) = 10.62$, $p < 0.01$). Recommendations from friends was ranked higher for the experience-framed shoes than for the product-framed shoes ($M_{\text{E shoes}} = 2.00$ vs. $M_{\text{P shoes}} = 1.00$, $F(1, 23) = 7.08$, $p < 0.05$). On the other hand, description of the product was ranked higher for the product-framed shoes than for the experience-framed shoes, although this effect was only marginally significant ($M_{\text{E shoes}} = 0.28$ vs. $M_{\text{P shoes}} = 0.79$, $F(1, 23) = 3.54$, $p < 0.10$). Those who were exposed to the experience-framed ad ranked recommendations from friends significantly higher than product description ($M_{\text{Description}} = 0.79$ vs. $M_{\text{Recommendation}} = 1.00$, $F(1, 26) = 0.37$, NS). While those who saw the product-framed ad were indifferent between the sources ($M_{\text{Description}} = 0.27$ vs. $M_{\text{Recommendation}} = 2.00$, $F(1, 22) = 40.11$, $p < 0.001$). None of the other sources of information presented any significant differences.

Figure 4

Study 3: Likelihood of Writing a Review for Search and Experience Frame
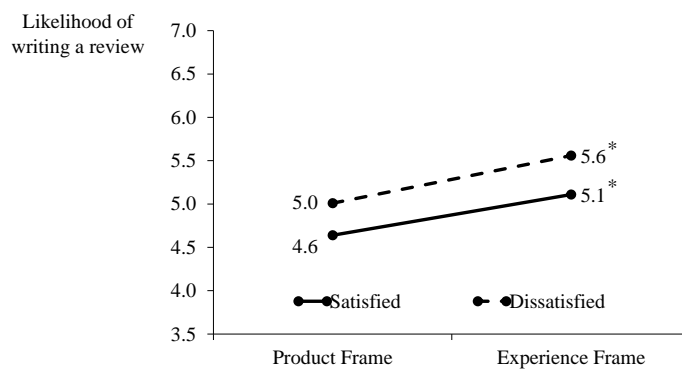
Consumers who saw the experience-framed shoes reported a higher likelihood of writing a review than those who saw the product-framed shoes condition ($M_{\text{Experience-shoes}} = 5.31$ vs. $M_{\text{Product-shoes}} = 4.82$, $F(1, 121) = 4.43$, $p < 0.05$). There was no effect of experience valence on likelihood of reviewing ($M_{\text{Satisfied}} = 4.92$ vs. $M_{\text{Dissatisfied}} = 5.27$, $F(1, 122) = 2.43$, NS), nor did these two factors interact.

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Preference for Staff Choice Recommendations in Specialty Stores and Bestseller Lists in General Stores: Role of Consumer Need for Uniqueness and Introjection.

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Narayan Janakiraman, University of Texas at Arlington*

Amy is evaluating a staff recommended winter jackets at a specialty winter clothing store like North Face. Would it be better for North Face to entice Amy by mentioning that the jacket is part of a best seller list or would they be better off recommending the product as a staff recommended item? Why? What if Amy were buying her jacket at a more general store like Costco, which would be a better recommendation tactic - staff recommendations or best seller lists? Why?

In this research we propose that consumers are likely to be more influenced by staff recommendations lists than by best-seller lists in a specialty retail context, while the reverse is true in a general store context. We draw on research in the domain of consumer need for uniqueness (e.g. Snyder and Franklin 1980, Tian et al 2001, Ames and Iyengar 2005) and introjection (i.e. the influence that other's preferences has one's own preference, (Irmak, Vallen and Sen 2010), to suggest that the type of recommendation in certain types of stores, has a differential influence on consumers with low (or high) need for uniqueness leading to a low (or high) perceived uniqueness for the product (Lynn and Harris 1997).

Specifically, in a general store context, consumer's with a low need for uniqueness are more likely to introject and place more emphasis on other consumer's preferences (best seller list recommendations) as compared to expert's preferences (staff choice recommendations). On the other hand in a specialty store context, there is likely to be a bigger influence on consumer's with a high need for uniqueness. Drawing on prior research (Tian and McKenzie 2001) that shows that consumer's with a high need for uniqueness prefer non conventional outlets, we show that providing staff choice recommendations, increases the perceived uniqueness of the product in a specialty store context thus influencing preference and choice.

The first hypothesis therefore predicts the interaction effect of type of recommendation type and type of store on product preference. The second hypothesis predicts that this effect is mediated by perceived uniqueness of the product. We provide conclusive evidence for both as described in the empirical section that follows (Study 1a and 1b).

In Study 1a we used a 2 (store type: specialty vs. general) × 2 (recommendation type: staff-choice vs. bestseller) × 2 (category type: table lamp vs. winter jacket) between-participant design. An ANOVA revealed a significant interaction between store type and recommendation type ($F(1, 160)=27.4$, $p<.001$; figure 1a) such that consumers are more likely to follow the bestseller recommendation when in a general store (specialty) ($M_{specialty}=2.69$, $M_{general\ store}=4.03$; $t=7.93$, $p < .001$), but are more likely to follow the staff recommendation when in a specialty store (vs. general) ($M_{specialty}=4.15$, $M_{general\ store}=2.56$; $t=8.92$, $p<.001$). A Sobel test confirmed the mediating role of initial need activation ($z=2.17$, $p<.03$), but not the recommendation credibility ($z=.23$, $p>.6$).

In Study 1b we varied store type (specialty vs. general), recommendation type (staff-choice vs. bestseller) and measured Consumer Need for Uniqueness. Results supported our hypothesis with a significant three-way interaction ($\beta=.98$, $t=1.93$, $p<.05$, figure 2). In a specialty store, high (vs. low) CNFU participants reported greater purchase likelihood of staff-choice chocolate ($\beta=1.01$, $t=3.11$, $p<.02$) but CNFU dimensions did not affect purchase likelihood of bestseller chocolate ($\beta = .21$, $t = .77$, *NS*). However, in the general store, low (vs. high) CNFU participants reported greater purchase likelihood of bestseller chocolate ($\beta=-.97$, $t=-3.26$, $p<.02$), while CNFU dimensions did not affect purchase likelihood of staff-choice chocolate ($\beta=.17$, $t=.81$, *NS*).

We then identify multiple moderators that influence this interaction effect, some of which have theoretical meaning, while some have managerial relevance. Firstly, we suggest that the extent to which the product is atypical of the product category (or not), determines

whether the effect of recommendation amplifies within a particular type of retail store. In Study 2 we used a 2 (store type: specialty vs. general) × 2 (recommendation type: staff-choice vs. bestseller) × 2 (Product Typicality: Typical table lamp vs. Atypical product lamp) between-participant design. Findings (figure 3) suggested that atypical products in a specialty store, consumers with high CNFU were more likely to follow the recommendation of a staff-choice than the bestseller, but consumers with low CNFU were indifferent between two recommendation types.

Thereafter, we show that increasing either perceptions of conformity (as compared to individuality – Study 3) or decreasing self-other differences (as compared to increasing the difference – Study 4) amplifies preference for best-seller recommended products in a general store. On the other hand, increasing perceptions of individuality, exacerbated preference for staff choice recommended products in a specialty store. Specific, we found that in a general store, where participants primed with assimilation need were more likely to follow the bestseller recommendation (vs. staff-choice) ($M_{bestseller}$=4.94, $M_{staff-choice}$=2.75; $t = 4.12$, $p < .001$), and participants primed with uniqueness need were indifferent between two recommendation types ($M_{bestseller}$=2.56, $M_{staff-choice}$=2.38; ns). This pattern, however, reversed the specialty store, participants primed with uniqueness need were more likely to follow the staff-choice recommendation (vs. bestseller) ($M_{staff-choice}$=5.44, $M_{bestseller}$=2.5; $t = 5.98$, $p < .001$), but participants primed with assimilation need were indifferent between two recommendation types ($M_{staff-choice}$=2.43, $M_{bestseller}$=2.88; ns).

Finally, and something of importance to retailers, we show that the framing of a retail store by its assortment size and assortment mix, also determines the differential effect of recommendation type (staff choice vs. best seller) on choice (Study 5).

We then followed up with a real life empirical study, where we conducted a survey among people who came out of a specialty store (Footlocker) vs. a general store (Target). Respondents indicated a greater purchase likelihood for a staff-choice product at Footlocker ($M_{staff-choice}$=4.18 vs $M_{Bestseller}$=3.53; p< .03), while a greater purchase likelihood for a bestseller product in Target ($M_{Bestseller}$=3.89 vs. $M_{Staff-Choice}$=3.12; p< .01, figure 4).

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2.5 *Symposium:* **New Perspectives on Nonconforming Behaviors**
   Room: Concepcion
   Chair: Silvia Bellezza, Harvard Business School, USA

Preferring the Same, but Consuming Differently
   Yanping Tu, University of Chicago, USA*
   Ayelet Fishbach, University of Chicago, USA

People make lots of choices in social context with others' choice information available. A question that naturally arises is whether consumers conform or dis-conform to others. In psychology, research dating back to the 1950s captured people's tendency to conform due to social pressure (Asch, 1955). Beyond this, following others can also fulfill our need for affiliation (Lakin and Chartrand, 2003), and increase our decision accuracy (Cialdini and Goldstein, 2004) because others' choice provides useful information. Similarly, research in JDM and Economics has shown again and again the phenomena of herding (Grinblatt, et al., 1995) and information cascade (Alevy et al., 2005), due to observational learning (Zhang, 2010). Furthermore, our own observation in a local milkshake store also found that the majority of consumers followed the choices the person right in front of them made. However, circumstances in which people dis-conform also exist. So far in literature the most prominent reason that accounts for disconformity might be that people have the need for uniqueness or for differentiation (Snyder and Fromkin 1977; Brewer, 1991). For example, Ariely and Levav

(2000) reported that people's choices of dishes were more divergent when they ordered sequentially in groups than alone, and the effect was stronger among people who were high in need for uniqueness.

We argue that whether choosers conform or dis-conform depends on the information contained in others' choices: valuation or/and consumption. We define consumption as "satisfying experience" – be it obtaining, or eating/drinking/using a product. We hypothesize that, while others' valuation suggests whether a product is worth obtaining, thus induces conformity, others' consumption would vicariously satiate one's own desire (e.g., Wilcox et al., 2009) for the product, thus induce dis-conformity. Such vicarious satiation happens because when others consume, people would have a sense that WE, instead of I, consume.

We tested the implications of this analysis in five studies.

Studies 1 and 2 showed that people conform more to others' "stated preference" (proxy of valuation) than "voluntary consumption", because the latter vicariously satiates one's own desire for the consumed product, beyond providing valuation information; and that the conformity rate in "stated preference" condition was above chance level. Specifically, in Study 1, we used dyads, and showed participants several pairs of products (e.g., bookends, chairs, water bottles). Depending on conditions, we asked participants to either indicate the item they liked (stated preference condition) or the item they wanted to obtain (voluntary consumption condition) regarding each product pair sequentially. In study 2, we extended the context of vicarious satiation from between two individuals to between an individual and a group. We showed participants several pairs of products (e.g., lamps, clocks, napkin holders) and told them that these products have recently been tested among a panel of consumers. In the stated preference condition (vs. voluntary consumption condition), we randomly picked one item from each product pair and told participants that this item was chosen (vs. preferred) by the majority the consumer panel. We then asked participants to either indicate the products they liked better or wanted to obtain.

Stated preference often implies voluntary consumption, therefore, in Study 3, we used gendered-products (e.g., men's wallet) to dissociate these two constructs. Again, we asked dyads to make choices sequentially ("If you had to choose one, which one would you choose?"), however we matched the second responder's gender with the products' (i.e., men's/women's products for male/female participants), and manipulated whether the first responder's gender was the same as or opposite to the products'. The logic is that, while choices of same-gender products imply voluntary consumption, choices of opposite-gender products could only reveal preference. As predicted, we found that people followed opposite-gender's choices more than same-gender's, and that the conformity rate in the former condition was above chance level.

In Study 4, we removed the valuation component from consumption by using "imposed consumption". Specifically, we showed dyads two flavors of gum, and asked the first participant to either indicate his/her preferred flavor (stated preference condition) or taste an assigned flavor (imposed consumption condition). We then asked the second participant which flavor he/she wanted. We found that people were less likely to choose the flavor that was consumed, than preferred, by others, and that the conformity rate in the assigned consumption condition was below chance level, providing evidence of dis-conformity.

When choosers vicariously satiate on others' choices they should delay their consumption rather than avoid it. Accordingly, in Study 5 we asked dyads to make decisions regarding two flavors of candies sequentially, and always gave the second person both flavors and measured the order of his/her consumption. We manipulated orthogonally whether the first person got the flavor he/she preferred or a flavor decided by a coin flip, and then whether he/she tasted it or not. We found that the second person was less likely to immediately consume the flavor the first person got if the first person tasted it than not, regardless of whether the flavor was preferred or assigned, suggesting vicarious satiation from other's consumption.

Taken together, our studies show that consumers prefer the same (conformity to valuation) but consume differently (dis-conformity to consumption). Theoretical and managerial implications will be discussed.

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The Red Sneakers Effect: Inferring Status from Signals of Nonconformity

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Francesca Gino, Harvard Business School, USA

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We examine status attributions that observers make based on individuals' nonconforming behaviors (e.g., not complying with a certain dress code). Research in social psychology, sociology, and consumer behavior demonstrates the benefits of conforming to group norms and expectations (Dittes and Kelley 1956; Phillips and Zuckerman 2001; Wang et al. 2012). In this research we argue that under certain conditions, nonconforming behaviors, such as entering a luxury boutique wearing gym clothes rather than an elegant outfit, or wearing red sneakers in a professional setting, can be beneficial since they signal a higher status.

High-status individuals generally feel confident about their social acceptance. Unlike lower status individuals, high-status people are more likely to deviate from conventional behavior and common expectations about appropriate responses other people might have (Hollander 1958). For instance, CEOs of major corporations, such as Bill Gates (Microsoft) or Mark Zuckerberg (Facebook), often appear without ties or wear sweatshirts at interviews or formal gatherings like the World Economic Forum. In this research, we focus on the perspective of external observers and investigate when nonconforming behaviors may lead to inferences of higher status.
We propose that inferences of status demand that the observer is aware of the norms of appropriate behavior in the group to which the individual belongs and that the context is prestigious. Our investigation of underlying mechanisms reveals that the inference of status from signals of nonconformity is mediated by perceived intentionality and moderated by individual differences in need for uniqueness (Snyder and Fromkin 1977).

A series of lab and field studies explore responses to a variety of nonconforming behaviors in different settings. In an effort to ensure high external validity of our findings, all our studies are preceded by interviews and pilots to explore the expected behavioral norms in specific environments and to confirm that higher status individuals in these contexts tend to deviate from such norms.

Study 1 examines responses to descriptions of potential prospects by shop assistants in luxury boutiques in downtown Milan. As was confirmed in interviews with store managers of luxury boutiques in Italy, the accepted norm for shoppers at these high-end stores is an elegant outfit that fits the store's atmosphere. In this study, we manipulated between-subjects the descriptions of a client (nonconforming vs. conforming) entering the store, and compared reactions of shop assistants to those women not familiar with the norm who were recruited in Milan's central station. In particular, in study 1a the prospect entering the store was described as wearing gym clothes and a jacket (nonconforming), or wearing an elegant dress and a fur (conforming). In study 1b we operationalize nonconformity through usage of well-known brand names. The potential customer entering the store was described as wearing flip-flops and a Swatch watch on her wrist (nonconforming), or elegant sandals with heels and a Rolex (conforming). In both manipulations, we find that boutique assistants attribute higher status to the nonconforming shopper wearing gym clothes, rather than the conforming one wearing an elegant dress. In contrast, people not acquainted with these boutique shoppers attribute higher status to the conforming individual.

In studies 2 and 3, we further examine our hypotheses by testing students' responses to the nonconforming dress-style of their professors. In these studies, we recruited students familiar with the experimental stimuli manipulated (i.e. descriptions of professors).

In a pre-test with students we confirmed that participants perceive the majority of their professors to dress more formally (i.e. professional / business attire) rather than informally (i.e. wear t-shirts). Furthermore, in a pilot study conducted at the ACR conference in 2011, we provided evidence that in this environment high status individuals tend to deviate from the norm. We find a significant negative correlation between formality in clothing style and the number of publications in top journals. Individuals who are well-published were more likely to wear an informal or unusual outfit or clothing item (e.g., wearing jeans, red sneakers, or t-shirts) rather than professional / business attire (e.g., a button-down shirt).

In study 2 we demonstrate that undergraduate students perceive a male professor who wears a t-shirt and is not shaven (i.e., nonconforming individual) as having higher status than a professor who wears a tie and is shaven (i.e., conforming individual), but only when the professor teaches at a top school, i.e. the context is prestigious. These inferences of status are mediated by participants' perceived intentionality of the individual's nonconforming behavior. Participants who judged the professor to have higher status when his behavior was nonconforming rather than conforming also believed that the nonconforming professor was purposely deviating from the accepted norm of appropriate behavior in an attempt to distinguish himself from others.

In study 3, we find that when a specific nonconforming behavior becomes the norm, then the inference of higher status disappears. Participants did not infer higher status when they were told that wearing a t-shirt to school was the accepted norm in the professor's department.

In study 4 we examine nonconformity in the power point presentation style of contestants in a well-known entrepreneurship competition at MIT. We show that inferences of status are moderated by need for uniqueness (Snyder and Fromkin 1977), such that participants with high levels of need for uniqueness tend to attribute more status to nonconformity behaviors compared to participants with lower needs for uniqueness.

Finally, in a follow-up study we tested two alternative interpretations for the moderating role of need for uniqueness. This follow-up study also aimed to increase the validity of our findings by examining nonconformity outside the lab. One of the authors taught a session at a distinguished symposium of entrepreneurs in a top business school wearing bright red sneakers. We find that individuals with high levels of need for uniqueness are more sensitive and attribute more status to nonconformity signals since they tend to engage in similar distinctive conducts themselves.

Taken together, these results identify a counterintuitive strategy for gaining status in the eyes of others: rather than dressing up and adhering to norms, one may instead adopt nonconforming behaviors.

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Shorn Scalps and Perceptions of Male Dominance

Albert Mannes, University of Pennsylvania, USA*

Nonconformity comes in many forms. Some change the world, like Rosa Parks's refusal in 1955 to give up her seat on an Alabama bus for a white passenger, while others simply offer individuals a means of self-expression. In this research I explore how the unconventional choice by men to shave their heads influences how they are perceived by others.

Society places a tremendous value on cranial hair. Dating back as least as far back as the biblical story of Samson and Delilah, a thick head of hair on men has been associated with beauty, power, and virility and its absence with age, frailty, and impotence (Bromberger, 2008; Leach, 1958). Accordingly, as men age and lose their hair, they experience lower self-esteem and are perceived by others as less

attractive and assertive (Cash, 1999). It is therefore no surprise that demand for products to hide, slow, or even reverse natural hair loss—from the cosmetic to the medicinal to the surgical—is a multi-billion dollar consumer market (Farhi, 2003).

What is surprising is that many men choose to shave their heads. Why would a man willingly dispense with his hair? One paradoxical explanation is that it has a positive effect on how they are perceived by others. People make inferences about others based on their appearances (Naumann, Vazire, Rentfrow, & Gosling, 2009) and behaviors (Ellyson & Dovidio, 1985). For one, people judge the dominance or power of others by whether they engage in counter-normative behaviors. Van Kleef et al. (2011), for instance, asked students to evaluate a man smoking outside a cafe´ either adhering to societal norms (e.g., using the ashtray) or violating them (e.g., placing his feet on a chair). They rated the man as substantially more powerful when he violated societal norms. Keltner, Gruenfeld, and Anderson (2003) suggest that power reduces behavioral inhibitions and allows people to act with less regard for convention. Accordingly, when people observe non-conformist behavior by another, they may infer that he or she is powerful.

Because shaving one's head is likely to be seen as unconventional, men who do so may therefore be seen as dominant or powerful figures. Synnott (1987, p. 402) summarized this theory well:

"They reject an extremely powerful and popular symbol of life and youth and elect a baldness which is an equally powerful symbol of age and death. Perhaps this choice expresses a transcendence of conventional views of masculinity and life and thus these individuals become symbolically more alive and more virile."

I conducted three studies to examine how men who shave their heads are perceived by others and whether nonconformity influences these perceptions. Study 1 sought merely to establish that men with shaved heads are perceived differently than men with hair. Students at a university in the southeastern United States evaluated authentic photographs of 25 men. The 10 men who shaved their heads were viewed as more dominant ($M = 4.14$, $SD = 0.45$) than the 15 men with full heads of hair ($M = 3.64$, $SD = 0.51$), $t = 2.52$, $p = .019$, Cohen's $d = 1.05$.

Study 2 sought to isolate the influence of hairstyle from other unobserved differences between the men and examined nonconformity as a mediator. Adults from a national online panel evaluated one of four men pictured either with their authentic hair or with digitally shaved heads. Ratings of their dominance and two indicators of nonconformity, openness to experience and norm violation (Van Kleef et al., 2011), are summarized below.

	Hair	Shaved	$t(342)$	p	Cohen's d
Dominance	4.93 (1.54)	5.55 (1.47)	3.83	< .001	0.41
Openness to experience	4.87 (1.43)	5.42 (1.48)	3.51	< .001	0.20
Norm violation	3.31 (1.54)	3.26 (1.63)	–0.29	.772	–0.03

Note. Means are reported with standard deviations are in parentheses.

The total effect of the shaving manipulation on dominance perceptions, $B = 0.62$, $SE = 0.16$, 95% CI [0.30, 0.94], was decomposed into its indirect effect on the two indicators of nonconformity, $B = 0.19$, $SE = 0.07$, 95% CI [0.09, 0.35], and a residual direct effect, $B = 0.43$, $SE = 0.16$, 95% CI [0.12, 0.73]. Nonconformity mediated in part the shaving manipulation on dominance perceptions. Finally, Study 3 dispensed with photographic stimuli and used instead a written description of an otherwise identical man who was described with thick hair, thinning hair, or a shaved head. A summary of the results is presented below.

	Thick hair	Thinning hair	Shaved	$F(2, 549)$	p	η^2
Dominance	5.37 (1.35)	5.22 (1.32)	5.55 (1.35)	2.80	.062	.01
Openness to experience	5.39 (1.61)	5.17 (1.63)	5.61 (1.54)	3.43	.033	.01
Norm violation	2.93 (1.48)	3.28 (1.51)	3.55 (1.49)	7.94	< .001	.03

Variation in hairstyle explained 6.2% of the variance in dominance perceptions. The man was most dominant when described with a shaved head and least dominant with thinning hair. He was also viewed as the most open to experience and more of a norm violator with a shaved head. Controlling for these two indicators of nonconformity, hairstyle had a non-significant residual effect on dominance perceptions, $F(2, 547) = 1.38$, $p = .25$.

The results suggest that men with shaved heads are viewed as dominant figures in part because they conform less to societal norms. Although together openness to experience and norm violation mediated the effects of shaving on dominance perceptions, their effects were inconsistent and modest. This suggest both that other mediators may play an important role (e.g., stereotypes) and that better measures of nonconformity are needed to faithfully test the theory.

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2.6 Conversations: Consumption, Happiness, and Public Policy

Room: Madero B

Discussants: Punam Anand Keller, Dartmouth College

Mike Norton, Harvard Business School

Cassie Mogilner, University of Pennsylvania

3.1 Symposium: Decision Making in Social Contexts: Choosing for Others, Recommending for Others, and Delegating Choice to Others

Room: Espada

Chair: Peggy Liu, Duke University, USA

Choosing for Others is More Fun (and Less Depleting) than Choosing for the Self

Evan Polman, New York University, USA*

Decades of research show that people enjoy activities that provide them with opportunities to make choices (for a review, see Ryan and Deci (2002)). However, recent research shows that people describe their choices as difficult, paralyzing, and exhausting (for a review, see Iyengar (2010)). This inconsistency is called the paradox of choice, whereby people have opportunities to make more choices than ever before, yet do not seem to be benefitting from them, psychologically (Schwartz 2004). The net effect, for instance, on satisfaction between choosing among extensive options and few options is virtually zero (Scheibehenne, Greifeneder, and Todd 2010). Although considerable research has investigated the effect of making choices on well-being, very little has been aimed at identifying answers that might help explain when people benefit from exercising self-determination.

By self-determination, we mean the desire to have control over one's external environment (Deci and Ryan 1985). In keeping with this definition, we add from Johnson, Dabbs, and Leventhal (1970) that a sense of control over one's environment is "associated with the ability to influence others" (p. 26). Among the possible ways of exercising self-determination while simultaneously influencing others, is making a choice for others. At first glance, it might seem like choosing for others belies unique self-expressions of goals or preferences (relative to choosing for the self) and should therefore be less desirable than choosing for the self—but in fact, choosing for others may be viewed as an opportunity for enhancing the self by extending the self onto others. By choosing for others, the self is imprinting others which may be a satisfying and enjoyable phenomenon. Like recommending a restaurant to a friend, and then finding out that it has become his or her favorite restaurant, people may take pleasure in influencing others, particularly with respect to changing others' goals and preferences and matching them with the self's.

This type of behavior may be considered thrill-seeking or enjoyment of "constrained risks," whereby the risks of participation are low yet the arousal is high (Rozin 1990). In the same vein, we propose that choosing for others is an enjoyable and satisfying pursuit. People who choose for others tend to imagine and fantasize about possible positive outcomes, such as winning a lottery or having a fun blind date; in contrast, people who choose for themselves tend to imagine a more pessimistic fate, like having a horrible blind date (Beisswanger, Stone, Hupp, and Allgaier 2003). In addition, research has shown that people make riskier choices for others than they do for themselves (Stone and Allgaier 2008). On one hand, this behavior might be considered careless, but on the other hand, it might feel exciting—insofar as making risky choices is something people desire and admire (Wallach and Wing 1968). That is, people are reluctant to make risky choices with consequences that they themselves will bear, but on behalf of others people can satisfy their desires for risk by making choices that they would not make for themselves. Along these lines, Polman and Emich (2011) found that people make more creative choices for others than they do for themselves. In particular, they found that people displayed less inhibited behavior on behalf of others, precisely the kind of behavior that people find enjoyable (Apfelbaum and Sommers 2009).

One implication of making choices that are enjoyable is the amount of ego depletion that results after making them. Research has found that making choices requires self-regulatory resources that deplete with use (Vohs et al. 2008). For example, making choices renders the self less able to self-regulate on subsequent behaviors such as emotion suppression, self-presentation, and self-control because the resources required to display these behaviors have been depleted (Baumeister, Bratslavsky, Muraven, and Tice 1998; Vohs, Baumeister, and Ciarocco 2005; Vohs and Heatherton 2000). That said, resources can be restored by positive affect (Tice,

Baumeister, Shmueli, and Muraven 2007). For example, Shmueli and Prochaska (2011) found that smokers who were depleted—by having to exercise self-restraint (not eat cookies placed directly in front of them)—were twice as likely to have a cigarette during a subsequent short recess compared to smokers who watched a video that induced positive affect immediately before the recess.

Given the potential for positive affect to boost self-regulatory resources, increased enjoyment after making choices for others may have a buffering effect on ego depletion, and ultimately yield more self-regulatory resources in contrast to making choices for the self. Recent work has documented preliminary evidence for this possibility: In one study, people who made choices for others examined more information before making a choice compared to people who made choices for themselves (Polman 2010). In another study, people who made choices for others experienced a reversal of the choice overload effect (i.e., they felt more satisfied after choosing among extensive alternatives than among few alternatives) compared to people who made choices for themselves (Polman, 2012). Taken together, this indicates that people who make choices for others may have more self-regulatory resources because they persist in choices longer and can choose among extensive alternatives without corroding their satisfaction.

In two studies, we explored this possibility and examined the intersection of two research literatures: self-other decision making and self-determination. In Study 1, we asked participants to make choices for themselves or for others and then measured their depletion by asking them to try an unpleasant drink mixture (drinking more indicates less depletion). We found participants choosing for others consumed more of the mixture and enjoyed making their choices more. In Study 2, we investigated a moderator, self-construal, and found a crossover interaction illustrating that choosing for others is more enjoyable and less depleting if decision makers are self-oriented; whereas choosing for others is less enjoyable and more depleting if decision makers are other-oriented. Our findings underscore that differences in self-other decision making can be explained within a framework of self-construal and that, ironically, choosing for others is more enjoyable and less depleting when the agent of one's orientation mismatches the agent of one's choice.

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Matching Choices to Minimize Offense: Avoiding Offending Stigmatized Group Members by Making Similar Choices for Them and for Us

Peggy Liu, Duke University, USA*
Troy Campbell, Duke University, USA
Gavan Fitzsimons, Duke University, USA
Grainne Fitzsimons, Duke University, USA

Situations in which people choose products both for themselves and for others to consume together are common. For instance, people may find themselves responsible for buying drinks at the bar for themselves and another, picking up take-out dinner entrees for themselves and a colleague, or packing snacks for a social event. What happens when people need to choose products for themselves and for stigmatized others? We examine the interpersonal challenges that arise in communal consumption scenarios in which people choose for and consume together with stigmatized group members. Specifically, we focus on overweight others as a special case of a stigmatized group.

Past research suggests that we may choose different products for ourselves than for members of stigmatized groups (Berger and Heath 2007). However, this and other related research examined choices in isolation (i.e., when one is choosing to consume alone) (Berger and Heath 2007; McFerran et al. 2010). In fact, there are often situations in which people choose for both themselves and stigmatized group members before consuming together with them. In such situations, we propose that a new factor comes into play: the potential for the stigmatized group member to make negative inferences about different choices. We argue that people may worry about the

inferences the other person would make about differing choices and that this concern would therefore influence them to make more similar choices for themselves and a stigmatized group member.

Thus, the present research tests a novel hypothesis about consumer choice in the context of consuming together with others. Namely, we hypothesize that consumers will be more likely to engage in a matching strategy—to choose the same product for themselves and another person—when the other person is a member of a stigmatized social group (vs. a non-stigmatized social group). We further hypothesize that the use of this matching strategy is driven by consumers' desire to avoid offending members of stigmatized groups. In four studies, we test these hypotheses in the context of food choices that consumers make for themselves and for overweight versus normal-weight others.

In study 1, we conduct a first test of our matching hypothesis, examining whether people are more likely to choose matching foods for themselves and an overweight (vs. normal-weight) recipient. Using a two-group between-subjects design in which half of participants chose salad or fries for an overweight recipient and themselves and half chose selections for a normal weight recipient and themselves, we found that people chose matching foods more often with an overweight recipient than a normal weight recipient.

In studies 2, 3, and 4, we seek to replicate the matching effect while exploring potential mechanisms of this effect, testing our second hypothesis that this effect is driven by peoples' desire to keep the overweight recipient from drawing negative inferences and feeling offended.

Study 2 examines consumers' lay theories about whether choosing non-matching (different healthiness) foods for self and recipient will lead to more negative inferences by an overweight recipient compared to a normal-weight recipient. Using a within-subjects design, in which participants predicted the inferences an overweight versus normal weight recipient would make if the selector made matching choices (the same unhealthy or healthy option for both persons) versus non-matching choices (a healthy option for one person and an unhealthy option for the other), we found that participants thought recipients would make more negative inferences if the selector made non-matching choices for an overweight recipient, suggesting that people believe they can prevent overweight recipients from forming negative inferences by matching choices.

Study 3 further tests our account by examining how choices are affected when the choice set options differ on the stigma-relevant dimension of healthiness; we hypothesize that increased matching with overweight others should only occur when the non-matching choices have the potential to lead to negative inferences (i.e., when they differ in healthiness). Using a 2x2 between-subjects design in which participants chose between fries and either salad or onion rings, for themselves and either an overweight or normal weight recipient, we found that when dining with an overweight recipient, increased matching occurred when choosing different food options might lead to negative inferences (i.e., when the items differed in healthiness: salad/fries), but not when choosing different food options would not readily lead to negative inferences (i.e., when the items were of the same healthiness: onion rings/fries).

Finally, in study 4, we use a moderated mediation analysis to more precisely test our proposed process, examining whether people select matching choices to avoid making an overweight recipient feel negative about her weight. Using a between-subjects design similar to that used in study 1, in which half of participants chose a healthy or unhealthy food for an overweight recipient and themselves and half of participants chose between a healthy or unhealthy food for normal weight recipient and themselves, participants were then asked to indicate to what extent they chose the foods to make the recipient feel positive (not negative) about her weight. We hypothesized and found that there was moderated mediation, such that for an overweight recipient but not a normal weight recipient, the effect of the recipient's weight on matching was mediated by whether the participant chose the options to make the recipient feel positive, not negative, about her weight.

Thus, in four studies, we identify a novel choice strategy of matching to avoid offending others. Unlike past research that shows divergence from the choices of undesirable groups, we found that in communal consumption scenarios, people select the same products when choosing for oneself and a member of a stigmatized group. More broadly, we argue that people may use a general matching strategy when choosing for oneself and for others if non-matching choices could lead the recipient to make negative inferences.

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A Desensitization Bias in Social Judgment: Predicting Others' Emotive Reactions and Making Recommendations after Repeated Exposure

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People often seek out individuals who are distinguished by their repeated experience with emotive content (e.g., art, comedy). Consumers seek out these individuals for recommendations, corporations hire these individuals to design products for the public, and governments employ these individuals to craft public policy. Additionally, when trying to predict others' reactions to emotive content, people often make an effort to become well exposed. For instance, a person may deliberately watch a YouTube video multiple times to decide whether it is funny or appropriate enough for sharing. Both lay intuition and empirical research suggest that gaining experience can help people predict others' emotive reactions by closing empathy gaps (Nordgren, McDonnell, and Loewenstein 2011).

However, individuals can quickly gain too much experience and become desensitized to content after repeated or extended exposure (Dijksterhuis and Smith 2002). Although much research has examined how desensitization affects judgments of one's own tastes and preferences (e.g., Loewenstein, O'Donoghue, and Rabin 2003; Wilson and Gilbert 2003), we examined downstream consequences for prediction of others' judgments.

We hypothesized that people will not only desensitize to an emotive experience after repeated exposure, but also incorrectly use their desensitized sensitivities to make predictions of how someone else would react to an emotive experience. Our framework is rooted in the dual judgment model of emotional perspective taking (Van Boven and Loewenstein 2005). This model posits that people predict others' emotions by first considering their own (simulated) emotions and often fail to adequately adjust for differences between self and other. Thus, rather than realizing that one's own current state (e.g., subjective desensitization) may be different from that of someone else who lacks a high level of exposure, people who desensitize to an emotive experience might falsely assume that the experience is less arousing for others too. This should lead them to mispredict others' preferences and emotive reactions and lead them to error when they recommend and share content with others. We tested this desensitization bias in social judgment hypothesis across six studies using various emotive content ranging in valence, complexity, and repeated exposure method.

In the first study, we exposed participants to twenty images of a dramatic style of astrological art. We then asked participants to remember the first and last images they had seen and to indicate which image would be better for publically consumed Space Art media. We counterbalanced the first and last picture between subjects, and found that participants showed a bias towards select the image that was presented at the start of the exposure (before they became desensitized) rather than the image presented at the end.

In study 2, after viewing a slideshow of motorcycle tricks, we presented participants with two images, each featuring a different thrilling motorcycle stunt. Participants were asked to select which image would be more impressive as a single promotional image to

people viewing motorcycle stunts for the first time. We found that participants were more likely to choose the image of a specific stunt type if that stunt type had been featured *less often* in a slideshow that preceded the choice.

In study 3, people were repeatedly exposed to one of two shocking Lady Gaga pictures. We found that participants were more likely to predict others previously unexposed to both images would be less shocked by the image participants themselves were repeatedly exposed to compared to the image participants were not repeatedly exposed to.

A variety of indirect and direct probes in studies 2 and 3 found that participants were largely unaware of the desensitization bias and unable to retrospectively correct for the bias. In sum, the breadth of the first three studies distinguishes the desensitization bias as a unique phenomenon separate from related phenomena such as primacy effects (Carpenter and Nakamoto 1989) and peak-end biases (Kahneman et al. 1993).

In studies 4 and 5, we tested the underlying process and potential downstream consequences. In study 4, we found that repeated exposure to a joke (writing it five times versus one time) led participants to find the joke personally less humorous, predict the joke would be less humorous to others, and report lower likelihood of sharing the joke. As predicted, one's own feelings fully mediated the effect of repeated exposure on predictions of others' feelings and likelihood to share. In study 5, we found that after extended versus shorter exposure to a painful noise, participants predicted an additional, brief sound burst would be less painful for themselves, predicted it would be less painful for unexposed others, and reported they would feel less guilty using the sound burst to punish other participants in a game. Similar to study 4, the effect of exposure on the latter two other-regarding variables was fully mediated by predictions of how painful a short noise burst would be for oneself.

In the final study, we tested whether this desensitization-bias could lead high-exposure consumers to make poor recommendations for unexposed others. Participants were given an objectively better joke and an objectively worse joke (based on pre-test ratings). We found that participants who were repeatedly exposed to the good joke (writing it down five times) were more likely to choose to share the worse joke with someone else compared to participants who were not repeatedly exposed (presumably because extra exposure desensitized them to its amusingness). Moreover, we described the study to a separate group of participants and asked them whom they would rely on to choose the funnier joke: a person in the control condition or a person in the repeated exposure condition? A majority chose the person in the repeated exposure condition.

These studies suggest that repeated exposure can dramatically and negatively influence sharing, recommendations, and social behavior. The lay intuition to seek out those with more exposure and to acquire more exposure to better predict others' reactions may often steer consumers in the wrong direction. Thus, high-exposure "experts" may sometimes be in the *worst* position to connect with someone who lacks any exposure at all.

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Delegating Decisions: Recruiting Others to Make Difficult Decisions

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Past research suggests that offering shoppers too many options can lead to choice overload: shoppers are less likely to purchase anything from a larger choice set, despite a better chance of them finding a product that fits their wants or needs (e.g., Iyengar and Lepper 2000). Yet past research examining choice overload has failed to consider that, in many situations, making a choice or walking away empty-handed are not shoppers' only options. Rather, shoppers often have the option of asking other people, such as

salespeople, to help them choose. We suggest that, although offering many options will decrease purchases when a salesperson is not available, it will actually *increase* purchases when a salesperson is available, because shoppers who are struggling with choice overload will delegate their choices to salespeople and can thus take advantage of the larger set of options.

Study 1a tested the premise that people are more likely to delegate decisions when faced with a greater number of choice options. Participants were asked to imagine that they were dining at a fancy restaurant, and they were given a restaurant menu with a small or large array of entrées from which to choose. Participants indicated whether they would prefer to choose an entrée themselves or tell the waiter which entrées they were considering and have the waiter to choose for them. More participants delegated their choice of entrée to the waiter in the large array condition (33%) than in the small array condition (19%; $\chi^2(1, N = 166) = 4.16, p < .05$).

Study 1b sought to replicate this finding in a setting with real consequences. Participants were invited to participate in a taste test of gourmet jelly beans, and they were given a small or large array of jelly bean flavors from which to choose. Participants were given the option to choose which flavor they would taste themselves or tell the experimenter which flavors they were considering and have the experimenter choose for them. As in study 1a, more participants delegated the choice to the experimenter in the large array condition (67%) than in the small array condition (26%; $\chi^2(1, N = 64) = 10.72, p = .001$).

Study 2 explored the implications for purchases in the absence and presence of a salesperson. We predict that, as in past research, when a salesperson is absent, increasing the number of choice options will decrease purchases because people will opt not to choose anything. However, when a salesperson is present, increasing the number of choice options will increase purchases because people will delegate choices to the salesperson rather than walk away empty-handed. Participants were asked to imagine that they were shopping and that they came across a store selling a small or large array of gourmet loose-leaf teas. As in past research, some participants were only given the options of choosing a tea themselves or passing for the time being. Other participants were told that a salesperson offered to help them choose and were given the options of choosing a tea themselves, telling the salesperson which teas they were considering and having the salesperson to choose for them, or passing for the time being.

We examined the impact of set size and salesperson presence on whether or not participants opted to purchase tea (via choosing themselves or delegating to the salesperson). A logistic regression with set size and salesperson presence on purchases indicated that, as predicted, there was a significant interaction between set size and salesperson presence on purchases (Wald's $\chi^2 = 8.90, p < .005$). When a salesperson did not offer to help, fewer participants chose to make a purchase when there were many teas (37%) than when there were few (64%; $\chi^2(1, 63) = 4.22, p < .05$). However, when a salesperson offered to help, *more* participants purchased tea when there were many teas (86%; 31% chose and 54% delegated) than when there were few (61%; 29% chose and 32% delegated; $\chi^2(1, 69) = 5.13, p < .05$, or, separating out choice, delegation, and passing for the time being, $\chi^2(2, 69) = 5.72, p = .06$).

This research demonstrates that the social context in which people shop (i.e., whether salespeople are available or not) is an important determinant of shopper behavior. Although offering many options decreases purchases when another person is not available to assist with the decision, it actually *increases* purchases when someone else is available, because shoppers who are struggling with choice overload instead delegate their choices to that other person. This research contributes to the study of choice avoidance by showing that people use others in their social contexts to help them make difficult choices. It also contributes to the study of choice overload by identifying an important boundary condition: when social resources are present, increasing choice increases purchases.

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3.2 *Individual Papers:* **Risky Business: Risk and Impatience in Decisions**

Room: San Jose

Chair: Sean Blair, Northwestern University

Priming Consumers with Baby-related Cues Induces Impatience

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Are you familiar with images of Mickey Mouse, the Teletubbies, or the logo of Michelin tires? These are successful applications of baby images in Marketing. Baby-related cues are everywhere in the world: We see infants in their cribs, baby images in advertisements, etc. However, our understanding of the influence of baby-related cues on consumer behavior is quite limited. In this project, we will explore how baby-related cues impact consumer decision making, specifically when deciding between smaller-sooner and larger-later rewards.

'Baby schema' is described by (Lorenz 1943) as a set of physical features, like a large head, a high and protruding forehead, large eyes, chubby cheeks, a small nose and mouth, short and thick extremities, and a plump body shape. FMRI study revealed that exposure to the baby schema was associated with the brain reward system in nulliparous women (Glocker, Langleben et al. 2009). They found out that infant faces, regardless of baby schema levels, activated the key structures of the mesocorticolimbic system, known as reward system in the brain. Magnetoencephalography (MEG) results (Kringelbach, Lehtonen et al. 2008) confirmed that a significantly more activity occurred in the medial orbitofrontal cortex area, that represents the reward value, the expected reward value, and the affective value of reinforcers (O'Doherty 2004; Kringelbach 2005), responding to unfamiliar infant faces than adult faces around 130ms. Moreover, from an evolutionary perspective, babies are generally assumed to have rewarding capacities, as they allow the human species to carry on genes to the next generation (Dawkins 2006). Therefore, we expect that priming consumers with baby images or even baby-related cues will activate the reward system in consumption contexts, thereby influencing consumer behavior.

Previous studies have shown that activation of a general reward system promotes preference for irrelevant rewarding items (Li 2008; Van den Bergh, Dewitte et al. 2008; Wadhwa, Shiv et al. 2008). Specifically, priming consumers with hot cues (have them touch bras or rate pictures of sexy women) led to steeper delay discounting of monetary rewards among male participants (Van den Bergh, Dewitte et al. 2008). Also, sampling a product, high in incentive value (e.g., Hawaiian Punch) increased preference for anything rewarding (e.g., food, drink) in both men and women (Wadhwa, Shiv et al. 2008). We build on these studies to demonstrate that priming consumers with baby-related cues will activate the general reward system, as evidenced by acts of generalized impulsiveness.

In Study 1, ninety students (Mage=18.74, SDage=1.33; 43 males) from a large university participated in a lab study for credits. They were randomly assigned to one of two picture evaluation conditions, a baby priming or a landscape condition. In each condition, participants indicated their liking for ten pictures on a seven-point scale, with either a baby face (baby-priming condition) or a landscape picture (control condition) on the screen. A delay-discounting task followed to measure impatience. In the discounting task, participants had to specify the amount of money that would make them indifferent between receiving this money in three days, in one week, in two weeks, and in one month, and getting 15€ immediately (Thaler 1981). The area under the discounting curve ranged from 0 (steepest discounting) to 1 (no discounting at all), and was the indicator of impatience (Myerson, Green et al. 2001). The smaller the area under the discounting curve, the more impatient participants are.

The main effects of baby priming and gender were significant. Participants primed with baby images (Mbaby=0.77, SDbaby=0.15) were more impatient than those primed with landscapes (Mlandscape=0.82, SDlandscape=0.13), F(1, 86)=3.96, p=.05, η2=.044. And male participants (Mmale=0.76, SDmale=0.14) were significantly more impatient than female participants (Mfemale=0.83,

SDfemale=0.14), F(1, 86)=5.24, p=.025, η2=.06. The interaction of baby priming and gender was not significant, F(1, 86)=0.44, p=.51. Therefore, we will skip the influence of gender in further studies.

Baby clothes were used in Study 2 to replicate the effect of Study 1, while excluding the potential explanation that human faces induced impatience. Fifty students (Mage=19.06, SDage=1.20; 30 males) from a large university participated in this lab study for credits. They were randomly assigned to one of two conditions, in which they either evaluated a set of baby pyjamas (baby-priming condition) or a T-shirt (control condition). Participants could touch the product, and then answered a set of questions about its quality. The same delay-discounting task as the one used in Study 1 followed to measure impatience.

We replicated the effect of baby priming on impatience. After touching baby pyjamas participants (Mbaby=.62, SDbaby=.17) discounted money more steeply than those touching a T-shirt (Mcontrol=.71, SDcontrol=.13), F(1, 48)=4.48, p<.05, η2=.09.

If baby cues indeed activate a general reward system as we proposed, manipulating the cuteness of baby images should affect the strength of this activation. We tested this in Study 3. We recruited 106 participants (Mage=37.35, SDage=14.47; 36 males) on Mturk. Firstly, participants decided between ten pairs of T-shirts displaying either an image of an extremely cute baby (attractive baby condition) or a regular baby (less attractive baby condition). We morphed the baby images to be cutter by increasing forehead, eyes, and decreasing nose and mouth, or morphed the same image to be less cute, by decreasing forehead, eyes, and increasing nose and mouth. Then participants had to choose one out of two payment options in a television purchase scenario (Mishra and Mishra 2010). They could wait to get the television and pay installment fees successively for three months, or pay extra cost to get the television immediately. They indicated their preference on a nine-point scale. Priming with more attractive baby faces (MHigh=4.17, SDHigh=3.21) increased preference for immediate payment entailing extra costs compared to priming with less attractive baby faces (MLow=1.98, SDLow=1.37), F (1, 104) =18.76, p<.001, η2=.15.

To conclude, two studies verified that baby-related cues enhance impatience in consumer decisions. Participants preferred smaller-sooner rewards (Study 1 & 2) and wanted to pay extra costs to get an immediate reward (Study 3) after seeing attractive baby faces or touching baby clothes. We speculate that baby-related cues activate a general reward system, which drives impatient behaviors. In further studies, we will try to explore the underlying mechanism.

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The Diversification Paradox: Covariance Information and Risk Perception among Novice Investors
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With the development of employee savings plans and privatized retirement savings schemes, people with scant knowledge of finance routinely make risky decisions with dramatic implications for their future wealth. Although people can drastically reduce portfolio risk by investing in negatively correlated assets (Markowitz 1952), empirical evidence demonstrates that they fail to do so, instead investing overwhelmingly in positively correlated assets (e.g. French and Poterba 1991; Huberman 2001). Behavioral research suggests that novice investors diversify poorly because they fail to take into account the way assets covary with each other (Hedesstrom, Svedsater, and Garling 2006). For instance, they evaluate the riskiness of assets one at a time (Dorn and Huberman 2010), or they invest in all available assets in the menu evenly (Benartzi and Thaler 2001).

Building upon this literature, we examine the interplay between covariance information, risk perception, and financial literacy. We suggest that investing in positively correlated assets can actually be a deliberate choice made by novice investors, in a failed attempt to

reduce risk. Indeed, negatively correlated assets may appear incongruent to novice investors. In non-financial decisions, incongruence is usually associated with a notion of risk (Campbell and Goodstein 2001; Meertens and Lion 2008). While retrieving this misleading incongruence-risk association, novice investors may end up making riskier financial decisions (investing in correlated assets and avoiding negatively correlated assets) when trying to minimize risk, compared to when they are encouraged to take risks. In other words, they accomplish exactly the opposite of what they intend to do. In four studies, we show that this erroneous strategy can be applied in sequential (study 1) and in simultaneous (study 2) financial allocation tasks, and that it is the result of a deliberate and reasoned decision-making process (study 3). We also suggest menu design (study 2) and investor education (study 4) solutions to improve novice investors' investment decisions.

In study 1, participants were fictitiously endowed with a fund and asked to choose a second fund. We manipulated investment motives: participants were either instructed to minimize the risk of their allocation (risk-minimizing condition), or to maximize profits by taking risks if necessary (risk-taking condition). They could choose between two funds, presented as equally risky and equally profitable. Based on expected performances across hypothetical economic situations, one fund was positively correlated with the endowed fund, and the other fund was negatively correlated. We hypothesized that the latter fund would appear incongruent to novice investors and be perceived as riskier. We measured financial literacy with a standard questionnaire. Not surprisingly, expert investors were more likely to invest in the negatively correlated fund when instructed to minimize risk, than when encouraged to take risks (z=3.24, p<.001). More interestingly, novice investors adopted the opposite strategy; they were marginally more likely to invest in the positively correlated fund when instructed to minimize risk (z=-1.86, p=.06). Novice investors' decisions were mediated by the belief that investing in the negatively correlated fund would add risk to their investment.

In study 2, participants were asked to allocate $800 among eight funds, whose past performances were shown in a table. The funds were equally risky (same variance of returns) and equally profitable (same average return). As in study 1, we manipulated investment motives. We also manipulated the covariance structure of the funds. In one condition (unbalanced structure), a majority of funds exhibited positively correlated returns, and the remaining funds were negatively correlated with the majority funds. We hypothesized that these minority funds would appear incongruent to novice investors and be perceived as riskier. In the other condition (balanced structure), there was no majority subset of positively correlated funds. In the unbalanced structure condition, novice investors allocated less money into the minority subset when instructed to minimize risk, compared to when they were encouraged to take risks, paradoxically resulting in a riskier allocation (z=-2.31, p=.02). Mediation analyses confirmed that this strategy was due to erroneous beliefs about covariance. Designing the menu in such a way to decrease the perceived incongruence of negatively correlated assets (balanced structure condition) made the erroneous covariance-risk inferences ineffective, and improved novice investors' allocation.

In study 3, we hypothesized that impairing cognitive abilities would hinder the accessibility of this covariance-risk inference and thus improve diversification. We replicated study 2's design (unbalanced structure only), and half of the participants had to memorize fifteen words before performing the financial allocation task. Under cognitive load, novice investors instructed to minimize risk invested less in the positively correlated funds, compared to the no-load condition (t(80)=1.97, p<.05), resulting in a less risky allocation.

Study 4 was based on the idea that laymen already know and routinely use the correct covariance-risk inference in their everyday life, although they are unable to retrieve it in financial decision tasks. To test this idea, we used the same operationalization as in study 1 but framed the investment decision task in such a way to help participants retrieve by themselves the correct inference. They were initially endowed with the stock of a company that produces Umbrellas, and they had to decide whether to invest in a company that produces Raincoats or in a company that produces Sunglasses. Most participants retrieved the correct inference, and made the correct choice. This study may inspire financial education programs, as previous research shows that explaining Markowitz's portfolio theory to novice investors is largely ineffective (Hedesstrom et al. 2006).

This research documents an erroneous diversification strategy, which leads novice investors to take on more risk when in fact they intend to reduce it. Whereas previously documented diversification heuristics increase with cognitive load (e.g. Morrin et al. 2012), the strategy that we present requires investors' full cognitive capacity, thus relying on deliberate and reasoned inference-making. We

believe that managers and policy-makers largely ignore this diversification paradox, and our research proposes applicable solutions (menu design, financial education) to mitigate its negative consequences on people's long-term financial wealth.

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At Risk of Feeling too Safe: Risk Compensation in Consumers

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Introduction
In general, consumers are considered to be risk averse. Give a man the choice between 100$ with a 50% chance, or the equivalent 50$ for sure, and many people will go for the latter option. Is it possible to turn consumers risk seeking by manipulations in the environment? Is it possible to turn consumers risk seeking at all? Would that help in encouraging consumers to make more risky choices, like going for the new and (allegedly) improved option? For the unknown and cheaper option? For the risky option from a social point of view?

We base ourselves on a self-view maintenance account (Gao, Wheeler, & Shiv, 2009)to investigate whether consumers will seek out risk to compensate a previous experience in which they were pushed into an uncomfortable situation of manifest safety.
The notion of risk compensation predicts that driving consumers to an option with low risk will make them counter this force by (subsequently) choosing one with higher risk. The occurrence of risk compensation has been shown with ABS, helmet-wearing cyclists, seatbelts, etc. (e.g. Johnson, Jurik, Kreb, & Rose, 1978; Rodgers, 1996), and in the existence of "remedies" for risk (Bolton, Cohen et al. 2006). Still, some of this research has been criticized as most of it is based on aggregate methods (Dulisse 1997) and most of it does not demonstrate psychological process evidence.

The latter is exactly what our research aims to do, as we show that risk compensation behavior has its boundary conditions in consumers' regulatory focus, and provide process evidence. Additionally, and in line with the notion that risk compensation depends on a psychological state, we show that its effects are not specific to the domain where it was triggered, but on the contrary can have effects in unrelated domains.

Study 1
The first study was aimed at finding initial support for the notion of risk compensation. As an important part of the literature about these effects deals with car driver behavior, we opted for an experimental design related to this subject. We expected that participants that are put in a safe car drive more aggressively. Participants were put in a driving simulator, and drove the car for 10 minutes along an indicated route with simulated normal traffic. The safety manipulation consisted of having participants (n=49) either drive a small or a large car, an implicit manipulation of safety. Also, a questionnaire was administered after the driving session, gauging for chronic differences in regulatory focus (prevention and promotion focus) (Higgins, 1997).

Analysis revealed a significant main effect of the safe car on driving intensity (t(47)=2.30, p<.05) where the big, safe car leads to a higher driving intensity (M=2.69, SE=.068) than the small car (M=2.45, SE=.080). We also found a significant interaction between car type and promotion focus on driving intensity (F(1,46)=5.29, p<.05) where only participants low in promotion focus seemed to be sensitive to the effect of car type. Participants high in promotion focus seem to drive with high intensity, no matter what car type. We found a mirroring directional interaction effect between car type and prevention focus (F(1, 46)= 3.45, p=.07): only participants that scored low on promotion focus seemed to be affected by car type, whereas people high in prevention focus seemed to drive cautiously, no matter what car they thought they were driving. These results imply that promotion and prevention focus can impose boundary conditions on the previously found effect, and support an explanation of these effects in terms of risk regulation according to risk compensation, as hypothesized.
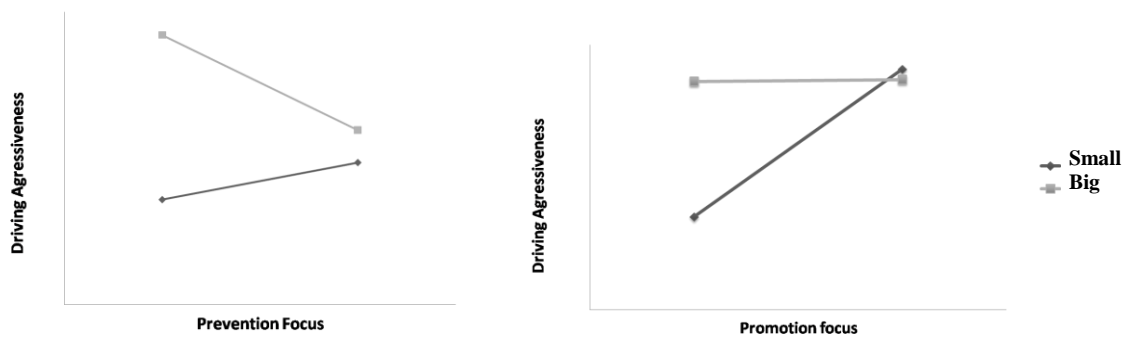
Study 2

If greater safety would lead to compensatory behavior by taking more risk, in principle it should not matter whether this risk is associated with the initial safety cue. In this study we test whether a safety prime in one domain (cars) can lead to more risky behavior in an unrelated other domain (financial risk taking). For this study, we used a subtle prime of safety by having participants evaluate one of two car ads. Features of the car were briefly mentioned, and participants were asked to express their evaluation about the car in the ad on several dimensions, amongst which safety. The manipulation in this study consisted of the fact that, although both cars were from the same brand, one of them was objectively a very bulky and safe car, whereas the other one was famous for having failed some government issued safety test.

As a dependent measure, we used an approximation of financial risk taking, which consisted of the Balloon Analog Risk Task (BART; Lejuez et al., 2002), where participants receive 5ct for every time they push the pump that blows up a balloon, but lose all of their money on a specific balloon if it pops.

A mediation analysis conducted according to recommendations by Preacher and Hayes (2004) revealed an indirect effect of car type on financial risk taking as measured by the BART task, mediated by the perception of safety of the car that participants had evaluated. A bootstrapped estimate of the indirect effect showed significance within a 95% confidence interval that did not include 0 (M = .59, SE = .033, LL = .032, UL = 1.37). Importantly, no similar results could be found for other model differentiating features that were subject to the participants' evaluation like price, quality or performance. We therefore conclude that it was indeed the manipulation of safety, that caused risk seeking behavior in another, unrelated domain, i.e. financial risk.

Discussion

In these studies, we provide evidence for the existence of risk compensation in consumer decisions, additionally providing process evidence for these effects. Additionally, the results of study 2 indicate the potential broad applicability of these effects. Potential uses

could be in guiding consumers towards choices that, although perceived as more risky, might also be more fit to consumers' needs. Further research, by us and hopefully by others, can elaborate on this.

Our theoretical contribution is adding to the understanding of risk compensation in terms of its situational and dispositional drivers, the latter being necessary to establish its place in the realm of relevant consumer effects.

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When Less is More: Threats to Personal Control Increase Investor Optimism
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"It is hard for us, without being flippant, to even see a scenario within any kind of realm of reason that would see us losing one dollar in any of those [credit default swap] transactions."
Joseph Cassano, Head of AIG Financial Products

On an investor conference call in August of 2007, Joseph Cassano dismissed out of hand the possibility that AIG could suffer losses on the $78 billion worth of home mortgages his group had guaranteed. Within a year the insurer was on the verge of bankruptcy, a victim of what Cassano had claimed to be impossible—enormous losses resulting from a nationwide collapse in housing prices. Although today we may be incredulous at the complete repudiation of risk encapsulated in Cassano's statement, the sentiment was not uncommon at the time. Indeed, overly optimistic beliefs about investment outcomes appear to be the norm rather than the exception. Research has shown that investors consistently believe that they will outperform the market and outcompete the competition, contributing to overly generous asset valuations and speculative bubbles that invariably pop. The pervasiveness of such unabashed investor optimism underscores the importance of identifying its antecedents, especially given that more individual consumers than ever are managing their own money.

Research in psychology suggests that this may be yet another manifestation of optimistic bias, whereby people believe not only that positive events are more likely to occur but also that negative events are less likely to occur. Such optimism is consistent with the broader phenomenon of overconfidence; individuals tend to overestimate their abilities, probability of success, and level of control, even in situations in which their outcomes are determined by chance. Thus, people may be overly optimistic about their investment outcomes because they have an inflated sense of personal control more generally (i.e., the belief that they can personally predict, affect, and steer events).

In the current research, I put forth the counterintuitive proposition that unrealistic investor optimism may be exacerbated not only by too much confidence but also by too little. Specifically, I argue that consumers are more likely to be optimistic about investment outcomes when their sense of personal control is threatened than when it is not. I theorize that this occurs because the desire to restore personal control motivates consumers to perceive more control over investment outcomes, thereby reducing risk perceptions. I test this in three experiments.

In experiment 1, I show that consumers are more optimistic about investment outcomes when their personal control is threatened than when it is not by demonstrating an increase in preference for risky assets. Respondents were told to imagine that they had started a new job and that they needed to allocate their retirement contributions across five mutual funds of varying risk. To manipulate personal control, I varied whether the assortment of investment options was described as being restricted, thus limiting control over their money, or as being extensive, thus providing a great deal of control over their money. Results revealed a general tendency for

respondents to be risk-averse, such that they allocated less of their savings to riskier mutual funds. However, risk-aversion was less pronounced for respondents in the low-control (vs. high-control) condition, suggesting that low personal control increased investor optimism.

Experiment 2 provides support for my proposition that this effect is driven by more optimistic risk perceptions. I first manipulated personal control using a recall task in which respondents wrote about a time in which they either lacked control or had complete control. In a subsequent task, respondents were told to imagine that they had been considering investing in the stock market and, after researching their options, had narrowed their consideration set down to one stock. They then reported how probable they thought it was that the investment would be profitable after having done this research and also whether or not they should make the investment. The data revealed that respondents were more likely to say they should make the investment when they were in the low-control (vs. high-control) condition. Importantly, this effect was fully mediated by a higher perceived probability of profit. These data further support my proposition that threatened personal control increases investor optimism.

Finally, experiment 3 provides evidence for my claim that this effect occurs because consumers perceive more control over investment outcomes. If increased investor optimism is indeed the result of increased perceptions of control, then the effect should be weaker (vs. stronger) when the threat to personal control occurs in a domain that is related (vs. unrelated) to investment outcomes, because this would decrease perceptions that investment outcomes are controllable. In this context, respondents were asked to provide ways they could predict either the weather (unrelated) or stock prices (related). To manipulate personal control, I varied ease of retrieval by asking respondents to provide either 2 (high control) or 12 (low control) ways to predict this outcome. Following this, respondents participated in a study described as investigating financial decision-making and were asked to predict whether a stock's price was more likely to be higher or lower the following month based on a chart of its recent price history. In reality, the chart had been randomly generated using a Gaussian random walk model; the resulting data had a slight, but significant, negative trend. I predicted that respondents would have more optimistic beliefs about the stock price when their personal control had been threatened than when it had not but that this effect would be weaker (vs. stronger) when the threat was in a related (vs. unrelated) domain. The data supported this prediction, such that when respondents were asked to provide ways to predict the weather, they were more likely to believe the stock price would increase when they were asked to provide 12 than when they were asked to provide 2. In contrast, price predictions did not differ as a function of control when respondents had provided ways to predict stock price.

Across these three studies, I find consistent support for my hypotheses regarding the impact of personal control on investor optimism.

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3.3 *Individual Papers:* Money Matters: Spending Decisions in Consumer Behavior
Room: Madero A
Chair: Tima Kiesler, California State University, Northridge

I Love You Both Equally, But… Parental Spending on Daughters versus Sons in Economic Recessions
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Vladas Griskevicius, The University of Minnesota, Twin Cities, USA
Joseph Redden, The University of Minnesota, Twin Cities, USA
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While past research has revealed important insights into children's consumer behavior and the consumption patterns of spouses (e.g., Rick, Small, and Finkel 2011), much less is known about how parents make spending decisions regarding their children. Drawing on

theory in animal behavior, we use both archival and experimental methods to examine how spending on daughters versus sons is influenced by economic recessions.

Theory and research in animal behavior shows that parental investment in male versus female offspring depends on environmental conditions (Clutton-Brock 1991; Trivers and Willard 1973). When conditions are favorable, parents invest relatively more in male offspring. By contrast, when conditions are bad, parents invest more in female offspring. This gender-specific difference stems from the difference in reproductive variance between males and females. Across the animal kingdom, males have *higher* reproductive variance: Whereas some high-status males attract a large number of females and, as a result, produce high numbers of offspring, a substantial portion of lower-status males attract no mates and produce zero offpsring (Dittus 1998). By contrast, females have *low* reproductive variance: As long as she is healthy, almost all females are able to attract a mate and tend to produce some moderate number of offspring.

Environmental conditions alter how parents invest in male versus female offspring because an offspring's likelihood of reproduction depends on their status and health. However, whereas under good conditions parental investment is focused on achieving a *maximum amount of status* (e.g., large size and dominance) for offspring, in bad conditions parental investment is focused on maintaining a *minimum level of health* needed for reproduction. When conditions are good, investing in male offspring has higher reproductive benefits because a high-status male will out-reproduce any female. When conditions are bad, however, this pattern reverses. In bad conditions, investing in a female ensures that there will be at least some offspring. Accordingly, animal research shows that when environmental conditions are favorable (e.g., abundant food resources), parents invest more in male offspring. But when environmental conditions are poor (e.g., scarce food resources), parents invest more in female offspring (Krist 2006; Robbins et al. 2006).

In the current research, we examine whether humans might show similar types of patterns by examining how economic recessions influence investment in daughters versus sons. Based on theory and research in animal behavior , we hypothesized that economic recessions should be associated with spending more on daugthers compared sons.

Study 1 examined how household spending on girls' versus boys' apparel in the US relates to fluctuation in the US Gross Domestic Product (GDP) from 1984 to 2010. We focused on apparel because it is a child consumer product category that is clearly separated by gender. Consistent with predictions, findings showed that GDP growth was negatively related to the ratio of spending on apparel for girls relative to boys (p=.003). This means that downturns in GDP over the last 26 years are associated with spending more money on girls' relative to boys' clothing.

Study 2 examined the relation between individual-level concerns about money and spending on a daughter versus a son. Participants (both parents and non-parents) first answered a question about how they would split up $100 dollars between their daughter and their son. Participants were told to imagine that they have two children (a boy and a girl) and were asked to indicate how much of the $100 they would spend on a son and how much they would spend on a daughter. Participants then answered questions that measured the degree to which they were concerned about money. Consistent with predictions, there was a significant positive relation between an individual's concerns about money and the share of $100 allocated to daughters ($p = .038$).

Studies 3 and 4 manipulated cues to economic condition. Participants first read a news story either about an economic recession, an economic upswing, or a neutral story. Participants in Study 3 then answered a forced-choice question about whether they would invest resources in their daughter or their son. Participants in Study 4 imagined that they had two school-aged children (a boy and a girl) and answered questions about allocating resources to either their son or daughter. For example, "You have the funds to put one child in a special healthy lunch program at school. Which child will get the lunch program?" Responses were provided on 8-point scales with

"Definitely Son" and "Definitely Daughter" at the endpoints. Participants also indicated how they would divide their assets to bequeath either to their son or daughter. Consistent with predictions, people chose to invest in their daughter more often in the economic recession condition ($p=.044$). Economic recessions also led people to invest more limited resources in daughters ($p=.011$) and bequeath more assets to daughters than to sons ($p=.036$).

Study 5 tested the moderating role of risk aversion. Biasing investment toward daughters in an economic recession is akin to biasing decisions toward the safe bet. Because investing in daughters ensures a modest reproductive payoff, we predicted that individuals who are more risk averse should be most likely to bias investment toward daughters in an economic decline. To assess risk aversion, participants made a series of choices between a certain monetary reward or a 50% chance of getting a larger monetary reward. Participants again read scenarios that detailed either an economic recession or an economic upswing and made choices about how to spend money on a daughter versus a son. As predicted, there was a significant economic prime condition by risk aversion interaction ($p = .01$). Individuals high in risk aversion spent significantly more on a daughter than a son in the economic recession condition ($p = .006$). However, there was no effect of the economic prime on spending on daughters versus sons for those low in risk aversion. These findings highlight how theory and research in animal behavior can provide insight into consumer behavior. Just as resource scarcity leads animals to invest more in female offspring, we find that resource scarcity (indexed by economic recessions) leads people to invest more in daughters than sons.

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Mentally Accounting for Others: Evidence for Mental Stealing Effects on Purchase Decisions

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Past research on mental accounting has focused on how consumers create budgets for themselves to control the flow of resources (Thaler 1980; 1999; Thaler and Johnson 1990). In this research we examine how the creation of a mental account, or budget, for another person affects purchase decisions made on behalf of others. Although prior research suggests that consumers might focus on meeting task objectives (e.g., a good gift), we predict that the formation of a mental account for another can lead to consumers being averse to spending significantly less on others due to an experience we term *mental stealing*.

M*ental stealing* can be understood as a sense of guilt due to an individual feeling that they are stealing from another individual by spending less money than they had cognitively committed to the person in their mind. This ties to mental accounting as the creation of a mental account may lead consumers to be averse to spending significantly below the budget due to the feeling that they are stealing resources that have already been given to the other person. In experiment 1, we predict that aversion to mental stealing and potential guilt can lead to decreased purchase intentions towards gifts that meet gift criteria but which are priced significantly below the budget. In experiment 2 we examine whether an aversion to mental stealing can lead consumers to pay more money for an equally liked gift and whether mental stealing is reduced when there is a justification for spending less. Finally, experiment 3 examines a moderator of the mental stealing effect based on a consumer's frequency of interaction with the account recipient. Consumers may feel that it is ok to spend fewer resources now as the consumer can make up for it by spending more resources on the recipient later.

Experiment 1: Does mental stealing occur?
Undergraduates were randomly assigned to a 3 Mental Account (no mental account, $30 account, $50 account) x 2 Recipient (self, other) between groups design. Participants were informed that they were going shopping for a gift for themselves or for a friend. The creation of a mental account was manipulated by instructing participants that they had either: 1.) Not decided how much money to spend, 2. Decided to spend $30, or 3.) Decided to spend $50. Subsequently, all subjects were asked how likely they would be to buy a

$15 dollar gift. A significant interaction emerged ($p < .05$). Planned contrasts revealed significant differences between recipients in the no mental account ($p < .05$) and $50 mental account conditions ($p < .05$), but not in the $30 mental account. In the no mental account condition, participants shopping for others more strongly favored the $15 dollar gift than the self recipient condition. In contrast, when consumers formed a $50 mental account they were significantly less in favor of the $15 dollar when shopping for others than when shopping for the self. This latter finding is consistent with the notion of mental stealing as the discrepancy between $50 and $15 was sufficient to elicit concerns one keeping too much money from another person's account for themselves. In addition, we do not see mental stealing effects when consumers are buying for the self, suggesting it is harder to steal money from the self than from others.

Experiment 2: Gift Choices when Mental Stealing is Justifiable versus Non-Justifiable.
Undergraduates were randomly assigned to a 2 Gift Choice (non-justifiable or justifiable) within-group design. All participants were instructed that they were shopping for a friend, and had decided to spend $50 dollars. Participants were then informed that they had found two appropriate gifts priced at $10 and $50. In the equal gift conditions, both gifts were described with the caption, "You like this gift. You know your friend will like it." In the non-equivalent gift condition, the $10 item has the same prompt as before, however the $50 item read, "You like this gift. You think your friend might like it". Using a Chi-square analysis, we found significant deviation from expected choice percentages for both the non-justifiable ($p < .05$) and justifiable gift conditions ($p < .001$). In the non-justifiable gift condition, 17 participants (35.4%) chose to buy the $10 gift compared to 31 participants who chose to buy the $50 gift (64.6%). In the justifiable gift condition, 45 participants chose to buy the $10 gift compared to only 8 participants who chose to buy the $50 gift. These results suggest that consumers will spend more on an equally liked gift to avoid mental stealing, unless a strong justification is present for spending less (i.e., superior product).

Experiment 3: Frequency of Interaction Moderates Mental Stealing.
Undergraduates were assigned to a 2 Mental Account ($30, $50) x 2 Interaction Frequency with Friend (Frequent, Infrequent) between-group design. We manipulated frequency of interaction with the gift recipient by asking participants to choose a friend who lives in their current area of residence (frequent interaction) or to choose a friend who does not live in their current area of residence (infrequent interaction). The creation of a mental account was manipulated similar to prior studies. Subsequently, all subjects were asked how likely they would be to buy a $10 dollar gift. A significant interaction emerged ($p < .01$). Participants in the infrequent condition, were significantly less likely to buy the gift in the $50 mental account than in the $30 mental account ($p < .001$), replicating prior experiments. In contrast, there were no differences in purchase likelihood between the $30 and $50 mental account conditions ($p => .50$) for consumers in the frequent condition, suggesting that consumers in the frequent interaction condition were able to make future reparations and therefore less sensitive to mental stealing effects.

Conclusion and Contributions:
Consumers shopping for others showed decreased willingness to purchase for gifts priced significantly below the established mental budget, despite high gift desirability. This effect was moderated when recipients of the gifts were seen frequently versus infrequently. Implications for the mental accounting literature and literature on self versus other differences in decision making are discussed.

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Reducing Psychological Distance Can Reduce Credit Card Overspending
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There are over a billion credit cards in circulation in U.S. An average American holds 3.5 credit cards. The nation's total credit card charges increased from about $69 billion a year to more than $1.8 trillion between 1989 and 2006. While wide availability of plastic

payment methods has enabled consumers to satisfy their consumption desires, it also brought about increased household debt. Average credit card debt per household with credit card debt is around $16,000 and credit card debt comprises ninety-eight percent of $800 billion U.S. revolving debt.

The "Credit card effect," a tendency to spend more with credit card, has been a topic of interest in consumer research community. It is a robust effect that manifests in lab experiments as well as actual market transaction. Although several mechanisms including lower pain of payment (Prelec and Loewenstein 1998; Thomas, Desai, and Seenivasan 2011), payment decoupling, physical form (Raghubir and Srivastava 2008), and absence of rehearsal (Soman 2001) have been suggested as the factors underlying credit card premium, the literature has not provided an effective solution to avoid this seemingly pervasive bias.

In this research, we suggest that paying with credit card reduces one's attention to resource scarcity and propose a simple but effective solution to avoid the attentional bias caused by credit cards. We propose that credit card distances the customer from the transaction, thus reducing attention to the resource scarcity. Reducing one's psychological distance from the transaction can mitigate this Credit card effect. Specifically, we focus on bodily distance as an antecedent of psychological distance and argue that increasing bodily proximity to purchasing situation can reduce the inattention to resource scarcity. Our manipulation of psychological distance, adapted from Thomas and Tsai (2011), is easy to implement. It requires people to adopt a bodily pose that helps them to mentally "zoom into" a transaction. Two studies demonstrate how changing bodily distance mitigates the Credit card effect; psychological proximity increases attention to resource scarcity. Across the studies, we find that participants were more sensitive to resource scarcity when they paid in cash than when they paid using a credit card, replicating the credit card effect. However, paying by credit cards did not reduce sensitivity to resource scarcity when participants were physically closer to their computer screen where they indicated their willingness-to-pay.

In Study 1, three hundred and one participants were randomly assigned to one of the six between-subjects conditions created by crossing two factors: mode of payment (cash, credit card, control) and the salience of resource scarcity manipulation (salient vs. not-salient). First, half the participants assigned to the resource scarcity salient condition were asked to recall and describe an instance when they were financially worse off than their peers (Sharma and Alter 2012) while the other half of the participants assigned to the resource scarcity not-salient condition did not respond to this priming task. After the priming, participants were asked to indicate their willingness to pay in an auction for twenty consumer items – such as umbrella, shampoo, and pillow – that are commonly needed by consumers. Before the bidding, one third of the participants were informed that the auction only accepts cash payments while another one third of the participants were informed that the auction accepts all major credit cards. The remaining participants (control condition) were not given any information regarding the mode of payment. Results show that in the control condition and the credit card condition, there was no effect of the resource scarcity manipulation: participants for whom the resource scarcity was made salient and not-salient had the same bidding amounts, suggesting that they didn't pay attention to the resource scarcity. However, in the cash condition, participants in the salient condition had lower bidding amounts than the participants in the not-salient condition. Thus, this study suggests that credit card payments reduce the effects of resource scarcity on propensity to spend money whereas cash payments increase the effects of resource scarcity.

In Study 2, we tested the moderating effect of psychological distance on the inattention to the resource scarcity. The procedure of this study was similar to Study 1 except for two changes. First, the control condition was removed and only credit card and cash condition were tested. Second, participants' psychological distance was manipulated. In the beginning of the study, *half of the participants were asked to lean forward* to (using the instructions from Thomas and Tsai 2011) their computer screen and the *other half of them were asked to lean backward from their screen*. Results show that in cash payment conditions, regardless of the distance from the screen, participants in the resource scarcity salient condition bid less than participants in the not-salient condition. However, in the credit card condition the salience of resource scarcity did not matter when participants were distant from the transaction: participants in the salient

condition bid as much as participants in the not-salient condition. More importantly, we found the predicted moderating effect of psychological distance: the inattention to the resource scarcity under credit card payment vanished when participants leaned forward. The graph below depicts the pattern of mean values of WTPs in the six cells.

Chart Study 2: Psychological Distance Moderates Credit Card Effect
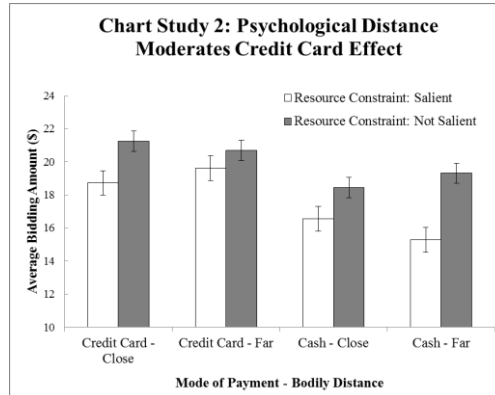
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The Dynamic Patterns of Intra-Shopping Spending for Budget and Non-Budget Shoppers

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Much of our current understanding about how consumers shop for goods and services is based on a cross-sectional analyses of end-of-trip variables (e.g., basket composition, spending). However, research increasingly examines intra-shopping decision-making processes to gain an understanding about how spending unfolds during a single shopping trip. Dhar et al. (2007), for example, study the impact of an initial purchase on subsequent decisions. Stilley and colleagues (2010), in turn, examine how shoppers shift their spending between planned and unplanned items. Following this paradigm, the present research examines how shoppers' spending decisions, pertaining to each individual product choice, change as a function of their cumulative spending during a single shopping trip. Building on recent research that shows the differentiating effects of budget constraints on shopping behavior (Van Ittersum et al. 2010, 2011), we examine this for budget versus non-budget shoppers.

Intrigued by the idea of whether cumulative spending during a shopping trip influences subsequent purchase decisions (spending $2.25 vs. $3.75 on eggs), we conducted a simple exploratory lab experiment where participants were asked to make sixteen subsequent choices from one of two products (for different product categories). The results revealed a U-shaped relationship between the cumulative amount of money spent and the relative spending on an individual item. Shoppers are more inclined to purchase more expensive items early and towards the end of the shopping trip, but are more inclined to purchase less expensive items halfway through their shopping trip. Interestingly enough, this relationship takes on an inverted U-shape when shoppers are budget constrained. Halfway through the shopping trip, budget shoppers actually spend relatively more on individual items than their non-constrained counterparts ($F(1,59)=5.4$, $p<.05$).

To explain the origin of these unique relationships between cumulative spending and the relative spending on an individual item, we build on research on the pain of payment (Prelec & Loewenstein 1998) and regulatory resources (Baumeister 2002), both of which have shown to influence shopper decision making (Thomas et al. 2011). The literature on the pain of payment suggests that pain of payment increases with spending. We extend this to propose that for non-budget shoppers, the pain of payment evolves concavely throughout a shopping trip (as the relative pain of payment of the last $1 spent is less compared to the first $1 spent). For budget

shoppers, however, we hypothesize an S-shaped relationship, as the money left in their budget reduces the pain of payment early in the shopping trip (Heath & Soll 1996). We further expect to find differences in the speed with which budget versus non-budget shoppers deplete their regulatory resources. While both groups of shoppers are expected to deplete resources in a convex manner, the resource depletion of budget shoppers is expected to occur more quickly due to the additional need of monitoring the spending (Van Ittersum, et al. 2010). Both sets of unique patterns help explain the differences in the relationship between the cumulative amount of money spent and the relative spending on an each purchase between budget and non-budget shoppers. We conducted two independent studies to provide evidence for the proposed mechanism.

Study 1: Pain of Payment

To observe how shoppers' pain of payment evolves during a single shopping trip, we asked participants to complete a simulated shopping task containing 30 randomized purchase decisions. For each decision, participants selected one out of four choice options. After randomly assigning participants to a budget or non-budget condition, we measured each participant's pain of payment (Thomas et al. 2011) after 5, 10, 15, 20, 25, or 30 decisions (between-subjects). Consistent with expectations, the pain of payment evolves concavely during the shopping trip ($\beta_{decision}$=.09, p<.01; $\beta_{decision2}$=-.02, p<.05). Furthermore, budget shoppers experience significantly less pain than non-budget shoppers halfway during the trip (3.4 vs. 4.5, $F_{(1, 53)}$=4.57, p<.05), but not at the beginning or end of the shopping trip.

Study 2: Regulatory Resources

The setup of this study was similar to that of Study 1, with the exception of the measurement task within each shopping trip. In study 2, participant's resources were measured by observing their persistence on an anagram task (Vohs et al. 2008) after a specified number of purchase decisions (identical to Study 1). Consistent with expectations, the regulatory resources deplete during the shopping trip (p<.05) and slightly quicker for budget shoppers (p<.10). Furthermore, by the end of the shopping experience, there are significant differences in the persistence of budget and non-budget shoppers (252 vs. 140 secs., $F_{(1, 27)}$=5.57, p<.05).

Study 3: Online Shopping Experiment

As the exploratory lab study was a small controlled laboratory experiment, we conducted a final field experiment in a mock online grocery store. Subjects were randomly assigned to a budget conditions (budget vs. non-budget) and asked to shop with a pretested shopping list. This online grocery store contains more than 3000 products, and for items on the shopping list, subjects were able to choose from between five and fifteen product alternatives (e.g., blueberry bagels, plain bagels) from between two and eight different store and national brands. We coded the relative spending of each subjects decisions throughout the experiment. A repeated measures analysis reveals the predicted quadratic interaction between budget and purchase decision ($F_{(1,92)}$=11.53, p<.01). Furthermore, consistent with the pilot study, the conventional wisdom that non-budget shoppers always spend more than budget shoppers is only found in the beginning and end of the shopping trip. In the middle of the shopping trip, budget shoppers actually spend slightly more (1.08 vs. 0.98, $F_{(1,92)}$=3.48, p<.10).

Our research makes three important contributions. First, this research is among the first to examine shoppers' intra-shopping trip decision-making and its subsequent spending consequences. Second, significantly extends literature on pain-of-payment (Prelec & Loewenstein 1998) by demonstrating the evolution of pain of payment within a shopping trip for budget and non-budget shoppers, as well highlighting a point in a shopping trip when pain experienced by budget shoppers actually decreases. Finally, this research provides insights on both the rate and consequences of regulatory resource depletion for budget and non-budget shopper

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3.4 *Individual Papers:* Sharing or Keeping: Materialism, Selfishness, Sharing, and Equality

Room: El Capistrano

Chair: Nailya Ordabayeva, Erasmus University Rotterdam

Broadcasting and Narrowcasting: How Audience Size Impacts What People Share

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Jonah Berger, University of Pennsylvania, USA

Consumers communicate with dozens of people every day. Whether face-to-face or through the web, all of this communication requires more than one party; indeed, people cannot share things without an audience. Some conversations involve communicating with just one person (*narrowcasting*), whereas others involve communicating with many people (*broadcasting*). How might audience size impact what people talk about and share?

We suggest that different audience sizes will change the degree to which the sharer focuses on themselves versus others, which will in turn will whether they share self-enhancing or useful content. People disproportionately attend to their own opinions and interests (Kruger 1999), and given that considering others requires substantial time, effort, and motivation (Epley et al. 2004), broadcasting should do little to move people from their natural tendency for self-focus. Self-focus, in turn, should boost self-enhancement because people automatically associate themselves with favorable attributes (Paulhus and Levitt 1987).

Narrowcasting, however, should mitigate egocentrism and encourage people to focus on others. Thinking about a specific other reduces the above-average effect, for example, because it makes others more concrete and promotes recognition of a person's distinct identity (Alicke et al. 1995; Alicke and Govorun 2005). Along these lines, sharing with just one other person should make the audience more vivid, increasing the attention they receive. By increasing other-focus, narrowcasting should facilitate the process of "audience tuning" (Higgins 1999), consideration of the audience member's point of view, and lead people to share useful things. Thus, we suggest that broadcasting will lead people to share more self-enhancing content (because it increases self-focus), while narrowcasting will lead people to share content that is more useful to others (because it increases other-focus). The current research tests the causal impact of audience size by manipulating it directly across four experiments.

In **Study 1,** we gave 52 participants a list of positive and negative imaginary events and asked them to write a short description of their day for one person (narrowcasting) or a group of people (broadcasting). Since people often self-enhance through distancing the self from negative personal experiences (Sedikides 1993), we predicted and found that broadcasting led people to share fewer negative events ($t(90)=2.50$, $p=.01$) and reframe the negative events they mentioned in a positive light ($t(90)=-2.04$,$p<.05$).

In **Study 2,** we asked participants to write a passage to either one person or a group of people. Then we used textual analysis (Linguistic Inquiry and Word Count) to code what they had written on a variety of psychological constructs. Building on Study 1, we found that broadcasting reduced negativity, as demonstrated by fewer words related to negation ($t(96)=2.04$,$p=.04$) and anxiety ($t(96)=1.86$,$p=.066$). We also found that broadcasting led people to self-enhance through the use of more words greater than 6 letters ($t(96)=2.55$,$p=.01$) and articles ($t(96)=2.95$,$p<.01$), both of which are associated with being better-educated (Tausczik and Pennebaker 2010). As a preliminary test of other-focus, we found that narrowcasting increased the usage of other-focused pronouns (e.g., you, $t(96)=2.75$,$p<.01$), which indicate the speaker is recognizes the distinction between the self and the immediate listeners (Simmons, Gordon, and Chambless 2005).

Study 3 tested the underlying mechanism behind these effects. In addition to manipulating audience size, we asked half the participants to list the name(s) of the people with whom they are sharing, which should have a similar effect as narrowcasting by boosting other-focus and should thus moderate the effect of audience size. Respondents were then asked how likely they would be to share useful items (e.g., "A coupon for a discount") and items that would make them look bad (e.g., "A recent boring experience"). A repeated-measures ANOVA revealed a significant Audience Size x Audience Focus interaction on both self-enhancement ($F(1,138)=5.61, p=0.02$) and usefulness ($F(1,138)=9.57, p<.005$). As predicted, when participants did not list others names, broadcasting decreased participants' willingness to share things that would make them look bad and narrowcasting boosted the sharing of useful content. When participants listed the names of the people with whom they were sharing, however, these differences disappeared. Making the audience more concrete had an analogous effect to narrowcasting, supporting the notion that audience size effects are driven by changes in focus.

Study 4 tested this mechanism more directly by measuring how much people focus on the self and others when sharing to audiences of different sizes. Respondents were randomly assigned according to a 2 (Audience size: narrow vs. broad) x 2 (Self-enhancement: look good vs. look bad) x 2 (Useful: yes vs. no) between-within-subjects design. We simultaneously manipulated the usefulness and self-enhancing nature of the content, and then asked participants how likely they would be to share each type of content and how much they were thinking about the self and others when deciding whether to share it.

As expected, people were always more willing to share content that made them look good rather than bad, but this tendency was stronger when they were broadcasting ($F(1,153)=4.29, p=0.04$). Similarly, people were always more willing to share content that was useful, but this tendency was stronger when people were narrowcasting ($F(1,153)=5.86, p=0.02$). The effects of broadcasting on self-enhancement were mediated by self-focus (95% CI[.04, .40]), while the effects of narrowcasting on usefulness were mediated by other-focus (95% CI[-.39,-.03]).

By demonstrating the impact of audience size on communication, the present research offers novel insights for word-of-mouth and consumer research. Moreover, by articulating the mediating role of focusing on the sender versus the receiver, our findings deepen understanding of the psychology of self-other trade-offs. Hence, for its contributions to work on the behavioral drivers of word-of-mouth, interpersonal communication, and the balance between self-focus and other-focus, we believe this research would be of interest to a wide audience at SCP.

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Consuming in Support of the Free Market: The Relation Between Economic System-Justification and Consumer Preferences and Behaviors

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According to system-justification theory, people who are dependent on a social system or institution are often motivated to engage in various psychological processes (e.g., motivated social perception and judgment) aimed at rationalizing and defending the legitimacy of these systems (Jost and Banaji 1994; Jost, Banaji, and Nosek 2004). Researchers have recently investigated how these tendencies manifest in ways that are relevant to consumption behaviors. Feygina, Jost, and Goldsmith (2010) showed that people who evinced strong political system-justification tendencies were more likely to deny climate change and engage in fewer pro-environment behaviors. Cutright, Wu, Banfield, Kay, and Fitzsimons (2011) showed that activating the motive to justify one's national political system resulted in choosing products of national versus foreign brands.

Given these results, it follows that people's tendencies to justify the current *economic* system may also affect their consumption habits and preferences. An economic system-justifying motive may lead people to favour products, services, or consumption habits sold or promoted by companies and industries that feature prominently within the overall economy. In line with this idea, it has been demonstrated that private label and widely-recognized national brands are typically more popular than smaller, independent store brands in terms of product stereotypes (Cardello, 1997) and purchase intentions (The Polling Company, 2002). In addition, people's trust in science and public authorities has been related to more positive attitudes toward consuming genetically-modified food products, foods with preservatives, and greater automobile travel (Costa-Font & Gil, 2009; Siegrist & Cvetkovich, 2000). It remains to be seen if these and other related tendencies are influenced by people's tendency to justify the current economic system which sustains, and is sustained by these larger companies and industries.

In line with system-justification theory, we hypothesized that the tendency to justify the current economic system is associated with purchasing products and pursuing habits or lifestyles that directly support the economic system itself. Legitimizing the economic system is demonstrated by attention to and purchasing products from widely recognized brands, and reporting a greater trust and inclination to buy products from large chains versus smaller independent retailers. Both activities are more supportive of companies that have a deeper presence in the economic system. We also hypothesized that economic system-justification is related to purchasing products that support the system even if doing so comes at the cost to one's wellbeing or the environment (e.g., not paying a premium for healthy foods or organic products).

To test these ideas, we conducted an online survey of American consumers. Our survey included a measure of economic system-justification (Jost and Thompson 2000). The criterion variables in this survey included the Consumer Styles Inventory (Sproles and Kendall 1986) to assess people's attention to and inclination to purchase well-known brands. We administered relevant subscales of the Food-Related Lifestyle measure (Scholderer et al. 2004) that assess people's tendency to use organic products, buy food products without preservatives, try new recipes and cooking styles, and buy foods from specialty stores. We also included the Local Retailer Shopping Loyalty scale (Hozier and Stem 1985) to assess people's tendency to use smaller, independent retailers. Finally we adapted a scale based on other measures of environmental motivation (Clayton 2003) to assess people's acceptance of a high standard of living even if it has destructive consequences for the environment.

Various covariate measures were embedded in a demographic section that was administered at the end of the survey. Included were measures of people's self-reported gender, age, relationship status, political leaning, education level, and annual income. The survey also included a scale of social desirability (Reynolds, 1982), materialism (Kasser and Ryan, 1996), and a validated measure of political system-justification (Kay and Jost 2003). Our final sample for the analysis consisted of 285 eligible respondents (133 men, 148 women, 2 unreported; average age = 43.80, *SD* = 12.76 years) who indicated that they (along with their romantic partner or spouse, if applicable) paid for the majority of their living costs.

We conducted a sequential regression analysis on each criterion variable that entered our covariates first, followed by the political and economic system-justification variables. We included each of the covariate variables mentioned above except for social desirability; it was unrelated to most of the criterion variables.

Our general hypothesis was supported. After controlling for the influences from all of the covariates, economic system-justification predicted self-reported behaviors that support the prevailing economic system, even when these behaviors are less beneficial to personal health, the community, and the environment. That is, economic system-justification predicted a stronger tendency to choose well-known brands, a greater acceptance of a luxurious but environmentally-insensitive lifestyle, less loyalty to one's local retailer(s),

and a weaker inclination to use specialty shops, try new foods or new ways to prepare meals, and buy foods that are organically grown or produced, or have no added preservatives. Collectively, these results provide evidence that economic system-justification is implicated in a wide range of behaviours and lifestyles that support companies or industries that have a stronger presence in the current economic system.

These findings extend system-justification theory and other research on the relation between consumer psychology and the justification of the current social order and social institutions (Cutright et al. 2011; White, MacDonnell, and Ellard 2012) by illustrating the potential for economic system justification to affect a variety of consumption behaviors and habits. Moreover, our work has important implications. We illustrate a previously uncovered factor that may influence people to buy well-known brands, create reluctance to shop at local retailers, and even to avoid trying new foods. These findings are also consistent with the palliative function of system-justification (Jost et al. 2004), such that the tendency to justify the economic system was implicated in the tendency for people to undermine their long-term health interests by eschewing the use of organic products or foods without additives, and favoring a lifestyle that values luxury over preserving the environment. Thus, economic system-justification may pose a challenge to marketers who are trying to promote healthy and environmentally-conscious products, services, and lifestyles.

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The Influence of Materialism and Motivation on Children's Reason for Playing
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Today's children are raised in a materialistic world (John, 1999). Although children express materialistic values at early ages (Chaplin and John, 2007), little academic research focuses on the relationship between materialism and children's behavior. This paper shows that materialism impacts children's behavior during play. Playing is an important activity, because it is a way for children to express themselves (Landreth, 2001) and it is essential in children's development (Messier et al., 2008). Playing also shows similarities with elements of consumer socialization, the process in which children acquire and learn the skills and attitudes needed to perform consumer actions (Ward, 1974). Playing can even be seen as a goal-directed consumer behavior, since it involves, for example, interactions with toys, choosing between play activities, employing certain goals and converting them into different play methods, etc.

We propose that many play activities can be initiated for two different reasons. When children are outcome oriented; they initiate a play activity to reach the end result of that activity, when children are process oriented; they play because they enjoy the process of playing itself. We believe that these play reasons are derived from children's motives and personality. Self-determination theory (Deci and Ryan, 1985; Kasser and Ryan, 1993) distinguishes between two basic motivations: extrinsic motives that focus on satisfying a need that is not primarily inherent, but rather external (e.g., the need for rewards and praise) and intrinsic motives that strive to directly satisfy an inherent psychological need. Kasser and Ryan (1993) showed that extrinsic goal pursuit is linked to high materialism, whereas intrinsic goal pursuit is related to lower levels of materialism. We argue that materialistic children should be more focused on the outcome and the end-result of play activities; less materialistic children should be more focused on the process and the experience of an activity.

Study 1 (N=122; M_{age}=9) investigates if materialism is related to outcome versus process oriented playing. Materialism was measured with items from Goldberg's Youth Materialism Scale (YMS, 2003), and the adjusted YMS scale from Buijzen and Valkenburg (2003). Both scales were especially developed for this age group. Children were then asked to engage in coloring a drawing; they could color one of the provided examples or could draw on a blank page. Afterwards, they completed a one item measure, assessing

their play orientation (viz. 'What defines best why you chose this picture to color?', with two options; 'Because I really liked the picture itself' (outcome) or 'Because I really liked the act of coloring/drawing' (process)). Results indicate that children who play outcome oriented (N=56) are more materialistic than children who play process oriented (N=66).

Study 2 (N=118; M_{age} =9) extends these results by assessing children's general play behavior and by eliminating a forced choice between outcome and process. Children were asked why they generally played, which was assessed by two process and two outcome items (e.g., 'I play because playing on itself is fun' (process), 'I play because I want to win' (outcome)). Regression analysis shows that materialism is positively related to outcome orientation, but unrelated to process orientation.

Study 3 (N=60; M_{age}=8) assesses the influence of motivation (overall life aspirations and intrinsic task motivation) on playing. The children were asked why they usually play with a jigsaw puzzle. They completed measures of process and outcome orientation (two one-item measures), materialism, overall intrinsic and extrinsic life aspirations (Kasser and Ryan, 1996) and intrinsic task motivation (Intrinsic Motivation Inventory; Ryan, 1982). Life aspirations are overall motivations regarding children's future wishes and dreams (e.g., getting wealthier), whereas intrinsic task motivation is related to the specific task (e.g., enjoyment). We show that extrinsic life aspirations (e.g., acquiring wealth and success) determine outcome orientation, whereas intrinsic life aspirations (e.g., personal growth) predict process orientation. Results also indicate that intrinsic task motivation positively predicts both outcome and process orientation. Children can therefore be equally motivated for a specific play activity (they enjoy it equally), but overall life aspirations (extrinsic or intrinsic) and materialism are responsible for different reasons to play (outcome or process). This intrinsic motivation is necessary, because it gives children confirmation to keep on choosing this reason to play: they need to get repeated enjoyment from a certain orientation or they would shift to a different motivation. This result is congruent with Cognitive Evaluation Theory (Ryan and Deci, 2000), arguing that people who have an extrinsic task motivation see a task as a means to reach a separable outcome (Vansteenkiste et al., 2010). This excludes outcome orientation from being extrinsically motivated, since outcome orientation focusses on the result of the specific activity and that result is inseparable of the activity.

Figure 1. Influence of overall life aspirations (extrinsic vs. intrinsic) and intrinsic task motivation on outcome and process orientation. ** p<.01 * p<.05.
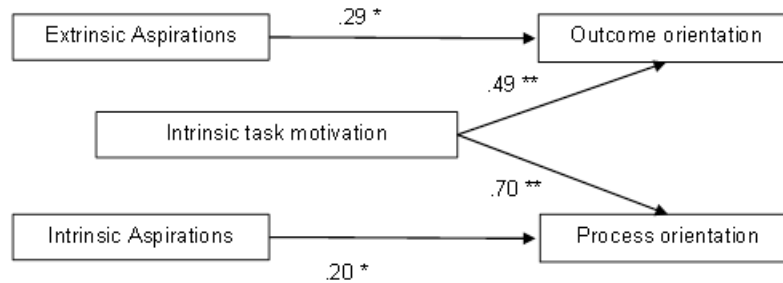
In study 4 (N=107; M_{age}=10), real play behavior was used, in which all children played the same jigsaw puzzle, but for half of the participants the jigsaw puzzle was incomplete (three prominent pieces were missing). The incomplete condition represented a bad outcome and end-result, which should be especially disturbing for materialists. Before and after playing, children indicated their current happiness. ANCOVA analysis (with pre-experimental happiness as covariate) reveals a significant interaction between materialism and the experimental condition (complete/incomplete) on happiness after the activity. In the condition with the complete jigsaw puzzle, materialism is unrelated to happiness. In the condition in which the puzzle missed some pieces, however, materialistic children are significantly less happy than less materialistic children. Since materialists' reason to play relies on seeing the end-result of the activity, they experience discomfort when this result fails.

This paper contributes to research on materialism by showing its effect on children's play behavior. Four studies demonstrate that children engage in a play activity because they like the process or the outcome. While both play orientations are intrinsically motivated and can thus be equally enjoyable, they stem from differences in overall life aspirations and materialism. This finding is especially important because we show that the relation between materialism and playing causes differences in children's actual happiness levels.

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When Improving Equality Promotes Selfish Behavior

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Increasing equality is expected to bring a host of social benefits in a group (Frank, 1985). In particular, it is expected to reduce conspicuous consumption by people who feel threatened by their low status (Becker, Murphy & Werning, 2005). More generally, equality is expected to improve social cohesion and cooperation and to promote welfare-enhancing behaviors within a group (Zizzo, 2003).

However, recent research has demonstrated that increasing equality may not always be beneficial. Ordabayeva & Chandon (2011) showed that greater equality actually increases, rather than decreases, conspicuous consumption among people at the bottom of the hierarchy because it increases the status gains (the number of people that can be surpassed) provided by consumption. Interestingly, much of the previous literature focused on conspicuous consumption as a means to enhance status, thus overlooking other methods that individuals may use to improve their relative position. We propose that aside from conspicuous consumption, which improves one's rank by enhancing own performance, people may also improve their rank by pulling other people down. For example, they can "burn" other people's money (Zizzo, 2003) or sabotage others' performance in order to improve rank. Whereas conspicuous consumption directly affects only one's own well-being, demoting others hurts the well-being of others and the total welfare of the group.

This research therefore examines whether, counter to existing arguments (Wilkinson & Pickett, 2009), equality promotes selfish behaviors that low-status individuals use to cope with a status threat. We hypothesize that increasing equality will increase status-seeking among low-status individuals by encouraging behaviors that demote others and the group. Furthermore, the effect should be moderated by status level (low vs. high) and status desirability. We expect that equality effects should be stronger for low-status individuals than for high-status individuals (because for high-status individuals, increasing equality has the opposite effect of reducing position gains) and when status gain is positive (vs. negative). We tested our hypotheses in four studies, which measured selfish tendencies of low-ranked individuals in the context of salespeople. This context was chosen because salespeople are commonly assessed based on their ranking and low ranking poses tangible threats such as withheld commissions and job loss.

A pilot study examined whether a low-status individual was evaluated more negatively and hence had stronger reasons to engage in status-seeking behaviors when the distribution of performance was equal (vs. unequal). A group of MBAs read a scenario about managing 20 salespeople at an electronics store. They read that to evaluate the salespeople's performance they monitored the distribution of monthly sales. They saw an equal or an unequal distribution of previous month's sales and indicated how likely they would be to fire a salesperson with a low sales rank (19th out of 20). The results indicated that the low-ranked salesperson was evaluated more positively and faced a lower threat of being fired in the equal than in the unequal distribution.

In study 1, we examined whether equality would encourage selfish status-seeking behaviors among low-ranked individuals despite higher performance evaluation by managers. The participants read the same scenario as in the pilot study, except that they imagined that they were a salesperson (vs. a manager in study 1). The participants imagined having attained low rank (19th out of 20) or high rank (9th out of 20) in the equal or the unequal distribution of sales. They were then asked to indicate how likely they would be to help a new colleague, who could improve the store's overall sales, but reduce the performance of individual salespeople. The results revealed that the low-status salesperson was less likely to help a new colleague than the high-status salesperson. More importantly, equality reduced the likelihood of helping among low-status salespeople but not among high-status salespeople.

Study 2 examined the moderating role of individual selfish tendencies. The participants read the same scenario as in the low-status condition of study 1 and answered three questions about the low-ranked individual's selfish status-seeking behaviors. The first behavior involved refusing to train a new colleague (as in study 1). The second behavior involved directly sabotaging a colleague's sales, and the third behavior involved directing customers to the competing store in exchange for a higher commission from the competitor. We measured the individual propensity to endorse selfish, devious, and manipulative behaviors using the Machiavellian attitudes scale (Christie & Geis, 1970). Whereas people with strong Machiavellian attitudes indicated high likelihood of engaging in selfish status-seeking behaviors regardless of equality, individuals with weak Machiavellian attitudes were more likely to engage in selfish behaviors when the distribution of performance was equal (vs. unequal).

Study 3 sought to replicate the findings in the context of real behaviors and tested the moderating role of status desirability. Throughout the experiment, the participants earned tickets for a lottery that was conducted at the end of each session for a €10 cash prize. In the first stage, the participants earned tickets in a general knowledge test. At the end of the test, everyone was assigned low performance rank (2 correct answers out of 10 = 10 tickets) and saw the distribution of everyone's test scores (high vs. low equality). In the second stage, the respondents participated in a public goods game (in which they could multiply everyone's tickets by initially contributing tickets to the common pool) and a burning game (in which they could spend some of their tickets to burn the tickets of others). Status desirability was manipulated by informing half of the participants that the winner would pay a tax on the lottery earnings and help a research assistant, which reduced the benefits of ticket accumulation. The results showed that high equality reduced contributions to the common pool and increased spending to burn others' tickets when the lottery earnings were free, but not when the lottery winnings were taxed.

Overall, our findings demonstrate that the effects of equality go beyond consumption decisions and may encourage status seeking so much that people resort to selfish behaviors that hurt others and the group. More generally, the results have implications for understanding the adverse effects of equality and the dark side of social comparisons.

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3.5 *Conversations:* Improving and Diversifying our Research Practices

Room: Concepcion

Discussants: Leif Nelson, University of California, Berkeley

Joe Simmons, University of Pennsylvania

Vicki Morwitz, New York University

Zakary Tormala, Stanford Graduate School of Business

3.6 *Special Awards Session:* SCP Fellow Award and Distinguished Scientific Accomplishment Addresses

4.1 Symposium: Content Characteristics and WOM Success

Room: Espada

Chair: Zoey Chen, Georgia Tech, USA

The Cultural Success of Sensory Metaphors

Ezgi Akpinar, Erasmus University Rotterdam, The Netherlands*

Jonah Berger, University of Pennsylvania, USA

Language varies over time (Lieberman et al. 2007; Nowak, Komarova and Niyogi 2002; Pagel, Atkinson and Meade, 2007). There are often many ways to convey the same thing and linguistic variants often act as substitutes. In 1800s, for example, people used the phrase "popular topic" but now the phrase "hot topic" is more en vogue. Why are certain linguistic variants more culturally successful than others?

We suggest that linguistic variants which relate to senses in metaphoric ways should be more successful. A kind person can be described as "warm", an unpleasant note as "sour". Sensory experiences serve as analogical basis for expressing abstract concepts with metaphors (Gibbs and Tendhal 2006; Lakoff and Johnson 1980). Calling a person "warm" suggests the person is inviting, just like a warm shower might be.

Sensory metaphors have important consequences for human thought and behavior (Lee and Schwarz 2010; Zhong and Leonardelli 2008). Humans scaffold abstract concepts onto existing knowledge acquired through sensory experiences with the physical environment. So when an abstract concept is encountered (e.g. feeling socially excluded at a reception), the sensory neural cues associated with the formation of that concept are triggered (e.g. feeling cold), and downstream behaviors (e.g. desire for warm foods and drinks) or expression of the concept (e.g. chilly reception) are based on the activated sensory cues. Thus, abstract concepts can be processed using cues of sensory experiences, even without physically interacting with any sensory stimuli.

Sensory metaphors (e.g., warm person) should be more culturally successful in part, because they are more likely to be remembered. Sensory metaphors may be easier to remember because they activate the same brain regions as sensory experiences (Stilla, Sathiana and Sathian 2012). Further, retrieval of sensory experience knowledge (e.g. "cat has fur") is more automatic, and involves less processing than semantic knowledge (e.g. "cat needs training"; Golberg et al. 2007). Consequently, compared to semantic analogues, there should be stronger associations between sensory metaphors and sensory experiences which should make them easier to retrieve. Sensory metaphorical phrases may also be easier to remember because they have multiple and accessible linkages with memory. While non-sensory phrases are only stored with their semantic meaning, sensory metaphors are stored both in semantic and sensory codes. Further, the sensory cues are prevalent in the environment. Thus, we expect that increased number of associative cues, some of which are more accessible in the environment may boost memory.

Two studies investigate whether sensory metaphors are (1) more culturally successful over time and (2) more memorable.

In first study, we examined the cultural success of sensory metaphors. First, we compiled an extensive list of sensory metaphors (e.g. bright student) and their semantic analogues (e.g. intelligent student and smart student). Then we recorded the success of each phrase over time using the Google Books corpus. This dataset allowed us to track the number of times phrases were mentioned every year in over 5 million digitized books from 1800 to today. We compared the use of sensory metaphors and semantic analogues using a Poisson model with linear and quadratic effects.

As illustrated in Figure 1, rigorous modeling results show that sensory metaphors are more successful over time, with an increasing quadratic trend ($\beta_{\text{Time*Sensory Metaphors}} = .024$, $p < .001$; $\beta_{\text{Time}^2\text{*Sensory Metaphors}} = -3.55E\text{-}5$, $p < .001$; higher than zero for all value of time).

Figure 1- Sensory Metaphors are Used More Frequently over Time
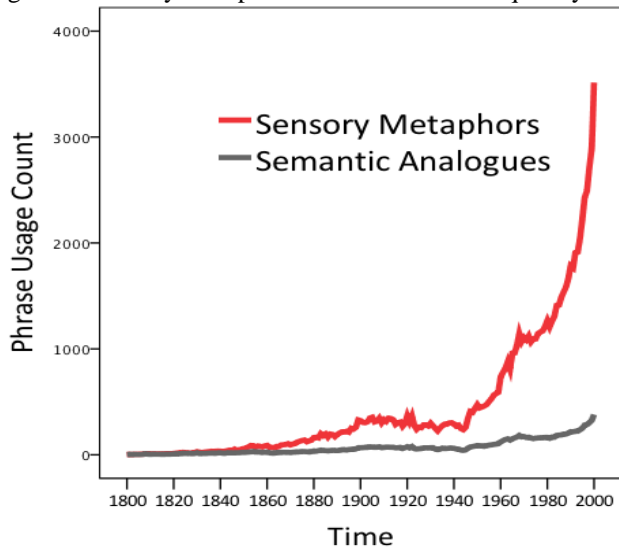
Study 2 experimentally examines whether sensory metaphors are more memorable. Further, we test the underlying role of relation to the senses and greater prevalence of associative cues.

Participants received 32 randomly selected phrases from the pool used in Study 1. Some participants rated each phrase on the extent to which it relates to senses while others rated each phrase on the number of associations it has with other words and ideas. After filler tasks, participants completed an unaided-recall task where they wrote down as many of phrases as they could remember.

The results support our theorizing. First, compared to semantic analogues, sensory metaphors were more likely to be remembered. Second, as predicted, sensory metaphors were rated as more related to the senses and having more associative links. Third, a multiple mediation analysis shows that the effect of phrase type on memory is partially driven by the combination of their sensory nature and prevalence of associative cues.

Alternative mechanisms have difficulty explaining these effects. More emotional (Mackay and Ahmetzanov, 2005), interesting, or descriptive phrases might be more memorable, and concrete, visualizable information may be easier for people to retrieve (Rubin 1995). The sensory metaphorical phrases used here, however, did not differ from the semantic analogues on any of these dimensions. Also, Study 1 still holds if we only look at non-visual sensory metaphors.
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Taken together, these findings illustrate how senses shape cultural success in language. Compared to linguistic variants with similar meanings, sensory metaphors are more (1) memorable and (2) culturally successful over time. These findings not only speak to the reciprocal influence between individual psychological processes and collective outcomes (Gureckis and Goldstone 2009) but also embodied cognition, and neural linkages between sensory processing and language.

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Answering Why: Action versus Reaction Explanations in Word of Mouth

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Word of mouth (WOM), where individuals share information about consumption experiences with others, is an everyday occurrence that has a fundamental impact on consumers. Positive and negative WOM influence consumers' product trial and adoption (Arndt 1967), and thus impact firms' sales and revenues (Chevalier and Mayzlin 2006). However, prior work has neglected some important aspects of WOM. Specifically, the literature has overlooked content and focused on the valence of WOM (Richins 1983)—yet content is key to understanding the impact of WOM (Godes et al. 2005). Indeed, recent work demonstrates the importance of specific content for those who share and those who hear WOM (Schellekens et al. 2009; Moore 2012).

The current paper focuses on one important type of WOM content: explaining language. Individuals often attempt to explain their actions and experiences, to reduce uncertainty and manage future utility (Gilbert, Wilson, and Centerbar 2003). Prior work shows that the act of explaining influences consumers' evaluations of their prior experiences, since it leads them to understand these experiences. Specifically, explaining dampens consumers' evaluations of hedonic experiences, such that positive experiences become less positive and negative experiences become less negative, but polarizes consumers' evaluations of utilitarian experiences, such that positive experiences become more positive and negative experiences become more negative (Moore 2012).

We extend this work by focusing on how two types of explanations, action and reaction explanations (Malle 2006), influence speakers and listeners. Action explanations outline why consumers chose experiences or behaved in certain ways (e.g., I bought the cookies for a friend). Reaction explanations outline why consumers feel the way they do about experiences (e.g., I liked the cookies because they were chewy). While prior work has identified actor/observer differences in using these types of explanations (Malle 2004), we focus on explanations in a WOM context.

We posit that explanation type in WOM may not be predicted by actor/observer differences—since the audience is always salient in WOM contexts, the use of different explanations may instead be determined by what speakers think would be most useful or helpful for their audience (Grice 1957); this, in turn, may be determined by product type rather than actor/observer perspective. We suggest that for utilitarian experiences, which are instrumental and goal-oriented, action (why) explanations might be more useful and therefore more common; in contrast, for hedonic experiences, which are affective and sensory (Dhar and Wertenbroch 2000), reaction (liking) explanations might be more useful and therefore more common. Further, we predict that providing these explanations will impact speakers (Moore 2012), such that for utilitarian experiences, only action explanations will polarize evaluations, but for hedonic experiences, only reaction explanations will dampen evaluations. We examine these predictions in five studies.

In studies 1 and 2, we tested audience preferences for different types of explanations and began to examine whether speakers (reviewers) were sensitive to these preferences. In study 1, we collected and coded 200 Amazon.com book reviews for explaining language use. We collected fiction and non-fiction book reviews to represent hedonic and utilitarian experiences (confirmed in a pre-test), and coded each set of reviews for their proportion of reaction and action explanations. We found that more action explanations were provided for non-fiction (utilitarian) books (e.g., I bought this because it was a best seller), while more reaction explanations were provided for fiction (hedonic) books (e.g., I loved this book because it was so well written). Further, the review helpfulness ratings provided by Amazon visitors were correlated with these differences in explanation type across product categories. In study 2, we used a controlled lab setting to confirm these results. We provided individuals with constructed reviews that varied in valence (positive or negative), experience type (hedonic or utilitarian), and explanation type (action, reaction, or none). As in study 1, participants found action explanations more helpful for utilitarian experiences and reaction explanations more helpful for hedonic experiences.

In studies 3 and 4, we examined how different types of explanations influence the speaker. Individuals recalled and wrote about a recent experience that varied by valence (positive or negative), experience type (hedonic or utilitarian), and explanation type (action,

reaction, or none). To manipulate explanation type, we provided individuals with fill in the blank sentences to complete that varied in terms of the explanation requested. In studies 3a and 3b, individuals wrote about dining out at a restaurant (hedonic) or purchasing a technology product (utilitarian). In study 4, to control for concerns about product tangibility, all individuals wrote about a recent technology purchase that was either hedonic or utilitarian. For positive and negative experiences across all three studies, compared to not explaining, action explanations polarized individuals' evaluations of utilitarian experiences, and reaction explanations dampened individuals' evaluations of hedonic experiences. Finally, in addition to explanation type, in studies 3 and 4, we coded and controlled for explanation target—that is, whether individuals identified who caused the action or reaction (e.g., self or firm), as prior work shows that attributions of blame influence consumer satisfaction (Bitner 1990). We found that the impact of explanation type held when controlling for explanation target.

In study 5, we experimentally tested whether speakers provide different explanations for utilitarian versus hedonic experiences. Individuals recalled a recent utilitarian or hedonic experience that was either positive or negative. They then imagined they were writing a guided online review, and selected specific sentences from a list to include in their review. Individuals were provided with 12 sentences to choose from: 4 neutral, 4 action explanations, and 4 reaction explanations. Corroborating the Amazon data from study 1, regardless of valence, individuals selected more action explanations for utilitarian reviews and more reaction explanations for hedonic reviews. After selecting their sentences, individuals evaluated their experience; as in studies 3 and 4, evaluations were influenced by the type of explanations individuals chose to include in their reviews.

In sum, we examine WOM content, a critical but understudied issue in WOM. In particular, we focus on the different types of explanations individuals provide in sharing WOM about hedonic and utilitarian experiences. We examine when different explanations are preferred by listeners, and show that speakers are sensitive to these preferences—but sometimes to their detriment, as providing certain types of explanations can impact speakers' evaluations of their own experiences.

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Consumer Reviews as Stories; Narrative Persuasion in an E-WOM Context

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Motivation and Conceptualization
A body of work has focused on why consumers choose to engage in e-WOM or the impact e-WOM can have, but the process of *how* e-WOM persuades has received less attention. Consumers often write online reviews of their experiences with products in a format describing a sequential experience, or a narrative. Processing narratives is distinct from that used to evaluate argument-based message, involving emotion, identification with characters, cognitive immersion, and imagery (Green and Brock 2000; Busselle and Bilandzik (2008) which ultimately impact persuasion-related outcomes. Extant theory does not specify how the narrative immersion experience effects changes in expected outcome measures. We propose that reflection mediates the impact of immersion on persuasion-related outcomes.

We examine narrative immersion and reflection as the mechanisms through which e-WOM results in intention to use a product, and examine how source (credibility), message (review valence, product types), and audience characteristic (empathy) variables affect the process.

When reviews lack credibility, we anticipate that consumers will reduce their attention and further processing of the review. This is consistent work that suggests that suspicion toward the source of an advertisement will diminish the narrative processing that would occur in absence of the skepticism (Escalas 2007). We predict that higher levels of perceived credibility will have a positive impact on reflection, and that lower levels of credibility will reduce narrative processing.

We predict a direct effect of valence on behavioral intention. Based on work suggesting that negative information is more vivid and memorable than equivalent positive information (Herr, Kardes, and Kim 1991), we predict that valence of the review will have an impact on narrative processing such that negative reviews are likely to have a stronger impact.

Online reviews may be perceived as more useful for certain types of products such as experience goods (Nelson 1970), whose product characteristics are difficult to observe until consumption. We hypothesize that the nature of the product (experiential vs. utilitarian) will moderate the relationship between narrative processing and reflection.

Several studies provide evidence that the extent to which individuals experience empathy influences the components of narrative immersion (Deighton, Romer, and Mcqueen 1989). While there is little extant research to guide empathy's role in narrative persuasion, there are several ways in which it can intervene. Our efforts in the following study will identify the role of empathy in this process.

Methodology

A pretest (n=116) identified office supplies as most representative of the utilitarian product category, and desserts as most representative of the experiential product category. We used a stratification strategy to select reviews from epinions.com that varied in product type (experiential/utilitarian), valence (positive/negative), and format (informational/narrative) (confirmed by pretests n=47), with 3 reviews in each category (total of 24 reviews). Study participants (n=110) were randomly assigned to read 3 reviews from one of the 2 (product category) x 2 (valence) x 2 (format) groupings.

We collected measures examining perceptions of the format, reflection on the review (operationalized as perceived persuasiveness), behavioral intention to try the product, a composite measure of narrative immersion (comprised of imagery, emotion, cognitive immersion, and identification with the writer), perceived source credibility, perception of review valence, collected responses to the empathy subscale of the Jackson Personality Inventory (Cronbach's alpha = .83) and measured perceptions of whether the focal product was experiential or utilitarian, treating the difference between the scores as reflective of product type (Edwards 2001). We aggregated responses to the 3 reviews within each category to reduce the impact of idiosyncratic aspects of a single review, and to create a more stable reflection of the consumer review for that product. All subsequent analyses use the composite measures.

Findings

Model fit was evaluated using a maximum likelihood algorithm. The initial model included the hypothesized constructs (with the exception of empathy). The traditional indices of global fit yielded poor model fit ($\chi^2(38)$=76.34, p<.01, CFI=.85, RMSEA=.10, close fit test p=.01, standardized RMR=.09). Inspection of model diagnostics revealed one sources of meaningful ill fit; a modification index of 7.36 suggesting a link between message format and reflection. The revised model with this change yielded good fit ($\chi^2(23)$=35.36, p=.05, CFI=.95, RMSEA=.07; p-close=.22, SRMR = .08). All hypothesized path coefficients were significant.

We investigated the role of empathy by testing 4 models in which we varied empathy's relation to immersion, reflection, and as a moderator of the format-immersion and immersion-reflection relationship. The model in which empathy moderated the immersion-reflection relation was the only model in which empathy's impact was significant, and we included this link in our final model (see figure 1).
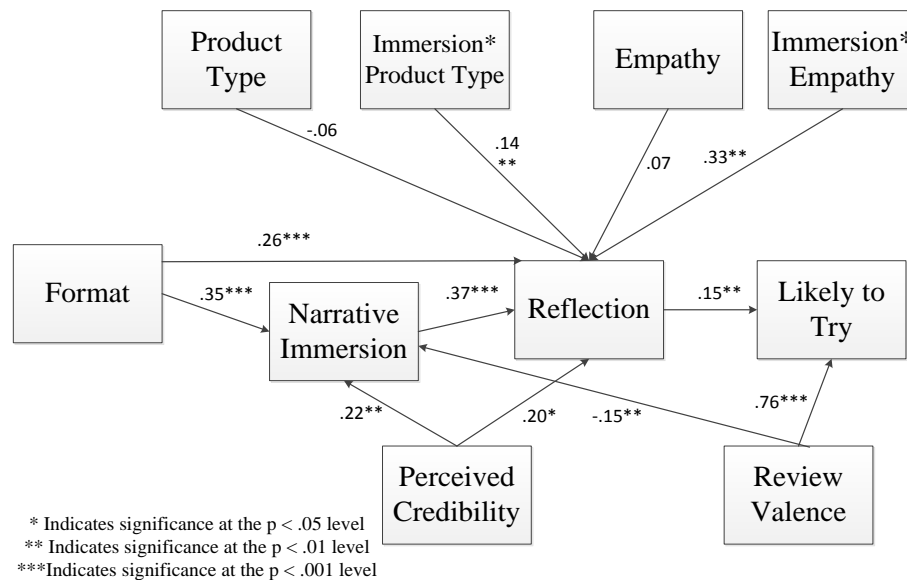
We performed an asymmetric bootstrap mediation test (Zhao, Lynch and Chen 2010) in which we examined the indirect effect of format on reflection through immersive processing, which was significant (b=.13, SE=.04, 95% CI=.06-.21, p<.01), but the direct effect of format on reflection was also significant (b=.27, SE=.08, CI=.12-.43, p<.01), suggesting the partial mediation illustrated in figure 1. An identical set of analyses examined the indirect effect of narrative engagement on behavioral intention, which was significant (b=.06, SE=.03, 95% CI=.01-.11, p<.01). Thus, higher levels of narrative immersion affect the reflection, which in turn leads to increased behavioral intention.

Discussion

The present study extends work on e-WOM by examining the audience's perception of reviews and evaluating the mechanisms that underlie the impact of format. Narratively-orientated reviews evoke immersive processing, which increases levels of reflection, and increases the intent to purchase the product.

In an effort to identify conditions under which narratives enhance persuasion, we found that sources that are perceived as more credible increase perceptions of review persuasiveness, whereas sources that are perceived as less credible diminish narrative immersion. We obtain the "vividness" effect of negative information, such that negative reviews are more likely to prompt immersion. Product type and empathy change the relationship between immersion and the reflection on the immersion experience such that respondents who are immersed while reading experiential reviews perceive them as more persuasive than reviews of utilitarian products. Finally, individuals higher in empathy are likely to have an intensified experience that enhances their perception of the review's persuasiveness.

Figure 1

* Indicates significance at the p < .05 level
** Indicates significance at the p < .01 level
***Indicates significance at the p < .001 level

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When Controversy Begets Conversation

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Conversation topics vary on how controversial they are, or whether they are marked by opposing views (Merriam-Webster 2003). Some advertisements, topics and brands are relatively non-controversial while others are more divisive. Topics like the weather are

less controversial than abortion. While the lay belief among marketers and consumers is that controversy increases conversation (Steel 2011), is that actually the case?

We theorize that the impact of controversy on likelihood of discussion will depend on two countervailing forces. On the one hand, controversy can boost conversation because it is interesting. Differences in opinion can liven things up, and people talk about interesting things to entertain others (Heath, Bell, and Sternberg 2001) or fulfill self-enhancement goals (e.g., signal that the speaker is interesting, Berger and Milkman 2012; Berger and Schwartz 2011). On the other hand, controversy can decrease conversation by making people uncomfortable. People want to be socially accepted, and interpersonal conflicts, such as those generated by controversial topics, can jeopardize acceptance. How controversy shape conversation, then, will depend on the strength of the two underlying processes.

Contextual factors such as identity disclosure and conversation partner (e.g., friend vs. stranger) should moderate the relationship between controversy and conversation by acting upon these underlying processes. The effect of interestingness is likely to remain static across situations since interesting topics are likely to remain interesting across settings. However, if discomfort reflects concerns about social acceptance, then it should be weaker in contexts when social acceptance concerns are less salient (e.g., when there is no identity disclosure) or less threatened by discussion of controversial issues (e.g., when talking to friends).

Five studies examine (1) how controversy affects conversation, (2) the underlying drivers, and (3) how this relationship varies in different conversation contexts.

Field Study 1

Our first study uses articles from a real news website to look at how the amount of controversy an article evokes impacts the number of comments it receives. We collected over two hundred articles as well as the number of comments each received (~5,000 comments overall. Two independent coders then rated each article on controversy (1 = not at all controversial, 7 = very controversial). Regressing the number of comments articles received on both the linear and squared controversy ratings shows an inverted-U relationship between controversy and conversation. Low levels of controversy increase conversation. But past a moderate controversy, additional controversy fails to increase (and even decreases) conversation.

Studies 2A and 2B

In Study 2A, we showed participants either a low, moderate, or highly controversial topic (pretested) and measured how likely they would be to talk about the topic in an anonymous online situation. Consistent with the results of Study 1, we find an inverted-U relationship between controversy and likelihood of talking whereby people are more likely to talk about the moderately controversial topic than the low or the highly controversial topics. In Study 2B, we allowed participants to come up with topics themselves and measured likelihood of conversation in a real-life setting. Specifically, participants first listed a broad topic in current events (e.g., "taxes") and then listed three subtopics, one that is high, moderate, and low in controversy (e.g., "corporate bailout", "taxing the rich", and "sales tax"). Participants were informed that they will be having a conversation with another participant and they were asked to choose one of the three subtopics they listed to talk about in this conversation. Consistent with earlier findings, results show that people were more likely to talk about moderately controversial topics than the low or highly controversial topics.

Study 3

The goal of study three is to test the underlying processes of interest and comfort and also explore how identity disclosure moderates the relationship between controversy and conversation by affecting comfort.

Participants were randomly assigned to condition in a 2 Disclosure (No disclosure vs. disclosure) x 3 Controversy (low vs. moderate vs. high) design. We again asked participants to list a general topic and three subtopics that varied in level of controversy. Participants were then asked to imagine having an online conversation with a stranger in which everyone was either using aliases (No Disclosure condition) or real names (Disclosure condition). Then, they were randomly given one of the subtopics they listed and asked to rate how likely they would be to talk about the subtopic in that conversation. They also rated how interesting they found the subtopic to be and how (un)comfortable they would feel talking about the subtopic.

Results show that disclosure moderate the relationship between controversy and conversation. In the no disclosure condition, controversy has an inverted-U relationship with conversation where moderate level of controversy increases likelihood of discussion. However, additional controversy decreases conversation. In the disclosure condition, controversy doesn't increase conversation and instead, decreases conversation. Mediation analyses show that when people do not disclose identity, conversation is driven primarily by interestingness. When identity is disclosed, however, conversation is driven by both interestingness and comfort.

Study 4
We further test our framework and examine how conversation partner (friend vs. stranger) affects people's propensity to talk about controversies. We again asked participants to list a general topic and three subtopics that varied in level of controversy. Then we manipulated the audience by asking them to imagine having a face-to-face conversation with either a friend or stranger. Then, they rated each of the three subtopics they listed on likelihood of talking (main DV), interestingness, and discomfort.

Results reveal that conversation partner moderates the relationship between controversy and conversation. When talking to friends, controversy increases conversation. A move from low to moderate levels of controversy increases conversation. Beyond that point, however, additional controversy fails to further increase conversation. When talking to strangers, conversation is flat across the three controversy conditions. Mediation analyses reveal that when talking to friends, conversation is driven primarily by interestingness; however, when talking to strangers, the positive effect of interesting is canceled out by discomfort.

Taken together, we show that (1) controversy doesn't necessarily increase conversation, (2) interesting and comfort drive the effects, and that (3) situational factors moderate the outcome by affecting these underlying processes.

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4.2 *Individual Papers:* Thinking About Feeling: Affect and Consumption Behavior

Room: San Jose
Chair: Ilona de Hodge, RSM Erasmus University

A Meta-Analysis of Affect Induction Techniques: How Do Induction Characteristics, Context, and Measurement Factors Influence the Strength of Affect Induced?

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Dhruv Grewal, Babson College
Susan Andrzejewski, Franklin and Marshall College

Almost every aspect of the marketing environment evokes an affective response in consumers: retail atmospherics, employee behavior, advertising, product sampling, and even reading. The role of affect (i.e., mood and emotion) has been an important and growing topic evidenced by over 75 published papers by marketing researchers alone. Despite the large amount of research that has

been conducted, a set of clear, standardized methods to induce affect has failed to emerge. This is evidenced by the variety of methods researchers employ with generally little to no defense or explanation for why a particular affect induction technique (AIT) was selected.

To help guide researchers in their choice of the best AIT to test their hypotheses, this meta-analysis focuses on understanding how induction characteristics (e.g., cover story, personal relevance, length) and contextual factors (e.g., culture, motivation) affect the strength of an affective state induced. Additionally, we also compare the three most popular induction methods (i.e., associational, autobiographical recall, and video–see table 1 for our summary of each technique), exploring their relative effectiveness at inducing positive and negative affect.

TABLE 1

Review of Affect Induction Techniques

Affect Induction Technique	Summary of Technique	Type of Affect Induced	Standardization of Affective Responses	Demand Effects	Key Drawbacks	Representative Papers
Associational	Asked to generate associations to words or images	Core Affect	Moderate	Moderate	Associations generated can be difficult to standardize across participants	*Fishbach & Labroo 2007, study 3; Pocheptsova & Novemsky 2009; Williams & Aaker 2002*
Autobiographical Recall	Asked to write a short essay recounting happiest or saddest day	Reliably elicits core affect, less reliable for basic emotions	High	High	Memories rarely embody a single emotion, making a single basic emotion difficult to induce	Agrawal & Duhachek 2010; Labroo & Patrick 2009; Raghunathan & Trope 2002
Video	Asked to watch a television show or movie	Core Affect and Basic Emotions	High	High	Some basic emotions may be difficult to elicit (e.g., anxiety, jealousy), genre and clip familiarity may introduce additional confounds	*Barone 2005; Goldberg & Gorn 1987; Hornik 1993; Garg, Wansink, & Inman 2007*

Method

Data Collection

Using meta-analytic techniques (Brown & Peterson, 1993; Grewal et al., 1997; Keller & Lehman, 2008; Palmatier et al., 2006) we synthesize 26 years (1987 - 2012) of empirical marketing research (published and unpublished) on affect. Papers were identified based on an extensive literature search, in which we utilized journals, conference proceedings, and personal communications with scholars in the field. This technique produced over 75 papers.

Inclusion Criteria

The analysis draws on 75 papers that include 99 studies with a total of 12, 939 participants reported in 53 articles. Given that some studies have multiple subsamples, we obtained 123 independent effect sizes. Papers were included if they experimentally manipulated one or more of the following affect contrasts: positive/negative, positive/neutral, or neutral/negative. Thus, studies were excluded if they manipulated only a single valence, only manipulated two types of affect of the same valence, or only measured pre-existing affect.

Pearson's *r* was used as a scale-free measure of the strength of affect induced. A larger effect size indicates that the technique results in a stronger induction. To analyze effect sizes across studies, it is necessary to calculate the effect *independent* of any additionally modeled factors (Borenstein et al., 2009; Rosenthal, 1991). We only include studies that provide sufficient information for calculating independent effect sizes (e.g., critical values, means and standard deviations, *t*- or *F*-values). When a study failed to include this information, we were often able to obtain the necessary statistics through direct contact with the authors.

Results and Discussion

We present the mean effect size and related *Q* statistics for each level of the moderators of the positive-negative contrast (other contrasts could not be presented due to limited power) and AIT analysis for all three contrasts.

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Induction Characteristics

Our results indicate that disguised, relevant, and short manipulations that stimulate multiple sensory channels are most effective (see table 2). Studies employing a cover story are significantly more effective than those that do not ($r_{No Cover Story}$ = .39, = $r_{Cover Story}$ = .68, $Q(1)$ = 171.27, $p < .001$). Techniques that are personally relevant to the individuals (e.g., autobiographical recall; $r_{Not Personally Relevant}$ = .60, = $r_{Personally Relevant}$ = .66, $Q(1)$ = 17.63, $p < .001$), and manipulations lasting less than five minutes ($r_{0-5 Minutes}$ = .82, = $r_{5+ Minutes}$ = .61, $Q(1)$ = 99.46, $p < .001$) add to the effectiveness of an induction technique. Finally, using a technique that uses a modality that activates multiple sensory channels (e.g., visual and auditory) is more effective than ones that only activate a single channel (r_{Single} = .60, $r_{Multiple}$ = .65, $Q(1)$ = 10.07, $p < .001$).

TABLE 2a
Induction Characteristics of AIT Strength (Positive-Negative Affect Contrast)

Moderator	Level	r	N_{eff}	Z	CI Low	CI High	Q
Cover Story	No	0.39	10	14.41***	0.34	0.44	171.27***
	Yes	0.68	55	60.88***	0.67	0.69	
Personally Relevant	No	0.60	30	38.59***	0.58	0.62	17.63***
	Yes	0.66	35	47.65***	0.65	0.68	
Length of Manipulation	0-5 Min	0.82	7	30.20	0.79	0.84	99.46***
	5+ Min	0.61	18	30.94	0.58	0.64	
Multiple Modalities	No	0.60	17	28.89***	0.57	0.63	10.07***
	Yes	0.65	45	52.85***	0.63	0.67	

* $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 2b
Contextual Factors of AIT Strength (Positive-Negative Affect Contrast)

Moderator	Level	r	N_{eff}	Z	CI Low	CI High	Q
Culture	Eastern	0.59	20	32.88***	0.56	0.61	22.50***
	Western	0.66	45	51.80***	0.64	0.68	
Motivation	Low	0.61	50	51.36***	0.60	0.63	36.36***
	High	0.74	9	26.54***	0.70	0.77	
Incentives	No	0.55	15	24.60***	0.51	0.58	37.18***
	Yes	0.66	50	56.34***	0.65	0.68	

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: r refers to size of the effect; Z tests that the size of the effect is different than 0; Q tests whether the size of the effect differs among the levels of the moderator.

Study Context

Beyond features of the induction technique, several study-level contextual attributes were also considered. Our results indicate that techniques are more effective in Western cultures and under low motivation conditions. Given research on display rules (Ekman, Sorensen, & Friesen, 1969), it is unsurprising that induction techniques appear to be more effective in Western cultures ($r_{Eastern}$ = .59, $r_{Western}$ = .66, $Q(1)$ = 22.50, $p < .001$). Furthermore, motivation also seems to play a key role in the effectiveness of inductions. This is true regardless of whether one creates motivation as a result of the task (r_{Low} = .61, = r_{High} = .74, $Q(1)$ = 36.36, $p < .001$) or through the use of incentives (r_{No} = .55, = r_{Yes} = .66, $Q(1)$ = 37.18, $p < .001$).

Specific Techniques

Finally, when considering specific techniques, we compare the strength of effect sizes for each technique across all contrast types (positive/negative, positive/neutral, neutral/negative) to examine the differential effectiveness of each AIT at priming positive and negative affect. As table 3 and figure 1 illustrate, associational techniques, such as word association (Labroo & Mukhopadhyay, 2009), more effectively elicit positive affect, whereas autobiographical recall techniques (Pham & Avnet, 2009) more effectively elicit negative affect. Furthermore, procedures using video clips (Barone, 2005) are equally effective at eliciting both positive and negative affect.

TABLE 3
Comparison of Specific Affect Induction Techniques (AITs)

Induction Technique	Contrast Positive-Negative			Positive-Neutral			Neutral-Negative		
	r	N_{eff}	Q	r	N_{eff}	Q	r	N_{eff}	Q
Associational	0.55***	10		0.63***	11		.41***	6	
Autobiographical	0.68***	26	33.37***	0.20***	3	79.65***	.49***	6	16.26***
Video	0.60***	12		0.61***	11		.60***	6	

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: Significant r statitistics indicate the AIT is effective at inducing affect. Q is an omnibus test of the differences between the three techniques.

FIGURE 1
Effectiveness of the Three Most Popular Affect Induction Techniques
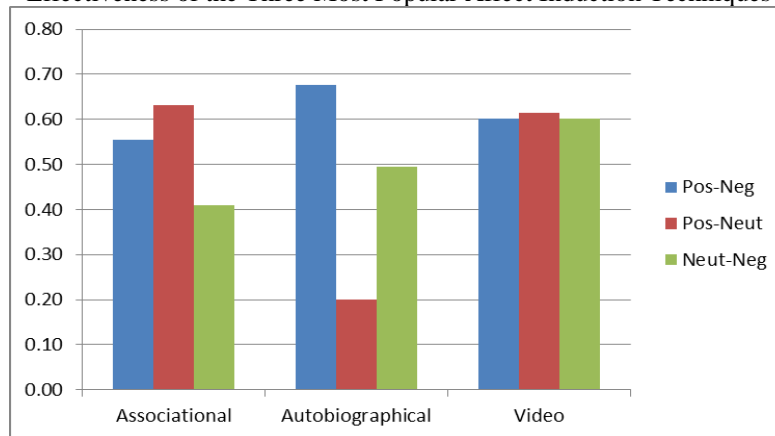
Conclusions

In summary, the study of affect is an important and growing area of research in marketing. Our results provide clear guidelines that researchers can use to maximize the effectiveness of their affect induction methods and thereby provide the strongest test of their hypotheses. In general, we recommend disguised, personally relevant and short manipulations, avoiding autobiographical recall when comparing positive to neutral affect, and associational priming techniques when comparing neutral to negative affect. Furthermore, researchers should be aware of the challenges in inducing affect in Eastern cultures. When choosing a specific technique, we would advise researchers to choose based on the type of affect they are studying. If looking at positive and negative affect simultaneously, a video-based induction would be best. For research on positive affect, associational techniques are a good option. Finally, for studies examining the effects of negative affect, autobiographical recall methods will best elicit the negative affect.

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Abstract Art as an Emotional Buffer for Consumer Processing

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Art plays an important cultural role by acting as a medium of communication for important sources of information. Given this role, it is not surprising that art has permeated consumption specific contexts like advertising (Hetsroni and Tukachinsky 2005), product decoration and even bolstering brands such as the iconic use of modern artists to promote Absolut Vodka (Lewis 1996).

While the use of art is commonplace in the modern Western world, there has been little empirical research on the impact of art on the consumer experiences (e.g., Hagtvedt and Patrick 2008a, 2008b, 2011). The few studies focused on how representational artwork (i.e., the artwork depicts something that is easily recognizable by most people) influence consumer perceptions and product evaluations. Yet, little is known about how other forms of artwork, such as abstract art, might influence consumer behavior. Considering that abstract art is used in marketing practice, the current research seeks to extend our understanding of how artwork can influence consumer information processing and judgments.

The current research seeks to explore the impact of abstract art on consumer processing. In particular, we examine different circumstances in which abstract art is detrimental and beneficial for product evaluations and consumer experiences. Building off research on verbalization (Wilson and Schooler 1991; Yamada 2009), we demonstrate that using abstract (vs. representational) art is beneficial when a brand or product evokes negative emotions which are low in uncertainty (e.g., sadness as induced by funeral homes). This happens because the disfluency caused by processing abstract art provides consumers with the opportunity to emotionally distance themselves from the negative context of the product and, thus, accept the information about the product. In contrast, we demonstrate how the use of abstract (vs. representational) art is detrimental when a brand or product evokes negative emotions high in uncertainty (e.g., fear as induced by a drunk-and-driving ad). This is because uncertainty appraisals lead consumers to seek out ways to decrease their level of uncertainty. However, due to its perceptual disfluency, abstract art does not allow consumers to reduce uncertainty, thus leading to lower evaluations. Representational art, however, has concrete elements for the consumers to anchor thoughts and has the potential to lead to a greater reduction in uncertainty and subsequently higher evaluations.

In study 1, we hypothesize that when abstract art is paired with a sadness evoking negative product, consumers will have more favorable attitudes and indicate greater willingness to pay for the advertised product. Four stimuli advertisements were created showing either a negative product (i.e., a funeral home) or a neutral product (i.e., dog/pet service) and featured either an abstract painting or a representational painting. After viewing the advertisements, participants were asked to evaluate the advertisement and the product as well as mood-related questions. If abstract art provides an emotional buffer against the negativity of the product class, we expect consumers viewing the negative product with the abstract art to report less negative emotions than those who saw the representational art. The results revealed that participants who viewed the sadness-evoking advertisement rated the both the product and the advertisement higher when it featured abstract rather than representational art. In contrast, participants who saw the neutral product rated the product and advertisement significantly lower when it featured abstract rather than representational art. In addition, for participants in the negative product condition, those who saw the abstract art reported fewer negative emotions than those who saw the representational art.

In study 2, we examine the idea that abstract art provides an emotional buffer for processing negative products. In particular, we purport that abstract art pushes consumer to process information in a psychologically distant manner. In order to test this hypothesis, we used a 2(art type: abstract v. representational) x 2(psychological distance: close v. far) design and primed participants to think either in a psychologically close or far manner. If abstract art acts as an emotional buffer, only participants who are primed to think in

terms of close psychological distance should prefer the negative product advertisement featuring the abstract art over those featuring representational art. Using only the sadness-evoking negative product advertisements, participants who were primed to think either in a psychologically close or far manner saw advertisements that either featured abstract or representational art. As predicted, there was no difference in advertisement attitude between participants who saw the representational or abstract art when primed for the far psychological distance. In contrast, only when participants were primed for close psychological distance was there an increase in advertisement attitude for the abstract art. Finally, an emotional buffer question index was shown to mediate the relationship between art type and attitude.

In study 3, we examine a boundary condition to the benefit of abstract art for negative products. In particular, we found that abstract art is beneficial only for negative emotions that are low in uncertainty (e.g., sadness and disgust), not for those emotions high in uncertainty (e.g., fear). Participants in this study rated advertisements for organizations that evoked sadness, disgust, or fear and featured abstract or representational art. Results revealed that for sadness and disgust advertisements, participants who saw the abstract art rated the advertisement higher than representational art. However, when the advertisement evoked fear, participants preferred the representational art. We hypothesize that the disfluency of the abstract art is detrimental when uncertainty is high and found that processing difficulty mediated the relationship between art type and attitudes as moderated by emotion.

This research makes several contributions to marketing literature. Foremost, this is the first empirical study of the differential impact of abstract art on consumer product perceptions. Second, we identify that abstract art itself can motivate far psychological distance processing, allowing consumers to better comprehend certain types of negative products. Finally, we pinpoint a boundary condition of the beneficial effects of abstract art. Specifically, the disfluency associated with abstract art is detrimental when the negative emotional appeal evokes an uncertain emotion (e.g., fear; Smith and Ellsworth 1985).

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Private Self-Aggrandizement and Public Modesty: The Conflicting Effects of Envy on Consumer Decision Making

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Imagine a woman reading a *People* magazine during a shopping trip. She sees an article of Paris Hilton, which makes her envious of Hilton's largesse. How will these incidental feelings of envy influence this shopper's subsequent purchase decisions? Will she become more likely to purchase extravagant goods, or will she avoid extravagance in an effort to dissociate herself from the envied other? Although prior research has shown that the experience of envy can motivate people to self-enhance (van de Ven, Zeelenberg, and Pieters 2009), both conventional dictates (e.g., "Thou shalt not covet") and academic research (Crusius and Mussweiler 2011; van de Ven, Zeelenberg and Pieters 2010) converge to suggest that consumers may be motivated to conceal their envy-driven impulses from others. This leaves two open questions: Will envy promote self-aggrandizement or modesty and will who is watching matter?

In line with prior work, we argue that experiencing envy will lead to a desire to self-aggrandize (van de Ven, Zeelenberg and Pieters 2009). However, we build on this work by suggesting that decision context (private vs. public) will be critical in determining if and how this desire influences behavior. We draw from the literature on envy (Crusius and Mussweiler 2011; van De Ven, Zeelenberg, and Pieters 2010) to argue that because envy is associated with a social stigma, consumers will be motivated to avoid signaling that they are envious (Bodner and Prelec 2002). As a consequence, the desire to self-aggrandize that follows the experience of envy will only lead to self-aggrandizing behaviors in private contexts, where no social-signal is sent. In contrast, when the decision context is public, consumers will be less likely to self-aggrandize (i.e., more likely to behave modestly) in an effort to avoid signaling that they

are motivated by envy. We test for the predicted interaction between envy and decision context (private vs. public) on three different behaviors that can be used to self-aggrandize: persistence, charitable giving, and conspicuous consumption.

In our first study, incidental envy (vs. control) was activated through an episodic recall task (Malatesta and Izard 1984). Next, participants were provided with a series of anagrams, presented as an unrelated task. In the private decision context condition no information was provided as to if and by whom the participants' performance output would be reviewed. In contrast, in the public decision context, participants were told that their performance data would be shared amongst a variety of researchers. The final anagram in the series was unsolvable. Time spent persisting on the unsolvable anagram was our main dependent variable. A 2 (envy vs. control) x 2 (decision context: public vs. prviate) ANOVA on time spent on the unsolvable anagram revealed a significant interaction between envy and decision context ($p < .01$). Planned contrasts indicated that when the decision context was private, participants experiencing envy persisted longer as compared to the control condition ($M_{\text{Private-Envy}} = 70.48$, $M_{\text{Private-Control}} = 40.38$; $p < .05$). Conversely, in public, this pattern reversed. Those in the control condition persisted longer than those experiencing envy ($M_{\text{Public-Envy}} = 51.58$, vs. $M_{\text{Public-Control}} = 76.49$; $p < .10$).

In study 2, we test for convergence by utilizing a different manipulation of envy and a different decision context. Specifically, we measure donation amount as a proxy for one's desire to self-aggrandize (Bennett and Chakravarti 2009). Envy (vs. control) was primed by having participants read a fictional article about a fellow student (adapted from Hill, DelPriore, and Vaughan 2011) who was either unusually wealthy (envy) or of average means (control). Next, participants were presented with a hypothetical charitable giving decision and asked to indicate how much they would be willing to donate. In the private context condition, participants were told that these donations were anonymous. In the public condition, participants were told that donor's names posted on the "Donation Page" of their company's newspaper. The donation amount (scale: 0 to 100 US dollars) served as the main dependent variable. A 2 (envy) X 2 (decision context) ANOVA on the donation amount revealed a significant interaction ($p = .01$). Planned contrast showed that in the private context, participants donated more when they felt envy than when they did not ($M_{\text{envy}} = 28.75$ vs. $M_{\text{control}} = 16.36$; $p < .05$). In the public condition, however, the pattern of results directionally reversed ($M_{\text{envy}} = 16.58$ vs. $M_{\text{control}} = 24.83$; $p = .11$).

Study 3 extends our line of inquiry into a consumer context. This study utilized the same envy manipulation as in study 1. Next, participants read a vignette describing a computer purchase either for private or public usage. Participants were then presented with a choice between an HP or Apple laptop. Pretests confirmed that Apple computers were seen as significantly more luxurious than HP computers. Brand choice was the main dependent variable. A 2 (envy) x 2 (decision context) binary logistic regression analysis on choice revealed a significant two-way interaction ($p < .05$). In the private context, participants were more likely to choose Apple when they experienced envy as compared to when they did not (percentage choosing Apple: $P_{\text{Envy}} = 71\%$ vs. $P_{\text{Control}} = 44\%$; $p < .05$). However, the pattern of results directionally reversed the public condition ($P_{\text{Envy}} = 27\%$ vs. $P_{\text{Control}} = 43\%$; $p > .20$).

In study 4, a meta-analysis was conducted to validate our previous findings, and specifically to confirm the reliability of the pattern of results in the public context condition. The confidence intervals from the meta-analysis for the three studies showed that the incidental envy significantly affects self-aggrandizing behavior both in private (0.144 to 0.757) and public (-0.667 to -.027) decision contexts at the 99% level.

Through a series of four studies, we confirm that there is an interaction between envy and decision context (private vs. public) on subsequent, unrelated self-aggrandizing behaviors (i.e., persistence, charitable giving, and conspicuous consumption). Currently, two studies are being conducted in order to establish the underlying psychological process. We conclude with a discussion of the theoretical and practical implications.

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Taking Steps Towards a New View of Shame and Guilt: Shame Motivates Approach and Guilt Motivates Avoidance Behaviors

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Shame and guilt play a pivotal role in consumer behavior. Until now, consumer and emotion research suggests that shame has negative and guilt has positive consequences. Instead, I suggest that shame motivates a need to belong and approach behavior, whereas guilt motivates a need to repair a damaged relationship and avoidance behavior. Six experiments with different emotion inductions demonstrate that shame motivates a choice for being together with other people, and that guilt motivates a choice to be together only with one's victim. In sum, shame is not that ugly and guilt is not that good as currently thought.

Introduction

More often than not consumers experience emotions. These emotions can have pivotal influences on consumer behaviors such as approaching sales people, gift giving, or buying products in crowded malls. As two often-occurring emotions, shame and guilt have often been thought to play a central role in interpersonal settings. More specifically, existing consumer and emotion theories suggest that shame has negative interpersonal consequences such as withdrawal and avoidance behaviors, whereas guilt has positive interpersonal consequences such as approach and interaction behavior (see e.g. Baumeister et al., 1994; Lewis, 1971; Tangney & Dearing, 2002). However, this image of shame and guilt might be too simplistic. The present research presents a new view of shame and guilt and demonstrates with six experiments how shame motivates a willingness to interact with other people and guilt a willingness to avoid other people.

Shame is a very negative feeling that arises after moral or incompetent actions (Barrett, 1995). The person has done something that damages the view of the self and subsequently feels inferior and incompetent (Ausubel, 1955; Izard, 1991). The central concern of shame is a threatened self: the whole self is negatively evaluated (Lewis 1971). Existing theories suggest that this would motivate negative interpersonal consequences such as withdrawal, avoidance, and social isolation to deal with the threatened self (e.g. Haidt, 2003; Keltner & Harker, 1998, Tangney et al., 2007). In contrast, I suggest that shame motivates interactions with others to repair the threatened self. Having a positive self-image is a fundamental human need (Gibbons, 1990), and recent research demonstrates that shame activates a motive that addresses this need and restores the threatened self (De Hooge et al., 2010). Sociometer theory (Leary et al., 1995) suggests that self-esteem is a reflection of current social relationships. This suggests that the best way to restore a threatened self is to affiliate with people. In other words, shame would motivate approach behavior.

Guilt arises after a moral transgression in which the actor has hurt another person and perceives himself as a bad person (Baumeister et al., 1994; Lewis, 1971). The person experiences stress and regret and is preoccupied with the damaged relationship and the bad thing done (Lewis, 1987). The central concern of guilt is the damaged relationship and the tendency to make amends (Izard, 1991). Consequently, existing theories suggest that guilt motivates positive interpersonal consequences such as repair behavior, apologizing, and approach behavior (Barrett, 1995; Haidt, 2003; Tangney et al., 2007). In contrast, I suggest that guilt only motivates interactions with the victim and not approach behavior towards others in general. Guilt concerns the damaged relationship with one's victim, and the actor is preoccupied with repairing the damaged relationship (De Hooge, in press; De Hooge et al., 2011). This preoccupation motivates people to interaction with the victim and to avoid other people in order to deal with the damaged relationship.

Experiments

Six experiments tested these ideas. The first two experiments correlated the shame-proneness and guilt-proneness scales TOSCA (Tangney, 1991) and GASP (Cohen et al., 2011) with scales such as the Need to Belong, State Self-esteem, Social Comparison, Empathy, and Perspective Taking. The findings revealed that shame-proneness correlated positively with Need to Belong and Social Comparison, and negatively with State Self-esteem. Guilt only correlated positively with Empathy and Perspective taking. In Experiment 3 shame and guilt (or no emotion in the control condition) were induced with a autobiographical recall procedure, and in

Experiment 4 the emotions were induced with a scenario (De Hooge et al., 2008, 2011). In both experiments participants could subsequently choose whether they wanted to do a lab task alone or together with another participant. Both experiments found that shame motivated a preference for the together-task, and guilt motivated a preference for the alone-task.

Experiments 5 and 6 tested the prediction that shame would motivate approach behavior in every situation, whereas guilt would only motivate approach behavior towards the victim. In Experiment 5 shame (or no emotion in the control condition) was induced in the lab (De Hooge et al., 2008). Participants in the endogenous condition then chose between doing a lab task alone or together with somebody who knew about the shame condition, and in the exogenous condition participants chose between doing a task alone or together with somebody who knew nothing about the shame event. In both cases shame motivated a preference for the together task (compared to the control condition). Finally, in Experiment 6 guilt (or no emotion) was induced in the lab (De Hooge et al., 2011). In the endogenous condition participants then chose between doing a task alone or together with their victim, and in the exogenous condition between doing a task alone or together with somebody who knew nothing about the guilt event. Similarly to Experiments 3 and 4, participants in the exogenous condition chose the alone task. In the endogenous task, however, participants preferred the together task.

In sum, multiple experiments reveal that existing consumer and emotion theories on shame and guilt might need a change. Shame can motivate approach behaviors and guilt can motivate withdrawal behavior. These findings can have important consequences for emotion influences on consumer behaviors such as approaching a sales person, shopping in a crowd of people, or internet shopping. Thus, shame is not so ugly and guilt is not so good as currently assumed.

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4.3 Individual Papers: Consumers in Relationships: The Forgiving, Grateful, Envious, and Competitive Consumer

Room: Madero A

Chair: Hyunjung Lee, University of Texas at Austin

Attention to Social Comparison Information: It's All about Keeping Up with—but Not Standing Out from—the Joneses!

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Bearden and Rose (1990) introduced Attention to Social Comparison Information (ATSCI) to consumer research as an important individual-difference variable. ATSCI refers to a person's sensitivity to social comparison cues and is presumed to be motivated by factors such as a craving for approval from others. Bearden and Rose (1990)'s work validated Lennox and Wolf's (1984) ATSCI scale in a consumer context and also demonstrated its consequences for conformity with normative pressures (e.g., in participants' preferences for colors for a university logo; study 3). Bearden and Rose (1990)'s paper has been widely cited since its publication (e.g., currently over 200 citations in Google Scholar), but surprisingly, since then hardly any studies in consumer research have attempted to link ATSCI to specific brand-related behaviors. The objective of the present research is to address this gap in the literature.

Our overarching thesis is that consumers who are relatively high in ATSCI, being very assimilation-oriented, seek to avoid social risks when it comes to branded products. This tendency results in two important consequences. First, high ATSCI individuals in general

will tend to play safe by sticking to well-known brands. Second, high ATSCI individuals are likely to avoid brands and branded products that are overly unique or distinctive (Brewer 1991), because they don't wish to use brands which pose uncertainties or the risk of not being socially acceptable. In contrast, low ATSCI individuals will feel much less pressured to consume well-known brands and will be much more comfortable with distinctive brand choices.

We present three studies. Study 1 investigates the relationship between ATSCI and brand consciousness (Shim and Gehrt, 1996; Nan and Heo, 2007). Study 2 examines the influence of ATSCI on two known drivers of consumer-brand identification (CBI), namely, brand distinctiveness and brand prestige. Finally, study 3 investigates the moderating role of ATSCI on the effects of brand prestige on consumer preferences for brand logos of different sizes as depicted on branded products.

Regarding Study 1, brand consciousness refers to the propensity of an individual for buying well-known branded products (Shim and Gehrt, 1996; Nan and Heo, 2007). We expect high (vs. low) ATSCI individuals in general to be more brand-conscious. This hypothesis was tested in a survey dealing with brand consciousness among undergraduate students (N = 218). Results of the survey confirmed a positive relationship between ATSCI and brand consciousness (b = .49, p <.001; R2 = .22).

Regarding study 2, prior research has established that both brand distinctiveness and brand prestige are drivers of CBI (Bhattacharya and Sen, 2003; Stokburger-Sauer et al., 2012). We expect brand prestige will be an equally strong driver of CBI for both low and high ATSCI individuals. However, brand distinctiveness will have a weaker influence on CBI among conformity-oriented, high ASTCI (vs. low ATSCI) consumers.

This hypothesis was tested in a study (N = 46; 103 cases) concerning brands with which participants strongly identified. A mixed-model ANOVA with perceived brand distinctiveness and brand prestige as a within-subject variable and ATSCI as a between-subject variable showed a reliable interaction between the brand factor and ATSCI (p < .05). Follow-up analyses confirmed a significant negative association between brand distinctiveness and ATSCI (p < .05) and a non-significant relationship between brand prestige and ATSCI (p > .9). As expected, brand distinctiveness (but not brand prestige) of high-identification brands was higher for low (vs. high) ATSCI consumers.

Study 3 examines how ATSCI moderates the impact of brand prestige on preferences for small (vs. large) sized brand logos on products consumed in public. In general, we expect that consumers will not prefer large-sized, "loud" logos. But in the case of low ATSCI consumers, a prestigious brand may make a large-sized logo much more acceptable. When it comes to high ATSCI individuals, even if the brand is generally considered prestigious, such people are likely to be concerned about the acceptability of a large and highly conspicuous brand logo among peers. Therefore, in the case of high ATSCI consumers, brand prestige will not make a difference; they will consistently prefer small-sized, relatively inconspicuous logos to avoid being overly distinctive among their peers.

This prediction was tested in a study in which we manipulated brand prestige (less vs. highly prestigious; between-subjects) and presented participants (N = 391) with pictures of T-shirts with different logo sizes (small vs. large). Participants provided their relative preferences for small versus large-sized logos on a constant-sum measure. Results of an ANOVA revealed a significant interaction between brand prestige and ASTCI (p < .05). Among low ATSCI consumers, highly (vs. less) prestigious brands significantly diminished the relative preference for small versus large-sized logos (p < .001). However, among high ATSCI consumers, brand prestige did not influence the strong preference for small logos over large logos (p > .10).

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Forgive or Forget: How Victim Motivation Following An Interpersonal Transgression Affects Apology Gift Preferences

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Consumer research on gift giving has primarily focused on the exchange of dyadic gifts from the giver to the recipient for purpose of interpersonal relationship maintenance and as a means of symbolic communication in relationships (Belk 1979; Caplow 1982; Sherry 1983; Belk and Coon 1993). Here the occasion that precipitates gift giving is often commemorative in nature, as marked by ceremony, rituals and other important rites of passage (Sherry 1983). However another type of gift giving situation that has received limited attention in the consumer behavior literature, involves reparative gift giving where the central goal is interpersonal relationship repair. For example, following a moral transgression, the transgressor may offer a gift to the victim as a means of seeking forgiveness and reestablishing social ties. Using gifts to encourage forgiveness is so common there are websites dedicated to apology gifts, apology cards, and forgive-me gifts. There is even an apology gift buying guide in Shopwiki.com with suggestions for consumers based on the severity of the transgression: itty-bitty mistakes, big mistakes and absolutely massive mistakes. Previous research however, has found that apologies are not always effective (e.g. Fehr and Gelfand 2010). As a means of offering an apology, an intriguing question therefore is what deems an appropriate sorry gift? The current research focuses on the integral role of the victim's motivation for forgiveness on apology gift preferences following an interpersonal transgression. In the next section, we outline two types of apology gifts that may be offered as a form of apology by the transgressor, and then discuss the role of victim motivation and how congruency between the activated temporal focus and the victim's motivational goal accounts for varying apology gift preferences.

Hedonic Versus Utilitarian Apology Gifts

Consumer researchers have made a distinction between hedonic goods that induce pleasure and alternatives that are more functional/utilitarian in nature and instrumental to achieving another goal (e.g. Dhar and Wertenbroch 2000; Kivetz and Simonson 2002; Strahilevitz and Myers 1998). Whereas hedonic alternatives are associated with the attainment of immediate pleasure, utilitarian goods provide delayed benefits and thus are conducive with a longer-term focus (Loewenstein, Read and Baumeister 2003; Wertenbroch 1998). Gifts offered as a form of apology following an interpersonal transgression, may also vary along this dimension such as offering the victim a voucher for an aromatherapy massage known to be a relaxing experience (hedonic gift) or a deep tissue massage know to relieve back ache and pain (utilitarian gift). We propose that the victim's preference for either a hedonic versus utilitarian apology gift, will vary given the victim's motivation for forgiveness, and in turn, the temporal focus activated by their motivational goal.

Victim Motivation for Forgiveness and The Role of Temporal Focus

Previous research on coping suggests that there are two general coping styles – emotion-focused coping versus problem-focused coping – that may be adopted in response to a stressful event (Folkman and Lazarus 1988). While emotion-focused coping involves attempts to regulate the distress caused by the stressor, problem-focused coping involves addressing the source of the distress (Carver 1989). Applied to the context of an interpersonal transgression, we argue that the victim may be motivated to forgive the transgressor by forgetting about the transgression incident and by avoiding thoughts about the problem in an attempt to reduce their negative feelings of distress (avoid motivation). In this instance, a hedonic gift should be preferred as it will help to maintain the short-term focus necessary to distract the individual from thinking about the transgression incident thereby facilitating temporary mood regulation. Alternatively, rather than forgetting about the incident, the victim may be motivated to forgive the transgressor by engaging in a more problem-focused style of coping (forgiveness motivation). In this in case the victim will require a long-term focus in order to remember the past and consider the future so that the transgression incident can be integrated into the bigger picture of the relationship. This in turn, should lead to a preference for a utilitarian gift, which is consistent with a longer-term focus and will encourage the victim to maintain the broad focus necessary to understand how the transgression is an isolated event.

Study 1: The Reparation Gift Preference Effect

In Study 1 we sought to provide preliminary evidence for the proposed reparative gift preference effect. Participants were first instructed to imagine that a close friend had revealed a secret of theirs to a large group of people (including some of their enemies). Participants were then given an explicit motivation to avoid or to forgive the friend. Next they were told that the friend wanted to offer them an apology gift. As hypothesized, the results revealed that that victims' in the avoidance (forgiveness) motivation condition were more receptive to gifts that were hedonic (vs. functional), experiential (vs. utilitarian) and to be consumed immediately (vs. to be kept).

Study 2a and 2b: Measuring Temporal Focus

The purpose of studies 2a and 2b was to provide evidence of the process mechanism underlying the reparation gift preference effect. In Study 2a, the results revealed that participants with an avoidance motivation were more focused on forgetting about the transgression incident, and had a more proximal focus than participants with a forgiveness motivation. In Study 2b, to provide convergent evidence for our effect, victim motivation was manipulated using an implicit priming word-puzzle and temporal focus was measured using a reaction time task. The results revealed that participants primed with an avoidance (forgiveness) motivation responded more quickly to words associated with a short-term (long-term) focus, and tended to prefer hedonic (utilitarian) apology gifts.

Study 3: Manipulating Temporal Focus

In Study 3, to provide direct causal evidence for our proposed theoretical mechanism temporal focus was manipulated using a 2(victim's motivation: avoid, forgive) × 2 (temporal focus: consistent, inconsistent) between-subjects design. When victim motivation was consistent with the primed temporal focus, we replicated our earlier effect, however when victim motivation was inconsistent with the temporal focus that naturally occurs with the motivation, gift preference matched the primed temporal focus (i.e. an avoidance motivation increased utilitarian gift preferences, and a forgiveness motivation increased hedonic gift preferences).

Discussion

Choosing the right apology gift is important as it may serve to encourage forgiveness if made appropriately, and may be detrimental to relationship reparation if made inappropriately. We show that a match between the temporal focus of the victim's motivation and the consumption benefit of the gift is an important determinant of forgiveness and relationship repair. Buyer beware, gift selection is not simply a matter of matching the purchase price to the severity of the transgression, the type of gift matters. This research links theories of gift giving with concepts from relationship psychology in articulating a model of gift receipt that accounts for victim motivation and temporal focus.

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Out of Sight, Out of Mind: How Self and Others Loom Larger in Social Comparisons and Competitions

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Social comparisons are common in everyday life. Whether comparing their chances of winning a round of Texas Hold'em against other gamblers, their likelihood to contract a virus versus peers, or their ability to succeed with a startup venture relative to other entrepreneurs, people are interested in knowing their standing relative to others (Festinger 1954). Expecting that their business is more likely to survive in a competitive marketplace than other new businesses, entrepreneurs invest more and are more confident of

their chances of success (Camerer and Lovallo 1999; Moore and Cain 2007). Convinced that they are less vulnerable to sexually transmitted diseases, consumers may take fewer precautions than advised by health marketing messages (Menon, Block, and Ramanathan 2002).

Evidence now suggests that when people compare themselves with others, they myopically focus on their own strengths and abilities and pay less attention to the (equally relevant) strengths and abilities of the comparison group (Chambers et al. 2003; Klar and Giladi 1999; Kruger 1999). We suspect, however, that all is not equal. We suggest that the self receives the lion's share of the attention because it is the self. Specifically, we propose that social comparisons are not merely myopic, but egocentric. After all, representations of the self are some of the most accessible representations that people possess. Conceptual representations become more accessible the more they are activated (Higgins and Bargh 1987; Srull and Wyer 1979), and we spend considerably more time thinking about ourselves than we do about others. People are likely to egocentrically focus on their own strengths and achievements more than the strengths and achievements of others when they compare the two.

And yet, despite nearly a decade of research on the topic (including many with "egocentrism" in the title), prior literature has never ruled in egocentrism in social comparisons. We are able to contribute to the theory of social comparison literature because instead of manipulating information (often the confound in prior research), we manipulate accessibility of self and other to understand how people loom larger in social comparisons.

The present research was designed to provide the first unequivocal evidence of egocentrism in social comparisons. We present three studies. In Study 1, we show that information about the self is brought to mind more quickly than information about others, and that difference mediates the magnitude of bias in social comparisons. In Study 2, we manipulated participants' accessibility of the comparison group by changing the salience of the competitor while holding information about that competitor constant. Participants predicted their chances of beating a competitor on a trivia game comprised of easy and difficult categories. Path analyses revealed that participants based their predictions on their own knowledge of the trivia category more than on their competitors' knowledge of the category. However, that effect was attenuated when participants had a constant reminder of their competitor with a simple photograph. Finally in Study 3, we demonstrate that the mode of competition matters in highlighting the salience of competitors. Participants who played a game directly against their highly salient competitor (direct head-to-head competition) exhibited less egocentric bias in predicting their chances of winning than those who played through an intermediary (indirect competition), where the competitor while still present and equally skilled, looms less in judgments.

In addition to the theoretical contribution of egocentrism in social comparisons, we also provide applied contributions by examining how competitors naturally vary in accessibility across different types of competitions (a key domain where social comparisons matter). As shown in our third study, all modes of competition vary across a spectrum from direct to indirect. For instance, consider how the salience of a competitor varies in a direct head-to-head round of tennis versus a relatively indirect round of golf. Competition can be equally intense in both types of competition, but the game of tennis has a relatively more accessible competitor than golf because the rules of the competition position the competitors with greater salience. Thus the mode of the game affects how we assess our competition and how overconfident we will be. The same can be observed in a competitive business context—take a restaurant owner operating in a food court where competitors are salient and loom large versus in a equally competitive neighborhood where competition feels further away and loom less in competitive judgments.

Whether comparing their event chances, abilities, or entrepreneurial success, people tend to overweight self-assessments and underweight assessments of the comparison group. Although much prior work has mentioned egocentrism as the cause of this myopia, previous work has not ruled in egocentrism. In the present work, we show that comparisons are indeed egocentric. We demonstrated not only that self-information comes to mind more rapidly than information about a comparison group, but that those for

whom self-information is especially accessible tend to be most myopic in their comparisons. Furthermore, we showed that increasing the salience of the comparison group led to corresponding decreases in egocentrism. As a key implication from this research, we emphasize that changing the context of social comparison or competition, by simply highlighting the presence of the other or competitor (without changes in amount or quality of information) can alone diminish the degree of comparison bias. To summarize the key take away, these results suggest that a major reason why comparisons are myopic is that others are simply "out of sight" and "out of mind."

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Thanks for What I've Got and Thanks for What I've Not: The Effects of Being Grateful, and What We Are Grateful For, on Evaluations of Products

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Appeals to consumers' feelings of gratitude are quite common marketing tactic used by non-profit and for-profit firms to solicit donations, and during holiday gift-giving seasons (Wallendorf and Arnould 1991). Prior research suggests that when people feel grateful, they often express it in ways that benefit others (Emmons and McCullough 2003). Yet, apart from studies showing that consumers who are grateful for a firm's efforts will reward it (Morales 2005; Palmatier, Jarvis, Bechkoff, and Kardes 2009), there is little research that explores how gratitude influences consumption decisions. This research aims to fill that gap by investigating how gratitude affects consumers' decisions in purchasing products that provide benefit to the self versus others. In so doing, we highlight the important distinction between different types of gratitude ('gratitude for what consumers have' versus 'for what consumers do not have') and examine how experiencing different gratitude modes change consumer behavior.

In study 1, we explored how gratitude affects consumers' preferences for products that benefit themselves and others (N=117). The study design included three conditions, in which participants either wrote about an event that made them feel grateful, an event that made them feel amused, or a neutral event. The amused condition was included to distinguish the effects of gratitude from a similar positive emotion that shares its valence and frequency (Fredrickson, Tugade, Waugh, and Larkin 2003). After the manipulation, participants indicated preference for products that provided either self-indulgent (hedonic) or utilitarian benefits, as well as preference for products with self-oriented (high-performance) versus other-oriented (eco-friendly) benefits. Results showed that compared to both the amused and neutral conditions, those in the gratitude condition had a decreased preference for self-indulgent products and increased preference for products that benefit others (ps<.05).

Through studies 2a and 2b, we introduced the distinction between gratitude for having desirable things and gratitude for not having undesirable things, to understand how these two gratitude modes affect consumption behavior. In study 2a, we hypothesized that when individuals consider what they are grateful for, they will likely think of a specific object that currently exists in their lives. However, when individuals consider what they are grateful for not having, they will likely simulate the implications of having the negative object (Gilbert, Krull, and Malone 1990; Roese 1997). Simulations of such counterfactual circumstances will trigger the plight of one living with the negative circumstances, leading to greater feelings of empathy (Batson et al. 1997; Hung and Wyer 2009).
To test this, we asked 34 participants to list eight items that they were grateful to have and eight items that they were grateful to not have in their lives (counterbalanced order). Then, the first item for each gratitude mode was repeated back, and participants indicated the amount of perceived suffering of, and felt empathy toward, a person who did not have this object of gratitude. Results showed higher degrees of suffering of, and more empathetic concern toward, others who have an item that participants felt grateful to <u>not</u> have compared to those who did not have an item that participants felt grateful to have (ps<.01).

In study 2b, we hypothesized that individuals who consider things they are grateful to have will think of a specific benefactor who is socially closer, than the benefactor of items that one feels grateful to not have. This study design was identical to study 2a, except that participants considered the person(s) who enabled them to have (or not have) the first item that they had listed, and indicated the concreteness and closeness of that benefactor (N=44; α>.80). Results showed that indeed, those in the 'grateful for having' condition thought of a benefactor who was more concrete and more socially and emotionally close to the participant, than in 'grateful for not having' condition (p<.05).

Given the differences in felt empathy toward the less fortunate and social distance of benefactors between the two gratitude modes, we hypothesized that those who are 'grateful for having' will be more likely to select products that benefit socially close-others compared to those who are 'grateful for not having'. This was tested in study 3. 235 individuals participated in 3 (gratitude: having, not having, neutral) x 2 (beneficiary distance: close, distant) between-subject design. Participants wrote about two events that elicited the target emotional experience. Next, all participant evaluated four pairs of products (blenders, t-shirts, multivitamins, and Tupperware sets). Pairs were described as Product A and Product B. For each pair, Product A included a product description and its cost. Product B was identical to Product A, but also included a cause-related benefit. In 'close-other' condition, Product B supported needy families in a local community. In 'distant-other' condition, Product B supported needy families in a foreign country. For each product category, participants provided how many more dollars (0 to 20) they would pay for Product B than Product A. This WTP for Product B was averaged across the four products (α>.80).

Results showed a main effect of gratitude condition (p<.05). Consistent with study 1, results indicated greater WTP for cause-marketing products in the 'grateful for having' and 'grateful for not having' conditions compared to the neutral control. There was also a significant gratitude condition x beneficiary distance interaction (p<.05), demonstrating that 'grateful for having' consumers were willing to pay higher price for products benefiting *close-others* rather than distant-others (p<.05). However, 'gratitude for not having' participants were willing to pay more for products benefiting *distant-others* than close-others (p<.05). In the neutral condition, there was no difference in WTP for products benefiting close-others and distant-others (p>.05).

We make three key contributions. First, we propose and empirically demonstrate that gratitude decreases consumers' preferences for products that are perceived as providing indulgent benefits to the self, while increasing preferences for products that benefit others. Second, we differentiate the unique effects of gratitude as a pro-social motive from the general effects of positive mood on behavior. Third, we develop a theoretical framework that explains how 'gratitude for having' versus 'gratitude for not having' motivates different kinds of pro-social consumption.

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4.4 Individual Papers: Nutrition Cognition: Knowledge, Beliefs, and Perceptions of Healthy Foods

Room: El Capistrano

Chair: Jacqueline Conrad, Belmont University

A View to a Choice: The Effects of Lateral Visual Field on Choosing between Healthy versus Unhealthy Food Options

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Is preference for a healthy versus an unhealthy food option influenced by whether a healthy food option is on the left versus the right visual field? We examine this research question in Studies 1 and 2, and then in Studies 3A and 3B, we extend this further and examine if mere exposure to a food item (either healthy or unhealthy) on the left versus the right visual fields influences subsequent food choices. Prior studies have examined different factors that affect consumers' choices between healthy and unhealthy food options (Dhar and Wertenbroch 2012; Shiv and Fedorikhin 1999). However, no study, to the best of our knowledge, has examined the effects of presenting healthy versus unhealthy options in different lateral visual fields on consumer choices.

The right hemisphere of the brain processes information from the left visual field while the left hemisphere of the brain processes information from the right visual field (Delis et al., 1986). Moreover, the right hemisphere of the brain is more specialized in processing global information, while the left hemisphere is more focused on processing local information (Robertson et al., 1993). Hence, it can be proposed that a consumer will focus on global aspects of a stimulus if it is on the left visual field and on the local aspects of a stimulus if it is on the right visual field.

We extend this premise to the context of choosing between healthy versus unhealthy food items where temptation and self-control play influential roles (Dhar and Wertenbroch 2012). From the perspective of construal level theory, utilizing global versus local processing has implications for self-control (Fujita & Han, 2009); global processing being more abstract, helps people focus on the important goals and resist temptations (Trope & Liberman, 2003).
Building on this theoretical foundation, we propose that a healthy food option placed on the left visual field of a consumer will inhibit temptations. Hence, we hypothesize that there will be greater preference for healthy food options when they are placed on the left (vs. right) visual field. Four experiments test our hypotheses.

Study 1, a single-factor between-subjects experiment, examined if presentation of two food items (one healthy and one unhealthy) on the left versus right visual fields impacted choices. Participants made a choice between broccoli (healthy) versus grilled cheese sandwich (unhealthy) (e.g. Chernev, 2011). Participants saw the healthy (unhealthy) item either on the left (right) or on the right (left) side of a computer screen. As hypothesized, preference for the healthy option was higher when it was on the left (vs. right) visual field. In order to examine an underlying process, participants later identified (from multiple food items) the item that they previously saw on the left and the right sides of the screen. Participants' response latencies were recorded. Since the features of global processing are detected earlier than the features in local processing (Navon, 1977), we expected the item on the left visual field would be identified faster than the item on the right visual field. The response latency measures supported this claim.

Study 2 was a 2 (visual field of healthy food: left vs. right) X 2 (dietary orientation: restrained vs. non-restrained eaters) between subjects experiment. Consumers chose between a salad (healthy item) and a chocolate cake (unhealthy item). The first factor was manipulated as in Study 1. The second factor was measured (Hermann & Polivy, 1980). Since restrained eaters tend to monitor their food intake (McFerran et al. 2010; Ward & Mann, 2000), they are more susceptible to external influences when making food choices (Bublitz, Peracchio & Block, 2010). Thus, we expected the visual field effects to strengthen for restrained eaters and weaken for non-restrained eaters. Overall preference for the healthy option was higher when it was on the left visual field and this effect was strengthened for restrained eaters but weakened for non-restrained eaters.

Study 3A examined whether preattentive mere exposure to either a healthy versus an unhealthy food option on the left versus right visual fields influences subsequent choices. A 2 (left vs. right visual fields) X 2 (healthy vs. unhealthy food ads) between subjects experiment was used. Participants completed a hidden object search task (e.g., Janiszewski 1993). An advertisement of a yogurt (healthy) or an ice cream (unhealthy) was placed to the left versus the right of the object search task. After completing this task, participants chose between a chocolate cake and a fruit salad. As hypothesized, preference for the fruit salad was higher when the healthy food advertisement was on the left (vs. right) visual field.

Study 3B replicated the key findings of Study 3A with a field experiment conducted at a restaurant. After being exposed to a healthy item (on the left vs. right visual fields) on a page with a hidden object search task, restaurant patrons made their food selections from the restaurant menu. As hypothesized, patrons ordered healthy options from the menu to a greater extent when they had been exposed to the healthy item on the left (vs. right) visual field.

In conclusion, the results of four experiments showed that preferences for healthy food options are higher when they are placed on the left visual field and these effects get magnified (weakened) for more (less) restrained dieters. In addition, mere exposure to a healthy versus unhealthy food advertisement placed on the left versus the right visual field influences subsequent food choices from a menu.

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Apples to Apples or Apples to Crackers? Assimilation, Contrast, and Self-Control on Healthiness Perceptions.
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Assimilation and contrast effects play an important role in the way consumers make judgments (Parducci 1992; Schwarz and Bless 1992b). The order of information, in particular, may have a contextual influence on the way we evaluate (Schwarz and Bless 1992a). In the present research, we examine how assimilation and contrast effects might manifest differently in food consumption related situations. Across three studies, we examine contextual order effects and test our hypothesis that these effects are moderated by self-control, resulting in better overall patterns of consumption for individuals higher in self-control. We show that prior exposure to healthy or indulgent food options impacts consumer evaluations of healthiness for subsequent options differently at varying levels of self-control.

Comparative evaluations and order effects are critical to our understanding of consumer judgments and choice. Our research contributes to this knowledge by examining the role of self-control in goal contexts with sequential exposure to different foods. Research on order effects has identified highlighting and balancing behaviors toward pursuit of self-regulation goals (Dhar and Simonson 1999). For example, a dieter may balance an unhealthy lunch by eating a healthy dinner or vice versa. The present research examines judgments about the ambiguously healthy foods that may lead individuals with low self-control to use strategies such as highlighting and balancing ineffectively or categorize alternatives in a manner that negatively impacts the pursuit of health goals (Poynor and Haws 2009). Specifically, we hypothesize that people with lower self-control will assimilate their perceptions of healthiness for ambiguously healthy options following exposure to healthy foods and contrast after unhealthy foods. This behavior broadens the number of acceptably healthy choices available. For those high in self-control, we expect the opposite pattern to emerge and impede goal-inconsistent choices.

In Experiment 1, participants were shown food images one at a time and asked to rate the healthiness of each. Participants were shown either a healthy (an apple) or unhealthy food (potato chips) followed by an ambiguously healthy food (Goldfish® Crackers). Separately, participants completed the 13-item self-control scale (Tangney et al. 2004). Analysis revealed a significant interaction ($p = 0.05$) between the order condition and trait self-control. A spotlight analysis confirmed that individuals with lower self-control evaluated the neutral Goldfish option as more healthy subsequent to exposure to a healthier item (an apple) relative to people with higher self-control ($p = 0.01$). Consistent with our hypothesis, these results indicate that after seeing a healthy item, low self-control individuals assimilate judgments about subsequent neutral options while high self-control individuals contrast. In the condition beginning with an unhealthy item (potato chips), there was no significant difference between low and high self-control participants.

In Experiment 2, we extend to another health-related variable, calorie estimates, to again assess how contrast effects apply to consumers' perceptions of healthiness. Participants were shown Teddy Grahams as a neutral food following a healthy (apple slices) or unhealthy (chocolates) item. After being presented with the snacks, participants were asked to estimate the number of calories in the Teddy Grahams. The interaction between health condition and trait self-control was again significant ($p < .001$). Participants lower in self-control estimated fewer calories in the Teddy Grahams after exposure to apple slices ($p < .001$) relative to high self-controllers, supporting the pattern of assimilation and contrast found in Experiment 1. After exposure to healthy foods, this pattern of assimilation for people with low self-control effectively broadens the category of healthy foods and makes the pursuit of health goals easier, but less effective. Conversely, contrasting healthiness narrows categorization to protect high self-control people from threats to goal-pursuit. There was no significant difference based on self-control in the unhealthy first condition, possibly because seeing the indulgent food first does not activate a health goal.

In Experiment 3, we examined our hypothesized patterns of assimilation and contrast following self-regulatory depletion. Previous research has shown that exertion from performing difficult mental tasks can deplete self-regulatory resources (Schmeichel, Vohs, & Baumeister, 2003; Vohs et al., 2008), and we argue that people with low self-control are more susceptible to assimilation effects following a healthy item under conditions of depletion. Participants were asked to complete a writing task and those in the depletion condition were instructed to not use the letters 'a' or 'n' during the task (Schmeichel, 2007). Participants were then shown either baby carrots or Reese's miniatures followed by the relatively neutral Goldfish crackers, and they were asked to rate the healthiness of the Goldfish. General self-control was later assessed. We find a significant 3-way interaction ($p < .01$) among depletion state, order condition, and trait self-control. Chronic low self-controllers assimilated ambiguous foods to previous healthy options relative to those with high self-control more so when resources were depleted ($p < .02$). As such, the differences in assimilation and contrast effects based on self-control were heightened when self-control was temporarily depleted, underscoring the self-control mechanism underlying our results.

Our findings contribute to literature on context effects as part of a goal pursuit process by exploring the role of assimilation and contrast effects in self-control decision-making through the impact on healthiness perceptions. Prior research revealed the importance of categorizations of alternatives in goal pursuit (Poynor and Haws 2009). Here, we identify trait self-control as a factor that moderates order effects, showing that low self-control individuals tend to assimilate to prior healthy food choices. On the other hand, individuals with higher self-control contrast in these situations. These effects help to explain variant outcomes of people with low and high self-control in pursuing goals based on upon simple effects that order have on perceptions of the healthiness of food items.

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Beliefs About The Cause of Obesity Predict Actual Body Mass

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Consumers make over 200 food choices per day, and obesity has become a severe public health concern in many countries. Diet and exercise guides advocate numerous approaches to weight loss, variously implicating genetics, consumption, and exercise in explaining our expanding waistlines. While some authors point to sedentary lifestyles (Blair & Brodney, 1999) or genetics (Comuzzi & Allison, 1998), the strongest evidence implicates a marked increase in consumption of food and drink as the main driver of obesity (Livingston & Zylke, 2012). Consumer researchers have investigated several factors that help explain this increase in eating.

In this research, we start with the premise that lay theories guide actual behaviors (Dweck, 2000). This means that those who believe diet is the cause of obesity should be more likely to approach the goal of losing weight by changing how many calories he or she consumes. Given that science has shown that reducing intake is more likely to result in sustained weight loss than increasing the amount one exercises, we expect that those who believe exercise is the cause of obesity to have a higher body mass index (BMI). Further, we predict that all else equal, those who believe that not exercising causes obesity will eat more than those who believe that it is caused by a poor diet, since the former should believe that they can exercise off the additional intake (or that the additional calories are of little consequence).

In study 1, we asked 254 Korean participants what they believed was the primary cause of obesity: eating too much, not exercising enough, or genetics. Results showed that over 90% believed that diet or exercise was the primary cause (roughly equally split), and that exercise theorists indeed reported a significantly higher BMI.

In study 2, we compared Amazon.com users ($N = 100$) to a sample of 40 family physicians from a leading US hospital. We asked them to indicate both the primary cause, as well as to allocate 100 points among the options. For the lay people, results indicated equal numbers of respondents sharing the diet and exercise lay theories (44 vs. 48); which was reflected in the points allocation (Ms = 44.06 vs. 38.97). The genetics lay theory was far less prevalent (8 respondents, $M = 17.05$). However, the physicians were far more likely to be diet theorists (29/40), consistent with scientific agreement.

Study 3 again examined the relationship between lay theory and BMI in a sample of US consumers (N=84). We conducted a regression, allowing us to control for several additional known predictors of obesity (age, gender, education, hours of sleep, stress, medications known to cause weight gain). A greater number of points allocated to diet (out of 100) was associated with a lower BMI and a lower likelihood of obesity, and this predicted variance above all of the control variables.

We replicated this finding again in study 4 in a sample of French consumers (N=290), using all of the above control variables, plus several others (SES, pregnancy, overall health, employment, self esteem, nutrition interest). The results when we used a second, single item measure of lay theory (1=eating too much, 7=not exercising enough), suggesting the robustness of the effect.

One concern is that our question format may itself have prompted the diet and exercise lay theories to respondents, who otherwise normally hold some other beliefs. To address this concern, in Study 5, a research assistant approached 548 people in Hong Kong and asked them, "What do you believe is the main cause of obesity?" Nearly 90% spontaneously implicated diet or exercise; fewer than 10% implicated other causes, including genetics. However, since this was a face-to-face interview, respondents were not asked their weights. Therefore, in Study 6, we recruited 251 US-based respondents from an online panel. Two blind research assistants coded their open-ended responses. Again, 84% of respondents implicated diet, exercise, or both, and exercise theorists reported a significantly greater BMI than diet-theorists, making us confident that the effect is not due to question format or response priming. Study 7 tested whether lay theories about the relative importance of diet and exercise can actually affect consumption quantities. Participants were given a cup of chocolates while they filled out some unrelated questionnaires, including a measure assessing the relative weights of their lay theories of obesity. We found that those who believed that a lack of exercise was relatively more likely to cause obesity ate more chocolates from their given cups.

Study 8 aimed to establish the causal effects of these lay theories. Following Nussbaum and Dweck (2006), Hong Kong participants (N=93) read a paragraph, purportedly real research, which either stated that obesity is caused by diet or by exercise. A control condition read about research unrelated to consumption. Participants primed with an exercise theory ate more candies in the remainder of the session than those primed with a diet theory (3.74 vs 2.45; control = 3.32).

Across several studies, we provide the first evidence that (a) people have mainly two different lay theories about what causes obesity (diet vs. exercise), (b) these beliefs diverge somewhat from medical professionals, (c) these theories predict unique variance in BMI, and (d) these lay theories guide actual food choices. These results help answer the big picture question of what causes obesity, by introducing lay theories as a sociocognitive predictor of a healthy body weight.

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If It's Healthy And You Know, Do you Eat? Health Prompts Reduce Preschoolers' Consumption

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As obesity rates grow, marketers, health providers, policy makers, and educators constantly attempt to make individuals eat healthier food (Chandon and Wansink, 2007), for example, by including nutritional information on food labels and advertising the importance of starting healthy consumption at an early age. Our research argues and shows that framing food items as "healthy" as opposed to "tasty" or no framing can undermine the natural tendency of preschoolers as young as three years old to eat these food items, and decreases their level of enjoyment of these items.

Specifically, besides satisfying hunger, eating is motivated by two main benefits: taste and healthiness. Like satisfying hunger, taste is an experiential (intrinsic) benefit in that it is an integral part of the eating experience. In contrast, health benefits are instrumental (extrinsic) in that achievement of these benefits is separated and conditioned on completion. Thus, attending to instrumental health benefits can make eating an extrinsically motivated activity (e.g., Ryan and Deci 2000). Indeed, recent research shows that attending to the goals an activity serves (e.g., its healthiness), as opposed to the experience of pursuing the activity (e.g., pleasantness), undermines intrinsic motivation because the activity becomes instrumental for achieving the goal (Fishbach and Choi, 2012).

Accordingly, we predict that emphasizing a food's health rather than taste benefits, or not emphasizing benefits at all, would decrease current and planned consumption of the item, by shifting attention from the experience (i.e., enjoying the taste) to the instrumentality (i.e., promoting health) of eating. Building on research showing positive experiences of a given activity are associated with engagement (e.g., Custers and Aarts, 2005), we predict this shift in attention will decrease enjoyment of the food such that individuals will rate it as less tasty when they attend to its health benefits rather than its taste or nothing at all, and will therefore reduce consumption.

Of particular interest is testing these predictions among children as young as three to five years old. Preschoolers are frequently exposed to food-related persuasion attempts in person and through the media (Desrochers & Holt, 2007). Additionally, children 3-5 years seek more immediate rewards and do not have a chronic health goal active. As such, we assume these children rely primarily on taste, that is, the experiential aspect of eating, when deciding what and how much to eat. Adults, in contrast, rely, at least partially, on health and more complex considerations such as guilt-reducing mechanisms (Chandon and Wansink 2007b; Coelho Do Vale, Pieters, and Zeelenberg 2008; Raghunathan, Naylor, and Hoyer 2006). Accordingly, if children deem healthy-framed food less tasty, they will reduce consumption.

Our first study, an online survey of parents of preschoolers (n = 89) provides initial evidence for our hypothesis. The majority of those surveyed indicated trying to increase their children's vegetables consumption. Controlling for the *frequency* of serving vegetables, we find that emphasizing the taste benefits increased consumption, whereas emphasizing the health benefits did not. To test the reasons health claims fail and may even backfire, and to overcome the correlation-based nature of this pretest, we report below two

experimental studies that test whether framing food as healthy (vs. tasty or no-frame) undermines preschoolers' taste evaluations, as well as present and planned consumption.

Study 2 (N=57, age range: 4.5-5.5 years), included three between-subjects framing conditions: healthy/yummy/control. In the "healthy" ("yummy") condition, the experimenter read a story emphasizing the health (taste) benefits of Wheat-Thins crackers. No story was read in the control condition. In all conditions, the experimenter next offered the child a chance to eat the crackers. To measure planned consumption, the experimenter then had the children choose either Wheat-Thins or Ritz crackers to take home. As predicted, children in the "healthy" condition ate on average fewer crackers than children in the "yummy" and "control" conditions, whereas these latter two conditions did not differ. Additionally, more children chose to take home Wheat-Thins in the "yummy" condition than in the "healthy" condition, expressing greater planned consumption of these crackers.

To test whether we can eliminate the effect of the health messages after a time delay, we had participants in the "healthy" and "yummy" conditions complete the control-condition procedure (eating and choice) approximately two weeks after completing the above procedure. Supporting the predicted interaction between frame and measurement time, only children who originally were in the "healthy" condition increased their consumption from t_1 to t_2, with no effect among those originally in the "yummy" condition, suggesting health information affects consumption only if accessible at time of consumption (i.e., at t_1).

Study 2 (N=44, age range: 3-4 years) examined whether children also experienced the healthy-framed foods as less tasty, and included "healthy" (operationalized as above) and "control" (operationalized through a story that did not emphasize benefits) conditions. After eating, children evaluated the crackers' taste, using a pictorial smiley scale to represent liking, a pictorial scale to indicate similarity of the crackers to onions (which implies disliking) versus ice cream (which implies liking), and by opening their hands as a liking measure.

Extending study 2's results to a younger population, children in the "healthy" condition ate on average half as many crackers as children in the "control" condition. They also liked the crackers less. This decreased liking mediated the effect of framing on consumption.

Our third study thus replicates the result that health (versus neutral) frame decreases consumption, and shows health frame decreases liking. Thus even young children are susceptible to the "healthy=less tasty" bias.

To summarize, across three studies, using both within- and between-subjects measures, as well as correlational and experimental designs, we find consistent evidence that emphasizing the health benefits of a food item, relative to emphasizing its taste benefits or no benefits, decreases preschoolers' consumption (current and planned) by leading to lower taste ratings. A key take away for caregivers would be, when serving food to preschoolers, it is best not to mention health benefits.

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4.5 *Symposium:* Identity Structure and the Boundaries of Identity Marketing

Room: Concepcion

Chair: Julian Saint Clair, University of Washington, USA

Identity Cues in Product Rating Distributions: The Role of Self-Concept Clarity in Consumer Preferences

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Online retailers like Amazon synthesize consumer reviews in terms of means and distributions of star ratings. Whereas the mean rating conveys the average liking for the product, the distribution conveys the level of agreement among consumers. The present research probes how the shape of rating distributions and levels of agreement among reviewers affect consumer preferences.

Distinctiveness theory posits that people selectively focus on traits that emphasize their peculiar and unique characteristics (McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). The need to ascertain distinctiveness is particularly salient when people feel uncertain about themselves (Baumgardner, 1990). Frequently, this uncertainty is addressed by adherence to firm and extreme attitudes (Sherman, Hogg, & Maitner, 2009). These findings suggest that people have a heightened need to achieve distinctiveness and clarify their self-concept in situations of uncertainty.

Self-concept clarity reflects the extent to which people hold clearly defined self-beliefs (Campbell, 1990). Generally, it is the sense of knowledge about who you are and what you stand for. Because lacking certainty and clarity in one's self-views is aversive (McGregor & Marigold, 2003), those with low self-concept clarity are motivated to establish a consistent self-view. Because choice of products with identity-relevant characteristics helps maintain a well-defined identity through time (Kleine, Kleine, & Allen, 1995), one way to rectify a compromised self-concept is to choose products to re-establish and clarify a certain identity(Englis & Solomon, 1995; Gao, Wheeler, & Shiv, 2009). We propose that another way to satisfy this need is by choosing polarizing products, because products that are not homogenously liked help consumers differentiate themselves.

The rating distribution shape signals the degree of consensus regarding product appeal and allows consumers to assess their preferences relative to others. Unimodal distributions are clustered around a particular rating, decline in the tails, and convey a clear consensus on the level of appeal. On the other hand, bimodal distributions have two clusters, with one cluster in the high ratings and the other one in the low ratings. This lack of clear consensus means that preference for products with bimodal distributions suggests disagreement with a larger share of people than in the unimodal condition.

Distinctiveness theory suggests that people have a need to differentiate themselves from others, especially when they need to reduce self-uncertainty (McGregor et al., 2001; McGuire et al., 1978). Because preference for products with bimodal distributions suggests disagreement with a larger share of people than in the unimodal condition, people who are motivated to hold a clearer self-view should favor products with bimodal distributions. Thus, we predict that as compared to high self-concept clarity consumers, those with low self-concept clarity should find products with bimodal distributions more appealing.

In experiment 1, we examined people's lay theories about rating distributions. Participants chose the product types (generally liked, generally disliked, or polarizing) that they perceived to provide the most information about themselves, others, and general self-expressiveness. These measures created a single factor of identity relevance, with polarizing products seen as the most identity relevant, $\chi^2(2) = 101.87$, $p < .01$.

In experiment 2, we examine the influence of self-concept clarity and rating distributions on product evaluations. Participants saw a movie poster ("Contagion"), along with the movie synopsis, and were randomly assigned to see the bimodal or unimodal distribution (same mean rating). Ratings of the perceived quality, likelihood of enjoyment, and likelihood of seeing the movie were consolidated into a desirability factor. We measured self-concept clarity using a validated scale (Campbell et al., 1996). A significant interaction emerged, $b = -0.74$, $t(145) = -2.41$, $p = .017$, such that participants with low self-concept clarity preferred movies with bimodal distributions, whereas participants with high self-concept clarity preferred movies with a unimodal distribution.

We used the experiment 3 to explore whether group polarization was driving this effect. To create a clear representation of polarizing groups, we consolidated the preferences of reviewers into two distinct groups. To ensure that the movie genre was not a confound in the experiment 2, participants were asked to imagine they were considering seeing a movie. Feedback from previous viewers was polarizing [neutral], "65% really enjoyed the movie" and "35% really disliked [had neutral feelings about] the movie." Results revealed a significant interaction, $b = -0.41$, $t(162) = -2.04$, $p = 0.04$. Although participants high in self-concept clarity preferred the movie with the neutral ratings, this effect was attenuated for participants low in self-concept clarity, despite the fact that the polarizing movie had an objectively lower rating than the neutral movie.

In experiment 4, we manipulated self-concept clarity. Participants were randomly assigned to complete a task developed to lower or heighten self-concept clarity, with a prompt that asked them to think of a time they had [did not have] a clear and consistent sense of themselves. They were then asked to describe this event in as much detail as possible – what happened, how they felt, etc. After a filler task, participants saw either a bimodal or unimodal rating for the movie they were considering seeing. A significant interaction emerged, $b = -0.52$, $t(223) = -2.24$, $p = 0.026$, such that participants in the low clarity condition preferred movies with a bimodal distribution, but this effect was attenuated for participants in the high clarity condition.

Our examination of the role of product rating variance in product evaluation shows an influence of self-concept clarity. Surprisingly, this need to clarify one's identity persists despite the negativity bias. Adding to the identity driven consumption literature, the results suggest that polarizing products may provide a way for self-uncertain consumers to assert their identity. This implies that retailers should look to rating distributions to understand their customers, and attempt to appeal to self-uncertain consumers (e.g. adolescents) with polarizing products.

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The Many-Faced Consumer
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     Mark Forehand, University of Washington, USA

A working-parent may prefer work-oriented products or family-oriented products depending on whether her employee or parent identity is active. Although the literature supports the notion that priming a given identity prompts approach toward preferences and behaviors consistent with the primed identity and avoidance of alternate identities (Forehand & Deshpande, 2001; Forehand, Deshpande, & Reed, 2002; Hugenberg & Bodenhausen, 2004; LeBoeuf, Shafir, & Bayuk, 2010; Luna, Ringberg, & Peracchio, 2008; Zhang & Khare, 2009), attention to the situations or factors that facilitate such response is sparse. We explore when priming a given identity (e.g., employee) might lead consumers to approach products that are targeted toward alternate identities (e.g., family-oriented products). In answering this question, we identify when extant identity priming theory is violated and when targeted marketing campaigns may actually backfire.

It has been suggested that consumers cognitively organize multiple identities within an associative network where identities may vary on their degree of association (i.e., overlap) ranging from fully disassociated to fully associated (Amiot, De La Sablonniere, Terry, & Smith, 2007; Greenwald, et al., 2002; Luna, et al., 2008). As such, spreading activation suggests that priming one identity should inhibit the activation of disassociated identities (e.g., Hugenberg & Bodenhausen, 2004). Thus, when two identities are disassociated, one would expect the typical priming effect where individuals approach the primed identity and avoid the alternate identity.

Past research within the Bicultural Identity Integration (BII) literature has shown that biculturals with weakly integrated (i.e., disassociated) cultural identities demonstrate a contrastive reactance effect wherein they avoid behaviors consistent with the primed identity and approach behaviors consistent with the alternate identity (Benet-Martinez, Leu, Lee, & Morris, 2002; Cheng, Lee, & Benet-Martinez, 2006; Mok & Morris, 2009, 2010; Zou, Morris, & Benet-Martinez, 2008). This prediction is contrary to those we derive above from associative network theory.

Inherent in the bicultural domain is the fact that the two cultural identities are battling for dominance within the single self-conception category of "cultural identity." However, across the broader realm of consumer identity, two identities may be drawn from entirely different levels of self-conception: parent, employee, academic, socialite, etc. In this broader realm, two identities may or may not be in direct competition with one another. Thus, the average level of identity competition for consumer identity is relatively low compared to the average level of identity competition for bicultural identity. Following this, we argue that when two disassociated identities are in low competition the typical priming effect will occur where consumers avoid the alternate identity. When two disassociated identities are in high competition however, we expect identity priming to lead consumers to approach the alternate identity.

We tested whether level of competition moderated the effect of targeted marketing (i.e., primed- vs. alternate-identity-targeted products) in experiment 1 (n = 78). Undergraduate participants were first primed with disassociation between their "academic" and "socialite" identities with either low competition or high competition using pre-tested scenarios. Next, all participants had their socialite identity activated using a pre-tested word search. Finally, participants rated their attitude toward either an e-reader targeting the primed identity or an e-reader targeting the alternate identity. An ANOVA showed that when competition was low, participants had higher attitudes for the product targeting the primed identity relative to the alternate identity; M = 5.93 vs. 5.03. However, under high competition this pattern reversed; M = 4.92 vs. 5.78, interaction p < .01. This supported the notion that disassociation between two identities leads to the typical approach toward primed identities under low competition, but a counter-intuitive approach toward alternate identities under high competition.

The influence of the degree of association between identities has been explored extensively in bicultural literature (Benet-Martinez, et al., 2002; Cheng, et al., 2006; Mok & Morris, 2009, 2010; see also Sacharin, Lee, & Gonzalez, 2009; Zou, et al., 2008). Experiment 1 contributes by extending this work to consumer identity under high competition; experiments 2 and 3 sought to further explore the realm of low competition, which is entirely new to the literature. Experiment 1 showed that under low competition, disassociation between identities leads to the typical identity priming effect where consumers avoid products targeted toward the alternate identity. In experiments 2 and 3, we show that priming a given identity under low competition leads consumers to approach the alternate identity when the two identities are associated. Specifically, when two identities are associated (i.e., overlapping), priming one identity also activates the alternate identity as a second-order effect. Thus, the typical priming effect found under disassociation disappears under association due to dual approach.

Experiment 2 (n = 77) used the same methods as experiment 1 except in phase 1 all participants were low competition and the two identities were either disassociated or associated using pre-tested scenarios. An ANOVA showed that participants in the disassociated condition again had a higher attitudes for the product targeting the primed identity compared to the alternate identity; M = 5.80 vs. 5.02. Critically, participants in an associated condition had no difference in attitude between primed and alternate products, supporting the interactive prediction; M = 5.35 vs. 5.86, interaction p < .05. As more evidence of dual approach, in experiment 3 (n = 109) participants in the associated condition approached the alternate identity product significantly moreso than a control product. Disassociation, however, did not lead to significant avoidance of the alternate compared to the control; interaction p < .05. Collectively this shows that, under low competition, association between identities does lead to dual approach.

In sum, the present research provides an important update to identity theory by demonstrating that consumer response to identity priming depends on both degree of association and level of competition between identities. Priming a given identity can counter-intuitively lead consumers to approach products targeted toward alternate identities when identity competition is high and identities are disassociated or when competition is low and identities are associated. Practically speaking this research identifies when targeted marketing campaigns may have unintended consequences.

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Escaping the Crosshairs: When Identity Marketing Backfires

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Marketing messages often appeal to consumers based on identities they possess. Jif peanut butter targets mothers by suggesting that, "Choosy Moms choose Jif." DirecTV advertises, "If you call yourself a sports fan, you gotta have DirecTV!" Similarly, Gamefly.com urges, "You call yourself a gamer? You have to have it!" Such approaches are consistent with decades of consumer research suggest that identity marketing leads to increased purchase and deeper loyalty (e.g., Berger and Heath 2007; Escalas and Bettman 2005; Levy 1959; Reed 2004). This literature emphasizes the importance of a clear fit between the brand and the target identity (e.g., Aaker, Benet-Martinez and Garolera 2001; Sirgy 1982) suggesting that identity marketing that explicitly links purchase to consumer identity should be most effective.

In contrast, we propose that messages that explicitly connect consumer identity expression to the purchase of a particular product can backfire. Specifically, while marketing messages that merely reference consumer identity (*identity-referencing* messages) are beneficial, we argue that messages that explicitly define the terms of consumer identity expression (*identity-defining* messages) actually reduce purchase. Consumers perceive such explicit identity marketing as limiting options for identity expression and thus threatening consumer autonomy. Because autonomy is especially crucial in the context of identity expression (Deci and Ryan 1985; Kivetz 2005), these messages are likely to backfire. In order to protect their sense of autonomy, consumers are willing to avoid products that they would otherwise prefer.

Five studies test this theorizing. An initial study sought to assess whether managers can anticipate consumers' need for autonomy in identity expression and craft messages accordingly. We expected that managers would prefer identity-defining messages, since they are more explicit and more clearly intended for the target segment. A panel of actual executives selected one of three messages to advertise an environmentally friendly, biodegradable soap to a segment of "green" consumers: "Charlie's: A good choice for consumers." (non-identity), "Charlie's: A good choice for green consumers." (identity-referencing), and "Charlie's: The only good choice for green consumers!" (identity-defining). As expected, managers preferred the identity-defining message ($\chi^2(2) = 7.36$, $p < 0.03$), and predicted that it would lead to higher purchase than both the non-identity baseline ($t(57) = 7.59$, $p < 0.001$) and the identity-referencing message ($t(57) = 2.06$, $p < 0.05$). Confirming our expectations, ratings of explicitness in targeting were highly correlated with predicted purchase and perceived consumer freedom in identity expression ($rs(58) > .67$, $ps < .001$).

A second study tested the accuracy of managerial predictions by testing these same messages in a consumption scenario. We also tested the mechanism underlying these effects in two ways. First, if these effects are driven by identity, as we suggest, then they should occur only among consumers whose target identity is salient (e.g., Reed 2004). Accordingly, we primed participants with a green versus neutral identity. Second, we tested the proposed mediating mechanism of freedom in identity expression. As expected, message type had no influence among neutral participants. However, among green participants, contrary to managerial predictions, the

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identity-defining message decreased purchase relative to the identity-referencing message ($t(68) = 6.54$, $p < .001$) and even relative to the non-identity baseline ($t(66) = 2.24$, $p < .03$). This effect was mediated by reduced perceptions of consumer freedom in identity expression ($b = -0.29$, $z = -3.61$, $p < .001$), supporting our theorizing. Hence, identity-defining messages were not only ineffective, but counterproductive.

A third study using the same stimuli built on these findings by measuring instead of manipulating identity. We also tested a real behavior: actual choice of a sample of the target versus a neutral soap. As predicted, these effects held for actual soap choice, and were moderated by identity centrality (i.e., the extent to which an identity is deeply important). Message type had a significant effect on soap choice among high-centrality participants ($\chi^2(1) = 9.94$, $p < .01$), but no effect among low-centrality participants ($\chi^2(1) = 2.29$, $p > .13$).

A fourth study examined our proposed mechanism using a different moderator: individual sensitivity to constraint (Hong and Faedda 1996). Moreover, to establish external validity, we used a sample of mothers and actual identity marketing messages from the marketplace: "Moms like you choose Jif" (identity-referencing) versus "Choosy moms choose Jif!" (identity-defining). Mothers reacted increasingly against the identity-defining message as individual sensitivity to constraint increased ($\chi^2(1) = 4.49$, $p < .04$), further clarifying the mechanism.

Finally, as a crucial theoretical test, a fifth study investigated an instance in which the drive for identity definition may be more important than the drive for autonomy: when consumers are highly uncertain about what an identity means to them. According to our theorizing, greater identity definition is likely to be preferred in such cases. To test our predictions, we primed parent identity certainty versus uncertainty (Gao, Wheeler and Shiv 2009). While certain parents reacted against identity-defining messages (vs. identity-referencing; $F(1,142) = 4.59$, $p < .04$), uncertain parents welcomed identity definition and actually increased purchase ($F(1, 142) = 5.98$, $p < .02$), supporting our theoretical account.

While the literature has focused exclusively on the possibilities of identity marketing, our findings highlight its perils. Together with the drive to construct and define the self, the need for a sense of autonomy in doing so is one of the fundamental motivations of the self. Hence, considering consumer autonomy appears particularly crucial in the context of identity expression. Our findings simultaneously offer a caveat to the identity marketing literature and validate the explanatory power of the identity construct.

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4.6 Individual Papers: To Your Health!: Understanding When and Why People Make Healthy Food Choices

Room: Madero B

Chair: Sabrina Bruyneel, KU Leuven

Does Reducing Nutritional Information Complexity Promote Healthier Food Choices?

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The Nutritional Labeling and Education Act (NLEA) in 1994 was one of the biggest efforts by policy makers to promote healthy eating among Americans. Unfortunately, it has failed to curb the obesity epidemic, so policy makers and marketers are seeking new

ways to impact consumers' dietary decisions. A recent trend among food retailers is to provide consumers with simple and easy-to-understand nutritional information at the point of purchase. Various programs offer comprehensive nutritional information in a simple format (e.g., Guiding Stars, NuVal).

Our research examines how providing consumers with easy-to-process nutritional information at the point of purchase affects their food choices. We compare consumers' purchases of healthy and unhealthy foods pre- and post-introduction of the NuVal scoring system, which assigns each SKU a 1-100 score that is posted on the shelf pricing label. We present a conceptual framework that predicts the underlying behavioral, demographic, and category-level factors that determine which consumers are most likely to be affected by the implementation of the NuVal scores. Then, using six-month individual shopper sales data as the baseline, we test the conceptual framework via both the short- and long-term impact of the introduction of NuVal scores on consumers' food choices.

Past research demonstrates that the complexity of understanding nutritional information has impeded consumers from making smarter food choices. Cohn et al. (2012) report that point-of-purchase calorie postings in restaurants are not effective in encouraging consumers to embrace healthier eating because consumers find it difficult to comprehend and use the provided information. This suggests that in order for nutritional information to be incorporated into consumers' decisions, it does not have to be only available at the point of purchase but also easily "processable" (Bettman, 1975; Russo, 1975). Russo et al. (1986) argue that consumers face three types of costs in incorporating nutritional information into their food decisions: collection costs (time and efforts to acquire the information), computation costs (efforts in combining the gathered information into an overall evaluation), and comprehension costs (efforts to understand the nutritional information). Reducing all three costs leads to greater reliance on products' nutritional content in making food choices (Russo et al., 1986).

Although the NLEA largely eliminated consumers' collection costs, it had less impact on their computation and comprehension costs – the consumer must still pick up the product and examine the nutritional label that reports information on many types of nutrients. We propose that providing simpler and easy-to-process nutritional informational at the point of purchase will prove helpful in prompting consumers to purchase healthier foods (H1). Moreover, we predict that this effect will weaken over time since consumers will eventually adapt to the new nutritional information format (H2). Finally, we anticipate that this effect will be attenuated among health-conscious households who already consider nutritional contents in their food decisions. Therefore, the effect will be stronger for unhealthy households for whom reducing nutritional information complexity will have the greatest benefit in encouraging healthier food choices (H3).

We test our predictions using 42-month individual shopper sales data for over 100,000 households in a grocery chain. In the beginning of 2009, the grocery chain implemented the NuVal Nutritional Scoring System. Since the NuVal scores were displayed on the shelf tags, after their introduction, consumers could easily determine and understand the nutritional value of all foods. Our data contains information about consumers' purchases before and after the NuVal introduction in the chain, allowing us to assess both its short- and long-term impact on consumers' food choices. Thus far, we have tested our hypotheses in one product category (granola and nutrition bars). We will have replicated our analysis across several categories by this winter.

We estimate a hierarchical linear model in which purchases (level 1) are nested within households (level 2). The dependent variable is the number of units purchased of UPC *i* by shopper *k* in week *t*. To test the effect of NuVal over time, we created a dummy variable for every 6-month time period after the implementation of the NuVal scores, using the 6-month pre-introduction period as the baseline comparison. We control for the product price and promotion. The household health consciousness was used as a level-2 predictor of the random intercept and slopes. It was operationalized using the average nutritional content of the households' purchases in the pre-introduction period.

We find that the nutritional scores significantly influenced household's food choices in the first six-month post-NuVal period, such that the purchases of products with higher NuVal scores increased in comparison to the pre-NuVal period ($p < .0001$). This effect persisted but faded over time, such that consumers' food decisions in the last time period were again largely unaffected by the products' nutritional content ($p = .13$). Furthermore, we find significant cross-level interactions of household health consciousness and the interactions of the time period dummy variables and the product NuVal score. This supports our hypothesis regarding the asymmetric impact of the introduction of NuVal scores on healthy versus unhealthy households. Specifically, our results reveal that there were no significant differences in the impact of the introduction of NuVal scores on consumers' food choices between healthy and unhealthy households in the first six months after the implementation of the nutritional scores. However, in the long run, this effect persisted and weakened slightly over time for unhealthy households ($ps < .001$). In contrast, while the introduction of the NuVal scores prompted the more health-conscious households to increase their purchases of nutritious foods in the short term, those households returned more quickly to their pre-introduction buying habits ($p's > .05$ in subsequent time periods).

In sum, we demonstrate that consumers change their food choices following the introduction of simple and easy-to-process nutritional information at the point of purchase. Our research suggests that the confusion associated with understanding nutritional labels on food packaging is probably one of the reasons why the NLEA failed to reduce obesity. Moreover, our work reveals that facilitating consumers' understanding of nutritional information by disclosing nutritional facts in a simple and easy-to-process format can help them make healthier food decisions.

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Reading More than Exists: Unintended Consequences of Consumer Health Messages

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Targeted health messages have the potential to change people's behaviors (e.g., Albarracin et al., 2003) but the nature of their effects may be broader than expected. A vitamin pill company that advertises their new Vitamin C product undoubtedly wants to improve sales for their pills, and may not consider that their promotion could instead increase sales for oranges. Field studies of consumer purchasing behavior have shown that, indeed, product-specific promotions can lead to category expansion for consumers (Chintagunta, 1993), changing their behaviors towards related products. In a series of experiments, we test the boundary conditions of this category expansion effect, its moderators, and the reasons why it may occur.

We base our research on primarily two theories. Goal systems theory (Kruglanski et al. 2002) posits that activation of a subordinate goal, such as taking a Vitamin C pill, activates the superordinate goal, such as being healthy. The inclusion and exclusion model (Schwarz & Bless, 1992) suggests that assimilation between a target product and other products occurs when they are mentally linked in the same category. Both theories predict that a persuasive message will increase motivation for products not in the message, but only if they are assimilated to the message product.

To test this prediction, we manipulated in the laboratory whether participants read a message recommending the Vitamin C pill versus a control message recommending a skin lotion, and measured willingness to pay for other health products in a highly related category (supplements) versus a related but less similar category (healthy foods). In support of the hypothesis, we found that participants who read the Vitamin C message had greater willingness to pay both for other supplements (e.g., calcium pills), and for other healthy foods (e.g., spinach), but there was an interaction such that the effect was stronger for supplements than for healthy foods.

This expansion effect is not specific only to health-relevant categories; in Experiment 2, we examined the effect of an environmental message as well. Participants read a message about the importance of eating green vegetables or the importance of using dishtowels to help the environment and subsequently reported how much they wanted other grocery products in an ostensibly unrelated marketing survey. The participants who read a message about vegetables reported greater wanting for vitamin products than those who read a message about dishtowels, but the opposite pattern occurred for products relevant to the environment. No such interaction emerged for the other grocery products that were unrelated to the environment or health. Experiment 2 also speaks to the boundary conditions of the expansion effect; a message about vegetables may increase wanting for vitamins, but it does nothing for neutral foods such as bread.

We more closely examined the boundary conditions in a third experiment using two different types of health messages concerning either mental or physical health. These messages could activate the same broader health goal, leading to the same expansion effects, or more specific goals related to physical or mental health, leading to different effects. In the experiment, participants read either about the importance of word games (mental health) or power napping (physical health). We randomly ordered eight activities that data showed were related either to mental health (e.g., memorizing facts) or physical health (e.g., walking more) categories. Participants prioritized the mental health activities higher after reading the word game message, but prioritized the physical health activities higher after the napping message. These results suggest that the assimilated category can be made relatively narrow based on the nature of the message.

In a fourth experiment, we found that assimilation to the message category is even more likely to occur when participants exert effort. Effort can be a signal of importance, and we found that participants who read a message about running and then subsequently ran rated other exercise activities higher than participants who read the same message and only walked afterwards, or than participants who read a control message. Exertion of effort may change the way that people mentally define the message category.

Finally, we examined people's actual health behaviors at the gym. We expected that the category expansion effect we found in people's self-reported attitudes should change their real-life behaviors as well. We gave gym members heading into the weight room a message either about the importance of cardiovascular activities, e.g., speed walking, or a control message about the importance of gym cleanliness. As expected, participants who read the speed walking message reported engaging in more strength activities than those who read the message about gym cleanliness.

Consistent with goal systems theory, we predicted that the reason why we found category-specific expansion effect in our five experiments was that messages about products can activate higher order goals in particular mental categories, which then affect motivation for products in the same category. To test this, we gave participants the same messages from our first experiment about the Vitamin C pill versus skin lotion. Participants completed a lexical decision task in which we measured how quickly they responded to words that were either other supplements, healthy foods, or generally health-related versus matched nonwords. Results showed that participants in the Vitamin C message compared to the control message condition responded faster to the health-related words as well as the supplement and food words, as long as they found the message to be clear. Just reading a recommendation to take the Vitamin C pill makes people faster to recognize "health" as a word, suggesting that a simple product message can indeed activate higher order goals.

Taken together, our data suggest that people read more from a message than what exists. What, exactly, they read depends on how they mentally define the category of the product or activity in the message. A message about napping may change attitudes towards other physical activities like walking, but not mental activities like memorization. Messages are as powerful as the category of goals that they activate.

Unavailable Cake on the Menu: How Phantom Compromise Alternatives Alter Indulgence Tendencie

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Consumers commonly choose between vices and virtues: delicious high-calorie foods versus bland low-calorie foods, higher-rent exciting apartments versus lower-rent dull apartments, etc. Vices typically involve potential long-run harm but significant short-run pleasure. The short-run pleasure often triggers an indulgence in the vice, though indulgence may be difficult to justify and may ultimately produce guilt (e.g., Lascu 1991). Virtues, on the other hand, are typically better for us and easier to justify (e.g., Prelec and Loewenstein 1998). Research shows that vice-virtue justification can be influenced by pre-commitments to indulge (Kivetz and Simonson 2002) or to be virtuous (Khan and Dhar 2006) and effort (Kivetz and Simonson 2002). The current study extends research on indulgence by showing that compromise-but-unavailable "phantom" alternatives can alter indulgence tendencies.

Unavailable alternatives are common in the marketplace and often alter choices (e.g., Hedgcock, Rao, and Chen 2009). The experiments reported here test compromise phantoms that are equidistant in attribute (e.g., calorie/taste) space between two competing alternatives. Compromise phantoms, though unavailable, partition the distances between the two extreme alternatives into components on both vice and virtue attributes. Based on basic principles in the cognitive psychology of attention (Berlyne 1960, Kahneman 1973), we argue that such partitions act as *indicating stimuli* (Bertini and Wathieu 2008) that arouse selective attention (Berlyne 1974) and thus strengthen consumers' latent desires/unconscious goals which are not reflected in the binary choice set with only the two competing alternatives.

Prior research suggests latent hedonism desires for people to enjoy pleasure and satisfy their indulgent goals (Gosling 1969). We assume that consumers are under such unconscious self-indulgence goals when they are not under any other goals. Building on arguments above, we hypothesize that under such unconscious indulgent goals, compromise phantoms help consumers justify vices by reducing anticipated guilt and regret, and thus increase the popularity of indulgent choices. Research suggests that goals can be activated without being aware of such pursuit by priming such goals (Bargh 1990; Bargh et al. 2001; Chartrand et al. 2008), relatedly, when consumers are primed with some virtue goals (e.g., self-control) unconsciously, we expect the compromise phantom effect to be weakened or reversed.

Study 1 randomly assigned 75 participants to choose between (1) one apartment offering lower rent (virtue) and another apartment offering shorter distance to nightlife and entertainment (vice), or (2) the same two options when the set also included a compromise-but-unavailable alternative that fell midway between the two available alternatives. As hypothesized, the phantom increased the indulgence's share from 28.9% to 48.6%, though only approaching statistical significance ($\chi^2(1) = 3.07$; $p = .08$).

Study 2 replicated Study 1's phantom-compromise effect in another consumption context (snack choice) while assessing the mediating role of anticipatory guilt and regret. Seventy-eight participants were randomly assigned to control and phantom-compromise conditions involving taste-calorie tradeoffs (taste was indicated as expert rate, e.g., 7.5 out of 10 points). The compromise phantom again increased share of high-calorie high-taste cookies from 56.1% to 79.5% ($\chi^2(1) = 10.66$, $p < .05$), and reduced both anticipatory guilt (M's = 4.25 vs. 3.26; $F(1, 76) = 5.17$, $p < .05$) and regret (M's = 4.13 vs. 3.11; $F(1, 76) = 5.42$, $p < .05$), effects at Sobel tests implicate as mediators of the phantom effect (e.g., guilt; $z = -1.99$, $p < 0.05$).

Because we hypothesize reducing hedonistic tendencies will reverse the effect, Study 3 primed 124 participants with a virtue goal of healthy eating (Laran 2009) and randomly assigned them to control and phantom-compromise conditions using Study 2's taste-calorie trade-offs. We asked participants to form sentences by unscrambling seven self-control related words (diet, healthy, low calories, slim, weight, self-control) to prime them with self-control goals (e.g., Laran, Janiszewski, and Cunha 2008). As hypothesized, the phantom-compromise alternative increased virtue's share from 29.2% to 45.8% ($\chi^2(1) = 3.62$, $p = .06$).

Study 4 extended Studies 1-3 by manipulating participants' consumption goals through the use of lower and higher reference rents on apartments being considered. The participant's former rent was indicated to be lower or higher than the two apartments now being considered in a move to a new city. To eliminate contamination from known currency and apartment values, Study 4 enlisted a currency unfamiliar to the 191 U.S. participants (South African Rand) randomly assigned to 2 (phantom: yes/no) x 2(reference rent: higher/lower) between-subjects conditions. We expected a high reference rent to produce underlying indulgence goals and a low reference rent to produce underlying virtue goals. As hypothesized, a log-linear model revealed a significant phantom-by-reference rent interaction (Wald(1) = 5.14, $p < .05$). The phantom-compromise alternative increased the indulgence's share from 56.0% to72.9% ($\chi^2(1) = 3.05$; $p = .08$) under a higher reference rent, but reduced it from 65.2% to 50.0% ($\chi^2(1) = 2.18$; $p = .14$) under a lower reference rent.

Four experiments thus demonstrate a phantom-compromise effect that either increases or reduces indulgence tendencies depending upon the circumstance. It appears that latent desires not reflected in control/baseline shares exist, desires that phantom-compromise alternatives can leverage to alter decisions to indulge. The current research also adds to research on how consumers reduce consumption related guilt (e.g., Kivetz and Simonson 2002), and sheds light on how people make judgments and decisions with unavailable alternatives, which has received considerable scrutiny.

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Visual Processing of Food Temptations and Self-control

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Self-control is typically defined as the ability to stick to one's long-term goal, despite the occurrence of conflicting short-term goals (i.e., sticking to your diet in the presence of enticing food). Although self-control has been shown to be of significant importance for achieving success in life (e.g., Mischel, Shoda and Peake 1988), breakdowns of self-control are observed frequently (e.g., Carver and Scheier 1996). Hence, self-control has received a substantial amount of attention in diverse academic fields including social psychology, consumer research, and marketing (e.g., Hoch and Loewenstein 1991). Part of this research is devoted to understanding the mechanisms underlying self-control. The aim of the present paper is to advance our understanding of the role of visual presentation of unhealthy food on consumption of this unhealthy food.

Previous research has reliably shown that successful self-control depends on the adoption of high-level construals (Fujita et al. 2006). High-level construals capture global or abstract features of a situation or action (e.g., staying healthy) whereas low-level construals capture local or concrete features of a situation or action (e.g., not eating any chocolate; cf. Trope and Liberman 2010). In one study, Fujita and colleagues found that participants who adopted a high-level construal as they thought about why to engage in certain actions, preferred larger future rewards over smaller immediate rewards to a larger extent than participants who adopted a low-level construal as they thought about how to engage in certain actions. The explanation for this finding could partially lie in the fact that after a high-level construal is evoked, consumers orient their attention towards enduring personality characteristics (cf. Nussbaum, Trope and Liberman 2003), and thus presumably become more aware of the long-term goals and values they personally assent to.

Recently, it was demonstrated that 'perceptual' construal level influences traditional measures of construal level (Liberman and Förster 2009). Specifically, perception of global gestalts such as a focus on the global letter in a Navon letter identification task increased (temporal) distance estimates compared to perception of details such as a focus on the local letter in a Navon letter identification task. Given the relationship between conceptual construal level and self-control, and the direct link between conceptual and perceptual construal level, one might wonder whether perceptual construal level is linked to self-control. The present research addresses this question.

In study 1, we investigated whether the way in which tempting food is presented influences consumers' evaluations of this food. Participants were randomly assigned to one of two conditions. In the perceptual high-level condition, they saw a picture of eight slices of pizza arranged in a unified pizza shape. In the perceptual low-level condition, participants saw a picture of eight slices of pizza arranged in a random manner. To make sure that they would pay attention to the presentation, we asked them to evaluate the pizza on various dimensions (e.g., "Does it have a thin crust?"). Next, participants indicated how many additional minutes they would be willing to stay in the lab to be able to try the pizza (on a scale ranging from 1 = 1 minute to 7 = 7 minutes) and how many slices of pizza they would like to consume (ranging from 0 to 8). Participants in the perceptual high-level condition wanted to spend significantly fewer additional minutes in the lab and wanted to consume significantly fewer slices of pizza compared to participants in the perceptual low-level condition.

The aim of study 2 was to provide more evidence that perceptual construal level underlies our effect. To manipulate perceptual construal level, participants engaged in a Navon chocolate letter identification task. Specifically, they were presented with 64 global letters composed of local chocolate letters. In half of these trials, the letter T was visible, and in the other half the letter F was visible. The order of the trials was randomized. In the perceptual high-level condition, the letters T and F were always presented as the global letters that were composed of either local chocolate L's or H's. In the perceptual low-level condition, the letters T and F were always presented as the local chocolate letters that were combined into either global L's or H's. As soon as participants spotted a T or an F, they were to press the corresponding letter on the keyboard in both conditions. Thus, participants in the perceptual high-level condition adopted a higher-level perceptual focus than participants in the perceptual low-level condition. Subsequently, participants in all conditions were given the chance to eat as many chocolates as they wanted. Participants in the perceptual high-level condition ate significantly fewer chocolates than participants in the perceptual low-level condition.

In study 3, we wanted to find additional support for the role of construal level. We manipulated perceptual construal level by presenting participants with various bowls filled with party nuts. In the perceptual high-level condition, these bowls were arranged in an orderly shape, whereas they were presented in a random manner in the perceptual low-level condition. Party nut consumption was our main dependent variable. In a separate pretest, we applied the same manipulation but measured participants' distance estimates between where they were and a predefined object in the lab rather than party nut consumption. Previous research has shown that lower levels of construal reduce estimated egocentric psychological distance, including spatial distance (Liberman and Förster 2009). We measured distance estimates and party nut consumption separately, as we were worried that any intermediating measure might influence our dependent measure. As expected, participants in the perceptual high-level condition provided higher distance estimates and consumed fewer party nuts than participants in the perceptual low-level condition.

In sum, our results indicate that visual presentation influences self-control. Specifically, compared to a local focus, a global focus on tempting food reduces consumption of this food. So far, we did not provide evidence for the mediating role of construal level in the effect of visual presentation on unhealthy food consumption, but we aim to do so in follow-up research.

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Working Papers: Working Paper Session 2

Cater to Me: Serving-style Shapes Positive Feelings through Self-serving Attributions of Responsibility

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Attributions of agency and responsibility are famously strategic and self-serving. How does this affect consumers in the domain of food consumption, where they increasingly consume food served by others? Two studies established that i) when imagining eating unhealthy food, people feel better about themselves when they are served rather than self-serve the food, that ii) responsibility for one's unhealthy consumption is attributed in self-serving ways as afforded by serving-style (self vs. other), and finally that iii) feelings of responsibility mediate the interactive effect of health-value and serving-style on self-evaluative feelings after consumption. Implications for strategically structuring dining environments are discussed.

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Choosing to Change Fate: The Interactive Effects of Beliefs in Malleable Fate and Fateful Predictions on Choice

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We posit the existence of an implicit theory of fate, such that some consumers believe their fate is malleable, whereas others believe their fate is fixed. We test the interactive effects of fateful forecasts and consumers' implicit theory of fate on choice. Adding to the emerging findings on peculiar or irrational beliefs in consumer behavior, we show that unfavorable fate predictions induce people who believe fate is malleable to choose a vice over virtue option.

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Gauging Greenwashing and Questioning Quality: The Unintended Effects of Environmental Claims on Perceptions of Product Effectiveness

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We examine an unintended effect of evaluating products that make environmental claims: the 'greenwashing penalty'. Products that feature illegitimate environmental claims (i.e., presenting green imagery without substantiating information) can lead consumers to believe the company is deceptive and subsequently decrease perceptions of product quality compared to identical products that lack these claims. The ability to penalize greenwashers is dependent on the availability of cognitive resources, where busy subjects are inhibited from discounting effectively. We discuss research implications for impression formation when green intentions are questioned and managerial implications regarding how simple cues can get consumers to think critically about 'green' products.

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Poseurs: Understanding when Product Use is Perceived as Impression Management

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People frequently make inferences of what consumers are like based on the products they use. It is generally assumed that observers do not question the veracity of the image being portrayed by product users, believing that they are the way they appear (e.g. motorcyclists are rebellious, as opposed to simply trying to look that way). We argue that observers sometimes infer that products are used to deliberately create certain impressions, referred to as inferences of impression management (IM). In general, we argue that inferences of IM will undermine the overall impression, creating more negative attitudes towards the consumer, and under certain circumstances, leading to a more negative attitude towards the product itself.

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An Integrated Review of Screening Strategies

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Extant literature in screening strategies has documented several studies that investigated one of two streams related to screening strategy: 1) factors that influence the choice of screening strategy (antecedents of screening), and 2) consequences of screening. There, however, is no comprehensive study that synthesizes existing understanding of screening. In this paper, we attempt to remedy this gap in the literature by undertaking a thorough and integrative review of research in screening. We integrate the existing research on screening and propose directions for future research. This review highlights the important role of screening in decision making

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Consumer Schadenfreude: Perceived Deservingness Impacts Attitudes Regarding Another's Product Failure

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This paper examines perceptions of fairness of product ownership as an important antecedent to the experience of schadenfreude – taking pleasure in the suffering of another consumer's product failure. While prior research has found that consumers will experience more schadenfreude when they are envious of the social attention a target receives from a status product, we focus on the perceived fairness of the initial product ownership (e.g. did they earn the product?). The findings from two experiments suggest that schadenfreude can stem from the removal of an unfair situation (via product downfall).

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Are Brand Names Specific Proper Names? Letter-Case and Priming Effects in Brand Name Retrieval

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Psychological semantic representation of Brand names (BN) was explored through two experimental psycholinguistic tasks using reaction time. In a first experiment the effect of letter-case presentation for BN was tested. Results tend to prove that BN are lexicalized as Common Names (CN) due to continuous meeting with BN in everyday life. In a second experiment masked-priming

paradigm was employed to test the effect of subliminal presentation of BN on the recognition of subsequent related CN. Indeed, priming effect was observed and yet tends to prove that known-BN have acquired the status of CN in memory.

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Debiasing Omission Neglect by Creating an Alternative-seeking Mindset

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Insensitivity to missing information is common among consumers (i.e., omission neglect). Failure to account for the implications of missing information leads to extreme judgments that become unjustifiable when more other relevant information becomes available. One important factor that contributes to insensitivity to omissions is the neglect of alternatives that are not present. We propose that if an activated mindset engages people to consider alternatives (e.g., alternative possibilities, alternative causes), this cognitive motor should persist and result in increased sensitivity to omissions in a subsequent judgment in an unrelated context. We propose three methods to activate a mindset that encourages people to consider alternatives

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Examining the Relationship Between Illusion of Control and Sports Fanaticism

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Sports fanatics' extreme passion for their teams has been understudied in the consumer psychology literature. We sought to examine the relationship between sports fanaticism and several potential causes and consequences, most notably the illusion of control. In Study 1, we tested for, and found, a significant positive correlation between team passion and illusion of control. Study 2 revealed evidence that illusion of control is not a cause of team passion but may instead be an effect or coincidental factor. Follow-up studies further examine the role of illusion of control and several other factors in sports fanaticism.

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Sex Cues Increases Mens' Variety Seeking Across Different Reward Domains

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In two experiments, we provid evidence that sex cues make men to seek greater variety across two different reward domains: mating and food. Theoretical foundations, results of our experiments, and potential mechanisms responsible for our findings have been discussed.

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Conspicuous Sensory Consumption as a Means for Self-Worth Restoration

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We propose that consumers use heightened sensory consumption as a means of restoration of their feelings of self-worth. Specifically, if a consumer's sense of self-worth is threatened, they indulge in conspicuous consumption in different sensory domains to compensate for their feelings of inadequacy. Contrary to conspicuous consumption, we propose that compensatory effects occur even for consumption experiences that are not publicly visible. In three studies we find that individuals under self-threat show a preference for visually loud product designs and music of louder volume. A self-affirmation exercise before the consumption occasion offsets conspicuous consumption.

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The Impact of Psychological Distance from Illnesses on Effectiveness of Advertising Message Framing

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Construal-level theory suggests that as psychologicaldistance from an object or event increases, individuals are more likely to conceptualize the object or event in an abstract way (high-level construals)rather than in a concrete way (low-level construals). Since the principle of construal-level theory can provide valuable insight into consumer behaviors, it can be postulated that the theory is applied to health related communication. A 2 (Illnesses: distal vs. proximal) $\times$ 2 (Construal level:abstract message vs. concrete message) between-subjects design will be employed for the study and a total of 160 students will participate.

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Time versus Money: The Impact of Affective Displays on Donation

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In this research, we investigate the differential effects of recipients' affective displays (happy vs. sad) on two types of donation (time vs. money). We demonstrate that donors are more likely to contribute money to a happy child patient rather than to a sad child patient whereas they are more likely to contribute time to a sad child patient than to a happy child patient. Results show that donors emphasize their own psychological wellbeing in charitable behaviors and donors' happiness mediates the interaction between recipients' affective displays and donation types on prosocial behaviors.

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"I Can't Stand My Team, but I Can't Live Without It": Ambivalence Among Highly Identified Sports Fans

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André Richelieu, Université Laval, Canada

Using a mix of qualitative and quantitative analysis, the authors conducted in-depth interviews with highly dysfunctional fans that were very critical about the team they support. This study aims at better understanding the mechanisms that explain why these fans spend their energy in constantly negating anything about the sport entity they live for and stand by. Another goal is to provide a typology of these fans using their rationale and motives to adopt such behaviours. Those elements will provide important managerial implications to the brand and the team marketing managers on how to deal with these fans.

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Signaling Virtue is Key to Understanding How Protestant Work Ethic and Redistribution Affect Motivation

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When and why does redistribution demotivate? We provide some insight into these questions by leveraging Protestant Work Ethic (PE), which emphasizes hard work, frugality (e.g., not being wasteful), and prosperity (e.g., demonstrating material success).We theorize that the ability to use redistributed money to signal virtue impacts the relationship between redistribution and motivation. Two studies provide evidence that redistribution demotivates people with strong PE, due to a weakened ability to signal virtue through frugality and prosperity. Our work contributes to the literature on politically motivated consumption and has implications for several areas of consumer psychology, from general motivation to fundraising.

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The Amplification Effect of Individual Differences in Commitment to Beliefs on Ideologically-Driven Motivations to Engage in Environmentally-Sustainable Consumption

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The current research applied the Commitment to Beliefs (CTB) framework to understand when pro-environmental ideologies are most likely to predict environmentally-conscious consumption motivation. The CTB scale assesses individual differences in the extent to which people generally feel obligated to follow their value-based beliefs. We hypothesized and found, across two studies, that individuals who endorsed pro-environmental ideologies displayed the strongest motivation to engage in environmentally sustainable consumption practices when they also scored higher on the CTB scale.

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Ethical Ideology Effects on Alcohol Advertising Appraisals: The Moderating Role of Ethnic Identification

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In an extension of generational theory, the present research argues that ethical ideology (i.e., idealism vs. relativism) impacts alcohol advertising responses (i.e., ad attitudes, brand attitudes, and purchase intentions). Particularly, this research studies how this relationship is mediated by ethical appraisal of alcohol ads and moderated by the level of ethnic identification (i.e., high vs. low). In

support of generational theory, this study further identifies ethical ideology differences among the Generational Y cohort. Results are consistent with the notion that participants' sense of belonging and ethical ideology influences responses to alcohol advertisements.

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Beat Competitors or Beat Yourself: Differential Impacts of Goal Focuses on Players' Motivation in Different Stages of Competitive Goal Pursuit

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In the present research, we explore how to motivate individuals when they are competing against each other for a goal that offers limited access to rewards. In competitive goal pursuit, we propose that focusing on a competition aspect of the goal and thinking about outperforming competitors will elicit higher motivation, and thereby, lead to higher performances, before the actual competition is initiated. Once people start to actively pursue the competitive goal, however, we predict that individuals will be more motivated and will perform better by focusing on a specific performance standard to achieve, rather than on each other's progress on the goal.

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"Then, are You Flawless?": Fundamental Attribution Error and Evaluation on Actions of Others in a Moral Domain

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In the present research, we investigate people's systematic pattern of evaluating actions of others that are made with respect to a set of moral virtues. We propose that people will make a dispositional attribution (vs. situational attribution) a lot more in moral situations (vs. non-moral situations), especially when exposed to others' morally undesirable (vs. morally desirable) behaviors. We assume that individuals are led to infer dispositional attributes from others' moral transgression even when they are consciously aware that moral virtues are something they learn by social value systems in the process of socialization.

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Brand Loyalty: A Matter of the Maximizing Trait and Product Category Involvement?

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We examine the relationship between brand loyalty and two individual-difference variables, the maximizing trait and product category involvement. Data for the study include three different product categories (toothpastes, athletic shoes, and mobile phones). Contrary to the findings in a study in the prior literature, we find a positive association between the maximizing trait and brand loyalty. Product involvement also has a positive association with brand loyalty, which is consistent with previous findings. There is no evidence of interactive effects between the two individual-difference variables.

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Losing Weight Too Fast Is Problematic for Men but Ideal for Women: Examination of The Effectiveness of Before/After Advertisements

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Research has shown that employing before/after photos in advertising activates impulsivity and therefore attracts people to those ads. However, research has not examined moderators of this effect. This research shows that level of discrepancy between before and after photos in advertising can affect consumers' product safety attitudes. It is further shown that these effects are moderated by the gender of the endorser featured in the advertisement.

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Product Abandonment and Acquisition as Responses to Social Rejection

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The current research investigates how different types of rejection determine consumers' acquisition and disposal decisions. Specifically, we demonstrate that ambiguous (i.e., there is still the possibility of future reintegration) rejection leads to possession acquisition, while final rejection creates possession abandonment and disposal, particularly for possessions representing the rejected group identity. We argue that these results are due to the gap between an individual's social expectations and social outcomes, such that greater discrepancies between the expectation of acceptance and the reality of rejection lead to greater threats to control and more possession disposal.

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The Role of Ego Identity Status in the Formation and Structure of Consumption Constellations: An Examination of the Psychosocial Development of Emerging Adults

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Tim Dewhirst, University of Guelph, Canada   Ian Newby-Clark, University of Guelph, Canada

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The research examines the effect that the state of one's ego-identity development has on the accessibility of brand-related information that exists as associative networks formed in response to social role perceptions. Using response time methodology, the accessibility of associative networks, known as consumption constellations, is studied in a mixed model design. It is expected that individuals within a high-exploration state of identity development exhibit greater accessibility than those within a low-exploration state as social role related information is more rehearsed. Furthermore, individuals within a state of commitment exhibit greater accessibility of occupied compared to avoidance, aspirational, or irrelevant constellations.

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The Effect of Dukes' Consumption on Consumer Preferences for Status Associated Products

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Preliminary findings indicate that consumer preference could be influenced by the consumption of those who have higher status (i.e., the Dukes). This effect is particularly true when consumers have high power distance belief (PDB) and need for propriety (NFP). Specifically, for high PDB consumers, they are more likely to choose the products associated with lower status when the Dukes' consumption is present and their NFP is high, but are less likely to do so when the Dukes' consumption is absent or their NFP is low. For low PDB consumers, their preferences are not significantly influenced by the Dukes' consumption.

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Motivated Rehearsal and the "Rosy View" of Past Experiences

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Consumers often remember evaluate experiences more positively after a delay, making the past seem "rosy" compared to the present. Three experiments show that (1) negative experiences become retrospectively more pleasant after rehearsal (2) this pattern is driven by the particular aspects of an experience retrieved during evaluation, not by changes in the affect that those aspects evoke, and (3) the effect is magnified when social motives are salient.

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This is Important (But Don't Tell Me That): The Potential Backfire Effects of Emphasizing Goal Importance

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Prior research suggests that when goals are more important, people will strive harder to reach them by increasing self-control efforts. In this research, we suggest that although emphasizing goal importance may bolster goal pursuit efforts for those high in self-control, it can have the opposite effect on individuals low in self-control. We suggest that the increased emphasis on goal importance triggers lower self-efficacy for those low in self-control, leading to more goal inconsistent behavior.

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Aesthetic Response to Sources of Visual Complexity in Hedonic and Utilitarian Products

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Visual complexity, a central object property that influences consumers' aesthetic response can arise from aesthetic sources (e.g. patterns on fabric) or aesthetic + functional sources (e.g. buttons on electronics). This study examines the interaction effects of visual complexity source, complexity level, and product category on consumers' aesthetic response. Findings reveal that aesthetically complex hedonic products and aesthetically simple utilitarian products are perceived more beautiful than aesthetically simple hedonic products and aesthetically complex utilitarian products. In contrast, functionally simple hedonic products and functionally complex utilitarian products are perceived more beautiful than functionally complex hedonic products and functionally simple utilitarian products.

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Plain Packages for Analytic Thinkers and Decorated Packages for Holistic Thinkers: Cultural Influences of Product Packaging on Product Quality Perceptions

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Product packages not only serve basic functions such as protection and containment, but also is an important cue for consumers to judge product quality. In this research, we investigate the impact of an individual difference factor, thinking style, on the packaging - product quality relationship. The findings reveal that when a product comes with a plain versus decorated package, holistic thinkers will perceive the product quality as lower, whereas analytic thinkers will evaluate the product quality higher.

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"Thank You for Dining With Us" – How Expressions of Gratitude from Organizational Representatives affect Customer Satisfaction and Loyalty

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Organizations frequently thank consumers, but what effects do these expressions of gratitude have on consumers? This paper answers three questions: a) what are the effects of expressions of gratitude on consumers; b) when do these effects exist and through what mechanisms are they mediated; and, c) how do consumers react to the absence of an expected expression of gratitude? Results indicate that expressions of gratitude can benefit satisfaction and loyalty, but this effect is moderated by service quality and mediated by both persuasion knowledge and disconfirmed expectations. Finally, differential effects of verbal versus written expressions of gratitude are explored.

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When Abstract=Near and Concrete=Far: The Interactive Effects of Construal Level and Complexity on Temporal Perceptions

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In line with construal level theory, existing research has shown that when individuals think about the amount of time it would take to complete a task, those thinking abstractly estimate task completion to be in the more distant future versus those thinking concretely. We demonstrate conditions under which this effect will reverse. We show that when a task is complex, concrete (vs. abstract) thinkers perceive task completion to be more temporally distant. This reversal occurs due to concrete thinkers' focus on the steps necessary to complete a complex task.

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Exploring the Impact of Constraints and Uncertainty on Consumer Emotions and Coping

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In this paper we explore the impact of constraints and uncertainty, characteristic of life in poverty, on consumer's emotions and coping. Through an experimental simulation, we manipulate constraints and uncertainty and measure its impact on affect and arousal of participants. In a follow-up study, we conduct a field experiment in a low-income, low-literate context in Chennai, India to examine

the joint impact of low-literacy and low-income on consumer's emotions. We find that constraints and uncertainty lead to significant increase in negative emotions. Further, we find that the sensitivity of this relationship increases in case of low-literacy.

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The Effect of Embedding Agentic and Communal Self-Concept in Nostalgia Advertisements on Product Evaluation

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In this study, we show that embedding agentic self-concept on a nostalgic ad induces self-positivity and communal self-concept inserted in a nostalgic ad boosts social-connectedness. Consumers' attachment style moderates the effect of agentic and communal nostalgia content. Consumers with a high anxiety attachment can derive self-positivity through agentic nostalgia content and self-positivity enhances attitudes and purchase intention toward the advertized products. Low avoidance consumers derive social-connectedness from communal nostalgia ad content and the social-connectedness incurs favorable attitudes and purchase intention.

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My Rejection Your Pain – Brand Rejection on Peer Brand Consumer Desirability and Preference

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Luxury brands tend to employ the strategy of "people want what they can't have." To achieve this, companies hype the desired brand image and communicate it to a vast number of consumers. Yet, when it comes to the consumers who own the brand or identify with the brand emotionally, the number tends to be far and few. The emotional responses and behaviours of the inspiring consumers who are rejected the brand ownership can be complex. In this paper, we study the effects of brand rejection on consumers' judgment and feelings of the focal brand and its brand peers.

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Simply Desirable, Preferably Complex: The Differential Role of Complexity in Experiential and Material Purchases

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As the number of features on a product or activities in an experience increase the product/experience feels more complex. In this research, we present and test a framework for understanding the role of complexity as a purchase heuristic in material and experiential purchases. We find that although complexity is desired on products, consumers avoid complexity with regard to experiences. Additionally, we find that uncertainty is the underlying driver of this phenomenon.

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Humor Expression as Consumer Work: An Interpretive Examination in an Online Context

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Although the importance of online communities is recognized, less is known about consumer activities that draw upon modernistic notions of "consumer work" and "collective consumer creativity". This research presents an interpretive study of an online gaming community and identifies "humor expression" as a type of consumer work that fosters collective creativity. Findings contest assumptions that community identity is mainly claimed by those possessing core community-related skills. Humor activities enable marginalized members to claim status through demonstrations of alternative skills and become valued members. Communities are sustained through novel forms of consumer work and hold implications for marketers.

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Taking the Blame: The Effects of Social Identity on Attributions for the Loss of Membership

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Loyalty reward programs promote customer loyalty in a manner that may foster a social identity within the program. However, little is known about the reactions of highly identified customers who risk losing that membership. This research explores this question and finds that as social identification to program increases, high identifiers are more likely to take responsibility for failing to meet the program's spending requirements. Furthermore, the tendency to self-blame persists even when given an external attribution for the shortfall.

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A Model of Consumers' Retail Store Patronage Intention for Shopping Daily Necessities

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Drawing on psychology and retail literatures, we develop a model of store patronage intention when consumers purchase daily necessities in such stores as groceries and supermarkets. For this type of consumables, we suggest store use convenience and store use usefulness as two antecedents influencing store patronage intention directly without mediating through attitude toward the store. Further, we suggest store use experience, adequacy of time, self-efficacy as antecedents of store use convenience, while response efficacy, utilitarian value, and hedonic value, as antecedents of store use usefulness. A survey from undergraduate students and structural equation modeling provide general support for the model.

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Relative Income, Financial Satisfaction, and Subjective Well-being

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This article investigates the relationship between actual versus relative incomes on self-reported measures of financial satisfaction. Using General Social Survey data from 1972 to 2010, we develop a relationship between financial satisfaction and (1) respondent's

actual level of family income, (2) opinion of his/her family's income, (3) positive or negative changes to respondent's family's income, and (4) demographic controls. We find that relative income (as measured by opinion of, and change in, family income) is a significantly stronger predictor of financial satisfaction than actual income. Negative downturns to income are found to be more important than positive upturns, akin to prospect theory of losses looming larger than gains. Furthermore, income perceptions lead respondents in the bottom 10% income decile to report a significantly higher level of happiness than financially unsatisfied respondents (with incomes manifold higher) in the top decile.

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5.1 Symposium: Changing Climates and Changing Behavior: The Roles of Accessibility, Political Ideology and Personal Frames in Green Choices

Room: Espada

Chair: Troy Campbell, Duke University, USA

Elizabeth Keenan, University of California, San Diego

Driving Green Consumption

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Mounting evidence suggests that human consumption patterns are approaching the upper limit of what Earth's resources can sustain (e.g., WWF 2012) and attempts to reduce consumption are prevalent across the spectrum of human organization, from international agreements to individual citizens and households. The use of environmentally friendly products can play a role in reducing environmental harm, and understanding what causes a consumer to choose these products over an alternative is key to improving strategies and policies aimed at generating greater sustainability.

Targeting a growing population of environmentally conscious consumers, green products such as organic food, natural cleaners, eco-friendly clothing, and energy saving light bulbs have flooded the market in recent years. Yet, despite growth and an apparent increase in individuals' desire to be eco-conscious, green purchases represent a very small percentage of total product sales (e.g., Bonini and Oppenheim 2008). While people report they are eco-minded, research shows awareness, knowledge and attitudes are not necessarily linked to sustainable behavior (Abrahamse et al 2005; Bickman 1972; Costanzo et al. 1986).

The disconnect between motivation and action creates a challenge for those focused on promoting green behavior and a puzzle for those trying to understand it. Three primary theories have been put forth characterize the psychology driving individuals to eco-friendly consumerism: (1) a desire to behave morally, such that green consumption also offers some moral token (Khan and Dhar 2006; Monin and Miller 2001); (2) a need to be consistent, such that behavior is in line with held attitudes, past behaviors, or an identity (Bem 1972; Bénabou and Tirole 2011); (3) a top of mind effect, such that green consumption happens when relevant constructs are very accessible (Bargh et al. 1996; Kahneman 2003).

The moral token account predicts that consumers will be more likely to choose green or any other morally satisfying alternative only to the extent that a moral token has not already been achieved through some other act (see Mazar and Zhong 2010). Alternatively, consistency predicts that a prior action or attitude expression endorsing environmental conservation should drive an increased likelihood for choosing a green product over an equivalent alternative via self-signaling, dissonance avoidance, and identity maintenance (Bem 1972; Bénabou and Tirole 2011; Festinger 1957). Lastly, preference for a green product can reflect a "top of mind" effect whereby exposure to eco-friendly concepts makes them more active in one's mind (i.e., accessible; see Wegner and Bargh 1998) and may increase preference for green products.

Distinguishing the relative role of these psychological drivers of green purchasing would help inform those working to encourage green choices, as each dictates vastly different strategies. Using a two-stage consequential choice experiment, we investigated the role of each of these three potential drivers of preference for green consumerism. Participants (N = 756) were randomly assigned to one of four conditions. In three conditions they were asked to donate their time to writing slogans for one of the following national campaigns to encourage: exercise poverty awareness, or recycling behavior. In the fourth group participants were asked only to read and rate the quality of pre-existing recycling slogans. Following this task, all participants were allowed to choose thank-you gift cards

for Amazon.com or Greenhome.com (an online green "megastore"). This identical choice across all conditions was the main dependent measure: denoted by the proportion of people choosing the green certificate in the exercise, poverty, recycling, and rating conditions as g_e, g_p, g_g, and g_r respectively. Using participants' condition and choice of gift card, we created predictions that would were able to identify which of the drivers best explains green preference.

Our findings support an accessibility account above and beyond any of the other potential accounts. We found that those who engaged in writing recycling slogans were more likely to choose green gift cards ($gg = 29.3\%$) than those who wrote exercise slogans ($ge = 18.1\%$; $X2(1) = 6.619$, $p = .01$) and those who wrote poverty slogans ($gp = 14.7\%$; $X2(1) = 10.462$, $p = .001$). Additionally, those rating recycling slogans were more likely to choose green gift cards ($gr = 30.0\%$) than those who wrote exercise slogans ($X2(1) = 8.002$, $p = .005$) and those who wrote poverty slogans ($X2(1) = 12.094$, $p = .001$). The differences between gg and gr were non-significant.

These findings strongly suggest that green choices are not best explained by a need for a moral token or consistency but rather by increased accessibility (through priming) of the green construct. After being primed with green or after engaging in an effortful green behavior, participants were significantly more likely to choose the green gift card—nearly twice as much. The accessibility account, however, presumes the activation of an existing construct, which subsequently influenced preference for the green gift card. Such preferences can be influenced by a salient identity, in particular when the identity resonates with the individual (LeBoeuf, Shafir and Bayuk 2010). If the accessibility account is indeed at play, we should observe a larger effect for those individuals who indeed have more developed constructs to be activated and made available. Using the New Ecological Paradigm (NEP; Dunlap et al. 2000) we measured individuals' degree of "ecological worldview". We predicted and found support for the fact that those with a high NEP score and those whose task activated this construct are more likely to choose the green gift card, further supporting the accessibility account. This work suggests that rather than relying on moral appeals, identity, or individuals' drive for consistency to increase pro-environmental behavior, the focus needs to be on cultivating green ideals and then activating them. Findings show that a critical component in the effort to increase pro-environment behavior is accessibility – that is, reminding people of their environmentally friendly attitudes. These results also suggest that those working towards environmental sustainability cannot assume that the "Whole Foods crowd" has been won over and move on. Both laying the framework for eco-minded attitudes and then triggering them is key to motivating green consumption decisions.

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An Inconvenient Truth for Climate Change Communication: The Problem of and Solutions for Ideologically Motivated Skepticism

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To combat climate change, widespread collective action is necessary. Accordingly, attempts to communicate climate change as well as research on how to effectively communicate climate change have surged in recent decades (Antilla, 2005; Feygina, Jost, & Goldsmith, 2010; Feinberg & Willer, 2011; Nisbet, 2009; Wilson, 2000). One glaring question facing climate change communicators and researchers is "Why are Republicans (i.e., conservatives) more likely to deny the existence of climate change compared to Democrats (i.e., liberals) and what realistic communication strategies would eliminate this divide?" (Schuldt & Schwarz, 2011) .The authors propose that this political asymmetry in climate change belief is in part due to an asymmetry in motivated cognition, such that climate change represents an acute threat to Republican (but not Democratic) ideology.

Our hypothesis and ensuing recommendations for climate change communication stand in stark contrast to the "educate-only" climate change communication strategies which have dominated the last two decades and are exemplified by the film *An Inconvenient Truth.* These "educate-only" methods present an onslaught of numerical findings (sometimes paired with fear appeals). We argue that strategies like these that do not respect ideological concerns and often explicitly or implicitly threaten ideological concerns, have and will continue to fail to resonate with those currently most skeptical of climate change science.

In this paper we seek not only to critique past communication strategies, but propose new ones. We build upon the recent surge in research that shows how ideological motives bias the interpretation of science and the formation of beliefs, including climate change beliefs (Feygina, Jost, & Goldsmith, 2010). In three experiments we advance ideological work to solve the political asymmetry puzzle and propose solutions to provide realistic actionable steps. First, we make a methodological advancement. Compared to past research that has focused on general beliefs about climate change and mankind's role in its cause (Feinberg & Willer, 2011; McCright & Dunlap, 2011), we (in addition) examine the specific interpretation of a scientific data point. This allows us to test on a more granular level how people are interpreting statistical scientific evidence. Second, we show that exposing both Democrats and Republicans to same scientific data fails to eliminate the political divide, demonstrating the limitations of the "education-only" approach. Third, we experimentally demonstrate through moderation and mediation that the political divide on climate change is in part due to an asymmetry in ideological motivations. Finally, we seek to respect the realities of climate change. Specifically that climate change is a severe problem that will require government regulation. To address this reality, we show how media communication that affirms the merits of a valued ideology (the free market) in the face of a policy that explicitly violates that same ideology (the need for regulated markets), can lead people to accept scientific evidence that supports anti-ideological action.

In each experiment participants were presented with a statement by the International Panel on Climate Change (IPCC) that indicated that temperatures would rise by approximately 3.2 degrees Fahrenheit in the 21st century and that humans were largely responsible. Participants then reported their own estimate of degrees which we used to measure agreement with the IPCC statistic. In experiment two and three participants also indicated separately how likely it was that humans were causing climate change.

In the first study Democrats and Republicans read the IPCC statement paired with information that mentioned *no consequences, severe consequences,* or *minor consequences* on humans (e.g. the environment, economy, daily life). Republicans were more likely to agree with the IPCC statistic when the consequences were minor rather than severe or no consequences were mentioned. Republicans showed no difference in agreement when no consequences or severe consequences were mentioned. Democrats showed no difference in agreement across all three conditions.

In the second study Democrats and Republicans were assigned to read excerpts from a speech that we created from the point of view of a speaker who cited the IPCC statement. The speaker passionately championed either *governmental solutions* (an action against Republican economic ideology) or *pro-business solutions* (an action friendly to Republican economic ideology) to climate change. Republicans (Democrats) were more (equally) likely to agree with the IPCC statistic and indicate humans were causing climate change when the speaker championed pro-business versus government solutions. Further, we found that for Republicans, the effect of solution type on the two dependent variables was mediated by ratings policy's positive economic impact.

In the third study, we only recruited self-identified Republicans. All Republicans first read a passage defining the free market and indicated how much they agreed with and supported free market ideology. Republicans then read a blog by an economics professor that we created. The blogger cited the IPCC statement and called for government regulation, stating that the free market could not solve this problem. In the *government action* condition, the blogger said no more. In the *government action + ideology affirmation* condition, the blogger expressed his support for the free market even in light of personally calling for government regulation in this "unique" situation. We found that Republicans were more likely to agree with the IPCC statistic and indicate mankind was causing

climate change when the blogger affirmed free market ideology. However, in line with our ideology hypothesis, the effect of blog condition only had an effect on Republicans who strongly supported the free market ideology and had no effect on those who weakly supported the free market ideology.

On a broader level, the data shows that individuals are neither committed to a specific interpretation of science nor are they easily persuaded by new empirical evidence. Instead, individuals can be described as committed to their ideological motivations, willing to accept explicit violations of their ideology only when the ideology's universal merits are affirmed. This paper further contributes to recent research demonstrating the importance of ideology in understanding attitudes (Jost, 2006) and consumer behavior (Curight et al., 2011).

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Red, Blue, and Being Green: Identity Concerns Can Affect Demand For Energy Efficiency

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Much attention has been given to the development of energy efficient technology as a way of addressing the problem of climate change, but the demand for energy efficiency has remained low due to a number of roadblocks. For instance, people do not know the cost and energy savings associated with different technologies, and climate change is not viewed as an immediate threat requiring action.

Given these issues, the marketing of energy efficiency measures has focused on benefits in relation to the environment (e.g., promoting the environmentally friendly aspects of products). In the present research, we investigated whether attaching a "green" value-identity to an energy efficient product may, in fact, present an additional roadblock to increasing demand, due to the (unwanted) "green" value-identity connotations that can deter otherwise interested consumers from purchasing these products.

People's economic decisions are often affected by identity-related concerns, because people make choices that align with salient identities, and use their choices to distinguish themselves from others. Political ideology is an important aspect of people's identities, which we argue can lead them to reject choice options that appear to endorse a competing ideology. We examine how the promotion of identities related to political ideology affect demand for energy-efficient products. Specifically, we show that, as compared to energy-related values that have more trans-ideological appeal (e.g. American energy independence), promoting a "green", environmentally friendly identity can undermine political conservatives' choice of energy-efficient products.

Whereas political liberals tend to desire a "green" identity, political conservatives do not. Compared to liberals, conservatives are more likely to dismiss concerns about climate change, and to favor policies that provide economic benefits to industry more than those that benefit the environment. Therefore, appeals for adopting energy efficiency measures that emphasize "being green" might repel a substantial segment of the population who reject this identity. We expected that energy-saving products that signal a green identity (e.g., through labels or slogans) would be unattractive to conservatives, resulting in fewer choosing to purchase those options. However, we expected that (1) identity concerns would only affect choice when energy efficient options required greater upfront costs, and, (2) other values related to energy efficiency would be less polarizing (in particular, energy independence) than a concern with being green.

We conducted three studies to test these hypotheses. Study 1 (N = 210) examined how labeling products with a signal of green identity affected people's actual decision to purchase an energy saving product (i.e., the choice to buy an incandescent light bulb or a more energy efficient fluorescent light bulb) by varying upfront cost. Participants chose between purchasing equivalent wattage incandescent and CFL bulbs. In one condition, the bulbs were the same price; in the other condition the CFL bulb was higher priced. Green identity salience was manipulated via whether the CFL bulb came with a blank or "Protect The Environment" sticker. When the bulbs were the same price, all but one participant chose the CFL bulb, implying that long-term economic considerations dominated their choice process. When the CFL bulb was higher priced, identity concerns influenced choice: the signaling of a green identity led to a decrease in CFL purchases amongst more conservative participants, which was not matched by a corresponding increase in more liberal participants buying the CFL.

Study 2 (N = 657) identified whether political ideology is associated with support for investing in energy efficiency based on different energy-related values, such as reducing carbon emissions (environmental value) and reducing dependence on foreign oil (energy independence value). Participants who identified as conservative consistently rated the (environmentally-friendly) reduction of carbon emissions as least important, whereas liberals viewed this as their most important value. Liberals' greater support for investing in energy efficiency was best explained by this ideological divide over the value of reducing carbon emissions. The political divide was much less pronounced for reducing dependence on foreign oil (the most important value for conservatives).

Study 3 (N = 609) investigated a potential solution to the green identity problem by examining whether messages that tap into non-green identities produce less polarization in energy efficiency choices. Participants considered a hypothetical purchase of a standard or (more expensive) hybrid car. The hybrid car either came with a "Save The Earth" or "No Foreign Oil" emblem (displayed either publically or privately). Indicating their aversion to a green identity, conservatives were least likely to choose the hybrid car when it came with a Save The Earth emblem. However, there were no ideological differences when the hybrid car had a "No Foreign Oil" emblem, illustrating that an energy independence message does not polarize along ideological lines.

The present results demonstrate that promoting a green identity for energy efficient choices can have negative impacts on demand. Although one of the primary benefits of energy efficient options is its gentler impact on the environment, not everyone wants to be green. Our studies demonstrate that those on the political right do not want to signal a green identity, and will avoid purchasing more expensive energy efficient options, that they would have selected otherwise, when a green identity is promoted. However, although the value placed on reducing carbon emissions is divided along political lines, there is trans-ideological agreement about the value of energy independence, which presents one possible solution to the green identity problem.

Although much attention is given to information gaps and lack of immediate concern about climate change impacts as reasons for why people do not choose energy efficient options, this research identifies an additional roadblock to the widespread adoption of energy efficiency: People have different values related to energy efficiency (associated with their political leanings), and the salience of these values can both attract and repel people from selecting more expensive energy efficient options. As there are ideological differences in energy-related values, certain messages (in particular messages about environmental benefits of energy efficiency) can polarize people's choices along ideological lines, whereas other messages (such as messages about energy independence) have the potential to reach a broader audience.

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The Cause Matters! How to Successfully Use Cause-Related Marketing Campaigns for Products with Negative Externalities
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The production and consumption of products can cause various damages to the environment (e.g., air pollution) and society (e.g., unfair trade). As consumers are becoming increasingly attentive to social and ethical considerations and thus, more aware of some products' negative externalities, the purchase and consumption of these products becomes associated with guilt (Dahl, Honea, & Manchanda, 2003). To help consumers to alleviate that guilt such that they continue liking and buying these products, some companies use cause-related marketing (CM) campaigns in which they promise a donation to a cause every time a consumer purchases their product. The idea behind this approach is related to moral regulation (Mazar & Zhong, 2010): If customers' moral self-concept is threatened by the purchase or consumption of a product that is associated with negative externalities, a morally good act such as a donation can "safe" it.

The challenge when designing CM campaigns for products with associated negative externalities is that companies can offer a donation to fight a problem caused by their products (same domain-donation) such as, for example, a donation to offset carbon-emissions when booking a flight (see Continental Airlines or Lufthansa) or they can offer a donation to fight a problem unrelated to their products (other domain-donation) such as a donation to help children in need when booking a flight (see Scandinavian Airlines or Air Berlin). However, little is known as to which type of donation would be more effective for companies. The current project investigates that question.

Research on moral regulation suggests that licensing and compensation-mechanisms can be successful no matter if the two counterbalancing behaviors are in the same domain (Monin & Miller, 2001) or in differing domains (Mazar & Zhong, 2010). However, it is unclear which type of donation would work better in a CM campaign-context. The offer to donate to a cause from the same domain has the advantage of directly reducing a product's negative externalities which should translate to less guilt associated with the product. At the same time, however, a same domain-donation might increase the saliency of the damage supported by one's consumption and thus, make oneself feel hypocritical. As a result, the guilt associated with the product might be promoted rather than reduced and therefore make consumers avoid the product altogether. An other domain-donation avoids emphasizing the product's negative externalities and subsequent feelings of hypocrisy and thus could provide a better guilt-reduction mechanism.

In one field and one laboratory study, both with incentive compatible, consequential purchases, we show that if customers engage in consumption that is associated with negative externalities they generally prefer a donation in a product-unrelated domain rather than in the same domain – unless the damage is explicitly attributed to the consumer (personalized).

In our first experiment, we operated a coffee stand during a music festival on a European university campus, where we sold conventional and organic coffee at **Euro 1.20 each** and varied between subjects (N = 290) the sign accompanying the conventional coffee. A pre-test revealed that water pollution is an environmental damage that is highly associated with the production of conventional coffee. Thus, in one condition (*same domain*) the sign read that for each purchase of a cup of conventional coffee, 10 cents would be donated toward offsetting water pollution caused by the production of coffee. In another condition (*same domain-personalized*), the sign read that for each purchase of a cup of conventional coffee, 10 cents would be donated toward offsetting water pollution caused by the production of the consumer's ("your") coffee. In a third condition (*other domain*), the sign read that for each purchase of a cup of conventional coffee, 10 cents would be donated toward offsetting the educational disadvantages caused by illiteracy - in a pretest we had found this cause to be viewed as equally important and of equal fit with the product category coffee as the fight against water pollution. We added two control conditions without any donation: one in which both coffees were offered at the same price (Euro 1.20; *control + equal price*) and one, where the conventional coffee cost 10 cents less (i.e. Euro 1.10) than the organic coffee (*control*).

We found that in general, when both options were offered at the same price (*control + equal price*), consumers preferred organic (82.14%) over conventional coffee (17.86%). Furthermore, a same domain-donation increased the demand for conventional coffee (36.84%) and was as successful as a 10 cents price decrease in conventional coffee (control: 28.13%, p = .31). More importantly, compared to the conventional coffee at a lower price (control: 28.13%) a donation in the other domain (58.33%; p < .001) and in the personalized same domain (66.4%; p < .001) made the conventional coffee substantially more attractive – with the majority of customers now preferring the conventional coffee over organic coffee.

We replicated our findings in an incentive-compatible laboratory experiment, in which we offered participants the possibility to purchase coffee before taking part in an unrelated study. Further, this study provided insights into the underlying processes. Our results revealed that the positive effects of a personalized same as well as an other domain-donation on purchase of conventional coffee were fully mediated by the relative guilt associated with the purchase of conventional versus organic coffee. Furthermore, a personalized same domain-donation seems to benefit from the fact that guilt is most effectively diminished if a person has the ability to repair its actual wrong (Lindsay-Hartz, 1984).

As the use of CM has more than doubled over the past ten years (IEG Sponsorship Report, 2011) our findings are particularly interesting for companies intending to use CM for products with negative externalities. Offering the right type of donation allows companies selling a harmful (and even inferior) product to increase their market share without giving up profit margin. These findings have societal implications, too, because they indicate that companies can help their consumers to take responsibility.

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5.2 Individual Papers: **Mixing it Up: Variety Seeking and Assortments**

Room: San Jose

Chair: Aylin Aydinli, London Business School

A "Wide" Variety: The Effects of Horizontal vs. Vertical Assortment Display

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Over 75% of all purchases are made in the store (POPA1 1995). Shoppers on average spend only a few seconds making up their mind about a product category (Dickson and Sawyer 1990). During this "first moment of truth" (Nelson and Ellison 2005), in-store factors such as assortment display play a key role in turning a browser into a buyer. In this research, we study a visual assortment cue, namely whether a product assortment is displayed horizontally or vertically, and its effects on consumers' perceptions, preferences, and choices.

We examine the effects of assortment display using a two-staged model of in-store decision making developed based on eye-tracking research: in the first stage, shoppers process a product assortment holistically, scanning the entire display to form a quick, overall impression; in the second stage, they engage in more analytical processing, making pairwise judgments of similarity between items in the assortment to identify the preferred options (Hoch, Bradlow, and Wansink 1999; Russo and LeClerc 1994). We propose that during the initial scan, horizontal vs. vertical display of a product assortment influences the perceptions of overall assortment variety. This is based on the concept of binocular vision field (i.e., the field of view seen by both eyes). The human binocular vision field is roughly elliptical and can be fitted with a horizontal rectangle (Ruch and Fulton 1960). Because information presented within a

horizontal rectangle falls into the binocular vision field, the processing is more fluent. So, at one glance, people should be able to process more information, and better appreciate the full extent of the variety in a product assortment that is presented horizontally than vertically.

After the initial scan, when consumers focus on comparative evaluations of individual items within the assortment, two theoretical effects in the visual processing literature suggest that items presented horizontally are perceived to be more similar to each other than items presented vertically. The first effect is called the "vertical-horizontal illusion" (the overestimation of the vertical direction as compared with the horizontal direction of equal length, Kunnapas 1957) and suggests that items presented as a horizontal line appear closer together than items presented vertically. The Gestalt principle of similarity (Wertheimer 1923) prescribes that objects close to each other are considered similar to each other (i.e., proximity breeds similarity). The second effect is people's belief that items that occur at the top of hierarchy are of better quality than items that occur at the bottom (Raghubir and Valenzuela 2008). Because of this intuition, items in a vertical or "hierarchical" display should be seen as less similar to each other and items in a horizontal display as of the same "rank" and equally desirable.

To summarize, at the assortment level, horizontal (vs. vertical) display promotes higher perceived assortment variety. At individual item level, horizontal (vs. vertical) display promotes iso-quality (equivalent quality) inferences, which should increase the number of acceptable items in the assortment. We tested these expectations in two studies. Study 1 used a 2 x 2 between-subjects design where participants were exposed to a horizontally or vertically arranged assortment of ten different chocolate truffles for three or 15 seconds. They then reported the processing fluency, perceived assortment variety, and number of acceptable options. Consistent with our expectations and the fluency hypothesis, the time x display interaction was significant for the first two measures: participants considered the horizontal display [1] easier to process and [2] more varied than the vertical display, but only in the 3-second exposure condition. The effect of display on the number of acceptable options, however, lingered after the initial exposure because only a main effect was present showing that more unique items were chosen from the horizontal display than from the vertical display.

Study 2 was intended to tease apart the two possible reasons why horizontal vs. vertical display can affect preferences for individual items in the assortment. Both the illusion and hierarchical effects predict that items are viewed as more similar to each other when displayed horizontally than vertically. The hierarchical effect explanation goes a step beyond and predicts that items in a vertical display are evaluated so that the ones at the top are rated higher and ones at the bottom are rated lower than they would be otherwise. In other words, this explanation predicts an increase in the range of evaluations of individual items because the top items gain ratings and the bottom items lose ratings. In Study 2, participants viewed the (horizontal or vertical) display of ten chocolates (without time pressure) before providing similarity and preference ratings. The order of the ten items in the display was fully counterbalanced across participants. We found that [1] items were considered more similar to each other in the horizontal display; [2] the range of preference ratings for individual items was higher in the vertical display; and [3] across the ten items in the vertical display, the mean preference for each item was generally higher when the item was placed at the top of the display than when it was not at the top. These findings provided strong support for the hierarchical effect because the illusion effect cannot explain the changes in the preference ratings and the range.

Finally, in a field study, we displayed an assortment of 32 different fragrances of pocket-size hand sanitizers either horizontally or vertically in a mall store and recorded consumers' actual purchases. Consistent with our lab findings, those who shopped at the horizontal store display chose more variety in the purchased items compared with those who shopped at the vertical display. To summarize, two lab studies and a field study provide convergent evidence that a simple visual assortment cue, i.e., horizontal vs. vertical assortment display, can influence shoppers' perceptions of assortment variety, preferences for individual items in the

assortment, and choices. We believe that this research contributes to the literatures on shelf display, assortment planning, and variety seeking, as well as generates practical insights on managing in-store communications.

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Balancing the Basket: The Role of Shopping Basket Composition in Embarrassment

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Mellish: "I'll get a copy of Time magazine. And I think I'll take Commentary and the Saturday Review. And let's see, Newsweek. I'll just…grab one of these…[slyly picks up a pornographic magazine] I'll take 'em all."
Cashier: "Hey, Ralph, how much is a copy of Orgasm?"

Mellish: "…Just put 'em in a bag, will you?"

In this comical exchange from the 1971 Woody Allen film Bananas, Allen's character, Fielding Mellish, is purchasing a pornographic magazine in a store. Fearing that others will observe his purchase, he grabs several additional magazines in an attempt to hide his true shopping objective: the new issue of Orgasm. Unfortunately for Mellish, the strategy fails when the cashier's request for a price check makes the embarrassing product painfully salient to everyone within earshot.

The prevalence of such situations in popular culture highlights the pervasive nature of consumer embarrassment. Indeed, prior research has documented that purchases are sufficient to elicit embarrassment when they threaten consumers' desired public identity or image. Given the aversive nature of this emotion, it is not surprising that consumers employ a repertoire of coping strategies— including Mellish's strategy of purchasing additional non-embarrassing items. As in the movie, the traditional explanation for this strategy is that because an embarrassing product must be observed by others for embarrassment to arise, additional purchases mitigate embarrassment because they shift observers' attention away from the embarrassing product.

According to this account, which we label the *product prominence hypothesis*, the role of additional purchases in embarrassment is limited to their impact on the salience of the embarrassing product. Thus, products are either embarrassing to buy or they are not, and embarrassment results to the extent that an embarrassing product is salient in the context of the shopping basket. From this argument follows the intuitively appealing prediction that purchasing any additional product that is not itself embarrassing will mitigate embarrassment relative to purchasing an embarrassing product alone, because attention will be spread across multiple products rather than focused solely on the embarrassing product as a result.

In the current research, we argue that additional purchases can impact embarrassment independent of their influence on the salience of the embarrassing product. Contrary to the conventional wisdom, we posit that additional purchases do not necessarily mitigate the threat of embarrassment, as would be predicted by the product prominence hypothesis. Moreover, we propose that these additional purchases, which are not embarrassing in and of themselves, can paradoxically exacerbate embarrassment, such that consumers expect purchasing non-embarrassing products in addition to an embarrassing product to be *more* embarrassing than purchasing the embarrassing product alone.

Building on the notion that impressions form not as discrete collections of associated knowledge but rather as more holistic integrations, we argue that the impact of a non-embarrassing additional purchase on embarrassment is a function of the extent to which it balances against the undesired persona communicated by the embarrassing product. Specifically, we posit that the more an

additional purchase counterbalances (vs. complements) the undesired persona, the more it will attenuate (vs. exacerbate) embarrassment. We test this *balanced basket hypothesis* in a series of four experiments.

In experiments 1A and 1B, we demonstrate that embarrassment is not monotonically decreasing with additional purchases but is instead a function of shopping basket composition. Thus, consumers believed that purchasing *The Complete Idiot's Guide to Increasing Your IQ* would be less embarrassing when purchased in conjunction with a box of tissues and a pint of cookie dough ice cream than when purchased alone. However, this pattern was reversed when the embarrassing book was *The Complete Idiot's Guide to Handling a Breakup*, such that the same additional purchases exacerbated embarrassment when they were complementary.

In experiment 2, we show that the same additional purchases are more (vs. less) effective at attenuating anticipated embarrassment when they are perceived to be more (vs. less) effective at counterbalancing the undesired persona. Specifically, although adult consumers on average expected to feel less embarrassed to purchase a Justin Bieber album when they also purchased an Adele album, this effect was found to be a function of counterbalance perception. Thus, the more effectively consumers believed the Adele album counterbalanced the undesired persona communicated by the Justin Bieber album, the more effective it was at attenuating anticipated embarrassment.

Finally, a field study in experiment 3 demonstrates that shopping basket composition can cause embarrassed consumers to strategically alter their purchase decisions, even when doing so is economically disadvantageous. We recruited male undergraduates to participate in a study ostensibly aimed at helping a pharmacy chain understand the experience of purchasing personal products in its stores. Participants were assigned to purchase either condoms or anti-gas medicine and were given the option of purchasing the embarrassing product by itself or with a box of tissues and a bottle of lotion; respondents could keep whatever they chose to purchase. Because the additional products could be seen as having a sexual connotation in the context of the condoms, we reasoned that they would exacerbate embarrassment when buying condoms but not when buying anti-gas medicine. This forced participants buying the condoms to make tradeoffs between their desire to avoid embarrassment on the one hand and their desire to maximize economic gain on the other. Thus, we predicted that preference for the additional products would be weaker for participants purchasing the condoms (vs. anti-gas medicine). We also measured participants' public self-consciousness (PSC), because individuals who are higher in PSC are more responsive to negative social evaluations and are more likely to regulate their behavior in order to avoid embarrassment. We therefore predicted that the effect would be stronger (vs. weaker) for individuals higher (vs. lower) in PSC. The data supported this prediction, such that preference for the free tissues and lotion was weaker for participants purchasing the condoms than for participants purchasing the anti-gas medicine, but this effect was stronger (vs. weaker) for individuals higher (vs. lower) in PSC. Across these four studies, we find consistent support for our hypotheses regarding the role of shopping basket composition in embarrassment.

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Out With the Old and In With the New: The Effect of Ovulation on Women's Variety Seeking
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Might desire for variety and novelty be influenced by people's biology? While considerable past research has examined variety seeking (e.g., Kahn 1995), little research has considered how biological factors influence desire for novelty and variety. Here we examine whether women's novelty and variety-seeking is influenced by a universal biological factor – the monthly ovulatory cycle.

The human ovulatory cycle spans, on average, 28 days, during which a woman can become pregnant on about one week – the *ovulatory* phase of the cycle. Although most women do not know when they are ovulating, research has shown that ovulation can non-consciously alter women's psychology and decision-making. For example, near ovulation women have more fantasies about other men that are especially different from their current partner (Sheldon et al. 2006) and have more extramarital affairs (Bellis and Baker 1990). Ovulating women are particularly attracted to men other than their current partner who display markers of genetic fitness (e.g., symmetry, masculinity, social dominance; Durante et al. 2012; Garver-Apgar et al. 2006). Taken together, these findings suggest that the hormonal fluctuations associated with ovulation may increase women's openness to novelty and variety. Thus, in a series of studies, we tested how women's desire for variety and novelty change depending on *when* each month such decisions are made.

Study 1 tested ovulating women's desire for novelty and variety. To do this, ovulating and non-ovulating women indicated their agreement with several items such as: "I enjoy novelty", "I like to keep my options open", and "I like to have lots of variety in my life" ($\alpha = .84$). As predicted, compared to women who were not ovulating, ovulating women reported higher desire for variety and novelty ($p = .013$).

Study 2 investigated whether this desire for novelty would translate into an increased desire for exotic brands near ovulation. Women were shown one of two advertisements of a fictitious coffee brand that was either a domestic brand or an exotic brand. In the exotic brand condition, U.S. participants were informed the coffee originated from Italy, whereas in the domestic brand condition, U.S. participants were told the coffee came from the United States. Participants were then asked how likely they would be to buy the coffee. Results revealed that ovulating women were more willing to buy the coffee when it originated from Italy than the United States ($M_{Italy} = 5.82$ vs. $M_{U.S.} = 4.00$; $p < .05$). There were no significant difference for women who were not ovulating ($M_{Italy} = 4.70$ vs. $M_{U.S.} = 5.26$; $p = .25$).

Study 3 examined whether ovulation increased variety-seeking in consumer choice. Women made 15 choices about nail polish color (out of 20 colors). Participants were told to select a nail color for each day ($1 - 15$) and were told they could select as many or as few nail colors as they preferred. Results showed that women chose a greater variety of colors near ovulation compared to when they were not ovulating ($M_{ovulating} = 6.27$ vs. $M_{not-ovulating} = 5.49$; $p < .05$).

Study 4 investigated the mechanism behind ovulating women's increased preference for novelty and variety. Just as ovulating women are more open to affairs with new men and less committed to their current romantic partners (Gangestad et al. 2002; Garver-Apgar et al. 2006, Bellis and Baker 1990), they may likewise seek more variety and novelty in the marketplace because they are less committed to their current possessions. Because we predicted that mate attraction goals drive ovulating women to seek variety in consumer choice, Study 4 attempted to suppress and enhance the effect of ovulation on variety seeking by exposing women to either a mate attraction prime or a mate retention prime. In the mate retention prime, women imagined they were on a date with a handsome, confident man who was very affectionate and loving. In the mate attraction prime, women imagined they were single and flirting with attractive men. Whereas the mate retention condition effectively *strengthens* women's desire to commit to one partner, the mate attraction condition *lessens* women's desire to commit to one man. After exposure to the prime, participants were then asked to select 15 options for an upcoming 15 days of vacation (similar to Study 3) from four consumer product categories: nail polish, high heels, restaurants, and candy bars. These four product categories were converted into a variety seeking composite ($\alpha = .80$). Results revealed a significant interaction between fertility and prime ($p = .005$). As predicted, ovulating women in the mate attraction condition chose a greater variety of products near ovulation ($M_{mate\ attraction} = 10.35$) compared to ovulating women in the mate retention prime ($M_{mate\ retention} = 8.50$; $p < .03$). Whereas the mate attraction condition replicated the effect of ovulation on variety seeking found in Study 3, there was no effect of ovulation in the mate retention condition.

In sum, four studies found that – near ovulation – women seek more novelty and variety in consumption. Additional findings showed that the effect of ovulation on variety seeking is driven by mate attraction goals that are heightened near ovulation. Consequently, minimizing the salience of mate attraction goals suppressed the effect of ovulation on desire for variety. These studies provide some of the first evidence of how biological factors such as hormones can influence consumer decisions, which has important implications for marketers, researchers, and consumers. Female consumers, for instance, might choose to try new products and experiences depending on when during the month they make the decision. Researchers might find different effects in studies depending on the mix of women in the study and where they are in their cycle. And marketers may provoke different female responses from the same message at different times of the month. The study of how biological factors such as hormones influence consumption not only vast implications for linking consumer behavior with other disciplines (e.g., biology, animal behavior, anthropology, evolutionary psychology), it also presents a fruitful avenue for future research.

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The Preference for Larger Assortments in Feeling-based Decisions

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Past research suggests that consumers typically prefer larger product assortments over smaller ones, as evidenced by a stronger consumer patronage of retailers with larger assortments (Arnold, Oum, and Tigert 1983; Broniarczyk, Hoyer, and McAlister 1998; Pan and Zinkan 2006; see Chernev 2012, for a review). In this research, we propose that, in fact, this preference depends on the decision process that consumers are likely to follow. Specifically, we predict that consumers' relative preference for larger assortments is generally more pronounced when the decision is likely to be based on affect and feelings than when the decision is likely to be based on more cognitive processes. The phenomenon is likely to be due to consumers adopting a more expansive exploratory mindset in decisions guided by feelings. This expansive mindset may be linked some experience utility that consumers derive from the process of reviewing product options when relying on their feelings (Pham 1998; Schwarz and Clore 1988). Hence, one would expect this experience utility to increase with the number of options being assessed, triggering an appetite for exploring more options. The predicted effect of reliance on feelings on consumers' preference for larger assortments was tested in four studies.

The first three studies test the predicted effect and the underlying mechanism by using different operationalizations of the likelihood of reliance on feelings. Study 1 employed a 2 (product type: hedonic vs. utilitarian) × 2 (assortment size: small vs. large) between-subjects design, replicated across two independent sets of participants with two pairs of product categories. Participants were asked to review product assortments that contained either 12 items or 36 items and rate how much they liked the selection of products offered in these assortments. We manipulated the reliance on feelings by varying the product category. Half of the participants were shown assortments of hedonic products (ice cream and jams), and the other half were shown assortments of utilitarian products (pens and detergents). Previous research has shown that the reliance feelings to be stronger for hedonic products than for utilitarian products (Adaval 2001; White and McFarland 2009). To test our process explanation, we measured participants' desire to explore the assortments of products. As predicted, we found that the relative preference for larger product assortments was more pronounced when the product category was hedonic than when the product category was utilitarian. The mediation results further supported that the effect appears to be driven, at least in part, by participants adopting a more exploratory mindset when evaluating assortments of hedonic products.

In Study 2, the product category was held constant, and the likelihood of reliance on feelings was manipulated by varying the motive for product evaluation. The study was a 2 (decision motive: experiential vs. instrumental) × 2 (assortment size: small vs. large)

between-subjects design. Participants were asked to evaluate a hotel selection that contained either 12 options or 36 options under either an experiential motive or under an instrumental motive. The reliance on feelings has been shown to be greater under experiential motives than under instrumental motives (Pham 1998). The results confirmed that when the motive was experiential there was a strong preference for the larger hotel selection compared to the smaller hotel selection. In contrast, when the motive was instrumental evaluations were comparable for the larger and smaller hotel selections. As in Study 1, the effect of decision motive on the preference for larger assortments was mostly mediated by participants with experiential motives adopting a more exploratory mindset when evaluating product assortments.

Study 3 employed a 2 (trust in feelings (TF): high vs. low) × 2 (assortment size: small vs. large) between-subjects design. Participants, either in high-TF or low-TF conditions, were asked to evaluate either a selection of 12 coffees or a selection of 36 coffees. We manipulated participants' likelihood of reliance on feelings using the *trust-in-feelings manipulation* (Avnet, Pham, and Stephen 2012). Before the evaluation task, supposedly in an unrelated study, participants were asked to describe either two (high-TF) or 10 (low-TF) situations in which they trusted their feelings to make a decision and it turned out to be the right decision. It has been shown that recalling two (vs. 10) instances of successful reliance on feelings induce higher (vs. lower) reliance on feelings. We found that the relative preference for the larger coffee selection was stronger in the high-TF condition where participants were likely to rely on their feelings, than in the low-TF condition where participants were less likely to rely on their feelings.

Study 4 aimed to demonstrate our phenomenon with a more implicit measure of preference for assortment size and to provide further evidence for the expansive exploratory mindset process. Participants, whose trust in their feelings was manipulated as in Study 3, were asked to draw a sketch of a cereal display found in a supermarket. We measured the total number of options and the number of different options in the depicted display as well as the size of the depicted display drawing. The results supported our hypothesis that the reliance on feelings increases relative preference for larger assortments. Specifically, it was found that when participants had higher trust in their feelings they drew greater number of options and greater number of different options than when participants had lower trust in their feelings. The results further support our conceptualization that the reliance on feelings triggers an expansive mindset. Compared to participants with lower trust in their feelings, participants with higher trust in their feelings drew larger display, occupying more space on the sheet of paper.

In sum, across four studies, we find that a greater reliance on feelings amplifies the preference for larger (as opposed to smaller) assortments. Specifically, this preference is stronger for hedonic rather than utilitarian products, when participants had experiential rather than instrumental motives, and when participants had higher rather than lower trust in their feelings. Our phenomenon transpires even on implicit measures of preference for assortment size and is driven by consumers adopting a more expansive exploratory mindset whenever a decision calls for a reliance on feelings.

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5.3 *Individual Papers:* Changing Judgments: The Influence of Primes, Baselines, Associations, and Frames on Consumer Judgments

  Room: Madero A

  Chair: Derick Davis, Virginia Tech

Inconspicuous Omission of Numerical Baseline: Perceived Materiality and Consumer Support for Mandatory Disclosure

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Marketers constantly search for effective communication strategies to present products in more positive light. A common practice involves the use of numerical comparison to signal superior product attributes (e.g., 5 times faster, 90% less, the top 3). Such numerical claims can be tricky if the baseline information is omitted (Preston, 1977). For example, a package label reads "50% more recycled content than before." The message suggests an increase of recycled goods by one half; however, the manufacturer's total increase of recycled content may have only improved from 2% to 3%.

Baseline omission raises concerns over its misleading implications (Johar & Simmons, 2000). For instance, McCornack (1992) argues that omission violates the relevance maxim of Grice's (1975) cooperative principles and is therefore deceptive. Indeed, prior research has documented "omission neglect": Consumers tend to focus on explicit information, and neglect omitted but relevant information in evaluating product quality (Kardes et al., 2004). To date, however, the literature has less to say about the extent to which consumers are influenced by numerical claims with or without baselines. This issue deals with "materiality" of a numerical claim - the degree to which baseline omission affects consumer purchase decisions (Richards & Preston, 1992).

In line with the "third-person effect" (Davison, 1983; Delorme et al., 2006), it is speculated that consumers tend to consider baseline omission more material for others than themselves, especially when the contextual influence is negative. This effect can be ascribed to an ego-enhancement bias: People would rather believe they are less influenced than others, when in fact they can be as influenced as others. Moreover, it is predicted that the self-other discrepancy may be also explained by self-defensive reasoning to resist undesirable influence (Darke & Ritchie, 2007). Three studies tested these hypotheses in different product categories and types of numerical baselines.

Study 1 employed a 2 (self vs. others, within-group) X 3 (numerical claims: between-group) mixed experimental design. Participants in an online panel were randomly assigned to one of three between-group conditions (i.e., "baseline only", "baseline omission", and "baseline disclosure"). They read text-only promotional claims of bottled drinking water. In the "baseline only" condition, the claims read: "…*This new bottle contains more organic additives than our original bottle: an increase from 3% to 5%.*" In the "baseline omission" condition, the same numerical information was framed as a percentage change: "…*This new bottle contains 67% more organic additives than our original bottle.*" In the "baseline disclosure" condition, the participants read both the baseline and the percentage change: "…*This new bottle contains 67% more organic additives than our original bottle: an increase from 3% to 5%."* In each condition, participants first answered questions about product attitude and purchase intention. Then, they rated materiality of the claim for themselves and others on Richards and Preston's scale (1992). The order of two perceived materiality questions (i.e., self vs. others) was counter-balanced. The results suggest that: 1) no significant difference was found between the "baseline omission" and "baseline disclosure" conditions in terms of product attitude and purchase intention; and 2) perceived materiality was higher for others than self, when contextual influence was positive (i.e., advertising a "greener" product).

Study 2 examined the extent to which self-defensive reasoning partially explained the self-other discrepancy in 2 (self vs. other, within-group) X 2 (priming. vs. control, between-group) mixed experiment. Participants in an online panel read the baseline-omission claim in study 1: "*...This new bottle contains 67% more organic additives than our original bottle."* In the priming condition, participants read a text before the ad claim: "*Advertising is designed to bring in new customers…An example is the use of probabilities in an advertisement with no reference to baseline information: A product reduces the chance of injury from 5 in 10,000 to 4 in 10,000. Rather than present a 1 in 10,000 improvement, the advertisers present a 20% improvement*." In the control condition, participants read the ad claim directly. The results show that the self-other discrepancy was more salient in the priming condition than the control condition. When participants realized omission was used as a tactic, they were less likely to trust the claim, which in turn attenuated perceptions of materiality for themselves but not as much for others.

Study 3 tested the self-other discrepancy in a between-group design when the contextual influence was negative. A 2 (self vs. others) X 2 ("baseline omission" vs. "baseline disclosure") between-group experiment was conducted. Participants in an online panel read text-only claims of weight-loss diet pill. In the "baseline omission" condition, the claims read: "*...Clinical studies show people using this product lose 3 times more weight than those on diet alone in 3 days!*" In the "baseline disclosure" condition, the claim reads: "*….Clinical studies show people using this product lose 3 times more weight (1.5 lbs) than those on diet alone (0.5 lbs) in 3 days!*" The results show that perceived materiality was higher for others than self regardless of baseline disclosure. Further, participants were more supportive of mandatory disclosure in the "self" condition than in the "others" condition when they knew the baselines. In contrast, when they were not aware of the baselines, no significant difference was found between the "self" and the "others" conditions with regard to consumer support for regulation.

Combined, three studies suggest that consumers tend to ignore omitted baselines, while they consistently perceive that the influence of numerical comparisons is more material for others than themselves. The perception that omission is material for oneself, but not for others, drives consumer support for mandatory disclosure. This research contributes to the third-person effect literature by demonstrating a salient self-other discrepancy when the contextual effect is positive or negative, which appears to be driven by ego-enhancement as well as self-defensive reasoning.

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Navigating residue sensitivity in the secondhand marketplace

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How do previous users' contact with used goods affect judgments of these objects? While past research revealed the effects of disgust and perceived contamination stemming from prior contact, little is currently understood about how people differ in their sensitivity to others' residue. In this research, we develop a scale of individual differences in residue perception. This scale enhances our understanding of consumer willingness to participate in the secondhand, refurbished, and shared-goods marketplaces.

According to past work, consumers often feel that products touched by strangers (e.g., a blouse in a dressing room) are dirty, lowering their intentions to purchase them. Yet consumers' purchase intentions increase for products with positive sources of prior contact, such as an attractive person or celebrity, suggesting that the effect of prior contact is not limited to disgust reactions alone (Argo, Dahl & Morales, 2006, 2008; Newman, Diesendruck & Bloom, 2011). Thus, people contain properties—both good and bad—that can be invisibly transferred to goods through observed or imagined touch.

We propose that some consumers view possessions as carriers of their prior users' personality or "essence," whereas other consumers primarily view possessions as inanimate objects with manufactured qualities that remain unaltered by previous users. In this work, we identify a trait measure of sensitivity to the residue of another's essence in used possessions. We then illustrate how the source of prior contact impacts residue-sensitive consumers' evaluations of secondhand goods. We find that sensitive individuals respond not only to the valence (positive/negative) of a prior owner, but also to that owner's specific personality traits.

To develop the residue sensitivity construct, we generated an initial pool of 43 items and then verified the scale with three samples: 148 volunteers approached on-campus, 130 students responding in the lab, and 106 non-student U.S. adults participating on mTurk (mean age=43.5). In each sample, our 4-item scale emerged as consistently reliable (Cronbach's alpha > .7 in each). See Table 1 for factor loadings and item wording. Confirmatory factor analysis on a separate sample of 134 lab participants verified that the 4-item

structure fits the data (see Table 2). These data illuminate the residue sensitivity construct and help reveal its psychological underpinnings.

We also tested the scale's relationship with other constructs (see Table 3). We expected that residue sensitivity would not correlate with disgust sensitivity (Haidt, McCauley & Rozin, 1994), since reactions to gross occurrences and outright disgusting physical pollutants (e.g., un-flushed excrement in public toilets) differ qualitatively from responses to unseen contaminants that transfer subtly from consumer to possession. However, we hypothesized a positive correlation with attachment (Ball & Tasaki, 1992). People with high levels of attachment perceive owned goods as de-commodified and imbued with private meanings, indicating heightened awareness of how a person's essence permeates her owned objects. We further predicted that people with an excessive focus on how contagions can transfer, as measured by Perceived Vulnerability to Disease (PVD) (Duncan, Shaller & Park, 2009), will have higher residue sensitivity. High PVD respondents are more likely to perceive previous users' residue, due to their greater awareness of the inherent transferability of traits and associations. We also explored potential relationships with other constructs. For instance, more neurotic personality types regularly experience anxiety, because they perceive commonplace stimuli as threats; they may react similarly to used goods from unknown sources. Through this work, our goal was to confirm that residue sensitivity converges with related constructs, but it is distinct from unrelated constructs. These results enlighten literatures on perceptions of possessions in ways that prior work on other constructs have not.

Next, we tested residue sensitivity's predictive validity for consumption situations. Study 2 (n=227) examined whether residue sensitivity moderated people's response to a target object with either a positive or negative source of prior contact. Participants read about an auction for a vintage bowling bag. As a between-subjects manipulation of prior contact, participants learned the bag was either donated by a local fireman (positive source) or learned that it was repossessed from a father who failed to pay child support (negative source). Participants then indicated their likelihood of bidding on the bag. We analyzed this measure as a function of source condition, residue sensitivity (continuous measure), and their interaction, finding a significant source X residue sensitivity interaction (F(1, 223)=3.24, p=.02). Analyzing a median split on residue sensitivity reveals the effect's pattern (see Fig. 1). Highly residue-sensitive participants desired the firefighter's bag (M=4.16) more than the deadbeat-dad's bag (M=2.59), whereas source condition did not affect the less residue-sensitive participants' evaluations ($M_{positive}$=3.37 vs. $M_{negative}$=2.98).

In study 3, we tested whether other implied personality traits of a source—beyond valence alone—transfer into the consumption object and whether this effect differs by residue sensitivity. Participants (n=97) viewed a mock classified advertisement featuring a photo of a tattooed hand holding a Wii game-controller. The tattoo was of a flaming skull with crossed swords. As a between-subject manipulation, we primed participants to think about ideal or non-ideal traits associated with having such a tattoo. This manipulation was pre-tested earlier. Participants considered if "gameplay on the Wii with this controller will be:" (a) exciting and intense (ideal-traits condition), or (b) reliable and refined (non-ideal-traits condition). We analyzed interest in owning the game-controller as a function of the traits condition, residue sensitivity (continuous measure), and their interaction, finding a significant traits X residue sensitivity interaction (F(1,67)=5.02, p=.02, in Fig.2). Again, people high in residue sensitivity were more impacted by the framing of the previous user's personality than were those low in residue sensitivity.

Through three studies we demonstrate that some consumers are sensitive to the residual essence or personality of a previous owner or user, while others don't sense such transfer. We craft a reliable, 4-item residue sensitivity scale and show that those who score high on this scale are (a) more sensitive to the essence of previous owners and less willing to purchase goods from negative sources, and (b) are more easily influenced in their judgment and behaviors by perceptions of specific traits of implied prior owners.

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Perceived Unity Affects Consumption and Experience

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A recent ad-campaign from BMW proudly declares, "We only make one thing: the ultimate driving machine." In amending their classic "ultimate driving machine" tagline, the company appears to believe that consumers prefer unified brands—that is, little within-brand variation or breadth in products. This belief is supported by research showing unfavorable reactions to brand extensions that are seen as inconsistent with the existing brand (Park, Milberg, and Lawson 1991) and that poor extensions can dilute and degrade the brand image (Keller and Sood 2003). However, little research has explored the effects of perceptions of unity for brands and other marketplace entities on judgments and consumption of their products.

The concept of entitativity provides a useful theoretical perspective for exploring perceptions of brand unity. Research finds that, when assessing highly entitative groups, people focus their attention on the overall group rather than its components and attempt to extract the underlying essence of the group (Yzerbyt, Rocher, and Schadron, 1997). Attributions, emotional reactions, and behavior are magnified in response to perceived entitativity such that people respond to an entitative group as if it was a single individual (Hamilton and Sherman, 1996), for example, with strong judgments (Smith, Faro, and Burson, 2013). Some research suggests that similar processes occur when judging products (Mishra, 2009; Wanke, Bless, and Schwarz, 1998). If brands and other marketplace entities are indeed sensitive to perceptions of unity, this may affect judgments in a variety of ways.

Exploring the concept of brand unity allows for an interesting theoretical investigation into not only overall perceptions of a unified versus non-unified producer, but also perceptions of the individual components of that producer—individual product experiences. Marketing variables such as price and knowledge of ingredients affect actual product experiences (Lee, Frederick, and Ariely, 2006; Plassman et al., 2008), and perceptions of brand unity may do the same, but the facets of this relationship are unclear. On one hand, processing of entitative groups is generally associated with reduced attention to individual members. This implies that judgments of individual products and product experiences may be more muted for entitative brands. On the other hand, stronger judgments of entitative brands may transfer into judgments of individual products, so judgments of product experiences may also be stronger for entitative brands. This also suggests that any "draw" from an entitative brand's offerings would *also* produce a strong judgment. It follows that those judgments may also affect actual consumption.

Two studies support the latter proposition: when consuming products associated with unified producers, consumers have stronger judgments of the producer overall and individual components, and also altered product consumption behavior. Participants in study 1 read a brief description of a band, listened to its music, and rated the band's songs. Perceptions of the band's unity were manipulated by informing participants that, after the recording of the music, the band remained close friends (unified) versus broke up due to personal differences (non-unified). The nature of the relationship between band members should have no obvious effect on perceptions of the quality of the music, but has been shown to affect perceptions of entitativity (Hamilton, Sherman, and Costelli, 2002; Lickel et al., 2000). Participants then listened to two neutral-quality songs, evaluated them, then reported their liking of the band and perceptions of the band's entitativity. As expected, participants reported higher ratings of the songs and actually listened to the songs longer when they believed the band-members were close friends versus broken up. Ratings of the band's entitativity predicted higher judgments of the songs and mediated the effects of the manipulation on these judgments. Time spent listening to the second song was also mediated by overall liking of the band, in line with the proposed theoretical account.

Study 2 used a similar design but also manipulated the valence of the product, which allows us to rule out the possibility that higher ratings in study 1 were due merely to a lay-theory that cohesive bands produce better music. If the proposed process is instead correct, unified producers of poor-quality products will actually be rated worse than non-unified producers, as will their products. Participants read about a juice brand, sampled juice, and rated the samples and the brand overall. Perceptions of the brand's unity were

manipulated by informing participants that, for accounting reasons related to their forthcoming stock IPO, the company's eight existing juice flavors were either united into a single product line (unified) or divided into three product lines (non-unified). Again, this manipulation should not obviously affect perceptions of quality of the juice, but should affect judgments of the brand's entitativity. Participants sampled two juices—orange and apple—which were described as coming from the same product line in both unity conditions. The quality of the juice was also varied, with participants either sampling two unadulterated juices, or two juices that had water, salt, and vinegar added to them. Following each tasting, participants rated the juice. As expected, an ANOVA revealed a significant interaction between unity and juice quality: the good juice was consumed more and highly rated when it was believed to come from a company with one product line, while the bad juice was consumed less and rated more negatively when it was believed to come from a company with one product line. These ratings and consumption were again mediated by perceptions of the company's entitativity. The quantity of the second juice consumed was also mediated by overall liking of the company.

These findings show that perceptions of a company's unity affect judgments of the company itself, their products, and consumption behavior. When marketplace entities seem unified, consumers rate those entities more extremely (positively or negatively) because each individual product has become more extreme. This research extends the theory of entitativity by exploring how perceptions of entitativity of a group affect judgments and experiences with the products of that group. The current findings add to a growing body of literature showing how marketplace variables affect actual product experiences, and do so using a variable with a nuanced relationship with product quality.

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Hard to Right and Easy to Bye: Priming Consequences of Reading Homophones

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Can reading the word "bye" influence how much someone is willing to pay to "buy" a product? Or can telling consumers to "wait" influence their perceptions of a target object's "weight"? We investigate conditions where one homophone – a word that sounds the same as another but has different spelling and meaning –primes perceptions and behaviors related to the complementary homophone. We suggest that this priming effect is an outgrowth of the reading process and is more likely to occur when individuals experience cognitive load, as load suppresses a secondary corrective process (Gernsbacher and Faust 1991). This research represents the first demonstration of homophone behavioral and perceptual priming and contributes to our understanding of priming in general.

We argue the described effect is an outgrowth of an automatic process—wherein stimuli induce processing (Bargh 1994; Schneider and Shiffrin 1977). We also draw from research on homophones and their relationships from the cognitive psychology literature (Lesch and Pollatsek 1993; Lukatela and Turvey 1994; Van Orden 1987). This research finds that homophones are linked via their phonology and can influence subsequent tasks (e.g. lexical decision tasks, Pexman et al. 2001; stem completion tasks, Rueckl and Mathew 1999; and also induce memory errors, Azuma et al. 2004; Starns et al. 2006), however these investigations never extend to the behavioral realm—where homophones can prime behaviors and perceptions.

In four studies we investigate how one word in a homophone pair (i.e. wait, right, bye, or phew) can influence behaviors and/or alter perceptions related to the complementary homophone (weight, write, buy, and few, respectively). We find support for homophone priming, relative to control conditions, but only when participants experience cognitive load, suggesting participants suppress the influence of homophone primes with sufficient cognitive resources (Gernsbacher and Faust 1991).

In study 1, we test if reading, "wait" can influence perceptions of "weight". The experiment had eight conditions (Wait Type: No Wait, 30sec wait labeled "delay", 30sec wait labeled "wait", 30sec wait without labeling) x (cognitive load: load vs. no load). Participants were primed then completed the target task, wherein they viewed a grocery bag depiction and answered, "If you placed the bag on a scale, what is your guess for the readout in pounds?" and "To ask another way, how heavy is the bag above?" on a 7-point scale anchored by "not heavy at all" and "very heavy". Responses were combined into a composite measure of subjective weight (cronbach's alpha = .83). An ANOVA revealed a marginal main effect of wait type ($F(3, 223) = 2.5$, $p = .06$), and a significant wait type x load interaction ($F(3, 223) = 3.74$, $p < .05$). Planned contrasts revealed that subjective weights in the wait/wait load condition were significantly greater than in any other condition (all ps < .05). Indicating that participants who read "wait" perceived the grocery bag to weigh more, but only when under cognitive load (see figure 1).

In study 2, we test if reading, "right" elicits longer essays from participants (i.e. they "write" more). The experiment had five instruction conditions (two containing the word "right" and three controls) crossed with a load manipulation. The main task was to "tell us about" a recent grocery trip. Initial analyses confirmed that collapsing conditions into "right" vs. "control" was appropriate. An ANOVA revealed a main effect of condition ($F(1, 150) = 10.02$, $p < .01$) such that people who saw the word "right" wrote fourteen more words on average, a marginal effect of load ($p = .059$), which was qualified by a significant condition x load interaction ($F(1, 150) = 5.20$, $p < .03$). An inspection of the means revealed that participants wrote more (eighteen words more on average) when they read "right" under load. Control conditions did not significantly differ from each other (see figure 2).

In study 3, we test if reading "bye" influences "buying" behaviors. Participants read an ostensibly unrelated story about a vacationer's last day. The story either concluded with the writer saying "Bye Bye" or "So Long" to their vacation spot. These conditions were crossed with a load manipulation. Participants then read about a restaurant promotion and indicated their WTP for dinner for two, this was the dependent variable related to "buy". An ANOVA revealed a significant condition x load interaction ($F(1, 109) = 4.03$, $p < .05$) such that people under load who read "Bye Bye" were willing to pay the most for the restaurant deal. Planned contrasts revealed that WTP in this condition was significantly greater than in any other condition (all ps < .05; see figure 3).

In study 4, we test if reading "phew" can have a downward effect on behavioral intentions. Participants read a story that ended with the protagonist exclaiming "phew" or "close call". These conditions were crossed with a load manipulation. Participants then answered a behavioral intention question (9-point scale) about saving money in the next year (a socially desirable behavior). This served as the dependent variable. An analysis revealed a significant prime x load interaction ($F(1, 173) = 5.85$, $p < .02$) such that individuals who read "phew" while under load indicated that they intended to save less money than any other condition (planned contrasts, all ps <.05; see figure 4).

Taken together these studies provide initial evidence for how homophones can prime perceptions and behavior. It contributes to our understanding of how and when behavioral priming can occur, by identifying a new way to prime behavior and influence perceptions. Homophones can prime both "more" and "less" of a behavior, behavioral intention, and perceptions. Additionally, this research may contribute to a related stream of research on phonemes and the role of phonology in branding (Argo et al. 2010; Lowrey and Shrum 2007; Yorkston and Menon 2004) and marketing in general. Consider for instance, the case of the weight loss drug "Alli". It is a constructed or psuedohomophone designed to help consumers understand that the drug is their "ally" in weight loss.

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5.4 Individual Papers: Let's talk about Sex: Gender Issues in Consumption

Room: El Capistrano

Chair: Kiju Jung, University of Illinois at Urbana-Champaign

Back Off My Man! Women's Conspicuous Consumption as a Mate Guarding Strategy

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Anthropologists and historians find that ostentatious displays of wealth have been occurring for millennia, with people in both traditional and modern societies seeking luxury possessions (Bird and Smith 2005; Veblen 1899). In the United States alone, spending on luxury goods amounts to as much as $525 billion per year, including millions of dollars spent on designer handbags, designer shoes, and luxury cars.

Given the ubiquity of conspicuous consumption across history and human cultures, scholars have proposed that the human tendency to seek and display luxury possessions might have functioned to enhance reproductive fitness (Miller 2009). This idea has received some support for men's conspicuous consumption. Multiple studies have found that a motive to attract a mate triggers conspicuous consumption in men but not women (Griskevicius et al. 2007; Sundie et al. 2011). Yet it is women who account for more than half of spending on lavish goods in the U.S. Given the prevalence of women's desire to acquire, how might conspicuous consumption have functioned to enhance women's reproductive fitness?

The current research examines the possible social function for women's tendency to seek and display luxury goods. We propose that whereas men's conspicuous consumption might have helped solve the evolutionary challenge of *attracting a mate*, women's conspicuous consumption might have helped solve the evolutionary challenge of *guarding a mate*. This means that women in romantic relationships might seek and display possessions such as expensive handbags and designer shoes to protect their relationship by warding off potential female rivals who might interested in pursuing in the relationship partner. We tested this possibility in four experiments.

Experiment 1examined how a motive to attract versus guard a mate influenced conspicuous consumption. The study had a 2 (Participant Gender) X 3 (Motive: Mate Attraction, Mate Guarding, Control) between-subjects design. To activate each motive, we used guided visualization manipulations from previous research that has successfully activated each motive (Griskevicius et al. 2007; Maner et al. 2007). After activating each motive, participants indicated how much money they would spend on four different products often displayed conspicuously: car, dress shoes, cell phone, and handbag (for women) /wallet (for men).

Findings revealed an interaction between Gender and Motive ($F(2,323) = 5.50$, p=.004). Consistent with past research, a motive to attract a mate led men but not women to spend more on conspicuous products ($t(323)=2.88$, p=.004). However, supporting our novel prediction, a motive to guard a mate led women to spend more on conspicuous products ($t(323)=2.65$, p=.008).

Experiment 2 conceptually replicated and extended the novel finding for women. To ensure robustness, the second study used different manipulations to activate mate-attraction and mate-guarding motives, as well as a control condition that was equated in arousal level. To assess conspicuous consumption, women physically drew brand logos on a designer handbag, shoes, shirt and car. The size of the logo (in cm^2) served as the dependent measure, with past research showing that a desire for larger logos reflects a desire for conspicuousness (Lee and Shrum 2012). Results again showed that while a mate attraction motive did not influence the size of the logos, a mate guarding motive led women to draw significantly larger logos compared to women in the control condition on handbag ($t(134)=3.21$, p = .002), shoe ($t(134)=3.67$, p<.001), shirt ($t(134)=3.99$, p<.001), and car ($t(134)=2.14$, p=.03).

Experiment 3 examined the intended audience of women's displays triggered by a mate-guarding motive. Because women's conspicuous consumption is hypothesized to ward off female rivals, we predicted that the intended audience of women's luxury possessions would be other women but not men (e.g., the woman's current relationship partner). We activated a mate guarding motive, but the situation was manipulated so that the woman's conspicuous products could only be seen by either other women or men. Thus, the study had three between-subjects conditions: (1) mate guarding – male audience, (2) mate guarding – female audience, and (3) control.

To assess conspicuous consumption, we used an incentive compatible measure. All participants earned 5 extra dollars in the study, which they could either take home or use to purchase raffle tickets to win a $200 gift card to a luxury store (e.g., Neiman Marcus, Tiffany & Co., etc.). Participants could spend as much or as little of the $5, with higher spending increasing the likelihood of getting the card. Findings showed that activating a mate guarding motive did not alter women's spending when the audience was male. However, as predicted, activating a mate guarding motive led women to spend significantly more of their money for a conspicuous consumption opportunity when the audience was female (t(72)=2.90, p=.04).

Experiment 4 examined if women's conspicuous consumption actually signals information to other women that would facilitate mate guarding. Participants viewed one of three descriptions of a woman a party with her date. The descriptions were identical expect that we varied the luxuriousness of her handbag, shoes, and jewelry. These possessions were described as: (1) inexpensive, (2) luxurious, or (3) no specific product description was provided. Findings showed that when the woman had luxurious products, she was perceived by other women as having a stronger bond with her romantic partner (t(90)=2.25, p=.027). Importantly, when the woman had luxurious possessions, other women were less willing to romantically pursue her relationship partner if the opportunity arose (t(90)=-1.95, p=.05). Furthermore, the study also found that women spontaneously inferred that the woman's partner contributed financially to her luxurious possessions.

Overall, this research identifies a novel social function of women's conspicuous consumption – that women in relationships use conspicuous consumption to guard their partner by warding off potential female rivals. This research is the first to identify a possible evolutionary function for women's conspicuous consumption, suggesting that women might seek and display luxury products for a different evolutionary reason than men.

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Closing the Gap: How Self-Discrepancy and Gender Drive Ideal Self-Congruency with Brands and Social Groups

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Consumers use products and brands in a symbolic way to narrate and express their identities (Escalas and Bettman 2005). An individual's self-concept, however, consists of various domains, including the actual self, which constitutes the attributes an individual believes herself to actually possess, and the ideal self, which constitutes the attributes she would ideally like to possess (Higgins 1987). The extent to which each domain of self (actual versus ideal) drives brand preference has been the subject of considerable research (Birdwell 1968; Dolich 1969; Landon 1974; Malär et al. 2011). Evidence for when ideal self-congruency might drive brand preference, however, has been rather equivocal (Landon 1974; Malär et al. 2011).

This research suggests that ideal self-congruency may drive consumption choices when individuals have high self-discrepancy (i.e., feel far from their ideal selves), but the avenues through which they prefer ideal self-congruency vary by gender. Women, whose ideal

selves revolve around relationships (Josephs, Markus, and Tafarodi 1992), should be more likely than men to seek ideal self-congruency in their social relationships. Men, on the other hand, should look towards more individual and independent avenues (Josephs et al. 1992; Markus and Kitayama 1991), such as brands, to reduce their self-discrepancies. We predict, therefore, that men (women) high in self-discrepancy will report more and prefer brand (social) relationships that match their ideal visions of themselves compared to men (women) low in self-discrepancy and women (men) in general.

In studies 1a and 1b, participants named their favorite brands and then classified those brands based on the extent to which they fit with their various dimensions of the self (actual, ideal). The dependent variables were the percentage of brands classified as matching participants' ideal and actual selves. In study 1a, participants indicated the discrepancy between their actual and ideal selves by completing the Self-Attributes Questionnaire (Pelham and Swann 1989). In study 1b, self-discrepancy was manipulated by having participants write about either a time they felt very close to their ideal self or very far from their ideal self. Tobit models in both studies revealed significant interactions of self-discrepancy and gender. Men with high self-discrepancy reported a larger (smaller) percentage of brand relationships with brands they considered to be consistent with their ideal (actual) selves compared to men with low self-discrepancy. Women, however, exhibited no such pattern.

Studies 2a and 2b focused on social relationships; participants named social groups to which they belonged, indicating whether the groups were related to their actual or ideal selves. Again, Tobit models revealed a significant interaction of self-discrepancy and gender such that women with high self-discrepancy named a greater percentage of social groups that were consistent with their ideal self compared to women with low self-discrepancy. Men, however, did not exhibit this pattern. These results occurred when self-discrepancy was both measured (study 2a) and manipulated (study 2b).

Although men reported greater ideal self-congruency with brands and women reported greater ideal self-congruency with groups, it is possible that both men and women could reduce their self-discrepancy through interactions with either an ideal brand or social group. Studies 3 and 4 sought to test this hypothesis. Both studies focused on a particular "self," an individual's American self, and manipulated self-discrepancy through the difficulty of a quiz on American history and government. In study 3, participants then evaluated one of three advertisements for a laptop. The advertisement was either for an American brand (ideal), foreign brand (unideal), or was unbranded. In addition to testing whether interacting with the advertisement for the American brand would lower participants' self-discrepancies, we also measured brand attitude and brand engagement. An ANOVA revealed that those with high self-discrepancy (hard quiz condition) had greater brand attitudes and brand engagement with an American brand compared to consumers with low self-discrepancy (easy quiz condition). Furthermore, we found that by interacting with an advertisement for the American brand consumers with high self-discrepancy lowered their self-discrepancy. These results only occurred with an American (ideal) brand and did not occur with a foreign (unideal) brand.

Study 4 was similar to study 3, but rather than view an advertisement for a brand, participants evaluated an advertisement for a social club on campus. The advertisement was either for an American club (ideal), foreign club (unideal), or was a generic club. Like in study 3, we found that those with high self-discrepancy (hard quiz condition) had greater club engagement with an American club to consumers with low self-discrepancy (easy quiz condition). Furthermore, we found that by interacting with an advertisement for the American club consumers with high self-discrepancy lowered their self-discrepancy. These results only occurred with an American (ideal) club and did not occur with a foreign (unideal) club.

This research examines when ideal self-congruency matters to consumers, and the avenues through which they seek it (brands, social relationships). We find that consumers are more likely to look for ideal self-congruency when they feel far from their ideal selves. The avenues through which they typically seek out ideal self-congruency, however, appear to vary by gender. Men with high self-discrepancy reported a greater number of their brand relationships as being consistent with their ideal selves, while women high in

self-discrepancy reported a greater number of social group memberships as being consistent with their ideal selves. When given an opportunity to interact with an ideal brand or social group, however, both men and women used such interactions to reduce their self-discrepancy. While this research begins to scratch the surface of how self-discrepancy affects self-expression, future research regarding the effects of self-discrepancy on consumers' desire for ideal self-congruency will lead to greater insights on the role self-expression plays in consumer behavior.

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Men's Romantic Motives and Partner Preferences: The Relationship with Materialism.

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\Men's engagement in conspicuous consumption may fulfil an important communicative function in a mating context (Griskevicius, et al. 2007; Miller, 2009; Sundie et al., 2011). In particular, in response to women's preference for men with status (Colarelli & Dettmann, 2003; Kenrick, Sadalla, Groth, & Trost, 1990), men in a mating mindset show an increased interest in status-signaling products (Griskevicius et al., 2007; Janssens et al., 2011). Since conspicuous consumption is a typical *materialistic* behavior (Richins, 1994; Wong, 1997), we test whether in particular materialistic men will engage in conspicuous consumption behavior to attract partners. However, given women's general preference for men with wealth and status (Buss, 2004; Kenrick, Sadalla, Groth, & Trost, 1990), it is likely that men scoring low on materialism may also exploit the benefits of conspicuous consumption in a mating context, while they may refrain from such behavior in other circumstances. Still, if materialism predicts men's engagement in conspicuous consumption to achieve reproductive rewards, this finding may have a number of important implications.

First, while the relationship between mating motives and conspicuous consumption is well-documented, relatively little is known about the conditions which evoke this mating strategy. Our research links men's reliance on conspicuous consumption to attract women to a fairly stable individual difference variable, namely materialism.

Second, an exception to the previous argument is recent work by Sundie and colleagues (2011). They show that men's engagement in conspicuous consumption behavior in a mating context may be a signal of short-term mating interest, rather than long-term commitment. This could imply that materialistic men may also be more inclined (than non-materialistic men) to pursue short-term mating goals. Consistently, materialistic men may be stronger inclined to desire partners who are sexy or highly attractive, characteristics which are especially important in the short run (Kenrick et al., 1990). Interestingly, to our knowledge little research has investigated the relationship between materialism and (men's) mating goals and partner preferences. The second aim of the current paper is to provide more insight in this matter.

A first study assessed whether the activation of men's mating motives, induced by a real-life encounter with an attractive woman (cf. Janssens et al., 2011), increased materialistic men's interest in products which signal status. 117 male students were welcomed in the lab by a female experiment leader who was either plainly (control condition) or sexily dressed (mating condition). Next, participants rated the attractiveness of 5 conspicuous status-signaling gadgets and 5 inconspicuous functional products (all pretested). Finally, materialism was measured (α=.83).

As predicted, a GLM analysis yielded a significant interaction between Materialism, Condition, and Product Type (within subjects; see figure); mating goal activation increased interest in status-related products (not in functional products) for materialistic participants, not for men scoring low on materialism.

attractiveness ratings
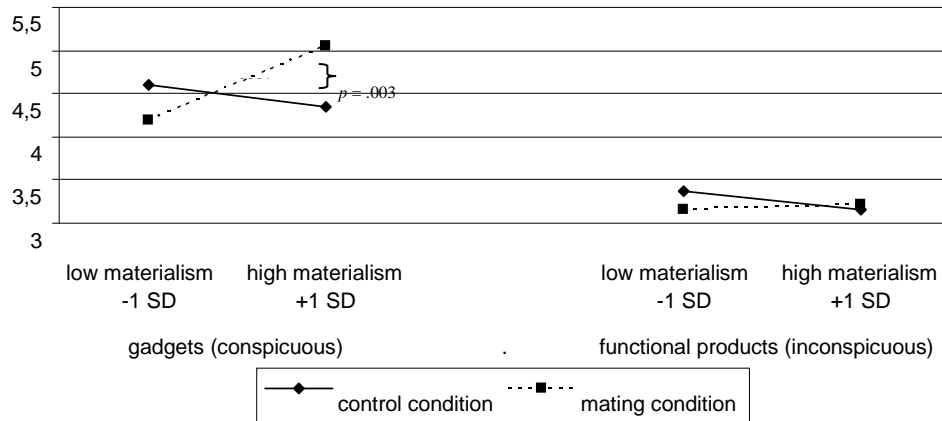
Combined with the finding that men with short-term mating motives tend to engage in conspicuous consumption (Sundie et al., 2011), study 1 suggests that materialistic men's mating strategy signals low commitment. This finding raises the question *why* materialistic men would engage in mate attraction strategy which is recognized as being short-term oriented.

First, the fact that materialists are likely to be self-centered, to display little empathy, or to experience poor interpersonal relationships (Richins & Dawson, 1992; Sheldon & Kasser, 1995; Solberg, Diener, & Robinson, 2004) could be interpreted as a signal of low ability or willingness to display relational commitment. Second, pursuing a mating strategy relying on conspicuous consumption may have an important benefit for materialistic men. Given that a short-term mating strategy might lead to the selection of highly attractive and socially visible partners (Simpson & Gangestad, 1992), this mating strategy could allow materialistic men to fulfill their need for social approval (cf. Chan & Prendergast, 2007; Richins & Dawson, 1992; Rose & DeJesus, 2007). In other words, materialistic men may attempt to increase their own status by flaunting a good-looking and highly desirable romantic partner. Study 2 explores these possibilities.

In study 2, 150 male students read descriptions of two hypothetical romantic partners (cf. Simpson & Gangestad, 1992). Description A depicted a women who scores high on characteristics related to social visibility (attractive, admired by others), but low on characteristics that are typically valued in long-term partners (responsible, faithful); vice versa for description B. Participants indicated which of both corresponded best to their ideal long-term romantic partner. They also completed a measure of extrinsic goal pursuit (α=.84, cf. Kasser & Sheldon, 2000) assessing their motivation to gain social approval, a measure of materialism (α=.82), and a measure of short-term mating interest (attitudinal items of the SOI, α=.75; Simpson & Gangestad, 1991).

Logistic regression analyses revealed that the probability of preferring partner B (over A) decreased with increasing levels of materialism. This effect became marginally significant when SOIattitude was added to the model (SOI attitude correlated positively with materialism), yet insignificant when extrinsic goal pursuit was added (significant mediation), suggesting that mainly their need for social approval underlies materialists' pursuit of socially visible women.

In sum, while the relationship between mating motives and conspicuous consumption is well-documented, relatively little is known about the conditions which evoke this mating strategy (for an exception: Sundie et al., 2011). Our paper links men's reliance on conspicuous consumption to attract women to a fairly stable individual difference variable: materialism. In addition, this paper advances our understanding of the consequences of materialism for romantic relationships–a type of social relationships which may have important implications for consumer decision making and product choice (see Simpson, Griskevicius & Rothman, 2012 for an

overview) and which has begun to be studied from the perspective of materialism (Sundie, Griskevicius, & Beal, 2012). While further research is warranted, our findings at least suggest that men who overtly flaunt status products are likely to search for a trophy wife, rather than a faithful and trustworthy partner. Future research may, for instance, investigate the consequences of these partner choices and mating strategies for materialists' well-being.

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Power, Gender and Consumption Choices: The Gender-Matching Effect
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An emerging literature on power and consumer decisions has documented how and why power affects consumer decisions for self and the other. However, little is known about whether, how and when the effect of power on choices for self and others is gendered. Drawing upon research on power and social hierarchy (Rucker, Galinsky and Dubois 2012), gender stereotypes (Bem 1981; Eagly and Wood 1999), and linguistic gender differences (Pardo 2006), this article investigates the effect of dynamic interplay between one's gender and its match (or mismatch) with the other's gender on choices for self and the other in the social hierarchy.

We assume that people would hold a naïve belief that the choice of a more potent product (e.g., stronger coffee) would elevate or sustain their state of power, suggesting that powerful people prefer a more potent product to sustain power as a confirmatory reaction whereas powerless people do so to elevate power as a compensatory reaction. Moreover, as powerful people would be more agency-oriented/self-regarding whereas powerless people would be more communion-oriented /other-regarding (Rucker, Dubois and Galinsky 2011), we assume that powerful people would be more reluctant than powerless people to sharing power with the other, in turn choosing a less potent product (e.g., weaker coffee) for the other.

However, once the other's gender is identified and there exists power disparity between self and the other in the social hierarchy, two sources of power are germane - one from power disparity in the social hierarchy and the other from gender stereotypes. These sources of power may conflict with each other particularly when gender is mismatched and men's dominance over women is violated. Therefore, a woman higher in power than a man may be motivated to resolve the conflict and reject the gender stereotype through making a more potent choice for herself than for the other. On the other hand, a man lower in power than a woman may resolve the conflict by making a more potent choice for himself than for the other as a way of restoring power.
In contrast, when interacting with the other of the same gender, men would be more hierarchical and agency-oriented whereas powerful women would be less hierarchical and more communion-oriented as suggested by gender differences in phonetic convergence (Pardo 2006). Therefore, we argue that when gender is matched, a man with high power would choose a more potent product for himself than for the other with low power. However, a woman with high power may be more mindful of the taste of the other with low power in the social hierarchy, adjust the choice for herself to the taste of the other with a consideration of warmer and softer qualifications assigned to women (Fiske et al. 2002), and choose a less potent product for both herself and the other.

Experiment 1 (*N*=135) examined the effect of power on choices (mild or strong taste of coffee) for self and the other when the other's gender is unspecified and the other is similar in power in the social hierarchy. Power was manipulated by using an episodic memory recall task (Derek and Galinsky 2008). In a seemingly unrelated task, where choices of coffee for self and the other were measured, participants were asked to choose two out of five coffee capsules varying by strength of taste (2-10: 10 is strongest with 2-interval) for a coffee break with their colleague, one for themselves and the other for colleague. Participants reported their choices for themselves

and their colleague. As predicted, participants with high power chose stronger coffee for self than for the other whereas participants with low power chose equally strong coffee for self and the other (table 1). Gender had no or little effects.

Experiment 2 (*N*=160) investigated contingencies of this effect by employing a 2 (power: low-power, high-power) × 2 (gender matching: mixed-gender, same-gender dyad) × 2 (gender of participant: female, male) between-subjects design. The gender of participants was obtained along with other demographic information, gender matching was manipulated by using one of the following two names of the other (Alexander Yates, Jenna Marie), and power was manipulated by employing different positions of the other, either as a vice president or as a senior staff while holding participants' position constant as a section manager. Thus, participants were led to feel less powerful when having a coffee break with a vice president whereas they were led to feel more powerful when having a coffee break with a senior staff. Information about coffee capsules was presented as in experiment 1, and participants reported their choices of coffee for self and the other. In general, participants with high power chose stronger coffee for self than for the other with low power whereas participants with low power chose equally strong coffee for self as well as for the other with high power, consistent with the pattern in experiment 1. However, there were important exceptions. When gender was matched, female participants with high power chose equally weak coffee for self as well as for the other with low power. In addition, when gender was mismatched, male participants with low power chose stronger coffee for self than for the other with high power (table 2). Moderated mediation analyses confirmed that the effect of the other's position on choices on self and the other through perceived power disparity was contingent on one's gender and gender-matching (figures 1, 2 and table 3).

In summary, research on gender difference in consumption decisions has mainly focused on the main effect of gender while treating it as a control variable or an intrapersonal variable. In addition, research on effects of power on consumer decisions has rarely reported any gender effects on consumer decisions in interpersonal relationships. Considering gender as both intrapersonal (gender) and interpersonal constructs (gender-matching) leads to new insights into the dynamic interplay between power and gender. This interplay is more complex than previously discussed, suggesting fundamental gender differences in the use of power as a basis of judgments for choices for self and the other.

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5.5 *Symposium:* **Why We Fight: Social and Emotional Motivations for Punishment**
Room: Concepcion
Chair: Ayelet Gneezy, University of California San Diego, USA

Taking Control: Revenge and the Role of Helplessness
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Alex Imas, University of California San Diego, USA
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Revenge is a common response to unfair treatment. Offended individuals lash out at others even when doing so comes at a cost to themselves, going to great lengths to seek revenge, spending time and money to "get even." Yet clearly not all offenses result in revenge (Bechwati and Morrin, 2003), which raises the question of what factors engender vengefulness, and how one can reduce its incidence. We propose that lack of control over an offensive interaction and the resulting state of helplessness serves as a critical motivator for revenge. We speculate that if individuals had a greater sense of control during the offensive interaction, they would feel less helpless and subsequently be less likely to engage in acts of vengeance.

In our first experiment (Study 1) we looked at the incidence of revenge in a controlled field experiment in which a research assistant interacted with coffee shop patrons, some of whom he intentionally annoyed. Subsequently, he "accidentally" overpaid participants for their time and measured their tendency to keep the extra cash. We used the difference in the proclivity to keep the extra cash between the Annoyed and the Not-Annoyed conditions as our measure of revenge. In line with our prediction, we found that annoyed participants were significantly less likely to return the excess cash than those who were not annoyed (17.1% and 51.5%; $t(134) = 4.51$, $p < 0.001$).

In the next three experiments, we utilize a paradigm known to induce helplessness. Study 2 uses this paradigm to demonstrate that uncontrollable offensive interactions increase vengeful behavior. Participants were informed that they would be matched with another individual against whom they would compete in solving anagrams for a prize, and their partners had the option to impede them by activating an irritating noise they would have to listen to while working on the task. In the Noise condition, participants heard a 3,000 Hz, 90 dB tone at random intervals (somewhat similar to a powerful vacuum cleaner)—the standard stimulus used in helplessness paradigms (Alloy and Abramson, 1982); in the No-Noise condition, participants heard nothing.

All participants played against a computer and were randomly assigned to either the Noise or No-Noise condition. They were instructed to put on a pair of headphones and keep them on for the duration of the experiment or be disqualified and forfeit all potential earnings. After solving anagrams for five minutes, all participants were informed that they had lost the competition, receiving 100 experimental tokens while their opponents would receive 200 (tokens were converted to money at the end of the experiment 10 tokens=$1).

To measure revenge, we told participants they could choose to reduce their opponents' earnings by giving up some of their own tokens. For every token they gave up, their opponents' income would decrease by five tokens. In line with our predictions, we found that participants in the Noise condition gave up significantly more tokens than those in the No-Noise condition to punish their opponent (M=13.1 vs. M=4.7 respectively, $t(60)$=1.67, p=.05).

In Study 3 we looked at whether offensive interactions increased demand for subsequent control, and whether endowing individuals with control over the offensive interaction would moderate this demand. Participants were matched into the Noise or No-Noise condition, and were either endowed with control over the interaction or not. In the Control condition, participants were informed that they could take off the headphones anytime at a cost of 50 tokens. The cost acted to discourage participants from actually removing their headphones, so that those in the Control condition heard the same levels of noise as those without control. To measure demand for control, after participants were informed that they had lost the anagram competition we elicited participants' willingness to pay for getting to pick the winning side (heads or tails) of a random coin toss. We told participants they would bid against their opponents to gain this option, and that we would deduct the bid amount from the winnings of the higher bidder, who would then get to choose heads or tails. We used bid magnitudes as the measure of demand for control, predicting that participants who had no control over an offensive interaction would submit higher bids than participants who had control.

Planned comparisons showed bids in the No-Control Noise condition were significantly higher than bids in the other three conditions, $t(146) = -2.89$, $p < .01$. We found no difference among the bids across the other three conditions (In-Control Noise; No- Control No-Noise; No-Noise In-Control). This suggests that offensive interactions induce feelings of helplessness and create a demand for subsequent control, and that endowing individuals with control mitigates this demand. In our next study, we argue that revenge acts as a mechanism of satiating this demand.

In Study 4, participants were matched into either No-Noise or Noise conditions, and either had control (option to remove headphones) or did not. Other than endowing some participants with control over the interaction, the protocol was largely identical to Study 2. Here, we directly test the prediction that having the option to control an offending interaction moderates individuals' motivation for revenge, even when they do not exercise this option.

The results support our hypothesis. Planned comparisons showed that participants in the No-Control Noise condition sacrificed significantly more tokens than those in the other three conditions, $t(123)= -3.658$, $p<.001$. Again, we found no difference in the number of tokens participants sacrificed to punish opponents across the other three conditions (In-Control Noise; No-Control No-Noise; In-Control No-Noise). Note that although they were exposed to the *exact same noise*, participants in the No-Control Noise condition punished their partners significantly more than Noise with Control participants, $t(57) = -2.112$, $p <.02$.

The results of this study show that having the *ability* to control an offensive interaction moderates individuals' motivation for revenge. Together, our studies provide support for our conjecture that acts of revenge are driven, at least in part, by feelings of helplessness and lack of control.

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When Consumer Revenge Proves to be Beneficial

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When a severe service failure takes place, many consumers want to exert some revenge on the company. Indeed, the Customer Rage Survey reveals that 15 per cent of the customers who receive an unsatisfactory service are seeking revenge and 1 per cent of them admit already having enacted some revenge (Customer Care Alliance, 2005). While not all angry customers complain directly to the firm, most of them are likely to talk to others about the episode (Wangenheim, 2005). Although companies can hardly control this tendency, at least they should try to respond adequately in order to retain frustrated customers and turn them into loyal ones (Michel, 2001). In this regard, companies can apply different recovery strategies with the aim of minimizing the resulting negative outcomes (McColl-Kennedy and Sparks, 2003). Additionally, it has been demonstrated that negative emotions such as anger represent a catalyst of revenge behavior and occur in 97% of the failures (Tronvoll, 2007; Zourrig et al. 2009). Therefore, special attention should also be paid to the way consumers share such emotions with others. In relation to the expression of emotions, the term "catharsis" describes the process of relieving personal anger through "letting off steam" and hence removing irritation from a person's system (Breuer and Freud, 1895). After a negative consumption experience, consumers may feel a strong need for catharsis. When this catharsis materializes in the form of angry complaining, consumers continue to buy the product (Bennet, 1997). Thus, allowing consumers to express their emotions could benefit the company (Schoefer and Diamandopoulos, 2008) and bolster the effectiveness of recovery actions in comparison with the situation where restrictions to the free sharing of emotions are imposed.

In study 1, we manipulate the level of service recovery actions and the opportunity for catharsis. Results reveal differences between catharsis and no catharsis for the intermediate level of recovery. Thus, when the company "only" apologizes, the possibility of catharsis makes a difference, contributing to a higher satisfaction compared to the situation when emotions need to be suppressed. This finding indicates that when a service failure occurs and the firm does not want to apply or cannot afford a higher level of recovery, encouraging customers to vent their emotions or, at least, not discouraging them to do so, leads to an increase in satisfaction.

Furthermore, the effect of service recovery strategies and catharsis on the satisfaction response may also be influenced by the self-regulatory focus adopted by the consumer. Individuals with a promotion focus are sensitive to the presence or absence of positive outcomes (gains/non-gains), are approach oriented, and are motivated to pursue goals consistent with their ideal state. Individuals with a prevention focus are more sensitive to the presence or absence of negative outcomes (losses/non-losses), and are generally avoidance oriented (Higgins, 1998). Recently, Arnold and Reynolds (2009) have shown that people in a bad mood and high in promotion focus recall more positive memories than individuals low in promotion focus. The rationale is that individuals with a promotion focus are more motivated to improve negative moods because such affective states are more consistent with an orientation toward positive outcomes. After a service failure, individuals are in a negative mood. The sharing process may elicit not only negative emotions but also positive ones, contributing to a higher level of satisfaction.

Prevention-focused self-regulation, on the other hand, is associated with a particularly strong tendency to react angrily and aggressively in situations involving a norm violation (Keller et al., 2007). In our context, service failures could represent a norm violation which activates the consumer's eagerness to get back at the company. If such need for revenge emerges in the form of a cathartic sharing, prevention oriented consumers may primarily focus on the negative aspects and get even angrier, leading to a decrease in satisfaction. Consistent with this prediction, in study 2 where we manipulate the service recovery strategy, the possibility of catharsis and the regulatory focus, we confirm that consumers under a prevention focus in the high-level of recovery condition show higher satisfaction when no catharsis is allowed. Thus, the expression of negative emotions along with the increasing aggressiveness penalizes individuals under catharsis, whereas restricting catharsis bolsters satisfaction. On the other hand, promotion-oriented individuals show higher satisfaction when catharsis is allowed in the apology condition. However, as the level of recovery increases, the differences disappear and catharsis does not make any difference, suggesting that the positive effect of recovery overrides catharsis.

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Tipping to Punish: Rewarding Bad Service and Punishing Good Service

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Imagine you experienced great service in an only-cash environment and then find that you don't have enough cash to reciprocate the quality of the service. What do you do?

Although tipping norms vary by culture, they exist primarily to reward good service—allowing consumers the opportunity to reciprocate service workers' (e.g., waiter, taxicab driver) efforts (Kahneman, Knetsch and Thaler, 1986). The rule of thumb is that the better service, the higher the tip. Consequently, very low tips are more likely to be associated with poor service. Indeed tipping has been shown to affect the perceptions and experiences of customers as well as the incomes, attitudes, and behaviors of service workers (Kwortnik, Lynn and Ross, 2009; Conlin, Lynn and O'Donoghue, 2003). Although the amounts given by a single customer to any one worker are typically modest, they are not negligible. For example, in the United States tipping is estimated to increase the cost of dining out by 10 to 16 percent and the costs of cab rides by 7 to 12 percent (Lynn and Lynn, 2004), and annual tips are estimated to exceed 42 billion Dollars (Azar, 2009).

This paper investigates a tipping paradox—consumers that experience good service would rather not tip at all when the alternative is to tip very low. In contrast, consumers experiencing rude service prefer tipping very low when the alternative is to not tip at all. The result? When not having enough cash, rude service workers end up being financially better off than nice service workers.

We started our investigation with an exploratory survey aimed at capturing service workers' tipping perceptions and preferences. Fifty-two restaurant and cafe workers were asked to imagine a scenario in which a guest only had $0.25 to tip, and were asked whether they would prefer to receive that tip or forgo it. Overall, 57.5% indicated they would prefer to <u>not</u> receive a tip, primarily because of its offensiveness on the one hand, coupled with its negligent value. Importantly, looking only at workers that do not receive individual tips (e.g., baristas) but instead see the amount accumulating in a jar revealed an opposite preference (39% no tip vs. 61% preferred a tip), primarily because "money is money", and "it adds up".

We followed up with two laboratory studies. Participants in Study 1 (N = 552) were asked to imagine having dinner in a nice restaurant that only accepts cash tips. Using a between-participants design, we manipulated the described behavior of the waiter (3 levels: rude, control, nice) and the tipping options available to the participants (2 levels: $0.25 vs. $0; $7 vs. $0). Participants reported their tipping decision, how they felt about it, the extent to which they cared not to offend the waiter, and whether they thought that tipping something was better than nothing. Not surprisingly, when having $7 (an amount considered more appropriate for the tip), participants were significantly more likely to tip the nice (96%) and control (89%) waiter than the rude waiter (52%). Interestingly, when having only 25 cents in their wallet, participants were as likely to tip the nice (49%) and control (41%) waiters as they were to tip the rude waiter (40%). Furthermore, while participants in the $7 conditions felt relatively good about their tipping decisions, for those in the $0.25 conditions, only participants in the rude condition felt good about their decision but those in the nice and control conditions felt significantly worse. A follow up analysis revealed that those with only 25 cents in their pockets did not feel that tipping something was better than nothing. In fact, particularly those in the nice and control conditions were concerned that a 25 cents tip would be offensive to the waiter and indicated feeling embarrassed about leaving such a tip.

In Experiment 2, we tested whether participants' tipping decisions would differ based on information regarding the worker's tipping expectations. Based on our proposition that tipping decisions are largely influenced by one's aversion to offend service workers, we expected that knowing that a low tip is "acceptable," would result with more people tipping $1. Participants (N = 305) were asked to imagine using complimentary transportation offered by their car dealership, in which the driver was described as nice. The tipping decision involved two options: $1 tip or no tip. Using a between-participants design we manipulated the reference tip to be high ($6-$10) or low ($1-$5). We also included a control condition in which we did not provide participants with any reference. After making their choice, participants completed a survey that measured their feelings with respect to their tipping decision, and the extent to which they would care not to offend the driver. In line with our predictions, low reference-participants were more likely to tip $1 (92%) relative to high reference-participants (77%, $p < .01$) and no reference-participants (82%, $p<.06$). Analysis of the remaining measures replicated the findings from Experiment 1 that participants' decisions were driven primarily by concerns to not offend a good worker even when doing so leaves the worker financially worse off.

These results suggest that because of the negative signal associated with low tips, individuals may end up not tipping good service workers at all. Interestingly, service workers share these tipping preference, but only when their job "forces" them to observe each tip.

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Last-place Aversion: Evidence and Redistributive Implications
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Scholars have long examined the surprising failure of lower-income groups to unite in support of redistributive policies, and have posited a number of accounts for this failure. The Marxist notion of "false consciousness," for example, holds that the capitalist class promotes ideological concepts—such as upward mobility—that blind members of poorer groups to their common interests and foment competition instead (Engels, 1893). Similarly, Veblen (1899) argued that members of the working class tend to admire the "leisure class" and even mimic its habits—such as conspicuous consumption—rather than identify with members of their own class. Especially in the American context, scholars have argued that racial, ethnic or cultural divisions (Woodward 1955; Alesina et al. 2001; Frank 2004) as well as a belief in income mobility (Benabou and Ok, 2001) limit support for redistribution.

We hypothesize that there is a basic, psychological aversion to the feeling of being in "last place," which increases competition and inhibits political unity among members of lower-income groups. Instead of uniting in pursuit of common interests, working class groups may wish to punish the groups slightly below or above themselves, with the hope of having at least one group "below" them. Because the probability of falling to the bottom of the income distribution decreases as an individual's income increases, the middle- and upper-classes would not be subject to this phenomenon. Why might this last-place aversion (LPA) exist? Certainly, the large body of research on reference-dependent utility (Duesenberry, 1949; Clark et al. (2008) suggests that people are highly sensitive to their rank in social groups; for instance, falling below the mean in a peer group has negative effects on subjective well-being (Luttmer 2005 and Card et al. 2010), and the ranked position of one's income is a better predictor of general life satisfaction than one's absolute income (Boyce et al. 2010).

In addition to a general human sensitive to ranks, some evidence suggests that people in lower ranks are more concerned with changes in status than people in higher ranks. Neural evidence suggests that individuals in a low pay group are averse to falling further behind those in a high payment group, while those in the high pay group exhibit less aversion to gains made by those in the low payment group (Tricomi et al. 2010). In addition, people's tendency to leave a queue is more strongly related to the number of people behind them than the number in front of them (Koo and Fishbach, 2010; Zhou and Soman 2003), again suggesting that people are more sensitive to feeling they are close to last place than close to first place. Finally, recent research showing that state lottery sales increase with poverty rates in a state-fixed-effects regression (Blalock et al., 2007) and that low-income individuals are more likely to play lotteries when primed to think about their rank (Haisley et al., 2008) offers further support for the notion that lower-ranked individuals are more likely to take action – even with low probability of success – to "move up" in rank.

We suggest that in addition to a greater general aversion to moving down than an attraction to moving up, people exhibit a particular aversion to moving down to *last place*, such that being in last place elicits behaviors that no other rank – even other low ranks – do not. Our results demonstrate an independent effect of being in – or at risk of falling into – last place, and documents two ways that individuals react to such situations: taking greater risks and being less generous to other people in lower ranks. We develop laboratory experiments to test its predictions for both risk-aversion and preferences over redistribution, and finally test for LPA using survey data assessing support for minimum wage increases.

In the first experiment, participants are randomly endowed with different dollar amounts, and shown their place in this "income" distribution. Each player is then given the choice between receiving a payment with probability one and playing a two-outcome lottery of equivalent expected value. The dollar amounts of the certain payment and the lottery outcomes are calculated so as to allow the last-place person the chance to move up in the distribution if he "wins" the lottery. The probability of choosing the lottery is uniform across the distribution except for the two lowest-placed players, who choose the lottery more often. These results are consistent with the last-place player trying to escape last place and the second-to-last-place player defending against the last-place player's strategy.

In the second set of experiments, participants are again randomly assigned a unique dollar amount and shown their place in the resulting distribution, and play money-transfer games. In the first game, participants are given a choice between keeping an additional

dollar and giving two dollars to the last-place person. As LPA predicts, the second-to-last place person is the least generous to the last-place person. In a second money-transfer game, players choose between giving two dollars to the person directly above or directly below them. Second-to-last-place players are again the least generous to the people below them. In both games, we show that merely being in the bottom half of the distribution does not explain the results—players must actually be close to "last place."

We then test for LPA using survey data on support for minimum wage increases. The minimum wage, by definition, defines the "last-place" wage that can be legally paid in most labor markets. As such, LPA would predict diminished support for increasing the minimum wage among those with wages just above the current minimum—if this new minimum were enacted, they would now likely share the "last place" wage with people whose wages used to be lower. We document this pattern using data from an online survey we conducted with a national sample, as well as using surveys on the minimum wage published by the Pew Research Center.

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5.6 *Individual Papers:* Lifestyles of the Rich and Famous: Status and Luxury Consumption
Room: Madero B
Chair: Renée Gosline, Massachusetts Institute of Technology

Competence versus Warmth Cues on Luxury Perception
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Luxury, a concept once used to delineate class-oriented exclusivity, appears to becoming increasingly popular and prevalent among today's mass market consumers. Not only has the size of the global luxury market grown exponentially to approximately 1 trillion dollars, but consumers are joining the world of luxury consumption from mature and emerging markets alike (BCG report 2010).

Given the large footprint of luxury products and services, an important challenge for marketers is to better understand the antecedents of a brand being perceived to be a luxury. The current research explores whether and how luxury perception can be influenced by cues of competence and warmth. While warmth is an assessment of others' intentions towards the self, competence captures others' ability to carry out intentions towards the self (e.g. Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Cuddy, & Glick, 2007). Applying this framework to branding, Aaker, Garbinsky, and Vohs (2012) found that while being judged high on either competence or warmth contributes to purchase intention for a brand, being judged high on both warmth and competence gives brands an extra boost in purchase intention, which they termed the "golden quadrant". However, in many situations, a brand might have the bandwidth to only advertise or represent itself as either competent or warm. The present research asks how each of these factors independently contributes to the luxury perception for brands.

Based on prior literature, we propose that just as competence cues signal ability to act on one's actions in an interpersonal context (Fiske, Cuddy, Glick and Xu 2002), the same cues could signal a brand's ability to produce superior products and services when judging a brand or a product. We further suggest that competence is the first important marker of luxury. Therefore, we predict that relative to warmth cues, competence cues increase luxury perception of new brands or brands not associated with being luxurious. However, building on the "golden quadrant" concept, we predict that once a brand has established itself to be a luxury brand, because competence is more likely to be inherently linked to the product, as a consequence we suggest warmth cues may contribute more strongly to additional luxury perception. Four studies tested the above novel hypotheses.

Experiments 1a and 1b:

The first two studies tested the effect that competence cues contribute to luxury perception through subtle variations of color or taglines on advertisements. Experiment 1a manipulated warmth and competence by either adding a warmth-related word (e.g. passion, sincerity) or a competence-related word (e.g. talented, intelligence) on the same mock advertisements. Experiment 1b manipulated warmth and competence by slightly altering the color tone on real print advertisements from well-known brands (e.g. Forever 21, Swatch) to be either a warm tone or a cool tone.

In both experiments, participants saw two advertisements with either warmth cues or competence cues. After viewing each advertisement, participants answered two items on the luxury perception of the advertisement on 7-point scales ("How much luxury do you associate with this ad?", "How much status/prestige do you associate with this ad?" 1= Not at all, 7= Very much). Results show that in both experiments, participants rated the advertisements with competence cues as more luxurious compared to advertisements with warmth cues (ps = .01, .005 respectively). An additional control condition in experiment 1b demonstrates that it is competence cues that elevate luxury perception (p = .001) instead of warmth cues lowering luxury perception compared to the control condition ($n.s.$).

Experiment 2:

The next experiment tested the proposed interaction effect that once a brand reaches luxury status, warmth cues enhance luxury perception more than additional competence cues. A 2 (cue: competence vs. warmth) × 2 (brand status: non-luxury vs. established luxury) between-subject design was adopted for the current study. Brand status was manipulated by using real print advertisements from well-known non-luxury brands (Forever21 and Swatch) or established luxury brands (Hugo Boss and Omega watch). Similar to Experiment 1b, warmth and competence were manipulated by altering the color tone on either advertisement to be warm or cool toned. Participants saw two advertisements in a random order and answered questions on luxury perception of the advertisements after seeing each advertisement, similar to Experiments 1a and 1b. Results show a significant two-way interaction (p < .001) between warmth/competence cues and brand status. For non-luxury brands, advertisements with a cool color tone are judged as more luxurious (p = .02) compared to the same advertisements with a warm color tone. However, for brands with an established luxury image, it is advertisements with a warm color tone that are judged as more luxurious compared to the same advertisements with a cool color tone (p = .08).

Experiment 3:

As Experiment 2 manipulated brand status by adopting real-life brands, the current study sought to replicate Experiment 2 in a more controlled setting with brand status manipulated through description of the brand. The current study adopted a 2 (cue: competence vs. warmth) × 2 (brand status: non-luxury vs. established luxury) between-subject design. To manipulate brand status, we informed participants at the start of the experiment that they would either see advertisements from "various new brands that hope to establish a reputation as luxury brands" or "various brands that have established a reputation as luxury brands." Competence and warmth cues were manipulated similar to Experiment 1a, in which either warmth or competence related words were displayed on the same mock advertisements as taglines. Results show a significant two way interaction (p = .003) in which advertisements with competence cues were rated higher on luxury perception for non-luxury brands (p = .04) while advertisements with warmth cues were rated higher on luxury perception for established luxury brands (p = .03).

Conclusion and Contributions.

The findings contribute to the literature on warmth and competence by identifying distinct stages of brand development in which either competence or warmth contributes to luxury perception. The current research has important implications for brands by suggesting that a brand should build a luxury image by sequentially displaying first competence cues and then warmth cues.

Earning Luckiness: The Effect of Elite Loyalty Program Membership Status on Perceptions of Luck

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A variety of companies from retailers to hotel chains have loyalty programs (LPs) designed to encourage repeat business. Managers recognize the importance of such programs, with half of the retailers polled in a survey by the National Retail Federation citing LPs as a key part of their strategy for 2012 (Grant, 2012). Given their ubiquity and perceived importance, it is unsurprising that both academic research (e.g., Bagchi & Li, 2011; Dreze & Nunes, 2009; Kivetz & Simonson, 2002, 2003; Kivetz, 2005) and practitioner interest (e.g., Jargon, 2010; Starvish, 2011) has focused on understanding what types of rewards consumers find most desirable and what structural features of LPs consumers find most compelling.

Despite the increasing sophistication of LPs, however, not all consumers who patronize a company join the company's LP. Further, in tiered programs, not all customers have equal status. In this research we examine how LP members with elite status respond differently than non-LP members to marketing outcomes that are outside of their control (e.g., winning a sweepstakes). We hypothesize that earning elite status in a LP fosters a sense of deservingness that transfers to randomly determined outcomes, leading elite LP members to believe they are "luckier" than non-members and hence more likely to win random drawings. We propose that this effect stems from the control heuristic, which posits that when consumers perceive a relationship between their effort and a desirable outcome, they believe that they have control over that outcome (Thompson, Armstrong, & Thomas, 1998). We argue that the elite members of a LP believe they have earned special treatment from the company, which leads to an illusory belief that they are more likely to obtain positive outcomes than others, even when those positive outcomes are randomly determined: the sense that they have put in more effort relative to referent others creates a comparative sense of illusory control (Langer, 1975, 1977).

We test the following hypotheses across three studies:

H1: Elite members of a LP (vs. non-members) perceive themselves as more likely to have random positive company-related outcomes happen to them.

H2: The effect hypothesized in H1 is mediated by elite LP members' belief that they have earned special treatment from the company.

H3:Elite members of a LP (vs. non-members) will only perceive themselves as more likely to have random company-related outcomes happen to them when

Effort is required to obtain elite LP status,

The random company-related outcome is desirable.

Study 1 (n = 197) tested whether elite status in a LP increased perceptions of luck in winning a random drawing for a gift basket while staying at a hotel. The study employed a 2 (LP elite status: yes or no) between-subjects design. As predicted in H1, elite LP members thought they were more likely than other guests to win the drawing (2.91 vs. 2.39; $F(1, 196) = 7.27$, $p < 0.01$) and felt that they had earned special treatment from the hotel to a greater extent than did participants who were not members of the LP (4.34 vs. 3.95; $F(1, 196) = 4.78$, $p < 0.05$). Supporting H2, this perception of "deservingness" mediates the effect of LP status on predicted likelihood of winning the gift basket [95% CI: (0.0097, 0.1208)] (Preacher & Hayes, 2008).

Because the control heuristic (Thompson, Armstrong, & Thomas, 1998) argues that people only perceive that they have control over a situation when their effort is tied to the outcome, we predict in H2 that LP members with elite status will not feel that they are more

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likely than others to have positive company-related outcomes happen to them when no effort was required to earn their status. Study 2 tests this hypothesis in a retail context by asking consumers what level of discount they expect to receive in the mail from a retail store (with which they hold a credit card) when the retailer sends out randomly determined discount cards ranging from 5-30%. Participants were told they had either earned "most valuable customer" status through their spending, were awarded status without any spending requirements, or did not have "most valuable customer" status.

Consistent with H3a, analysis of the study 2 (n = 201) data using orthogonal contrast codes indicates that participants in the "status earned via effort" condition expected to receive larger discounts (M = 3.16) than those in the "status awarded without effort" condition (M = 2.59; $F(1, 198) = 6.61$, $p < .05$). In contrast, participants in the "status awarded without effort" condition had equal expectations to those without status (M = 2.38; $F(1, 198) = 3.50$; NS). These results support the control heuristic as the causal mechanism behind elite LP members feeling "luckier" than others by demonstrating that this effect only obtains when participants connect their own effort to the desirable outcome. Study 3 provides additional evidence in support of this mechanism by demonstrating that the effect does not hold when the outcome is undesirable.

Study 3 (n = 264) employed a 2 (LP elite status: yes or no) x 2 (event type: desirable – win a gift basket vs. undesirable – sprinkler goes off in your room) between-subjects design to test H3b in the context of a hotel stay. Results revealed a significant interaction between LP status and event type ($F(1, 255) = 4.02$, $p < 0.05$). Follow-up analyses revealed that LP membership had no impact on perceptions of how likely the event was to occur in the sprinkler condition ($F(1, 255) = 0.25$, NS), but that, in the gift basket condition, elite LP members thought they were more likely to win compared to participants who were not members of the LP ($F(1, 255) = 5.49$, $p < 0.05$).

Our research thus contributes to the literature on loyalty programs by demonstrating a previously unknown psychological consequence of loyalty program membership: elite members of LPs think positive (but not negative) firm-related outcomes are more likely to happen to them than do non-LP members because of an illusory sense of control over these outcomes.

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Imagine All The People: The Consequences of Imagining Luxury Ownership
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An extensive body of literature has established the positive relationship between imagination and consumer behavior (McGill & Anand, 1989; Bone & Ellen, 1992; Keller & McGill, 1994; Babin & Burns, 1997; Keller & Block, 1997; Krishnamurthy & Sujan, 1999; Escalas, 2004). Specifically, it has been shown that imagining one's experiences with a product increases the purchase likelihood of that product, even weeks after the imagining occurs (Gregory et al., 1982). While the process by which imagination functions as a persuasion tactic is unclear, several theories exist. Some researchers have suggested that imagination can make positive attributes of a product more accessible (Kisielius & Sternthal, 1984, 1986). Others have argued that the act of imagining can transport consumers to an enjoyable imagined world, where they are less likely to counter-argue over the benefits of products (Schlosser, 2003; Petrova & Cialdini, 2009).

This paper differs from the previous body of work, by exploring potential backfire effects of imagining product consumption. Specifically, I focus on luxury ownership, and the possibility that imagining such ownership could reduce interest in purchasing luxury products (particularly those that convey status). Research has suggested that images of successful others can increase the desire for luxury products (Mandel et al., 2006). But what happens when consumers focus on their own potential consumption of luxury items? Given that luxury products are oftentimes perceived in terms of the social signals they send, it is possible that

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imagining ownership of luxury products can cause consumers to imagine negative reactions to these signals, thereby decreasing interest in these products. I explore this possibility in four studies below.

In Study 1, 113 participants completed an online survey on designer sunglasses at a university behavioral lab. Participants received an image of a pair of Prada sunglasses, and were told that the sunglasses retailed for $250. Next, participants were randomly assigned to one of three conditions, in which they either (1) imagined "what would it be like to own this pair of sunglasses" for 30 seconds (imagined ownership condition), (2) imagined "what would it be like to try out this pair of sunglasses at a store" for 30 seconds (imagined browsing condition), or (3) received no imagination instructions (control condition). Finally, participants indicated their willingness-to-pay for the sunglasses on an 11-point scale. Planned contrasts revealed that participants in the imagined ownership condition expressed a lower willingness to pay (M = 2.53) than those in the imagined browsing condition (M = 3.92) or the control condition (M = 3.68; t(108) = 2.892, p < 0.01).

Study 2 explored the possibility that the results of Study 1 are due to increased mental elaboration in the imagined ownership condition. To test this idea, I conducted an experiment similar to Study 1 using a Rolex watch (retailing at $6,000) in place of the sunglasses. 87 participants were randomly assigned to one of three conditions, in which they either (1) memorized a 7-digit number, then imagined ownership of the watch (high-load condition), (2) memorized a 1-digit number, then imagined ownership (low-load condition), or (3) received no imagination instructions (control condition). Then, participants entered their willingness-to-pay for the watch. Planned contrasts revealed that participants in the control condition marginally entered a higher willingness-to-pay (M = $676.29) than both the high-load (M = $263.33) and low-load conditions (M =$381.61, t(47) = 1.932, p < 0.10). Since negative consequences of imagining luxury ownership exist even when cognitive loads are introduced, this suggests that participants are not merely elaborating away their desires for these products.

Study 3 explores the possibility that previous results occurred because items used in these studies were prohibitively expensive, thus making the imagination of ownership difficult. To test this idea, I recruited students from a top-tier private university in the Northeast. 59 students were randomly assigned to one of two conditions, in which they either imagined (1) what it would be like to have a university car decal (a signal of status, like the sunglasses and watch) on their car (imagination condition), or (2) what it would be like to go grocery shopping (control condition). Then, participants entered their willingness-to-pay for the decal. Additionally, participants completed a 16-item Vividness of Visual Imagery Questionnaire (VVIQ; Marks, 1973) to measure their ability to imagine (a = 0.837). A univariate ANCOVA (with ownership of a decal as a covariate) indicated that participants imagining the decal exhibited a lower willingness-to-pay (M = $2.20) than those in the control condition (M = $3.77; F(1, 56) = 4.35, p < 0.05). Furthermore, VVIQ scores marginally predicted willingness-to-pay in the imagination condition (b = -1.022, p < 0.10), but not in the control condition (b = -.459, p < ns). Together, these results suggest that ease-of-imagining does not explain the negative relationship between imagining luxury ownership and willingness-to-pay, as those who were better at imagining preferred to pay less for the decal after engaging in ownership imagination.

Study 4 tests the external validity and managerial implications of the previous findings. Specifically, I showed 92 participants one of three advertisements for a sports car (Lotus Elise), featuring an image of the car as well as information about the retail price ($47,250). In two of the ads, a heading asked participants to (1) "Imagine how heads will turn" (imagined signaling condition), or (2) "Imagine the turns you'll make in this" (imagined experience condition); the third was identical to the other ads except without a heading (control condition). Participants indicated their willingness-to-pay for the car on a 12-point scale. A univariate ANCOVA (with gender and income as covariates) revealed that participants in the imagined signaling condition reported a lower willingness-to-pay (M = 3.67) than the imagined experience condition (M = 4.81) and the control condition (M = 5.17; F(2, 87) = 3.872, p < 0.05). This result is consistent with the hypothesis that imagining social consequences reduces the desire for luxury items. At the same time, it also suggests that other forms of imagination (ex. imagining experiences with luxury items) might be less harmful.

In short, I find that imagining ownership of status-signaling luxury products can reduce interest in these products. Furthermore, it appears that this finding cannot be explained by mere elaboration (Study 2) or ease-of-imagination (Study 3). Finally, the negative effect of imagination can extend to advertisements (Study 4). While imagining one's enjoyment of the luxury item does not reduce desire for the item, imagining other people's reactions to the item does. This latter finding is consistent with the idea that it is the imagining of social consequences that reduces desire when people imagine owning luxury products.

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Omnivores, Status Consumption and Self-Expression
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When consumers seek to express themselves via consumption, they engage in signaling rituals that allow them to differentiate themselves from others and speak to their social identities (Belk 1988; Tajfel and Turner 1977). One such area for signaling is status-based consumption (Bourdieu 1984; Veblen 1899). For instance, high status consumers may engage in conspicuous consumption (ex. by buying expensive, publically-visible items) in order to signal their social position (Veblen, 1899; Duesenberry, 1949; Leibenstein, 1950; Frank, 1985) or differentiate from low-status others and other undesirable, dissociative out-groups (Belk 1981; Shavitt 1990; Holt 1998; Escalas and Bettman, 2003; White and Dahl 2006, 2007; Berger and Heath 2007; Chernev, Hamilton, Gal 2011).

Research on status consumption suggests that higher-status consumers might avoid consuming markers of low-status because it could result in their confusion with groups that are dissociative to them (Dahl and White 2007; Bourdieu 1984). However, recent sociological work has shown that many high status individuals are not "cultural snobs" who enjoy only high-brow items. Rather, they are eclectic and "omnivorous" in their tastes, expressing preferences for both high-brow and low-brow items (Peterson and Simkus 1992; Bryson 1996; Erickson, Peterson and Kern 1996; Erickson 1996). This literature has theorized that high-status omnivorousness could be a result of cultural change reflecting new acceptance of non-elite practices, or the advent of technology which has made both high and low-brow tastes more accessible to the general population.

We introduce a new point of view on this status-based omnivorousness, and suggest that it is employed by consumers seeking self-expression. Consumer behavior research has examined the importance of self-expression (Belk 1988; Richins 1994; Aaker 1999), which reflects the desire to express one's uniqueness and difference from others (Chernev, Hamilton, Gal 2011). Omnivorous consumption may appeal to consumers with a desire to self-express, because it expresses one's distinct "cultural capital" (Bourdieu 1984) or expertise through one's ability to violate status boundaries (Lamont 1996) in enjoying both high and low-status items. Additionally, omnivorousness may serve the distinction need of self-expressives as a subtle signal of status, which recent evidence has revealed as a strategy for distinction among high-status consumers (Berger and Ward 2011; Han, Nunes, and Dreze 2010). In three surveys studies, we test this hypothesized relationship between self-expression and omnivorousness.

In Study 1, we examine whether self-expression predicts self-reported omnivorous behavior. 135 participants completed survey on fashion preferences. We measure self-expression via a three-item measure ($\alpha = 0.899$) derived from previous research (Chernev et al. 2011). Furthermore, we measure omnivorous behavior via participant agreement with the following statement: "I choose to use expensive and inexpensive clothes at the same time (in the same outfit)". Consistent with our predictions, desire for self-expression predicted omnivorous behavior in mixing expensive and inexpensive clothing items ($\beta = 0.219$, $p < 0.05$), even after controlling for income effects ($\beta = -0.036$, $p = 0.669$).

In Study 2, we test whether self-expression predicts ratings of omnivorous consumption options. 105 participants completed a three-item self-expression measure (α= 0.71), similar to that of study 1 but framed in a fashion context. Participants then rated the attractiveness of, as well as their liking of, eight different pairs of clothing items (ex. a dress and a pair of shoes, a blazer and a pair of jeans), one pair at a time. During the rating procedure, we randomly labeled each item as designed by either H&M or Versace (when in fact, all items were from the Versace for H&M co-branded collection). Thus, some of the clothing pairs were framed as "omnivorous" (featuring both H&M and Versace items), while others where "univorous" (featuring only Versace items). For omnivorous clothes pairings, we averaged each participant's ratings to form an overall omnivorous outfit score. Similarly, an overall univorous outfit score was computed for each participant.

While self-expression marginally predicts univorous outfit ratings ($\beta = 0.16$, $p < 0.10$), it predicted preferences for omnivorous outfit ratings ($\beta = 0.260$, $p < 0.01$), even after controlling for income and ownership effects. Furthermore, to test the prediction that cultural capital underlies preferences for omnivorousness among self-expressives, we asked all participants to rate the fashion knowledge and expertise reflected in each clothes pairing as a measure of the cultural capital demonstrated via the pairing. When this variable was added to the aforementioned model predicting omnivorous outfit ratings, cultural capital ratings predicted omnivorous outfit ratings ($\beta = 0.783$, $p < 0.001$), while desire for self-expression was no longer a significant predictor ($\beta = 0.074$, $p = 0.236$).

If self-expressive consumers prefer omnivorousness to signal their cultural capital, they might react negatively to co-branding that explicitly pairs the high and low status brands they use to signal their uniqueness. In Study 3, we test this possibility by creating a hypothetical collaboration between a higher and lower-status fashion brand (Prada and Banana Republic, respectively). We predicted that among different ownership groups (Prada-only owners, Banana Republic-only owners, or owners of both), consumers who own both brands use these brands for the expression of cultural capital, and are therefore likely to react most negatively to the collaboration. We asked 79 owners of one or both of the aforementioned fashion brands to rate the prestige of the new collaboration. As predicted, a planned contrast revealed that owners of both brands rated the co-branded collection as being less prestigious (M = 3.05) than Prada –only owners (M = 4.25) and Banana Republic-only owners (M = 3.96; t(77) = -2.236, p < 0.05).

In summary, across three studies, we find evidence suggesting that consumers with a high need for self-expression are more likely to engage in omnivorous behavior (Study 1), and prefer omnivorous pairings more so than other consumers due to the expression of cultural capital that omnivorousness affords (Study 2). Additionally, individuals who engage in omnivorous behavior react more negatively than other consumers when the high and low-status brands that they own collaborate (Study 3). We believe that consumer omnivorousness (particularly in status goods) is an underexplored phenomenon, and consider this research on self-expression to be a valuable first step in better understanding this behavior.

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6.1 Symposium: Fooled by Perception: The Impact of Consumer Biases on Food Intake

Room: Espada

Chair: Yann Cornil, INSEAD, Singapore

Discussion Leader: Pierre Chandon, INSEAD, France

The Low Intensity of Light: Behavioral and fMRI Insights into the Effects of "Light" and "Organic" Claims on Flavor Processing

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Why has people's weight kept increasing even though "healthy" foods have become more popular? One explanation is that people eat more when foods are positioned as healthy (Chandon and Wansink 2007a; Provencher, Polivy, and Herman 2009). However, other studies (Raghunathan, Naylor, and Hoyer 2006) have shown that people expect healthy food to taste less good. How can we reconcile these two findings and understand why people eat more when they expect the food to taste less good?

One reason is that people eat more when the food is presented as "healthy" (either as "diet," or "organic") because they expect that it contains fewer calories and hence that they can eat more of it without gaining weight (Chandon and Wansink 2007b; Provencher et al. 2009; Schuldt and Schwarz 2010; Wansink and Chandon 2006). On the other hand, these healthfulness claims differ with respect to consumers' expectations about the tastiness of the food. Unlike light foods, organic foods are perceived to be both healthy AND tasty (Niewold 2010).

Exploring answers to these conflicting findings about health associations, we examine how claims that the food is "light," "organic," or "regular" influence flavor perceptions using behavioral, self-reported, and neuro-imaging data. By doing this, we test another explanation of the "low fat food and high fat people" phenomenon, which is that people expect food positioned "light" to have a less intense flavor, and hence consume more of it to achieve the desired levels of hedonic satisfaction.

In the first study, 57 participants were asked to sample a regular version of a drink and then to match the flavor pleasantness or flavor intensity of this drink with another (not sampled) drink that was either labeled as "healthy" or "organic". To do this, they were provided with concentrated pure flavor extracts, which they were asked to add to either the "regular" drink they had just sampled or the other drink. Participants added more flavor to the "light" drink than to the "regular" drink ($F(1, 56) = 77.61$, p<.001), regardless of whether they were asked to match them on pleasantness ($M_{light}=4.85$ SEM=.49 vs. $M_{regular}=0.58$, SEM=.26) or on intensity ($M_{light}=5.63$, SEM=.73; $M_{reg}=0.68$, SEM=.26). As predicted, the organic claim had opposite (though weaker) effects ($F(1, 56) = 7.46$, p<.01): People added more flavor to the regular drink in both the pleasantness matching task ($M_{organic}=1.01$, SEM=.31 vs. $M_{reg}=2.05$, SEM=.47) and the intensity matching task ($M_{organic}=1.43$, SEM=.39 vs. $M_{reg}=3.06$, SEM=.71). Overall, the study showed, from behavioral data, that people expect "light" to be worse than "regular", which is in turn worse than "organic", in terms of both flavor pleasantness and intensity.

In the second study (N=58), we investigated how flavor expectations induced by health claims affect how the flavor is actually experienced using both self-reported and functional magnetic resonance (fMRI) data. Consistent with the expectations obtained in Study 1, experienced pleasantness was higher in the "regular" ($M_{reg}=5.62$; SEM=0.21) than in the "light" condition ($M_{light}=5.27$; SEM=0.21; T(1,28)=2.93; p<.005). Another comparison also showed that pleasantness was higher in the organic condition ($M_{organic}=6.09$; SEM=0.16) than in the regular condition regular ($M_{reg}=5.58$; SEM=0.17; T(1,28)=3.74; p<.001). Ratings of experienced intensity were also consistent with the expectation results found in study 1 for light claims ($M_{reg}=5.83$; SEM=0.17 vs.

M_{light}=5.19; SEM=0.19; T(1,28)=3.66; p<.001) but not for organic claims, which did not significantly affect experienced flavor intensity ($M_{organic}$ =5.68; SEM=0.14 vs. M_{reg}=5.68; SEM=0.14; T(1,28)=0.04; p=.52).

Analyses of the brain activity while people were consuming these identical foods were consistent with the reported ratings for intensity, but not for pleasantness. The "light" label reduced activity in the brain area encoding flavor intensity (i.e. the ventral striatum, amygdala), and activity in this area was similar in the "organic" and "regular" conditions. The "organic" label increased brain activity in the area encoding flavor pleasantness (i.e. the orbitofrontal cortex), which was consistent with the ratings. However, activity in the area encoding pleasantness was similar in the "light" and "regular" conditions, contrary to what the self-reports indicated. These results support earlier findings about the unreliability of self-reported measures of flavor intensity, which did not adequately represent brain activity, and demonstrate the value of measuring brain activity to understand the effects of food claims. More importantly, they show that people actually experienced similar taste pleasantness for light food.

Given the interesting pattern of results for the "light" claims, in a third study, we focused on the effects of "light" claims. We asked 34 participants to add milk to a drink powder that either claimed to be "light" or "regular". People added less milk when the powder was labeled as "light" (M = 294.26 ml, SEM = 36.85ml) than "regular" (M = 327.08 ml, SEM = 49.09 ml; F(1,32)= 8.52, p<.01). Yet, they expected to need to drink more of a pre-mixed version of the drink to feel full for three hours when the powder was labeled "light" (M =675.23 ml, SEM = 55.01 ml) vs. "regular" (M=403 ml, SEM = 36.03 ml; F(1,32)= 3.19, p<.08).

Overall, our results show that "light" and "organic" claims, while both seen as improving the healthfulness of the food, have mostly opposite effects in terms of the flavor of the food. Organic claims improve expected flavor intensity and both expected and experienced pleasantness, and these results are consistent across all measures.

Our results about the effects of "light" claims reveal an intriguing pattern. People think that "light" foods have a less pleasant and less intense flavor, before and after consuming them, which is why they expect that they have to drink more of it to be satiated. However, fMRI data shows that "light" claims only influence experienced intensity, but not pleasantness. Thus, people may overeat light products because of reduced perception of flavor intensity—yet may misattribute it to lower taste pleasantness. This may explain the paradoxical phenomenon that people overeat light products even though they expect to like them less. It also offers a potential solution: Let people compensate for the lower expected intensity of light products by increasing the dosage of the flavor component, rather than by eating more of it.

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Mix it Baby: The Effect of Customization on Perceived Healthiness

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Companies in the food industry (e.g., M&Ms) engage customers in the production process by allowing them to select between different ingredients to create their individual product.

The purpose of this research is to explore whether the mere act of selecting one's own ingredients for a given food/drink influences its perceived healthiness. Considering the increasing trend for customization (Lyon 2011) and the rising rates of obesity (Flegal et al. 2010), it is relevant to investigate whether customizing food products could bias consumers' healthiness perceptions. This research

adds to existing research that identifies factors, such as price (Shiv, Carmon, and Ariely 2005), health positioning (Chandon and Wansink 2007a), and healthiness (Raghunathan et al. 2006) which bias consumers' product perceptions. We present three studies to demonstrate that selecting one's own ingredients as compared to buying the complete product decreases its perceived healthiness. Further, we provide first evidence for the underlying mechanism.

In study 1 we investigate whether students that mix their own juice and those that obtain a ready-made juice differ in their healthiness perceptions of the drink. We offered students (N=85) a glass of juice. Depending on the condition the student either saw one carafe containing a mixture of juices (non-creators) or three different carafes (self-creators), each containing a different juice. Since we want to test whether the mere act of selecting ingredients influences individuals' healthiness perceptions, we need three juices (i.e., cranberry, lemon, and orange juice) that were pre-tested to be equally healthy and tasty. After participants mixed their juice we measured the perceived healthiness of the juice (7-points semantic differential scale, 1=healthy and 7=unhealthy). An ANOVA with the healthiness ratings of the juice as dependent variable revealed that self-creators (Mself-creators=2.88, SD=0.21) rated the juice as significantly less healthy than non-creators (Mnon-creators=2.12, SD=0.21; $F(1,83)=6.58$, $p<0.05$).

In study 2 we make use of food (i.e., cereal) to test generalizability of our finding. We explore whether selecting your own cereal ingredients as compared to obtaining a prepared mix decreases the perceived healthiness of the cereal. In addition, we investigate whether this effect is dependent on the physical act of mixing the ingredients together oneself. To test this we manipulate whether participants (N = 114) create their own cereal (self-creators vs. non-creators) and whether they perform the action of mixing themselves (yes vs. no). While the self-creators selected the cereal ingredients of their choice (i.e., walnuts, pumpkin seeds and dried strawberries; pre-tested to be equally healthy and tasty), the non-creators obtained a prepared mix of ingredients. Participants either performed the act of mixing their ingredients themselves or a researcher assistant took care of this: both self-creators and non-creators either filled the ingredients together themselves or a researcher took care of this. Before participants were allowed to eat the cereal, they indicated its perceived healthiness. A two-way ANOVA with healthiness ratings of the cereal as the dependent variable revealed a statistically significant main effect for creating your own cereal with self-creators rating the cereal as less healthy (Mself-creators=7.29, SD=0.23) than non-creators (Mnon-creators=7.93, SD=0.22; $F(1,110)=4.02$; $p<0.05$) irrespective of who performs the action of mixing the ingredients.

Study 3 fulfills two purposes. First, it tests the robustness of our effect by using another product of interest (i.e. yoghurt). Second, and most importantly, study 3 sheds light on the underlying mechanism for our effect. We argue that individuals in the mixing condition are faced with the decision of what kind of product to make. They have to think about which goal, tastiness or healthiness, they prioritize when creating their own mix. Generally, there are individual differences in concern with the emphasis individuals put on healthy eating. We expect that individuals who are concerned with healthy eating rely on healthiness as a criterion when selecting the ingredients while individuals that do not care about healthy eating would not take healthiness into account when choosing the ingredients. Further, in line with research on goals we predict that individuals base their judgment of the end product on the goal they had when creating it. As a consequence, we expect an interaction effect between our manipulation (i.e. self-creation) and the importance attached to healthy eating. We predict that the effect is pronounced for participants that do not attach importance to healthy eating but attenuated for participants to whom healthy nutrition is important.

Seventy-three participants took part in this study (distributed via Amazon Turk) and were randomly assigned to a self-creator condition or non-creator condition. All participants were shown a picture of plain white yoghurt. Afterward, depending on the condition participants either selected their own toppings choosing out of mango, cranberries and walnuts (pre-tested to be equally healthy) or received the prepared mix. Afterward participants indicated the perceived healthiness of their yoghurt on a 10-point Likert scale (10 = being very healthy). In addition, participants expressed their (dis)agreement with the statement "I consider eating healthy to be important" using a 7-point Likert scale (7 = strongly agree).

We find a significant difference between self-creators (M = 7.51, SD = 1.82) and non-creators (M = 8.37, SD = 1.15) in perceived healthiness of the yoghurt (p < .05). More importantly, we also find the predicted interaction effect between our manipulation and the importance attached to healthy eating (F (1, 72) = 3.81; p < 0.06). For participants that attach importance to healthy eating there is no significant difference between self-creators (Mself-creators= 7.89, SD = 1.59) and non-creators (Mnon-creators= 7.98 SD= 1.73; F < 1, p =0.87). However, individuals that do not attach importance to healthy eating judge their yoghurt to be significantly less healthy when they created it themselves (Mself-creators=6.72, SD = 2.02) as compared to when they obtained a prepared mix (Mnon-creators= 8.44, SD= 1.38; F(1,72)=6.43; p<0.05).

Our studies reveal customization as a factor that biases consumers' healthiness perception: The mere act of selecting ingredients oneself decreases consumers' healthiness perception. In a follow-up experiment, we intend to prime individuals with a health goal or an indulgence goal to provide further evidence that differences in goals are driving our effect.

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How Goal Conflict Influences Visual Sensitivity to Portion Size Changes

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A prominent hypothesis states that people overeat because they fail to realize how large portions really are, especially when the food is hedonic. Consistent with this hypothesis, researchers reported stronger tendencies to underestimate the food intake among overweight individuals, restrained eaters, and for hedonic foods (Goris, Westerterp-Plantenga, and Westerterp 2000; Lichtman et al. 1992; Poppitt et al. 1998). But is this really true? Recent studies in psychophysics found no differences in the calorie estimations of overweight and regular-weight people, once the actual size of the portion was controlled for (Chandon and Wansink 2007b). This suggested that psychophysical underestimation biases are not necessarily stronger among overweight individuals. We go beyond these findings to argue that overweight and restrained eaters may in fact be *less*—not more—biased and hence better at estimating today's growing portion sizes.

To formulate our hypothesis we draw upon two streams of research in perception. First, research on motivated perception shows that people are visually more sensitive to desirable (vs. undesirable) objects (Alter and Balcetis 2011). For example, coins look larger to people with low financial means (Bruner and Goodman 1947). Second, research on vigilant perception shows that people also have heightened visual sensitivity to risky objects, such as snakes, or any object detrimental to a particular goal (Balcetis and Dunning 2010; Erdelyi 1974).

To our knowledge, no research has examined visual sensitivity to size change, and to objects which elicit both a pleasure goal and a risk prevention goal. Hedonic objects, and particularly hedonic foods, are prone to elicit such goal conflict (e.g. Shiv and Fedorikhin 1999). We hypothesize that goal conflict increases visual sensitivity to changes in portion sizes. In other words, we predict more accurate size estimations when food is desired and perceived as unhealthy at the same time. By the same token, health claims –which reduce goal conflict-, will decrease visual sensitivity; people will estimate less accurately portion sizes of healthy food. We also explore the impact of individual differences on visual perception. Restrained eaters, but also overweight people are especially likely to experience goal conflict regarding food (Herman and Polivy 1980; Stroebe et al. 2008). We therefore predict that they will be *less likely* than "normal eaters" to underestimate the portion sizes of desired and unhealthy foods, and that there will be no difference for less desired, healthier foods.

Three studies were conducted to test our predictions. In all studies, participants were shown portions of food presented in ascending order of size, they were given the size (weight or calories) of the smallest portion, and they were asked to estimate the size of the remaining portions. In Study 1 we investigated the impact of goal conflict on estimation accuracy of portions of candies. We manipulated perceived unhealthiness –without affecting desire- by describing the candies as "Omega 3 nutrition chews" (healthy condition) or as "gummy candies" (unhealthy condition). We manipulated desire –without affecting perceived unhealthiness- by drawing on prior findings that sampling a product increases desire (Wadhwa, Shiv, and Nowlis 2008). We either asked the participants to consume one gummy (high desire condition) or no gummy (low desire condition). After the estimation task, we measured whether participants associated hedonic foods with pleasure and/or with risk in two Implicit Association Tasks (Greenwald, McGhee, and 1998 Schwartz). As expected, we found that people assigned to the unhealthy – high desire condition provided the most accurate estimations. We also found that people who implicitly associated hedonic foods with both desire and risk were the best estimators.

Study 2 was conducted in the field with a sample of dieting and non-dieting gym members. The participants had to estimate the number of calories in six portions of potato chips, labelled as "regular" (unhealthy condition) or "low fat" (healthy condition). Consistent with our predictions, restrained eaters were less prone to underestimate portion sizes than unrestrained eaters when estimating the portions of regular potato chips, but both groups were equally likely to underestimate the portions of low-fat chips. Mediated moderation analyses showed the key role of guilt feelings, a measure of goal conflict (Dhar and Wertenbroch 2000), in portion size estimations.

The participants in Study 3 were overweight or lean people who were asked to estimate the weights of six portions of baby carrots (healthy condition) or chocolate chunks (unhealthy condition). As predicted, overweight individuals made more accurate size estimates than lean individuals when estimating the portions of chocolate, but there were no differences between the two groups when estimating the portions of carrots.

Our findings contribute to the literature on motivated perception by examining the role of goal conflict, individual differences, and product differences in driving food quantity estimations. They also improve our understanding of compensation failures in food consumption. Contrary to existing hypotheses, overeaters and restrained eaters are not worse at estimating portion sizes than regular eaters. In fact, they are better and less biased at estimating portions when the food is perceived as hedonic. This suggests that improving knowledge of food quantity (e.g., through better nutrition and calorie labelling) is unlikely to help overweight and restrained eaters stop overeating. We finally show that health claims, which alleviate goal conflict, may lead to an underestimation of large portion sizes, through a decrease in visual sensitivity.

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6.2 Individual Papers: The Good, the Bad and the Happy: Consequences of Pro and Anti-Social Behavior

Room: San Jose

Chair: Leslie John, Harvard Business School

Depreciation of the Past: Diagnostic Behaviors Have a Longer Lasting Impact than Non-Diagnostic Behaviors

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In virtually all domains of human behavior bad information has been shown to have a stronger impact than good information (Rozin & Royzman, 2001; Baumeister et al., 2001). A similar pattern has been observed for bad information's impact over time: losses are discounted less than equivalent gains (Frederick et al., 2002), and people adapt slower to negative events than to positive events (Baumeister et al., 2001). We test whether this 'bad has a longer lasting impact than good' principle also holds for judgments of people.

Information about a person automatically evokes trait concepts and stereotypes which activate corresponding behaviors (Bargh et al., 1996). We hypothesize that the impact of information about a person will depreciate less over time the more diagnostic it is for predicting the person's traits. Immoral (negative) behaviors are generally more diagnostic than moral (positive) behaviors (Skowronski & Carlston, 1989). Hence, we hypothesize that their impact should depreciate less over time. In contrast, for judgments of ability, intelligent (positive) behaviors are generally more diagnostic than unintelligent (negative) behaviors. Hence, we hypothesize that the former's impact should depreciate less over time.

Experiment 1 employed a 2 (moral vs. immoral behavior) x 2 (time: recent versus far past) between-subjects design, with an additional control condition. Participants read background information about a person, ordered by time of occurrence. The control condition included only neutral behaviors. In the immoral behavior condition, the background information included an additional immoral behavior shown by the person; in the moral behavior condition, the person was reported as having shown an additional moral behavior. The immoral and moral behaviors were described as having occurred either recently (12 months ago) or in the far past (5 years ago). Importantly, time of occurrence of the critical behaviors was manipulated while order of presentation was held constant.

As predicted, negative impressions differed little whether the immoral behavior had occurred 5 years or 12 months ago, but impressions were more positive when the moral behavior had occurred 12 months as compared to 5 years ago.

In experiment 2, participants allocated real money to another (fictitious) player in a dictator game. Participants were shown a table summarizing the previous allocations by the other player in a previous game with a different counterpart. In the neutral condition, the other player's allocations were close to a 70-30 split. In the generous/greedy conditions, the other player had offered a generous (50-50) or a greedy (100-0) split in one of seven rounds, either in round 2 (far past) or round 6 (recent past).

Parallel to the results of experiment 1, participants' allocations to the other player differed little whether the other player had previously offered a greedy split in round 2 (far past) or round 6 (recent past), but participants allocated more money to the other player when s/he had previously offered a generous split in round 6 (recent past) than in round 2 (far past).

Experiment 3, similar to experiment 1, employed a 2 (valence: positive vs. negative behavior) x 2 (time: recent versus far past) x 2 (domain: morality vs. intelligence) between-subjects design, with an additional control condition in both domains. As predicted, in the domain of morality the previous pattern was replicated: negative behaviors' impact depreciated less over time than positive behaviors' impact. In contrast, in the domain of ability, positive behaviors' impact depreciated less over time than negative behaviors' impact.

Concluding, previous literature has documented that future negative events are discounted less, and past negative events have a longer lasting impact than positive events. In judgments of and behavior towards consumers, however, we found that this 'bad has a longer lasting impact than good' principle does not hold. Rather, it is diagnostic behaviors that have a longer lasting impact. Past diagnostic behaviors (immoral acts, greedy allocations in a dictator game, and intelligent behaviors) are shown to have a longer lasting impact on impressions of—and money allocations to—an individual than her past non-diagnostic behaviors (moral acts, generous allocations, and unintelligent behaviors).

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Imbalance in Spending Time vs. Money on Self vs. Others: Influence on Happiness

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Recent years have seen growing interest in research on time versus money. Several differences between them have been documented such as ambiguity in cost consideration (Okada and Hoch 2005; Soman 2001), personal connection with product (Mogilner and Aaker 2009), and interpersonal connection (Mogilner 2010). However, none of these studies examined the effects of imbalance in spending time vs. money more on self and less on others across different categories labeling here as *self-others imbalance* (e.g., more money spent on clothes for self but less on buying gifts for family). Filling this gap is important because it would be ironic if despite spending resources to buy things that will make one happy, consumers end up feeling unhappy because of their *imbalanced self-others* spending.

Prior research has shown that thinking about spending time activates emotional orientation (Schwarz and Clore 1996) and encourages people to focus more upon the experience of social connection with others (Mogilner 2010). In contrast, thinking about spending money evokes self-sufficient orientation (Vohs, Mead, and Goode 2006) which prompts self to depend less on others and similarly, want others to depend less on self. Thus, self-others imbalance should make consumers more unhappy and prompt stronger corrective actions in terms of reallocating more resource to the underspent category for others and greater willingness to specifically substitute resource from the overspent category for self to the underspent category for others. Thus,

H1: The unhappiness resulting from spending imbalance between self and others will be greater for time than for money

H2: Consumers will reallocate resource to the underspent category for others to a greater extent when the spending imbalance between self and others involves time vs. money

H3: More consumers will substitute resource from the specific overspent category for self to the underspent category for others when the spending imbalance between self and others involves time vs. money

H4: Effects specified in H2 is mediated by happiness

Study 1 tested H1 and 66 undergraduates were randomly assigned to either the money or time condition. They were asked to imagine a scenario in which they recently graduated with a \$30,000 job and spent their discretionary money (in money condition) among different categories in the imbalanced way. Besides, balanced distributions were presented as the spending distribution of same age group from the Bureau of Labor Statistics data. Participants reported their happiness on four 7-point items (Van Boven and Gilovich 2003) ($\alpha = .95$) and their feelings of imbalance ($\alpha = .92$) toward their current spending distributions. For the sake of brevity, the detailed procedure adopted to generate the *self-others imbalanced* spending distribution is included in Appendix A.

Manipulation checks confirmed that participants found their "scenario" spending distribution to be imbalanced and more importantly, to be equivalently imbalanced for both resources ($M_{money} = 2.77$ vs. $M_{time} = 2.29$; $t (1, 64) = -1.624$, *n.s.*). As expected, subjects in the time (vs. money) condition were more unhappy with the imbalance ($M_{time} = 2.24$ vs. $M_{money} = 3.75$; $t (1, 64) = -4.43$, $p < .05$), supporting H1.

Study 2 with 50 undergraduates and with same procedure and analysis plan as Study 1 was conducted to i) test the robustness of Study1 results by using different focal categories to create imbalance distribution (e.g., clothes and accessories); ii) examine the influence of imbalance on downstream corrective steps – extent to which they reallocate their current % allocations and whether they would substitute spending their remaining discretionary resource (e.g., \$80) from an overspent "self" category to an underspent "others" category; and iii) to test H4 or the mediation of these effects by happiness.

Manipulation checks confirmed that imbalance in time and money conditions were perceived to be comparable, reasonable, and believable (not listing the means for sake of brevity). Results supported H1 (M_{time} = 3.33 vs. M_{money}= 4.53; t (1, 48) = -3.58, p < .01). Further, H2 and H3 are also supported. Subjects reallocated to the underspent "others" categories to a much greater extent in the time vs. money condition (M_{time} = 800% vs. M_{money}= 150% increase; t (1, 48) = 6.95, p < .05). Similarly, chi-square analysis revealed greater percentage of participants substituting in time vs. money condition (M_{time} = 77% vs. M_{money} = 35%; χ^2 = 15.75, p < 0.05). Also, substitution decisions were much easier to make in time vs. money condition (see Table 1). Finally, mediation analysis (Baron and Kenny 1986) revealed that happiness is the mediator driving reallocation results (z = -3.21, p < .05, see Figure 1), supporting H4.

Study 3 was conducted to i) rule out demand effect explanation by testing if the above findings replicate when the subject is making decisions for a "Joe" (vs. for self in the last study); ii) check robustness of Study 2 results by using absolute numbers instead of percentages in the spending distribution (Appendix B); and iii) explore whether self-sufficiency (alpha = .67) and social connection (alpha= .75) ratings are consistent with our findings.

Ninety undergraduates participated in a 2 (resource: money, time) X 2 (target: self, Joe) between-subjects design with the same procedure as previous two studies. The insignificant two-way interaction on dependent variables rules out the demand effect explanation. Consistent with results from Studies 1 and 2, H1-H3 were supported (see Table 1 for details). Again, happiness is the mediator driving reallocation result (z = -2.8, p < .05), supporting H4. Finally, process measure results are consistent with our findings and theory; subjects felt more self-sufficient in money vs. time condition (M_{money} = 4.62 vs. M_{time} = 3.38; t(1, 88) = -5.29, p < .05). In contrast, they felt more socially connected in time vs. money condition (M_{time} = 6.06 vs. M_{money} = 4.86; t(1, 88) = 6.58, p < .05).

Our findings make important contributions to the consumer welfare and to time vs. money literature by showing that spending imbalance between self-others is treated more seriously for time vs. money. We rule out alternative explanation of demand effect and show the linkage between time (*money*) and social connection (*self-sufficiency*).

Table 1: Summary of mean numbers across studies

		Money	Time
Study 1			
Happiness		3.75	2.24*
Study 2			
Happiness		4.54	3.33*
Reallocation (%)		151	805*
Substitution (%)		35	76.7*
Easy to make decision		4.91	6.3*
Study 3			
Happiness	Self	4.48	3.56*
	Joe	4.55	3.58*
Reallocation (%)	Self	102	508*
	Joe	128	376*
Substitution (%)	Self	21.7	78*
	Joe	31.8	45

Note.*=significant at .05 level

Appendix A

The detailed procedure we adopted to generate the self-others imbalanced spending distribution is as follows:

i) we identified the distinct spending categories from prior research (Cheema and Soman 2006) and from the (BLS or) Bureau of Labor Statistics (2010) site;

ii) we took the current BLS distribution of spending and conducted a pretest (n = 36) which revealed that subjects believe 80% of discretionary spending on self and 20% on others represented a balanced self-other spending distribution;

iii) after allocating the 20% of spending on others among two plausible categories of electronics and entertainment expenses as spending on family/friends as gifts, we calculated the standard distribution of the overall distribution of 80% on self (as per BLS data) and 20% on others. This became the "balanced" self-other distribution;

iv) the self-other imbalance distribution was developed by increasing the standard deviation of the balanced distribution (in iii) by 50% and allocating this additional (imbalanced) amount on self categories and correspondingly allocating this amount less on categories for others.

v) a similar approach was followed to generate self-other imbalance for time condition. We ensured that the two imbalance categories for others remained as close as possible to those in money condition.

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Karma as a Source of Fairness Judgments: How the Weakening of Karmic Fairness Affects Consumer Preferences

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Research suggests that consumers often sacrifice their own self-interest to ensure fair outcomes. Thus, they share money with strangers (Camerer and Loewenstein 2004), accept price increases (Bolton and Alba 2006), and reward (punish) fair (unfair) corporate initiatives (Becchetti et al. 2011; Funches, Markley, and Davis 2008; Kennedy, Sparks, and Nguyen 2010; Sen and Bhattacharya 2001). However, there is little research on what drives consumers to make these fairness judgments. The paper aims to fill this void by suggesting that consumers could be using the Indian doctrine of karma (see Kopalle, Lehmann, and Farley 2010) to guide their actions and restore karmic fairness (Haidt 2010; Norenzayan and Lee 2010). Specifically, we investigate if North-American consumers believe in karma as much as their Indian counterparts do, and how their buying intentions change when they perceive a weakening of positive karma (when markets punish good actions) or negative karma (when markets reward bad actions) in the marketplace.

Karma, a fundamental element of belief in the Indian (Hindu, Jain, Buddhist, and Sikh) philosophy, holds that how humans have chosen in the past, determines their experiences of the present or future (e.g., Reichenbach 1989). The upshot of karmic fairness is that good (bad) actions should lead to good (bad) outcomes, and this tenet is quite familiar in the North American culture. It surfaces in popular music (John Lennon's *Instant Karma*), books (Gita Mehta's *Karma Cola* 1977), television series (NBC's *My Name is Earl* 2005-09 where the lead character tries to atone for past misdeeds and restore karma), and politics (Haidt 2010 suggests that the Tea Party's dissatisfaction stems from those government actions that purportedly weaken the laws of karma).

Just how familiar are North American students to the concept of karma? In a pre-test, we asked thirty-two undergraduate students from a North American University (32 females) several questions about karma (see Appendix). The results show that participants know karma well ($M = 7.25$, on a 9-point Familiar/Unfamiliar scale), and most believe in it (78%). They thought that karma is a

variation of the fairness theme of what goes around comes around and agreed that all four focal fairness statements (Appendix, Question 4) are true of karma (all *M*'s significantly greater than 1.0, on 5-point Very True/Not At All True scales).

We designed Study 1 to show that the North American population's belief in karmic fairness mirrors that of the traditional (Indian) population. We administered a four-item karmic fairness scale (Table 1) to (1) an Indian sample (forty undergraduate students of business at a Management Institute in Western India; 12 females), and (2) a North American sample (forty undergraduate business students enrolled at a public university in the North-Eastern United States, 27 females). An item-by-item analysis across the two samples indicates that the two samples respond comparably to each item, and all item scores are significantly more than 5.0 (the neutral point) within each sample (Table 1).

We designed Study 2 to investigate how belief in karmic fairness could affect consumer purchase intentions if markets did not abide by karmic fairness. Ninety-nine undergraduate business students (61 males), enrolled at a public university in the North-Eastern United States, read one of two scenarios (see Table 2). In the scenario describing the weakening of positive (negative) karma, participants read about a focal company (Company X) being made to pay the penalty for the misdeeds of other companies in the same industry (the government bailing out Company X and shielding them from the consequences of their bad actions). After reading the scenarios, the participants answered how likely they were to invest their money in Company X (9 point Very Likely/Very Unlikely to Invest), and completed the four-item karmic fairness scale.

We divided participants into two groups based on a median split of their composite scores of belief in karmic fairness, and examined their investment intentions across the positive/negative conditions (see Figure 1). Figure 1's pattern is consistent with our prediction. Participants who believe more in karmic fairness acted in a way to restore karmic fairness (relative to those who believe less in karmic fairness), by investing (restoring positive karma) or not investing (restoring negative karma) in Company X.

For a finer analysis, we ran an OLS regression (corrected for heteroskedasticity) testing the main and interaction effects of (1) valence (weakening of positive/negative karma; categorical variable), and (2) belief in karmic fairness (aggregate of four items, continuous measure, mean-centered), with (3) gender (male versus female: categorical measure) as an added control variable. Table 3 shows the results. Participants were more likely to invest in Company X in the positive, as compared to the negative, karma condition, but the effect was moderated by their belief in karmic fairness. As expected, belief in karmic fairness effect was positive and significant in the positive karma condition, and negative, approaching statistical significance, in the negative karma condition (Table 4). In the positive (negative) karma condition, those who believe more in karmic fairness were more (less) likely to invest in, and reward (punish), Company X, and thereby restore karmic fairness, relative to those who believe less in karmic fairness.

To our best knowledge, this is the first paper that investigates how belief in karma can be a source of fairness judgment among North American consumers. Future research can build on our work by refining our karmic fairness scale (discriminating from justice; expanding outside of the student population). Future research can also investigate if there are systematic differences in how consumers approach restoring positive versus negative karma. For example, the somewhat weaker effect that we observed in the negative karma condition might suggest that consumers may hesitate to punish an entity, given that such actions might have unanticipated negative consequences (layoffs and lost jobs). Thus, one might imagine consumers rationalizing that the affected person's karma led to the layoffs. Alternatively, whereas consumers may believe in karma when it comes to thinking and feeling about themselves, they may not be so quick to attribute karmic consequences to the happiness or misery of others.

Figure 1

Study 2: Likelihood of Investing in Company X
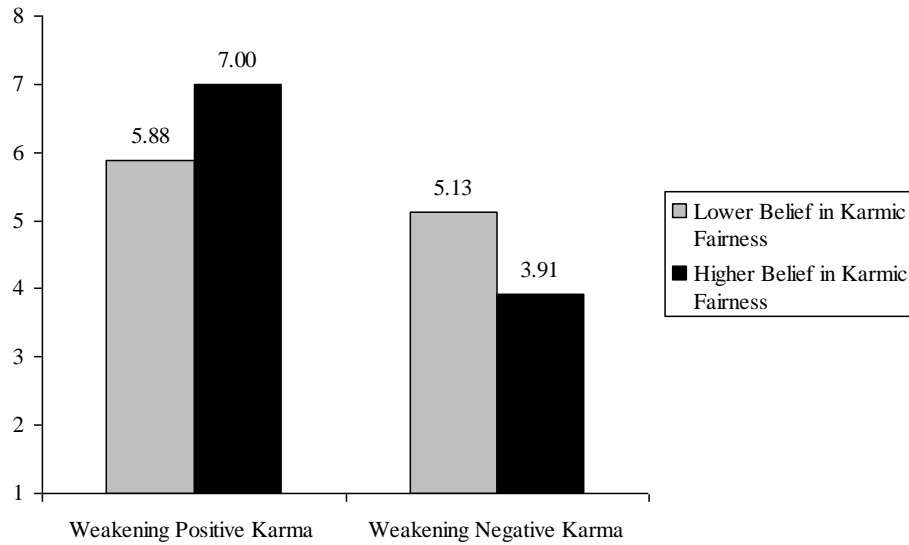
Appendix

Pre-test Items Measuring Familiarity/Belief in Karma and Karmic Fairnes

1. How familiar are you with the doctrine of karma? (9 = Very Familiar, 1 = Not At All Familiar)

2. Write down one or two sentences about what you think is the meaning of karma. (Open ended question)

3. Given what you have written down, do you believe in karma? (Yes, No)

4. To what extent do you believe that that the following statements are true to the meaning of karma?

(a) Kindness, honesty, and hard work will bring god fortune to me. (5 = Very True, 1 = Not At All True)

(b) Deceit, cruelty, and laziness will bring bad god fortune to me. (5 = Very True, 1 = Not At All True)

(c) Good things happen in the present because of good deeds done in the past. (5 = Very True, 1 = Not At All True)

(d) Bad things happen in the present because of bad deeds done in the past. (5 = Very True, 1 = Not At All True)

Table 1

Study 1: Belief in Karmic Fairness:

Mean (Standard Deviation) of Indian and North American Samples

Item	India	North-America	Remarks
I believe that kindness, honesty, and hard work will eventually bring me good fortune	7.50 (1.81)	7.25 (1.39)	$F(1,79) = 0.48$
I believe that cruelty, deceit, and laziness will eventually bring me suffering	7.20 (2.29)	6.93 (1.80)	$F(1,79) = 0.36$
I believe that that some of the good things that are happening to me are rewards for some of the good things that I have done in the past	6.30 (2.08)	6.68 (1.61)	$F(1,79) = 0.81$
I believe that some of the bad things that are happening to me are punishments for some of the bad things that I have done in the past	5.75 (2.35)	6.08 (1.65)	$F(1,79) = 0.51$
Average	6.69 (1.44)	6.73 (1.10)	$F(1,79) = 0.02$

Table 2

Stimuli: Study 2

Weakening of Positive Karma	Weakening of Negative Karma
Imagine that you have come into some money and looking into how you can invest that money. Your broker suggests that you invest some of the money in the stocks of Company X, makers of solar panels.	Imagine that you have come into some money and looking into how you can invest that money. Your broker suggests that you invest some of the money in the stocks of Company X, makers of solar panels.
About three years ago, there was a government investigation of the solar-panel industry relating to price-fixing. The government found the industry guilty of price fixing, and imposed a stiff fine. Company X's internal records showed that the company had not participated in the price fixing scheme. However, Company X had to contribute to a fund that the industry used to pay the fine. Because of the investigation and the subsequent fine, there was a steep drop in the stock prices of Company X.	About three years ago, Company X had made some very aggressive and reckless bets in the market. As a result, their stockholders had lost a lot of money. Unlike some of the other companies in the same situation, Company X did not make any changes to their management or operations (e.g., measures to cut costs), but requested the government for financial assistance. After several requests from Company X, the government stepped in last year and bailed the company out of their financial troubles.
Company X is now doing quite well. In the last 12 months, their stock has risen by 18% and analysts project that the company is poised to do very well in the next five years.	Company X is now doing quite well. In the last 12 months, their stock has risen by 18% and analysts project that the company is poised to do very well in the next five years.

Table 3

Study 2: Non-Linear OLS Parameter Estimates: Aggregate Model

Parameter	Dependent variable: Likelihood of investing in Company X		
	Estimate	Approx. Std. Err.	t (p-value)
Intercept	4.71	0.37	12.57 (<.0001)
Valence (Positive/Negative Karma)	1.99	0.36	5.56 (<.0001)
Belief in Karmic Fairness	−0.38	0.21	−1.82 (.07)
Belief x Valence	0.76	0.27	2.84 (.01)
Gender	−0.35	0.39	−0.89 (.37)

Table 4

Non-Linear OLS Parameter Estimates: Positive and Negative Karma Conditions

Parameter	Weakening of Positive Karma			Weakening of Negative Karma		
	Estimate	Approx. Std. Err.	t (p-value)	Estimate	Approx. Std. Err.	t (p-value)
Intercept	6.63	0.31	21.37 (<.0001)	4.77	0.47	10.14 (<.0001)
Belief in Karmic Fairness	0.39	0.16	3.34 (.02)	−0.38	0.21	−1.82 (.07)
Gender	−0.22	0.41	−0.53 (.60)	−0.44	0.61	−0.73 (.46)

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What Hiding Reveals: Ironic effects of withholding information

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Imagine being asked about your recreational drug habits by your employer, and realizing that in order to be completely truthful you'll have to admit that you have occasionally indulged. In four experiments, we show that people believe that the best way to deal with such situations is to opt out of answering at all – but that this strategy is costly, because observers often infer the very worst when consumers choose not to answer such questions: "If he refuses to even answer this question, he must have a serious drug problem." The internet has created a fundamental shift toward openness, and with this shift, consumers are increasingly facing choices of whether to share or withhold information. Previous research shows that consumers tend to 'infer the worst' about products when marketers fail to provide information on the products' key attributes (e.g. Kivetz & Simonsohn 2000; Huber & McCann, 1982; Simmons & Lynch 1991). In contrast however, we focus on consumers' decisions of whether to share or withhold their personal data – and the wisdom or error of such decisions.

In Study 1, participants were asked which of two individuals they would prefer to date. They were shown, side-by-side, each "prospective date's" response to multiple choice questions about their frequency of engagement in six taboo or illegal behaviors (such as failing to inform a partner about a sexually transmitted disease): the response options were "never," "once," "sometimes," "frequently," and "choose not to answer." One of the prospective dates answered all six questions; the other prospective date answered four questions but selected "choose not to answer" for the remaining two. We also varied the prospective dates' responses to the questions: in the "never" condition, for example, one of the prospective dates endorsed "never" for all six questions, while the other prospective date endorsed "never" for four questions and "choose not to answer" for the other two. We included similar conditions using "once," "sometimes," and "frequently." In all conditions, participants expressed greater interest in the prospective date who had answered all six questions – even in the "frequently" condition. In other words, relative to a prospective date who had left two questions blank, participants were more interested in dating someone who had admitted to frequently neglecting to tell a partner about a sexually transmitted disease and to frequently stealing goods worth more than $100.

Study 1 shows that omitting information can lead to more negative judgments; Studies 2A and 2B begin to address whether consumers understand this process, or erroneously believe that leaving questions blank is an effective impression management strategy.

In Study 2A, participants were asked to indicate how frequently, if at all, they engage in two behaviors – one desirable (donating to charity); the other undesirable (fantasizing about doing terrible things (e.g. torturing) to others). They were told that their response to only one of the questions would be shown to a rater, who would rate their attractiveness as a date. The other question would simply be displayed without the participant's response. Participants were asked which of the two responses they would like to display. The majority of participants (62%) chose to display their answer to the desirable question, leaving the undesirable question blank.

Study 2B tests whether this choice is a mistake. Both questions from Study 2A were displayed and participants were shown how a prospective date had answered one of them (the modal response from Study 2A was used); the other question was purportedly left blank by the prospective date. We manipulated whether the desirable or undesirable question was unanswered. In contrast to choices in Study 2A, participants in Study 2B expressed greater interest in the prospective date when s/he had answered the *undesirable* question, relative to when s/he had answered the desirable question (and left the undesirable question blank). Moreover, when we asked participants to guess the prospective date's answers to a series of new questions, results were consistent with the dating interest ratings, suggesting that nondisclosure may have enduring effects on person perception. Taken together, Studies 2A and B show that ironically, participants choose to opt out of answering questions about undesirable behaviors even though doing so makes them less attractive in the eyes of others.

Finally, Study 3 tests a moderator for observers' negative judgments of non-disclosers. We predicted that people who have recently withheld information – and therefore are more likely to understand that nondisclosure may not be driven only by desires to hide horrible information – are less likely to subsequently judge non-disclosers harshly. Participants were first asked to answer sensitive questions about themselves; for each question, they had the option of selecting "choose not to answer." We manipulated participants' propensity to select "choose not to answer" by varying the other available response options (i.e., sometimes / frequently / always VS. never / once / sometimes); participants were more likely to select "choose not to answer" for the former response scale than the latter. Next, participants were shown a prospective date's answers to the same questions and rated their interest in dating the person. We again manipulated whether the prospective date had chosen not to answer some of the questions. As predicted, the negative judgments of prospective dates who had left questions blank were buffered when the raters themselves had been induced to leave questions blank.

Taken together, these results suggest that consumers can be prone to withholding information when they would be better off sharing it, and point to situations in which this tendency may be exacerbated (e.g. when those who are judging them have not, themselves, recently withheld information). Moreover, the internet's fundamental shift toward openness may exacerbate these issues, as withholding information becomes more anomalous, and hence, more conspicuous.

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6.3 *Individual Papers:* Oh, Behave!: Self-regulation in Consumption Contexts
Room: Madero A
Chair: Hristina Dzhogleva, University of Pittsburgh

"I Don't Like it, but it's Important": Implicit Importance, not Implicit Attitudes, Predicts Consumers' Self-regulatory Success
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Melissa Ferguson, Cornell University, USA

In making progress toward goals, consumers' ambitious intentions do not always translate into impressive results. This is especially true for tasks that require self-regulation (e.g., Rhodes, Courneya, & Jones, 2003)—resource-consuming actions that must be effortfully willed in order to persevere toward future goals (Baumeiser & Vohs, 2007). Consumers have ambitious plans for retirement but cannot exercise the financial restraint in the present, vow to get in shape but may not keep up the necessary exercise regimen, or hope to reap the benefits of formal education but cannot always maintain the necessary academic discipline (de Bruijn, 2011; Rhodes, de Bruijn, & Matheson, 2010; Rhodes, Plotnikoff, & Courneya, 2008).

Previous research has noted the important role of implicit cognition in effective self-regulation (Aarts, Custers, & Marien, 2008). Implicit cognition appears to play a *special role*, one that predicts outcomes over and above explicit valuations and intentions (Bargh, 2001). Typically, such research has emphasized how implicit *attitudes*—positive or negative automatic associations—guide goal pursuit.

We argue that because effective self-regulation requires that one suspend a concern with short-term affective fulfillment in order to receive long-term gain, implicit affect may not be the proximal driver of effective self-regulation. Instead, consumers persevere—for example, with an exercise routine—not because they necessarily *like* it, but because they believe perseverance is *important* given what they hope to achieve. We predicted that an implicit belief that means to goal success are important should be a better tracker and predictor of successful self-regulation than implicit affect toward those means. We tested these hypotheses in the domains of academic achievement and exercise behavior.

In Studies 1a and 1b, participants completed two single-category IATs (Karpinski & Steinman, 2006)—one that assessed their implicit belief in the importance of schoolwork; the other, their implicit attitude toward schoolwork. In Study 1a, 310 upperclassmen completed the IATs and reported their college GPA. Implicit importance, $\beta =.13$, $p = .02$, but not implicit positivity, $\beta = .01$, $t < 1$, predicted their GPA. In Study 1b, 287 entering undergraduates who had yet to receive formal feedback completed the implicit measures. At the end of the semester, participants were recontacted and asked to report their GPA. Implicit importance, $\beta = .13$, $p = .04$, but not implicit positivity, $\beta = .03$, predicted their GPA.

Study 2 found that it was the *implicit* nature of importance that was key in predicting academic achievement. Replicating Study 1, implicit importance of schoolwork predicted GPA, $\beta = .23$, $p = .01$, but explicit importance did not, $\beta = .07$, $t < 1$. We reasoned that the implicit connection between specific means of academic success (e.g., lectures, papers) and the concept of importance may provide an important implicit self-regulatory nudge, especially for those likely to be defeated by the task of self-regulatory persistence. Someone who does not find completing problem sets, studying for exams, and attending class a difficult self-regulatory task may effortlessly do these things without the necessary prompting of an implicit association with importance. Consistent with this logic, we found that *academic self-regulatory ease* moderated Study 2's results. Those for whom schoolwork was a task that required significant self-regulation benefitted from the implicit link with importance, $\beta = .44$, $p < .001$. Those for whom schoolwork was completed without self-regulatory effort showed no such association, $\beta = .00$, $t < 1$.

In Study 3, we recruited consumers who had indicated to an academic test prep company an interest in attending graduate school. In the lab, we measured their implicit belief in the importance of the graduate school entrance exam (the GRE) as well as their implicit attitude toward test. Participants then took a surprise GRE practice exam. Even controlling for their baseline performance on standardized tests (their SAT score), implicit importance predicted their in-lab GRE performance, $\beta = .24$, $p = .04$, though implicit attitudes did not, $\beta = -.08$, $t < 1$. Consistent with our account that automatic associations with importance fuel persistence, self-reported effort mediated the effect. As in Study 2, those for whom it was difficult to maintain persistence while test-taking were those

who most benefitted from the importance connection, ß = .54, *p* = .002. Those for whom the task was less taxing on their self-regulation did not show the same boost, ß = -.01, *t* < 1.

Study 4 extended these findings to the exercise domain. In addition, we tested whether it is the implicit importance of the means to self-regulation (e.g., aerobics, cardio) and not the implicit importance of the endstates that exercise could lead to (e.g., health, wellness) that correlated with self-regulatory benefit. Indeed, an implicit belief in the importance of exercise predicted a well-validated measure of exercise behavior (IPAQ; Craig et al., 2003), ß = .21, *p* = .01. Implicit importance of the health endstate did not, ß = -.02, *t* < 1. As with schoolwork and standardized test performance, those who found maintaining a steady exercise regimen difficult were those who most benefitted from the implicit connection with importance. That is, those who found exercise self-regulation difficult showed a strong connection between implicit importance toward exercise and exercise behavior, ß = .33, *p* = .01. Those for whom exercise self-regulation was easy did not show the association, ß = -.09, *t* < 1.

Every time one must decide whether to persist (e.g., head to the gym) or slip up (e.g., head out for pizza), it is unlikely that explicit assessments are consciously called upon. Instead, automatic associations suggesting certain choices are important appear to be valuable. These findings support that implicit cognition plays a key role in self-regulation, but suggest that it is crucial that research move beyond implicit attitudes to also examine implicit beliefs. Our studies have relied on pre-existing individual differences in these implicit beliefs, showing that such measures allow us to predict which consumers are most likely to stick with and succeed in their self-regulation. In current research, we are testing whether we can modify consumes' implicit beliefs to help them meet their goals.

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Collaboration's Costs: Examining the Self-Regulatory Consequences of Cooperation

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Since Johnson, Maruyama, Johnson, Nelson, and Skon's (1981) meta-analysis recommended cooperation to boost productivity, a host of research has explored moderators of success in group or team situations (e.g., Lewis 2004; Salas, Sims, & Burke, 2005; Uzzi & Sprio, 2005). However, in daily life, individuals move in and out of cooperative situations. Interestingly, research has not carefully considered the way that cooperation may influence subsequent performance on non-group tasks.

The present paper argues that the effect of cooperation on subsequent performance on self-regulatory tasks depends on chronic or situationally-activated self-sufficiency. Specifically, we argue that cooperating may draw on the same resources as does self-control as both require an individual to overcome self-interested, impulses for weaker, more indirectly-beneficial desires (DeWitte & Cremer, 2001). In the case of cooperation, this requires sacrificing the individual goal for the group goal. Further, we argue that negative side effects of cooperation may predominate among individuals who are highly self-sufficient. Highly self-sufficient individuals prefer to attain goals individually (Vohs, Meade, & Goode, 2006), and so, adopting a cooperative mindset that does not match their inherent tendencies may be differentially depleting for these individuals (Hong & Lee, 2008). Conversely, we predict that less self-sufficient individuals have a chronic affinity for cooperation. From an evolutionary or societal perspective, this may be because less self-sufficient individuals are likely to rely on the group to provide safety and resources (Chen, Peterson, Phillips, Podolny, & Ridgeway, 2012). For these individuals, cooperation may bolster self-regulatory resources, both relative to competition and relative to their more self-sufficient counterparts.

In Experiment 1, a total of 225 adult members of Amazon's Mechanical Turk panel participated. We first asked subjects to complete a self-sufficiency index embedded among other trait measures. Participants then answered a set of filler questions. They then responded to an open-ended prompt asking whether they would prefer to work cooperatively or competitively on a project and why. Two blind raters rated each open-ended response according to the subject's affinity and aversion to both cooperation and competition.

Consistent with our theory, more self-sufficient individuals were significantly less likely to express affinity for cooperation only as opposed to competition only ($b = 0.68$, $\chi^2_1 = 6.77$, $p < .01$; $R^2 = .03$) suggesting that highly self-sufficient individuals will naturally gravitate more toward competition than cooperation. Consequently, we anticipate that they are particularly likely to show poorer persistence and impulse control on subsequent tasks.

We tested this prediction in Experiment 2. The experiment followed a 2×2 (independence or interdependence $\times$ cooperation or competition) between-subjects design. A total of 79 undergraduate students participated in a lab setting, where they first completed a priming task describing a tea tasting visit to Shanghai designed to focus either on the self (high self-reliance prime) or highlight the self's connection to others (low self-reliance prime). In the high self-reliance condition, participants counted the incidence of the words "I, me, mine, and my," while in the low self-reliance condition, participants counted the incidence of the words "We, us, ours and our" before continuing. They then cooperated or competed on a subsequent online search task. After six minutes, the experimenter stopped all participants and directed to complete a presumably unrelated study.

This study consisted of an anagram task adapted from Baumeister, Bratslavsky, Muraven, and Tice (1998) where the last anagram was unsolvable. Self-control was measured as the amount of time participants persisted on the unsolvable anagram. Contrasts show that individuals primed to be high in self-reliance and asked to cooperate persisted for less time than those primed to be lower in self-reliance ($M_{high\ self-reliance,\ cooperation} = 48.74$ sec; $M_{low\ self-reliance,\ cooperation} = 130.26$ seconds; $F(1, 75) = 17.26$, $p < .01$). However, there was no such difference in task persistence generated by competition.

Building on recent work demonstrating that access to money activates self-sufficiency (Vohs et al., 2006), in study 3 we used income as a proxy for self-sufficiency and simply primed cooperation or competition, to see if effects replicate when these mindsets alone are activated. A total of 157 adults were recruited through Amazon's Mechanical Turk panel. The experiment followed a $2 \times 2 \times 2$ (task prime: competition or cooperation $\times$ continuously-measured self-control $\times$ continuously measured income) between-subjects design. Participants first completed a prime aimed at activating a competitive or cooperative mindset adapted from Bargh, Chen, and Burrows (1996) by unscrambled words such as "compete" and "rival" (competitive mindset) or "agree" and "partner" (cooperative mindset) along with filler words identical across conditions. The dependent measure was how much debt they were willing to incur to see their favorite artist or band that was coming to play in town (Mishra & Mishra, 2010). After completing a brief picture rating task, we then collected individuals' trait self-control (Tangney, Boone, & Baumeister 2003).

Analysis shows both a significant two-way interaction of cooperation/competition prime and income and a significant three way interaction of cooperative v. competitive prime, income, and individual self-control. While we see only a main effect of income among higher self-control individuals (higher income individuals were willing to incur more debt), we replicate the pattern of effects from study 2 among lower self-control individuals. Here, low self-control, higher income (i.e., more self-sufficient) individuals were willing to take on significantly more debt under cooperation as opposed to competition ($b = 22.16$, $t = 2.65$, $p = .009$). By contrast, low self-control, low income (less self-sufficient) individuals were willing to take on significantly less debt under cooperation than competition ($b = -20.66$, $t = -2.36$, $p = .02$).

As a whole, our research suggests that despite their relative advantages and disadvantages in heightening productivity, competition and cooperation may have downstream consequences for the individual actor's post-task decisions or performance. Decisions about

task format should therefore be made not only in light of norms or performance on a focal task, but also in light of their implications for consumer behavior and well-being after the task's completion.

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Neuroticism Gone Good: The Restorative Benefits of Environmental Settings

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The ability to self-regulate is susceptible to fatigue with overuse, which can lead to ego-depletion or a temporary reduction in the ability to engage in volitional behaviors caused by prior acts of self-control (Baumeister et al., 1998). Solutions like consuming glucose can restore self-regulatory resources (Gailliot et al., 2007) and may prevent consequences ego-depleted consumers face (e.g., increased impulsive buying, Vohs & Faber, 2007). However, how likely are most consumers to adopt any solution while in a depleted state?

This research proposes that exposure to primes associated with natural and urban settings provide a passive solution to the depletion effect. Prior research finds that natural environments reduce stress (Ulrich, 1981) and restore attentional resources implicated in self-regulation (Kaplan & Berman, 2010) while urban environments, or environments characteristic of a city, cannot restore attentional resources and are detrimental to well-being (Kaplan, 1995; Kuo, 2001). Yet, this research suggests that neuroticism, a personality trait linked to negative emotionality (Elliot & Thrash, 2002), moderates the restorative potential of both environmental settings.

Based on regulatory fit, consumers are more successful pursuing goals, like self-regulation, which are congruent with their stable motivational orientation (Hong & Lee, 2008). For instance, negative states lead to improved task performance for individuals high in neuroticism (Tamir, 2005). Accordingly, this research demonstrates through three experiments that urban or natural environments, when associated with danger (calm), provide congruent motivational cues that restore self-regulatory resources to ego-depleted consumers high (low) in neuroticism who tend to be more avoidance-oriented (emotionally stable and calm), respectively (Elliot & Thrash, 2002; Sherman, Nave, & Funder, 2010).

Experiment 1

Experiment 1 tested the moderating effect of neuroticism (high vs. low) on self-regulatory task performance. Sixty-two student participants completed: 1-a white bear thought-suppression self-regulatory depletion task; 2-a 12-item neuroticism scale from the revised Eysenck personality questionnaire; 3-six solvable practice anagrams; 4-the PANAS; 5-a self-regulatory task consisting of four solvable and two unsolvable anagrams; 6-a self-regulatory financial budgeting task; 7-manipulation checks; and 8-demographic questions while continuously listening to sounds associated with natural (i.e., waves) or urban settings (i.e., traffic).

Results

Two general linear models (GLMs) indicated a significant interaction effect of neuroticism and environmental prime on 1-number of mouse clicks performed during the unsolvable anagram task ($F(1,57)=12.1$, $p<.001$) and 2-amount participants would spend over-budget to attend a hypothetical concert ($F(1,54)=6.25$, $p<.05$). Spotlight analyses revealed that participants low (high) in neuroticism showed significantly greater self-regulatory strength (i.e., performed more clicks) after exposure to the natural (urban) vs. urban (natural) prime ($t(57)=-2.54$, $p<.05$; $t(57)=2.44$, $p<.05$, respectively) while participants low (high) in neuroticism showed marginally significant (significantly) greater self-regulatory strength (i.e., spent less money over-budget) after exposure to the natural (urban) vs. urban (natural) prime ($t(54)=1.44$, $p=.079$, one-way; $t(54)=-2.22$, $p<.05$, respectively).

Discussion

Experiment 1 provided initial support that primes associated with natural and urban environments restore self-regulatory resources. A follow-up experiment was conducted with lexical primes and an added control condition to address potential methodological concerns of using auditory primes, to increase generalizability of the findings from study 1, and to gauge the direction of the restorative effect.

Experiment 2

A total of 174 student participants followed a design and procedure similar to study 1, except the added control condition and use of anagrams to prime different environmental settings (urban vs. nature vs. control).

Results

Two GLMs indicated a significant interaction effect of neuroticism and environmental prime on 1-amount of time spent ($F(2,167)=8.49$, $p<.001$) and 2-number of mouse clicks performed ($F(2,166=5.19$, $p<.01$) during the unsolvable anagram task. A spotlight analysis revealed that participants low in neuroticism showed significantly greater self-regulatory strength (i.e., spent more time) after exposure to natural primes in comparison to both control ($t(167)=-2.52$, $p<.05$) and urban primes ($t(167)=-3.91$, $p<.01$) while participants high in neuroticism showed significantly greater self-regulatory strength after exposure to urban primes in comparison to both natural ($t(167)=-2.7$, $p<.01$) and control primes ($t(167)=-2.22$, $p<.05$). Another spotlight analysis revealed that participants low in neuroticism showed significantly greater self-regulatory strength (i.e., performed more clicks) after exposure to natural primes in comparison to both urban ($t(166)=-2.39$, $p<.05$) and control primes ($t(166)=-2.93$, $p<.01$) while participants high in neuroticism showed significantly greater self-regulatory strength after exposure to urban primes in comparison to both control ($t(166)=-2.11$, $p<.05$) and natural primes ($t(166)=-2.07$, $p<.05$). In both GLMs, the restorative effect of urban (natural) primes for participants high (low) in neuroticism didn't result from a dampening effect between the natural (urban) primes and control primes (all ps <.05), respectively.

Discussion

A follow-up experiment was conducted to understand the process by which natural and urban environments operate in restoring self-regulatory resources. Based on prior theory, previous findings should flip if urban primes are associated with calm while natural primes are associated with danger.

Experiment 3

A total of 57 student participants followed the same design as in study 1, but a different procedure comprising of: 1-an essay writing depletion task; 2-a sentence unscrambling task comprised of environmental primes; 3-the PANAS; 4-a self-regulatory task consisting of six solvable and two unsolvable anagrams; 5-a self-regulatory financial budgeting task; 6-the neuroticism measure; and 7-demographic questions.

Results

Two GLMs indicated a significant interaction effect of neuroticism and environmental prime on 1-number of mouse clicks performed during the unsolvable anagram task ($F(1,52)=9.58$, $p<.01$) and 2-amount participants would spend over-budget to attend a hypothetical concert ($F(1,53)=11.8$, $p=.001$). Spotlight analyses revealed that participants low (high) in neuroticism showed significantly greater self-regulatory strength (i.e., performed more clicks) after exposure to urban (natural) vs. natural (urban) primes ($t(52)=2.33$, $p<.05$; $t(52)=-2.16$, $p<.05$, respectively) while participants low (high) in neuroticism showed significantly greater self-regulatory strength (i.e., spent less money over-budget) after exposure to urban (natural) vs. natural (urban) primes ($t(53)=-2.32$, $p<.05$; $t(53)=2.55$, $p<.05$, respectively).

Conclusion

This research contributes to the consumer behavior literature by discovering a solution to the depletion effect that doesn't rely on consumers' ability to actively monitor and replenish limited self-regulatory resources. Three experiments demonstrate that primes associated with natural and urban settings, as moderated by neuroticism, restore self-regulatory resources in consumers. Importantly, these effects are truly restorative as no dampening effects occurred.

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Should Birds of a Feather Flock Together? Understanding Self-Control Decisions in Dyads
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While the bulk of research in consumer behavior focuses on self-control tasks undertaken independently, our tendency to exercise self-control is often socially-determined. For example, a pair of friends may decide together whether to study or watch a movie. Similarly, a couple may go grocery shopping or create a household budget together. Moreover, individuals in work environments may have little choice over the self-control levels of people with whom they need to make decisions. How will different dyads make these self-control decisions together? If a dyad is prone to poor performance, why?

To answer these questions, we examine how different dyad types, formed on the basis of different combinations of partners' trait self-control, perform on joint self-control tasks. We examine the following dyad types: dyads containing two low self-control individuals (homogeneous low self-control), dyads composed of one low self-control and one high self-control individual (mixed), and dyads of two high self-control partners (homogeneous high self-control).

We predict that homogeneous high self-control dyads will perform better on joint self-control tasks than both homogeneous low self-control and mixed dyads. However, we propose that there will be no difference in the self-control of the latter two dyad types, such that dyads composed of one low self-control and one high self-control partner will perform as poorly at self-regulation as dyads of two low self-control individuals. Given their differences in perspective, when in mixed dyads, high and low self-control partners' goals are likely to be in conflict: while the high self-control individual is chronically likely to focus on working toward the achievement of long-term goals, the low self-control individual is prone to pursue immediate gratification by giving in to short-term temptations. When these conflicting goals meet, we propose that the higher self-control individual is more likely to capitulate than is the lower self-control individual. This is because the very act of cooperating in a joint decision demands self-regulatory resources (Baumeister & Exline, 2000). Thus, the higher self-control person can put off the immediate pursuit of their own goal in the interest of the other person's. However, the lower self-control individual will remain focused on their immediate gratification, and will be unable to compromise with the more restrictive demands of their partner. Thus, within a mixed dyad, the low self-control individual will play a more determining role in the decisions, which would cause the dyad's self-control to be comparable to that of homogeneous low self-control pairs.

In Studies 1A and 1B individuals first completed the Tangney et al. self-control scale and several filler tasks. Then the experimenter paired participants to create the three dyad types. All dyads worked either on a menu selection (S1A) or anagrams solving task (S1B). The self-control measures were amount of calories and fat in each pair's menu (S1A) and time persisting on unsolvable anagrams (S1B). Results from Study 1A revealed that homogeneous high self-control dyads chose menus that contained fewer calories and fat than did both homogeneous low self-control ($p=.03$; $p=.02$) and mixed dyads ($p=.06$; $p<.05$). Nevertheless, there was no difference in the caloric and fat content of the menus of homogeneous low self-control and mixed dyads ($p =.74$; $p=.76$). Similarly, in Study 1B,

homogeneous high self-control dyads persisted significantly longer at unsolvable anagrams than both homogeneous low self-control and mixed dyads ($p<.001$; $p=.01$). Again, there was no difference in the persistence time of the latter two dyads ($p=.17$).

Study 2 replicated these findings using married couples. We operationalized joint self-control based on the self-reported couple's success at meeting long-term goals and the amount of money the couple was willing to charge on credit card to book a luxurious vacation beyond their budget. Both spouses also responded individually to the Tangney et al. self-control scale (used to categorize the couples into the three dyad types). Results demonstrated that homogeneous high self-control couples were more successful at achieving long-term goals than both homogeneous low self-control and mixed couples ($p=.03$; $p=.02$). Moreover, homogeneous low self-control and mixed couples were both willing to incur more debt than homogeneous high self-control couples ($p<.0001$; $p<.0001$). However, there was no difference between the long-term goal performance and debt amounts of the former two dyad types ($ps>.16$). Study 3 elucidated the dynamics occurring in mixed dyads. First, participants were asked to identify a person with whom they make joint decisions. They were then asked to imagine that they had to decide with their partner what entrée they would both order at a restaurant. To create artificial mixed dyads, high self-control individuals (identified based on the Tangney et al. scale) were told that their partner recommends choosing an indulgent entrée, while lower self-control individuals were told that their partner recommended a healthier option. Participants then indicated their likelihood of going with the partner's recommendation, resisting the partner's influence, and willingness to compromise. Results revealed that in mixed dyads, high self-control individuals were more willing to compromise and follow their partner's recommendation than low self-control individuals ($ps<.03$). In contrast, low self-control participants were more likely to resist their partner's influence ($p=.07$). These results support our theory that the poor performance in mixed dyads in our prior studies is due to the higher self-control individuals' tendency to forego their own restrictive tendencies, instead being willing to compromise with their lower self-control partner's indulgent wishes.

The present work contributes novel theoretical insights to the research on self-regulation, dyadic decision-making, and marital well-being. First, the present work is the first to explore the self-control behaviors of pairs of people working together on shared self-control tasks. Second, while past research suggests that high self-control has uniformly positive outcomes, our work shows a "dark" side of self-control and demonstrates that higher self-control individuals' ability to put off their own wishes for the sake of others' preferences may enhance the affective component of social interactions, but may also lead to suboptimal outcomes in the long term. Finally, our research also extends recent work on relationship quality and marital well-being (Rick et al. 2011) and provides new theoretical insights which could prove helpful in improving couples' lives together.

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6.4 *Individual Papers:* Homo Realisticus: Heuristics and Biases in Decision Making
Room: El Capistrano
Chair: Robin Soster, University of Arkansas

Determinants of Diminishing Marginal Utility: Numeracy and Numeric Tractability
Dan Schley, The Ohio State University, USA*
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In his original conception of expected utility, Daniel Bernoulli (1738; 1954) proposed that individuals generally have diminishing marginal utility (DMU). Much in the same way that an additional spoonful of sugar provides a smaller additional taste sensation than the previous spoonful of sugar (i.e., satiation), an additional dollar of wealth provides a proportionally smaller additional utility than the previous dollar. Although DMU is foundational to choice theories, little is known about the particular determinants of DMU beyond prospective satiation (i.e., individuals expect to derive less utility from the 100th dollar than from the first).

Previous research in numerical cognition has demonstrated that individuals have curvilinear representations of magnitude (Dehaene, Izard, Spelke, & Pica, 2008; Siegler & Opfer, 2003). Although an individual may know that 1,000 is 10 times as large as 100, their subjective representation of 1,000 is often much less than 10 times as large as their subjective representation of 100. In the current article, we propose that the particular extent of DMU may be related to individuals' representations of numeric magnitude. In particular, we suggest that a gain of $1,000 may not be perceived as ten times as beneficial as a gain of $100 because the magnitude of "1,000" is not perceived as ten times as large as the magnitude of "100". We expect more numerate individuals to have more linear representations of magnitude, resulting in less DMU (i.e., more linear utility curves). Furthermore, we would expect anything that inhibits individuals' representations of magnitude (e.g., %Y off vs. $X off pricing) to produce more DMU.

For the current research we sought to create an ecologically valid response measure. The Willingness to Drive (WTD) measure asked participants to indicate the furthest distance they would be willing to drive (roundtrip) to receive a specified amount of money; as this is a common consideration for individuals (e.g., driving to take advantage of a sale). To test our proposed mechanism, that more numerate individuals are more sensitive to differences in numeric magnitudes than less numerate individuals, participants completed an analogous task to Siegler and Opfer (2003). On each of 11 screens participants were randomly presented a number (e.g., 268) and asked to indicate its position on a line anchored at 0 and 1,000. This task allows us to investigate participants' sensitivities to numeric magnitudes and compare these to their sensitivities to contextualized quantities (e.g., an amount of money).

Study-1 participants (N=76) indicated WTD for 12 dollar values ($5, $10, $15, $20, $30, $40, $50, $60, $70, $80, $90, $100) presented in random order. In all studies we constructed log-log mixed-models with random intercepts and slopes. Simply stated, results indicated significant DMU, $b = .86$, $t(834) = 29.67$, $p < .0001$, particularly for less numerate participants, $b = .04$, $t(834) = 3.07$, $p = .002$ (i.e., more numerate participants had more linear utility curves). Moreover, more numerate participants had more linear representations of magnitude compared to less numerate participants, $\beta = .06$, $t(758) = 5.15$, $p < .0001$. Including numeracy, representations of magnitude, and DMU in a mediation model indicated that the influence of numeracy on DMU was mediated by more linear representations of magnitude $\beta Indirect = 0.02$, CI [.002, .044].

The previous results were replicated in Study 2, in which (N=81) participants completed the same task as in Study 1, but indicated WTD on a slider anchored at "none" and "the furthest you have ever driven in a day" as opposed to the numeric response measure in Study 1.

Study 3 (N=123) involved a 2($X off vs. Y% off) x 4(Item Regular Price) x 4(Item Discount) mixed factorial design; where price format (i.e., numeric tractability) was manipulated between-participants and regular prices and item discounts were manipulated within-participants. Y% off pricing requires individuals to mentally transform the relative discount to an absolute discount to fully comprehend the extent of the savings. Given our hypothesis, that DMU is determined by individuals' ability to represent numbers, employing Y% off pricing should make the numbers less tractable, resulting in greater DMU. Consistent with our hypothesis, Y% off participants were more susceptible to DMU than $X off participants, $b=.11$, $t(1840)=4.64$, $p<.0001$. As in Studies 1 and 2, higher numeracy was associated with less DMU, $b=.03$, $t(721)=4.78$, $p<.000$. Furthermore, numeracy had a significantly larger influence on DMU in the Y% off condition than in the $X off condition, $b=-.03$, $t(1840)=2.68$, $p=.008$. That is, numeracy appears to ameliorate the deleterious effect of numeric intractability.

Results of the current research indicate that DMU is determined, in part, by individuals' numeracy (i.e., representations of magnitude), as well as the tractability of the numbers being presented. These results have clear implications for how individuals value different quantities of goods or money. In addition, firms may consider how the tractability of the information they provide influences individuals' sensitivity to differences in value.

The current research may also influence how we discuss risk aversion. Within research on decisions under risk, the extent of risk aversion is defined as the concavity of the utility function (Kahneman & Tversky, 1979). Consider a choice between option A, a guaranteed $40, and option B, a 50% chance of $100, otherwise $0. If an individual chooses option A, they would generally be considered risk averse. But, consider the possibility that the individual has a curvilinear representation of numeric magnitude. If the individual does not perceive the number 100 as twice as large as the number 40, then choosing A is not risk averse, but the utility maximizing choice.

The current research may account for some individual differences in risk aversion. For example, previous research has demonstrated that women, minorities, and the poor are typically more risk averse. Furthermore, these groups have generally been shown to be less mathematically proficient (i.e., lower in numeracy). The current research would suggest that women, minorities, and the poor may appear more risk averse, in part, because they have more curvilinear representations of magnitude.

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Going, Going, Gone: Hormonal Influences on Loss Aversion

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Loss aversion is the tendency to be more sensitive to losses than comparable gains. Research has converged on the robustness of loss aversion in human psychology (Kahneman and Tversky 1979; Tversky and Kahnemen 1991), yet little research has investigated how biological factors influence intra-individual differences in loss aversion. Drawing on the Ovulatory Shift Hypothesis, the current research examined whether women's sensitivity to loss aversion is influenced by a universal biological factor – the monthly ovulatory cycle.

The ovulatory cycle spans, on average, 28 days, during which a woman can become pregnant only during the week long *ovulatory* phase of the cycle – the time each month when estrogen levels are particularly high. Research has shown that ovulation can non-consciously alter women's psychology. For instance, ovulating women report less commitment to and satisfaction with their current romantic partner and increased sexual attraction to other men (Durante and Li 2009; Gangestad, Thornhill, and Garver 2002). Ovulating women are particularly attracted to men who display markers of genetic fitness (e.g., physical attractiveness, masculinity, social dominance; Durante et al. 2012). Consequently, ovulating women are more likely to cheat on their spouse or partner particularly if their current partner lacks indicators of genetic fitness (Bellis and Baker 1990; Garver-Apgar et al. 2006). Because ovulating women become less committed to their current partner and are more likely to engage in behaviors that could threaten their current relationship, we predicted that women might exhibit less loss aversion near ovulation. Thus, we investigated whether ovulating women's decreased commitment to their current partner translates to the marketplace.

Study 1 tested ovulating women's response to losing hypothetical amounts of money and consumer products. Ovulating and non-ovulating women were asked to indicate how unpleasant losing money in increments of $5, $10, $15, $20, and $25, as well a pair of shoes and a laptop ($\alpha=.74$). Results revealed that ovulating women were significantly less loss averse ($M_{ovulating} = 3.07$) than women who were not ovulating ($M_{not\ ovulating} = 5.55$; $p = .03$).

Study 2 examined how ovulation influenced selling price in an actual marketplace exchange. A high selling price indicates that a consumer places a higher value on the product and greater distress associated with losing that product (Aggarwal and Zhang 2006). In Study 2, women came into the lab once on a high fertility day (near ovulation) and again on a low fertility day. The sessions were counterbalanced and ovulation was confirmed via urinalysis. This methodology provides the most precise measure of ovulation and also allows us to examine behavioral change within the same woman across the cycle. At each session, women were given a coffee mug or a picture frame to keep. Women were told the mug (or frame) retailed for $5.00. Later in the testing session women were told that another participant in the same study was interested in buying the mug (or frame), and the participants were asked to indicate at what price they would be willing to sell the mug to the other participant. Results showed that women had a significantly lower selling price when they were ovulating compared to when they were not ovulating ($M_{ovulating}$ = $6.59 vs. $M_{not\ ovulating}$ = $8.46; p = .004). This suggests that women are less loss averse near ovulation.

Study 3 investigated the effect of ovulation on the endowment effect – a common measure of loss aversion. The endowment effect occurs when a seller values a product they possess more than a buyer (Kahneman, Knetsch, and Thaler 1991), which is often attributed to people being more sensitive to losing the product than to gaining it (Kahneman and Tversky 1979). Because Studies 1 and 2 suggest that ovulating women experience less loss aversion, we predicted that ovulating women would be more willing to part with a product compared to non-ovulating women, and thus show less of an endowment effect.

Study 3 also examined the mechanism responsible for the effect of ovulation on loss aversion. We predicted that the psychological mechanism that lowers women's commitment to a current partner near ovulation underlies ovulating women's lowered sensitively to loss aversion. Because ovulation leads women to become less committed to their current partner to facilitate greater sexual receptivity to men with markers of genetic fitness (Garver-Apgar et al. 2006), Study 3 attempted to suppress the effect of ovulation on loss aversion by priming a mate retention motive. To do this, women imagined they were on a date with a boyfriend who was described as handsome, confident, and a man who was very affectionate and loving toward her. The prime was designed to endow women with a partner who met the criteria of a man high in genetic fitness (e.g., physically attractive, dominant; Durante et al. 2012) and effectively increase women's desire to commit to one partner. Study 3 also included a control condition where women read a story about laundry. After exposure to either the control or mate retention prime, women were asked to indicate the price they would be willing to sell a hypothetical gym membership and the price they would be willing to buy a gym membership. Consistent with predictions, there was a larger discrepancy between the sell price and buy price for ovulating women in the mate retention prime condition ($M_{sell-buy}$ = $40) compared to ovulating women in the control condition ($M_{sell-buy}$ = $6; p =.03). There was no difference in sell and buy prices across conditions for women who were not ovulating. Results suggest that women's decreased level of commitment to a romantic partner near ovulation is the psychological mechanism that underlies the effect of ovulation on loss aversion. Increasing women's desire to commit to one man in the mate retention condition effectively suppressed the effect of ovulation on loss aversion.

These findings suggest that the hormonal fluctuations associated with ovulation lead women to become less loss averse. This research adds to the literature on loss aversion and provides some of the first evidence of how biological factors such as hormones can influence robust psychological phenomena commonly studied in marketing and decision research.

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Sunk Savings: When the Reason for Saving Something Is That You've Saved It Already

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Personal experience suggests that having saved an item is reason enough to continue saving it, leading to expired cookies, never-worn yet out-of-style outfits, and still-corked bottles of wine. We suggest that one determinant of whether someone decides to save an item is how long they have saved the item already, regardless of the value of the item, and at times to a self-defeating extent. All else being equal, saving begets saving. We compare this finding to the phenomenon of sunk costs (e.g., Arkes & Blumer, 1985), whereby people continue "throwing good money after bad" so that their previous investment is not "wasted;" the more resources have been invested, the more they need to get something back. Similarly, in the *sunk savings* effect, consumers have saved an item because they intended to use it at a special time or for a special purpose; thus, they had better keep saving it until the right time or purpose arrives, and the longer they have saved the item, the more special or appropriate an occasion needs to be to meet that standard.

In Study 1a, participants considered an item they had not yet used or consumed, one they had owned one week or less, or six weeks or more. They indicated the extent to which seven plausible reasons contributed to their having saved the item thus far; these items included reasons like "This item will improve with age, so I should continue to save it," "I have been too busy to enjoy this item lately," and "I like to anticipate enjoyable things as long as I can." The only reason of the seven that showed a significantly difference was that when they had saved the item for the longer time period, the more likely they were to indicate that the thought "I have saved it this long, I should continue to save it" influenced their saving it. This difference remains even when the cost of the item is included as a (nonsignificant) covariate. Participants also believed that they would continue to save the item for longer before using it when they had already saved it for six weeks rather than just one.

In Study 1b, participants were constrained to considering a food item they had saved so long that it had expired, either two weeks or less or six months or more after purchase; this allows us to control for the type of item saved, and to test whether saving-begets-saving leads people to "oversave" items until they are no longer useable. As in Study 1a, "I have saved it this long, I should continue to save it" is a significantly more influential reason why they saved the food until it expired in the longer timeframe.

In Study 2 we tested whether the item also accrues specialness as it is saved, as well as controlled for whether participants bring to mind systematically different items in different timeframes. Participants first imagined purchasing a highly coveted clothing item. With the item in mind, they then imagined that either two weeks or six months had passed, and they had not yet found the right occasion to wear the item. Participants who imagined saving the item for six months thought it would be no more expensive and seemed significantly *less* special than those who saved it for only two weeks. Despite this, they still believed they would need to save it for significantly longer before finding the right occasion to wear it.

Finally, in Study 3, all participants considered the exact same scenario about the same item: would they smash open a piggybank to pay for a vacation? The one difference between conditions is that they imagined they had owned this piggybank either for six months, or for five years. Despite showing no difference on whether they believed that the money should be spent on something important or how difficult it would be to decide how to pay for the trip, participants in the five year condition were still significantly less likely to smash open the piggybank than participants who had only owned the piggybank for six months.

These four studies suggest that saving begets further saving, regardless of the type of item or how much the item costs. This "sunk savings" effect can backfire, leading people to save items for so long that, instead of finding the right time to use them, they are unable to use them at all. This reiterative saving does not seem to stem from the item accruing "interest" as it is saved, as participants in Study 2 believed that the item became less special even as they saved it for longer. In future research, we will examine the role of anticipated regret and of item-occasion fit in the sunk saving phenomenon. In the meantime, we hope that increased awareness of sunk savings begets less unnecessarily delayed enjoyment and happily emptier wine racks and refrigerators.

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Using Sunk Costs to Untether Consumers from Default Actions

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The sunk cost effect (SCE) occurs when people are over-committed to a course of action to which they have allocated unrecoverable resources (Arkes and Blumer 1985; Thaler 1980, 1985). Whereas prior research has identified ways in which sunk costs tether consumers to suboptimal actions (Koo and Fishbach 2010; Nunes and Drèze 2006; Okada 2001, 2006; Zhou and Soman 2003), this work examines how emphasizing sunk costs can untether consumers from actions associated with those costs. Since the SCE stems from a desire to avoid waste (Arkes 1996; Arkes and Blumer 1985; Prelec and Loewenstein 1998; Staw 1976), we hypothesize that encouraging consumers to transfer their sunk costs to an alternative course of action will help them abandon the default action in favor of the alternative action. This approach to moderating the SCE, which relies on reframing sunk costs, differs from other approaches that have deemphasized sunk costs or weakened cost-benefit coupling (Gourville and Soman 1998; Soman 2001; Soman and Gourville 2001; Soster, Monga, and Bearden 2010).

Three experiments were conducted with undergraduate students. Experiments 1 and 2 were 2 (Sunk Cost: Low v. High) x 2 (Transfer Invitation: Absent v. Present) between-subjects designs. Experiment 3 had five conditions (described below). The DV for all studies was willingness to abandon the default action for the alternative action. Results from these experiments revealed that consumers who were invited to transfer monetary or temporal sunk costs were less likely to exhibit the SCE (i.e., were more willing to abandon the default action and pursue the alternative action), so long as the invitation to transfer costs did not come from someone who would benefit if the consumer changed actions. In addition to informing the sunk cost literature, this research provides a path to better consumer choices, while revealing a means for marketers to encourage switching when consumers have incurred sunk costs.

Experiment 1: Sunk Money

Participants (N = 289) imagined they had paid a non-refundable deposit of either $2 (small cost) or $15 (large cost) to reserve an indoor tennis court for a game with a friend. On the day of the match, participants learned that their friend preferred to play outdoors. In the *transfer present* condition, the friend added, "… the $2 ($15) reservation was key, because it forced me not to schedule anything else during this hectic time of the semester." Participants indicated their preference to play indoors (default) or outside (alternative). Findings revealed a SCE in that participants were more likely to stay with the default option (indoors) when sunk costs were large. Results also revealed that the SCE was smaller when participants were encouraged to transfer the costs (see Table 1).

Experiment 2: Sunk Time

Participants (N = 229) imagined that after standing in line at a new cupcake bakery for either 2 minutes (small time cost) or 15 minutes (large time cost) a friend passed by and invited them to a movie. In *transfer present* condition, the friend added, "Good thing you have been waiting! If you hadn't, I might not even have seen you!" As in Experiment 1, participants were more likely to stay in the cupcake line when they had incurred larger time costs, but this effect was greatly reduced when participants had been encouraged to transfer their sunk time costs (see Table 1).

Experiment 3: Motive of the Transfer Invitation and the Role of Waste Avoidance

This experiment had five conditions. In four conditions participants imagined they had been waiting in a cupcake line for 15-minutes when a representative of the University's Athletic Department approached and offered free tickets to a soon-to-begin basketball game. In three of the four conditions, the offer was accompanied by a suggestion to transfer the time spent in line. This suggestion was made either by a representative with nothing to gain (*transfer representative no motive*), a representative who would gain if the participant went to the game (*transfer representative with motive*), or a friend (*transfer friend*). For example, in the transfer friend condition, the

friend said, "I know we've been waiting in this line a while, but we can think of it this way…if we hadn't been standing in this line for the last 15 minutes, we wouldn't have been here when he walked by." In the fourth condition (*transfer absent*), participants were not encouraged to transfer the costs. Finally, in the fifth condition (*baseline*) participants were asked if they would prefer to go to the cupcake bakery or the basketball game. Since these participants had not incurred sunk costs, responses by this group provided a baseline for preferences not influenced by sunk costs.

Figure 1 presents the percentage of participants in each condition who changed course of action and opted to go to the basketball game. The SCE can be seen by comparing the baseline and transfer absent conditions. It can also be seen in the transfer representative with motive condition, where the percentage going to the basketball game was lower than baseline. No differences in were found between the baseline and the other two transfer conditions, indicating that the suggestion to transfer costs in these conditions removed the SCE.

Since SCE is grounded in waste-avoidance (Arkes and Blumer 1985), we also examined how decisions were influenced by concerns about waste. To examine this question we used individual difference data for each participant that was collected prior to the main study. Specifically, as part of a large battery of questions, participants responded to three items that we used to create a waste-avoidance index (WAI; α = .66) that captured the extent to which each participant was concerned with avoiding waste. Without a transfer invitation, the SCE was stronger for those high in waste avoidance. For these high WAI participants, the SCE was attenuated when participants had been invited to transfer costs. This indicates that concerns about wasting sunk costs drives the SCE and that encouraging high-WAI individuals to transfer sunk costs eliminates their tendency to pursue a lesser-valued, default course of action (see Figure 2).

Table 1

Percentage of Participants who Abandon the Default
Action and Pursue the Alternative Action in Studies 1 and 2

	Study 1: Indoor v. Outdoor Tennis (n = 289)	Study 2: Cupcake Bakery v. Movie (n = 229)
No Transfer Conditions		
Small Costs	70.8%	87.7%
Big Costs	25.0%	38.6%
SC Effect(Small – Big)	45.8%*	49.1%*
Cost Transferred Conditions		
Small Costs	61.1%	75.9%
Big Costs	38.4%	71.9%
SC Effect(Small – Big)	22.8%*	3.9%
Reduction in SC Effect(No Transfer – Transferred)	23.0%*	45.2%*

* denotes a significant effect at $p < .05$.

Figure 1

Percentage of Participants who Abandon the Default Action for the Alternative Action in Study 3
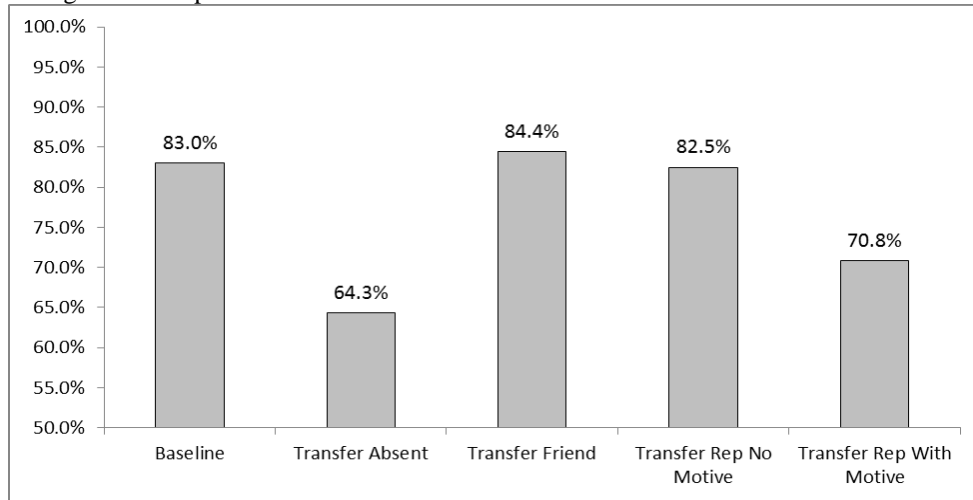
Figure 2

Percentage of Participants who Abandon the Default Action for the Alternative Action by Waste Avoidance Index (WAI) in Study 3
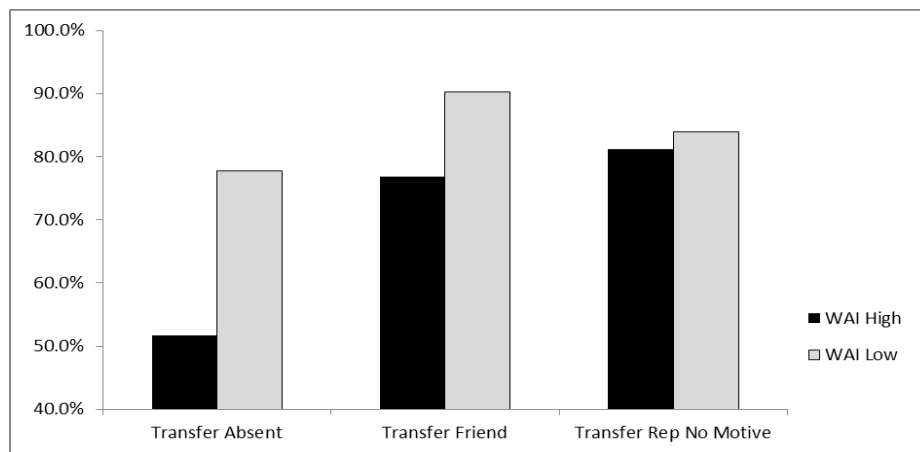
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6.5 *Symposium:* Deciphering Difficult Decisions: Incidental Influences and Process Insights

Room: Concepcion

Chair: Jennifer Danilowita, Yale University, USA

When Being Happy Makes Things Harder: The Downside of Positive Mood for Choice

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Being in a positive mood has been shown to confer a wide range of benefits on consumers. For instance, positive affect enhances creativity (Isen et al. 1985; Isen, Daubman and Nowicki 1987), promotes self-control (Aspinwall 1998; Frederickson 2001;

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Ragunathan and Trope 2002; Trope and Neter 1994), and generally leads to successful outcomes (Lyubomirsky, King, and Diener 2005). From these findings, one might expect positive mood to exert a positive influence on choice processes. In contrast, we propose that positive mood will exacerbate perceptions of choice difficulty, increasing the incidence of choice deferral.

We base our propositions on prior work showing that positive mood enhances cognitive flexibility (Murray et al. 1990; Hunsinger, Isbell, and Clore 2011; Showers and Canter 1985). Although prior work demonstrates that positive mood promotes a focus on similarities, or cognitive integration, as the default tendency (Isen and Daubman 1984; Isen et al. 1987; Isen et al. 1985; Kahn and Isen 1993; Lee and Sternthal 1999), positive mood may instead prompt a focus on inter-item differences when the focal task cues such a processing style. For example, Murray et al. (1990) demonstrated that when prompted to identify similarities between items, participants in a positive mood identified more similarities, but also identified more differences when prompted to identify differences. We posit that one situation leading consumers in a positive mood to focus on differences is choosing from a set of options that evoke tradeoffs. When consumers are faced with choices that evoke tradeoffs, they engage in comparison processes aimed at resolving this difficulty (Brenner et al. 1999; Gilbert et al. 1995; Nosofsky 1986; Tversky 1977; Wang et al. 2010). Though choice options may be compared in terms of similarity or dissimilarity (Gati and Tversky 1984; Medin et al. 1993; Tversky 1977), an emphasis on unique or different features is the norm (Brenner et al. 1999; Meyer and Eagle 1982; Tverky 1972; Tversky and Kahneman 1991; Tversky and Simonson 1993). For instance, Dhar and Sherman (1996) show people focus on unique features when making a choice and are therefore less likely to defer choice when the options have unique good and shared bad features, as opposed to unique bad and shared good features.

Thus, when a choice requires consumers to make tradeoffs, we propose positive mood will increase consumers' focus on the differences between the choice items. Consequently, we expect that consumers in a positive mood will have more difficulty making a choice, as evidenced by greater likelihood of choice deferral.

We test our propositions in three studies. In study 1, we induced either a positive or neutral mood using a word prime task (see Pyon and Isen 2011) and then presented participants with a set of three physician options (adapted from Schrift, Netzer, and Kivetz 2011). Half of participants were asked to make a choice between the physician options, whereas the remaining half of participants was asked to rate each of the physician options; thus, only half of participants (choice condition) were required to make tradeoffs between the choice options. Next, we asked participants to rate their perceptions of differences between the three physician options [1-7]. Supporting our proposition, being in a positive (vs. neutral) mood increased perceived differences between the physician options when participants made a choice ($M_{pos} = 4.89$, $M_{neg} = 4.26$; $F(1, 78) = 3.31$, $p = .07$). However, being in a positive (vs. neutral) mood directionally decreased perceived differences between the physician options when participants were merely asked to rate the options ($M_{pos} = 4.48$, $M_{neg} = 4.75$; $F < 1$).

Building on study 1, studies 2 and 3 investigate the impact of mood on choice difficulty and choice deferral. In study 2 we induce either a positive or neutral mood by having participants watch one of two video clips and then present them with a set of three flight options. We asked half of participants to choose a flight with a work trip in mind (i.e., all expenses paid by their company) and half to choose with a vacation in mind (i.e., all expenses incurred out of pocket). The options were stacked so as to not require tradeoffs in the case of the work trip (i.e., there was an asymmetrically dominating option on all features except price, which was the least important attribute for work-travelers); however, in the case of the vacation, participants were required to make tradeoffs between price and other aspects of the flight (e.g., internet on board, number of stops, etc.). We measured participants' perceptions of the differences between choice options as well as the conflict they experienced when making a choice [1-7]. Supporting our propositions, being in a positive (vs. neutral) mood increased perceptions of differences between choice options when they had a vacation in mind (i.e., when the choice required tradeoffs; $M_{pos} = 4.80$, $M_{neg} = 4.26$; $F(1, 156) = 4.70$, $p < .05$), but not when they had a work trip in mind (i.e., when the choice did not require tradeoffs; $M_{pos} = 4.33$, $M_{neg} = 4.88$; $F(1, 156) = 5.04$, $p < .05$). Further, positive mood increased the

experience of choice difficulty when the choice required tradeoffs (M_{pos} = 3.16, M_{neg} = 2.36; $F(1, 146)$ = 6.49, $p < .05$), but not when the choice did not require tradeoffs(M_{pos} = 2.31, M_{neg} = 2.76; $F(1, 146)$ = 2.18, $p = .14$).

In study 3 we manipulated mood as in study 1. Next, we asked participants to choose a task they would like to complete (for pay) from one of two sets of options. In one set (low tradeoff difficulty), there was an asymmetrically dominating task option, whereas in the other set (high tradeoff difficulty), there was not (adapted from Sela and Berger 2012). Our key DV was how interested participants were in deferring choice in favor of seeking out more information about the tasks [1-7]. Consistent with our predictions, being in a positive (vs. negative) mood increased participants' preference to defer when choosing from the high tradeoffs set (M_{pos} = 5.02, M_{neg} = 4.20; $F(1, 180)$ = 3.87, $p = .05$), but decreased preference to defer choice when choosing from the low tradeoffs set M_{pos} = 3.73, M_{neg} = 4.54; $F(1, 180)$ = 4.02, $p < .05$).

In sum, we demonstrate that positive mood can have a negative impact on choice, exacerbating the perception of differences between choice options and negatively affecting choice incidence. Our findings contribute to the literatures on positive mood as well as choice difficulty, demonstrating that positive mood is an important factor to consider when investigating sources of choice difficulty for consumers.

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Getting Mired in Simple Decisions: The Role of Shrinking Attribute Weight Variance

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Why do seemingly simple choices sometime suck people in and end up being much more difficult than they seemed at the outset? We suggest one reason is that making tradeoffs leads people to lose sight of which product attributes are really important. When choosing a flight, for example, most people would agree a priori that price and number of connections are more important than beverages or in-flight movie selection. But while these differences in importance may seem clear in the abstract, we argue that the act of making choices often muddies the distinction. In particular, we suggest that making tradeoffs between options makes unimportant attributes seem more important and reduces the variance in perceived attribute importance (i.e., the difference in importance ratings of the various attributes). This convergence of attribute importance, in turn, often makes choice more difficult.

We suggest this effect is driven by the focus that considering tradeoffs engenders. When considering differences in attribute levels across options, people focus on comparisons between levels *within* an attribute (e.g., how much better one movie selection is than another) and pay less attention to comparisons *between* the attributes (e.g., whether movie selection is as important as price). Consequently, attribute hierarchy becomes less salient. Further, the fact that there are tradeoffs (i.e., things to forego) within each attribute leads them all to seem equally important (rather than equally unimportant). Moreover, because tradeoff-making increases perceived attribute importance, it tends to have a particularly pronounced effect for attributes that start out seeming relatively unimportant than for attributes that seem important to begin with.

We test this possibility in three experiments. In Experiment 1, we examined how making attribute tradeoffs impacts the variance in attribute importance, and in particular, the importance of relatively unimportant attributes. In the attributes-first condition, participants started by indicating how important each of six attributes (e.g., flight duration, number of stops, and baggage fee) would be for them when buying a flight ticket (1 = extremely unimportant; 7 = extremely important). In the evaluation-first condition, participants were shown choice options before rating the attributes. They were asked to imagine buying a domestic flight and to consider four options

described on the same six attributes as in the rating task (e.g., a longer flight departing from a convenient airport but with a long overall duration versus a shorter flight from a less convenient airport).

Results demonstrate that making trade-offs first led people to lose sight of which attributes are more important. The variance of attribute importance ratings decreased significantly when participants considered the options before rating the attributes ($M = 1.62$), compared to when they first rated the attributes before seeing the options ($M = 2.34$; $p < .01$). Further, this variance shrinkage was driven by an increase in the average importance of the least important attributes (those rated as less important in a pre-test), with no change in the average perceived importance of the most important attribute. Decreased attribute importance variance, in turn, increased choice difficulty, decreased the extent to which participants felt that one option fitted them better than others, and decreased choice satisfaction and certainty ($\alpha = .85$); $M = 4.84$ vs. $M = 5.51$; $p < .01$).

In Experiment 2, we further tested whether this effect is driven by changed perceptions of unimportant attributes. We did this by manipulating the importance of the attributes that contained the trade-offs. Participants were all shown two flight options described by eight attributes. In the unimportant trade-offs condition only the unimportant attributes (e.g., beverages and in-flight entertainment) contained tradeoffs, while in the important trade-offs condition only the important attributes (e.g., price and number of connections) contained tradeoffs. Participants then rated all the attributes on the same 7-point scales used in the prior study.

Results demonstrate that making trade-offs decreased the variance in attribute important weights when the trade-offs were on unimportant attributes ($F(1,41) = 3.96$, $p < .05$). While the importance given to more important attributes did not change across conditions ($F < .40$, $p > .50$), unimportant attributes were seen as more important when trade-offs needed to be made on those attributes ($F(1,41) = 9.38$, $p < .005$).

Experiment 3 directly tests the proposed mechanism by examining whether the effects are moderated by focus of attention within individual attributes. Participants were shown four flight options, one in each column, described by four attributes, one in each row, but we varied how the information was displayed using a manipulation shown to influence whether people process the information by options or by attributes (Wen and Lurie 2010). In the by-attributes focus condition, a horizontal box was drawn around all levels within each attribute, highlighting the values of the same attribute across options. In the by-options conditions, a vertical box was drawn around all the attributes within each option, highlighting the values of different attributes within a given option. In the control condition no boxes were used. As predicted, focusing people on comparisons within an attribute (within-attribute condition) led them to lose sight of which options were important, shrinking attribute variance and increasing the perceived importance of the unimportant attributes.

Taken together, these three studies demonstrate that tradeoff making can lead people to lose sight of their priorities. Focusing on within-attribute differences causes people to see unimportant attributes as relatively more important, undermining between-attribute differences. This, in turn, can make choice more difficult and frustrating, leading people to get stuck in decisions that initially seemed rather easy.

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Distractions: Friend or Foe in the Pursuit of Conscious and Nonconscious Goals?

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We have all had the experience of going to a coffee shop with the intent of doing some work, such as reading papers or writing a paper, but then become faced with all sorts of distractions: the loud conversation at the next table, the loud music, the sunny weather outside, or even the desire to buy and eat a red velvet cupcake. How might these different types of distractions affect your goal to work? Will the consequences differ depending on whether you had a conscious or nonconscious goal to work?

Conscious and nonconscious goals are generally believed to lead to similar processes and outcomes (e.g. Bargh et al. 2001; Chartrand and Bargh 1996). More recently, however, research is examining how the two types of goals may differ (Gollwitzer, Parks-Stamm, and Oettingen 2009). Our research posits that the pursuit of conscious and nonconscious goals diverges when faced with distractions. Consistent with the view that there is a limited pool of cognitive resources with which cognitive processing occurs (Kruglanski et al. 2002), when a focal goal is faced with a distraction, the motivated response can be to protect the goal and protect the cognitive resources. We propose that because the activation and pursuit of conscious goals require cognitive resources (Kruglanski et al. 2002), introducing a distraction that threatens to compete for those resources, will lead to an increase in goal adherence because of an increase in goal importance. The activation and pursuit of nonconscious goals, however, require very few cognitive resources (Bargh and Barndollar 1996), such that distractions are not perceived as a threat that requires a response. We hypothesize, therefore, that distractions will enhance the accessibility and pursuit of a conscious goal, but have no effect on a nonconscious goal. Furthermore, we examine the effect that different types of distractions will have on the pursuit of conscious and nonconscious goals. As a key component of our theorizing involves the consumption of cognitive resources by a goal, and the subsequent threat posed to those resources by a distraction, we expect that the increase in goal pursuit will be further moderated by the extent to which the distractions consume cognitive resources. More specifically, we hypothesize that the nature of the distraction will moderate the effect of distractions on goal pursuit. We test these hypotheses in a series of three experiments.

In Study 1, we demonstrate our main proposition that distractions can increase adherence to a conscious focal goal, but not to a nonconscious focal goal. The study was a 2 (Focal goal: conscious health goal vs. nonconscious health goal) X 2 (Distraction: travel goal prime vs. none) between-participants design. Participants first completed the focal goal prime task, then were presented with a distraction task or not. Next, they chose between two magazines: healthy living versus desserts. As expected, we find that among participants primed with the conscious health goal, those who faced a distraction were more likely to choose the healthy living magazine compared to those who did not (83% vs. 69%; $p = .05$). But among those primed with the nonconscious health goal, there was no difference in the choice share of the healthy living magazine (73% vs. 72%).

Study 2 measures the influence that distractions have on the accessibility of focal goals. Study 2 was a 2 (Focal goal: conscious academic goal vs. nonconscious academic goal) X 2 (Distraction: environment goal vs. filler task) between-participants design. As in Study 1, participants first completed the goal prime and then completed the distraction or filler task. Participants were then given a word search task and instructed to find 9 hidden words. Ten of the hidden words were academic goal-related words, while the other 10 were neutral words. The notion here is that the more (less) accessible the focal academic goal is, participants would find more (fewer) academic goal-related words. Consistent with our prediction, participants with the conscious academic goal found more goal-related words in the presence of a distraction (i.e. environment goal) than not (i.e. filler task; $M_{distraction} = 5.03$ vs. $M_{filler} = 4.46$, $p = .05$). There was no difference among the participants with the nonconscious academic goal ($M_{distraction} = 4.85$ vs. $M_{filler} = 4.69$). Taken together, these findings suggest that 1) conscious and nonconscious goals differ when faced with distractions such as alternative goals and 2) distractions not only activate shielding mechanisms of inhibition, which decrease the accessibility of alternative goals (Goschke and Dreisbach 2008; Shah, Friedman, and Kruglanski 2002), but also actually increase the pursuit and accessibility of conscious focal goals.

Study 3 tests the underlying process that distractions increase conscious focal goal pursuit by increasing goal importance. It also specifies the type of distraction that will produce this effect. In particular, we compare the effect that a resource consuming

distraction—a conscious competing goal—would have against a distraction that is less resource consuming—a nonconscious competing goal on focal goal importance. We expect that a conscious competing goal will be perceived as a resource threatening distracter that will elicit a bolstering of the importance of the focal goal, while a nonconscious competing goal will not. As predicted, participants in the conscious academic goal conditions reported higher importance of the goal to study when there was a threatening distracter (i.e. a conscious goal distracter) compared to when there was a non-threatening distracter (i.e. nonconscious goal distracter; $M_{threat} = 8.60$ vs. $M_{non\text{-}threat} = 7.60$, $p < .05$). There were no differences across the nonconscious academic goal conditions on importance of the goal to study ($M_{threat} = 7.22$ vs. $M_{non\text{-}threat} = 7.40$).

These findings contribute to the existing literature on goal pursuit by demonstrating that the pursuit of conscious and nonconscious goals diverge in the presence of distractions. Furthermore, our findings suggest that distractions can have the ironic effect of facilitating the pursuit of conscious goals.

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The Positive Consequences of Conflict on Decision Making: When a Conflict Mindset Facilitates Choice

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Extensive research on decision-making suggests that when people are faced with high conflict they are more likely to defer choice, even when each option by itself is attractive, and when delaying choice is costly (Anderson 2003, Dhar 1997, Iyengar and Lepper 2000, Luce 1997, Tversky and Shafir 1992). We propose, however, that in some situations exposure to conflict can actually be beneficial. Specifically, conflict can increase the likelihood of making a choice, by activating a conflict mindset. A conflict mindset brings with it the procedural benefits of coping with conflict, without the associated costs such as stress (Lazarus 1993) and negative affect (Luce 1998). In a conflict mindset, then, people are better able to confront and resolve choices.

We base this proposition on two ideas. First, high level complex procedures, known as mindsets, are stored in memory and can be activated by subtle cues (Gollwitzer and Bayer 1999, Galinsky and Moskowitz 2000, Xu and Wyer 2008). Second, although decision researchers have generally documented an avoidant response to conflict, confronting and attempting to systematically resolve the problem is also a well-established response to conflict (Janis and Mann 1977, Lazarus and Folkman 1988). We suggest that the systematic cognitive procedures associated with resolving conflict form a conflict mindset, which can be primed (Kleiman and Hassin 2011), and will lead to increased choice.

The strongest test of our mindset hypothesis would demonstrate that conflict increases choice in domains unrelated to the prior conflict (Xu and Wyer, 2008). In addition, if we expose people to conflict without their conscious awareness we can activate the procedural benefits of the conflict mindset without triggering the negative affect traditionally associated with high conflict (Luce, Payne and Bettman 1999). Therefore in the current research we prime conflict below conscious awareness, and test for increased choice in domains unrelated to the primed conflict.

Our main proposition is that priming conflicting goals leads to the activation of a conflict mindset which, in turn, allows people to respond to subsequent choices by considering the options in a more systematic manner. As a result of this systematic processing of choice information, people in a conflict mindset are more likely to confront and resolve conflict. We test our proposition in three experiments.

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In experiment 1 adult participants were randomly assigned to one of three conditions: Healthy/Indulge Conflict; Career/Socialize Conflict, or Control (no conflict). Our priming manipulation was a decision task where participants indicated if the letters on the screen formed a word (21 trials) or a non-word (14 trials). In each of the Conflict conditions, 7 of the words related to one goal (e.g., fitness), 7 related to the conflicting goal (e.g., chocolate). Participants then completed a standard choice deferral task (apartments, cell phones), where they could either select one of the options (i.e., make a choice and resolve the conflict), or decide to keep searching (Dhar 1997). Finally, participants were probed for awareness of the primed conflict. As predicted, participants in the Conflict conditions were more likely to make a choice than those in Control ($M_{conflict} = 73\%$ vs. $M_{control} = 62\%$, $F(1,207) = 4.4$, $p < .04$). There were no differences between Conflict and Control on any awareness measure, for any study reported here (all $ps > .3$).

In experiment 2 we test our hypothesis that the conflict mindset facilitates choice because it evokes deeper, more systematic processing of choice information. Previous research adopted three markers of systematic processing: longer decision times, consideration of more information, and a holistic, alternative based information search pattern (Bettman et. al., 1993). In experiment 2 we capture these process measures using an information display board analogous to Mouselab (Johnson et al., 1991) and test if systematic information processing mediates the effect of conflict on choice likelihood.

Student participants were primed with either a Study/Party Conflict or Control (no conflict) as in Experiment 1. They then made choices (Partner, Apartment, Theater, Album, Cell Phone), which included a deferral option. The computer recorded the time spent on each choice, the information search pattern, and the total amount of information viewed. Participants in the Conflict condition were more likely to choose one of the options than those in Control, $M_{conflict}=82\%$ vs. $M_{control} = 71\%$, $F(1,78) = 5.0$, $p < .05$. Conflict primed participants tended to take more time to make their decision $F(1,78) =3.4$, $p = .06$, viewed more information $F(1, 394) = 4.5$, $p < .05$, and used a more alternative based information search pattern $(1, 77) =4.4$, $p < .05$. Measures of decision time, information search pattern, and conflict awareness were entered into a bootstrap model for multiple mediators (Preacher and Hayes 2008). As predicted, there were significant indirect effects of both decision time ($95\%CI = -.38, -.001$) and information search pattern ($95\%CI = .004, .32$), indicating that the increase in choice by Conflict participants is due to the shift towards more systematic processing.

Experiment 3 rules out alternative accounts based on (1) single achievement goal priming and (2) increased arousal, by adding a single achievement goal priming condition, and using both a choice and a non-choice, persistence task (rate as many pictures as you would like). Results indicate that Conflict participants were more likely to make a choice than those in Control or the Single Achievement Goal Condition ($M_{Conflict} = 86\%$, $M_{Control} = 75\%$ $M_{SingleGoal} = 76\%$, $t(154) =-2.04$, $p <.05$), suggesting that priming a single achievement goal is not the mechanism underlying our results. Finally, no significant differences emerged between conditions on the non-choice persistence task (number of pictures rated), $M_{Conflict} = 14$, $M_{Control} = 13$, $M_{SingleGoal} = 11$, $F(2,132) = .70$, $p = .5$, even though these participants were exposed to the same priming manipulations that yielded a significant difference on the choice task.

The negative consequences of conflict are well documented (Emmons and King 1988, Riediger and Freund 2004). This research examines whether a conflict mindset can have positive consequences, and suggests that the traditional view of conflict as causing a paralytic flight from choice may not tell the whole story.

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6.6 Conversations: Sex & Consumption: The Promises and Pitfalls of Evolutionary Consumer Research

Room: Madero B

Discussants: Gad Saad, Concordia University

Vlad Griskevicius, University of Minnesota

Kristina Durante, University of Texas, San Antonio

Geoffrey Miller, University of New Mexico

7.1 Symposium: Techniques for increasing enrollment and engagement: Field experiments with health and wellness programs

Room: Espada

Chair: Eleanor Putnam-Farr, Massachusetts Institute of Technology, USA

Choosing to Participate: The effects of message type on enrollment and participation

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As more services (including health services) move online, the development of communication strategies to maximize enrollment and engagement has become increasingly important. While some research has shown that message framing and choice architecture can affect enrollment, these studies have usually taken place in a forced choice environment where the consumer's attention is high. The reality is that most recruitment for most online services comes through email or other cluttered channels where attention is lower. Furthermore, engagement (or participation after enrollment) has rarely been examined, yet engagement is a major objective of services that require renewal, or for services that are designed specifically to help consumers manage their own behavior. We address both of these issues in a large scale field experiment where over 17,000 employees of a large American company were invited to enroll and participate in an activity tracking program. We also compare the effectiveness of different types of message frames, with, for example, some employees receiving messages that emphasize long term, abstract health benefits, and others receiving messages that emphasize short term, concrete, monetary rewards.

While research on choice architecture has focused initially on the differences between opt-in and opt-out, a number of recent studies (e.g. Carroll et al, 2009, Keller et al, 2011) have started to include an active choice component, where participants are forced to choose between enrolling or not enrolling rather than being presented with a default. Active choice has generally been used synonymously with forced choice because the scenarios have forced participants to choose one or the other option (usually a yes/no for enrollment), yet forced choice opportunities are relatively rare under most recruitment situations. Accordingly, we sought to examine the active choice framing in a non-forced setting to see if the enrollment gains from an active choice option (as opposed to a simple opt-in option) will be similar in this more realistic context.

Another objective of the study was to examine "enhanced" active choice frames (Keller et al , 2011) in which participants are not only presented with an active yes/no decision, but also some messaging that highlights the benefits and costs of yes and no options in order to make gains and losses more salient. Keller and colleagues (2011) found, in a series of experiments, that active choice resulted in significantly higher enrollment than opt-in (62% versus 42%) and that enhanced active choice resulted in even higher enrollment (75%) with no associated increase in post-enrollment dissatisfaction.

Participants in our study (N=17,093) were recruited for participation in an activity tracking program run by RedBrick Health and were randomly assigned to one of seven message conditions in a randomized field experiment. All participants were given the same introductory text with basic information about the health and rewards benefits of participating in the activity tracking program. All participants were eligible for $1 per day that they tracked at least 30 minutes of activity, with a quarterly maximum of $125 (other programs also provided rewards). All participants had previously completed a health assessment survey as the basis for program eligibility.

Participants in the control condition were given a standard opt-in message with a link to the enrollment page. The 6 treatment conditions were constructed by crossing two between subject factors pertaining to the yes/no response options. The first factor was

message type whereby different benefits of the program were emphasized. One message focused on health benefits (intangible), the second focused on the rewards (concrete, non-quantified), and the third quantified the rewards (concrete, quantified). The second factor was the strength of the "no" option (strong versus weak). The strong "no" option included a reference to the lost benefit, while the weak "no" condition did not.

For example, participants in the health benefits (intangible) group all saw the following "yes" text:

Yes, I would like to participate in the Boost tracking program. I want to track my activities to help improve my health.

And one of the following "no" options:

[STRONG] No, I do not want to participate in the Boost tracking program because tracking my activities to improve my health is not important to me at this time.

[WEAK] No, I do not want to participate in the Boost tracking program.

We found that all six active choice messages prompted higher enrollment than opt-in, with the concrete quantified message prompting the highest levels of enrollment (9.5% of emails sent versus 4% for opt-in). This provides initial support for the hypothesis that loss aversion is the main means through which enhanced active choice works (Keller et al., 2011), and also provides further support for the idea that loss frames are more effective when paired with concrete mindsets (White, MacDonnel, & Dahl, 2011). Interestingly, despite the expectation that the repetition of benefits in the strong no would increase loss aversion, we found no difference between the strong and weak no overall. This suggests that if loss aversion accounts for the enrollment increases resulting from active choice, it is not triggered simply by the direct rejection of the benefit.

This research also extends the existing choice research by measuring ongoing levels of activity and participation resulting from different choice frames. While a rewards focused subject might participate more at the beginning, his participation might end when the rewards period ends. Conversely a health focused subject might be less likely to join, but might continue to participate beyond the rewards period if he does join. Thus, in addition to the enrollment data collected in July/August 2012 when the experiment was launched, we are also in the process of collecting and evaluating participation at 14 days, 30 days and 60 days after the initial invitation emails were sent. Participation results will be reported at the conference. Beyond the primary measures of enrollment (completing the enrollment process for the activity tracking program) and participation (points earned through tracking), we also measured clicks to the yes and no links, open rates of the emails, type of activity tracked, points earned through other programs, and basic demographic information.

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Holding the Hunger Games Hostage at the Gym: An Evaluation of Temptation Bundling

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Limited willpower plays an important role in many critical decisions made by individuals about healthy eating and exercise: people intend to exercise and diet later but frequently lack the necessary willpower to act on those good intentions. On the other hand, limited willpower makes it difficult for individuals to resist engaging in many highly tempting and addictive behaviors involving indulgences (for a review, see Milkman et al., 2008). We propose that healthy behaviors such as exercise could be increased through the use of "temptation bundling" – mechanisms that force a coupling of highly pleasurable "want" activities (e.g., watching the next episode of a habit-forming television show, drinking your morning cup of coffee, checking Facebook) with engagement in a beneficial "should" behavior that requires the exertion of willpower (e.g., exercising at the gym, studying at the library).

We theorize that people with limited willpower who are aware of their self-control problems would benefit from and value an opportunity to force their future selves to engage in beneficial should activities (e.g. exercising, studying, paying bills) while simultaneously preventing those future selves from indulging in pleasurable but ultimately wasteful want activities (e.g., watching suspenseful television shows, reading lowbrow page-turner novels). We test a newly engineered method for enforcing these preferences by creating a temptation bundling program, which bundles a highly tempting activity (listening to low-brow, page turner audio novels like The Da Vinci Code and The Hunger Games) with an activity that requires exerting self-control (exercising). By bundling access to a hedonic experience with exercise, exercise is made "tempting" and increasingly appealing, while the squandering of time on wasteful, indulgent activities is prevented.

To investigate the value of temptation bundling, we conducted a three-arm randomized, controlled trial in collaboration with a large University gym. The outcome of interest was gym attendance. All 226 participants recruited to participate in our experiment were encouraged to exercise more frequently and required to work out once for 30 minutes at the study's initiation. In addition, participants were randomly assigned to one of three conditions. In the full treatment condition, participants were enrolled in a temptation bundling program giving them access to an iPod containing four addictive audio novels of their choice that could only be used at the gym. During their initial study workout, these participants were required to listen to the beginning of one audio novel. In the intermediate treatment condition, participants were also given access to four addictive audio novels of their choice and required to listen to the beginning of one novel during their initial study workout. However, audio novels were loaded onto participants' personal iPods, which they could access at any time. Participants were encouraged to try self-imposing a rule whereby they only allowed themselves to enjoy audio novels while exercising. In the control condition, participants were given a $25 Barnes and Noble gift certificate at the start of the study (valued equivalently to the loan of four addictive audio novels). After approximately 9 weeks, the study concluded and treatment condition participants returned their novels. All participants then reported the amount they were willing to pay for a temptation bundling device: one month of restricted, gym-only access to an iPod loaded with an addictive audio novel of their choice, which they would otherwise be free to take home and access at any time.

Comparing average weekly gym attendance frequencies across conditions, we find that attendance rates increased with access to the temptation bundling program, but the effectiveness of the intervention wore off over time. Control participants visited the gym an average of 0.75 times in the first week following the intervention, while participants who received access to an externally-imposed temptation bundling program made a regression-adjusted additional 0.48 gym visits (95% CI, 0.15 to 0.71; P = 0.004). As predicted, participants in the intermediate treatment condition achieved intermediate benefits from the program: they made a regression-adjusted additional 0.27 gym visits compared to the control condition (95% CI, -0.05 to 0.59; P = 0.092). Both the full and intermediate treatment effects were significantly attenuated over time, wearing off completely during the University's Thanksgiving break eight weeks into the study.

Across conditions, the majority of participants stated a non-zero reservation price for one month of access to a temptation bundling device at the end of the intervention period. The average willingness to pay for gym-only access to an iPod containing an addictive audio novel (versus taking the iPod home and being able to use it at any time) was $6.91 (95% CI, $5.44 to $8.36; $P_{Ho:WTP=0} < 0.0001$). Participants appeared to make sophisticated decisions about their stated reservation prices for the device: participants who benefitted the least from self-imposed temptation bundling were most willing to pay a non-zero amount for an externally-imposed temptation bundling device.

This study is the first to describe and evaluate temptation bundling devices – a novel tool engineered based on past self-control research to cost-effectively increase exercise, and perhaps other important behaviors as well. We find evidence that temptation bundling is an effective means of changing behavior. Additionally, our study participants' willingness to pay for temptation bundling

devices suggests a viable commercial market for this new tool. Individuals' desire to restrict their access to a pleasurable experience in order to encourage themselves to engage in desirable behaviors is also of considerable theoretical interest. Broadly, our research suggests that people are well-aware of the limitations on their will power when it comes to exercise and are actively seeking avenues for overcoming those limitations.

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Exercising to the Lowest Common Denominator

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Up to 40% of premature deaths in the United States are attributable to behaviors such as physical inactivity and overeating (Schroeder, 2007). Despite being aware of the negative health consequences, however, individuals continue to engage in these behaviors, even when such behaviors are fully modifiable – such as choosing to exercise more and eat less. Indeed, these behaviors have even been on the rise, as evidenced by the increase in obesity and physical inactivity in recent decades. For example, whereas half of U.S. occupations required at least moderate physical exercise in the 1960s, just one fifth did so in 2010 (Church, et al., 2010). As a result, average daily occupation-related energy expenditure has decreased by more than 100 calories over the same time period, a reduction that alone can account for a significant portion of the increase in average body weight.

Interestingly, many of these adverse – but largely modifiable – health behaviors are both social and visible. For example, exercise is often a public or team activity, and the weight (and weight gain) of peers is readily observable. Might these commonalities provide a clue as to why poor health spreads through populations? A large body of previous research has shown that observing others' behaviors can have a profound effect on one's own behavior, with people aligning their behavior with norms set by others (Cialdini et al., 1990; Schultz et al., 2007). Importantly, some recent research suggests that peers may exert more downward than upward pressure on health behaviors. Research demonstrates that obesity can "spread" though social networks (Christakis & Fowler, 2007), and United States Air Force Academy students assigned to squadrons with peers who were less fit in high school were more likely to fail the academy's fitness requirements (Carrell et al., 2011).

Why would peers exert greater relative downward influence on health? Group behavior tends to converge upon the dominant response (Zajonc, 1965). In one study, for example, many participants who had agreed to volunteer their time stopped volunteering as soon as someone else had stopped: once anyone exhibited the dominant response – in this case, *not* volunteering – others followed suit (Linardi & McConnell, 2011). The increase in sedentary behavior and body weight in recent decades suggest that with respect to physical activity, the dominant response is *not* to exercise, and that with respect to obesity, the dominant response is weight gain. As a result, for both weight gain and physical activity, we explored the possibility that social information might cause people to converge to the dominant response – weight gain and not exercising, respectively – such that people might converge to the lowest performing members of their groups: the lowest common denominator.

Method

We introduced walkstations (treadmills attached to workspaces that enable employees to walk while working) to a workplace and provided employees with usage feedback over time.

Employees (*N*=224) participated in a six month between-subjects randomized field experiment. In the "holdout" control condition, participants could not use the walkstations. In three experimental conditions, participants were asked to use the walkstations and sent a personalized weekly email. In the *solo* condition the email summarized the participant's walkstation usage for the previous week; in

the *duo* condition – in which each participant was randomly paired with another participant – the email summarized the participant's and their partner's usage. In the *quintet* condition – in which each participant was randomly grouped with four others – the email summarized each participant's and the other four participants' usage.

To use the walkstations, employees entered their unique employee ID; our primary outcome measure was walkstation usage assessed by these login data, which allowed us to assess how often and for how long each employee used the machine.

Results

Walkstation use declined over time (F(1, 2896)=86.8, p<.0005) – in general, participants reverted to the dominant response over time – but this main effect was qualified by an interaction between time and feedback condition (F(2, 2896)=4.62 p=.01). In both the duo and quintet conditions, usage declined faster than in the solo condition (F(1, 2898)=5.11, p=.02).

This greater decline in usage in duos and quintets was driven by the fact that usage converges to that of the least frequent user – the lowest common denominator. We first identified each quintet's top performer (the participant with the highest usage), worst performer (the lowest common denominator), and the three "middling" performers in month one, then tracked their behavior in months 2-5 and month 6. Middling performers converge over time to the lowest common denominator, rather than being pulled upward by the top performer. For duos, the same pattern is apparent: over time the top performer is pulled more toward the bottom performer than the reverse.

When we randomly group solo participants into post-hoc "quintets," we see no evidence of similar convergence; the same holds true when we group solos into post-hoc "duos." This lack of convergence in these synthetic groups offers further support for the specific impact of social feedback on convergence to the lowest common denominator.

Discussion

We showed that the impact of social feedback on walkstation usage was to decrease health behaviors: usage declined more in the *duo* and *quintet* conditions than in the solo condition, due to a tendency for people to converge to the lowest common denominator. Our results do not suggest that social feedback always leads to worse behavior; social support can be beneficial in improving people's health (Berkman, 1986; Cohen & Syme, 1985); they do suggest, however, that when the dominant response for a behavior is the negative one (from not exercising to overeating) that social feedback is likely to reinforce rather than ameliorate. Given the power of the dominant response in shaping social behavior, future research should explore the impact of framing behaviors as the dominant response – even when they are not – on health behaviors; in our paradigm, we could have shown participants in quintets *only* data from the top performer, changing the ostensible dominant response, decreasing the salience of the lowest common denominator, and perhaps changing behavior for the better.

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7.2 Individual Papers: Of Good and Nice: Moral and Pro-social Behavior

Room: San Jose

Chair: Nadav Klein, University of Chicago

Are You Rich Enough to Eat Organic? Moral Judgments Depend on the Income of the Target

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A trip to one's local grocery store highlights the increasing availability of products possessing organic, fair-trade, and green-friendly labels. The organic industry alone has experienced tremendous growth in recent years with U.S. sales reaching $29 billion (Organic Trade Association, 2011). Although the "organic" label technically refers to a production process (USDA, 2012), consumers have come to associate organic with two additional features: 1) health and 2) wealth. Recent work suggests that consumers perceive food with organic labels to have fewer calories than nonorganic counterparts (Schuldt & Schwarz, 2010). In addition, organic food is associated with a higher price tag (Hughner et al., 2007), which makes purchasing them less feasible for low-income segments. Given these associations, what perceptions do people form of the consumers who buy "healthier" more "costly" organic food versus conventional? Do moral inferences differ as a function of one's personal income level?

Beginning with Haire's (1950) seminal grocery list study, prior literature reveals that individuals judge others based upon their food choices. For example, consumers of unhealthy, fattening foods are viewed as less moral than those who eat healthy, noncaloric foods (Oakes & Slotterback, 2004-2005; Stein & Nemeroff, 1995). Besides ascribing moralistic meaning to specific food choices, individuals also attribute specific qualities to members of different social classes. For instance, low-income groups are often perceived as "other" and lesser in moral values, character, and work ethic (Lott, 2002). In line with recent research by Eskine (2012), we propose that consumers also hold strong associations between "organic" and "moral," a relationship that may not be present, or even reverse, when low socioeconomic groups make organic purchases. Our central prediction is that organic food choices will polarize moral judgments: individuals with higher income will be perceived as more moral for purchasing them, whereas those with lower income will be perceived as less moral.

Study 1 utilized a 2(organic label: yes, no) × 3(annual income: $85,000, $25,000, welfare) between-subjects design. Participants were presented a grocery list featuring eight items that belonged to a target individual where three of the foods (carrots, 2% milk, and cereal) were labeled organic or not. The remaining five foods were held constant across conditions. A morality index was created by averaging responses from four items: unethical/ethical, cruel/kindhearted, immoral/moral, and uncaring/caring ($\alpha = .90$). As expected, a significant interaction was found between income and organic labeling ($p < .02$). Individuals earning $85,000 are perceived as significantly *more* moral when they choose organic foods versus conventional equivalents, while those receiving welfare benefits are perceived as *less* moral. Results hold when controlling for how healthy the foods are perceived to be, providing evidence that mere differences in the nutritional content are not driving results.

Study 2 builds upon these findings by manipulating health value directly, rather than controlling for its effect. Study 2 used a 2(organic label: yes, no) × 2(health: healthy, unhealthy) × 2(annual income: $85,000, welfare) between-subjects design. A similar 8-item grocery list paradigm was used with either three healthy items (extra-lean beef, whole wheat bread, and skim milk cheese) or three unhealthy items (regular beef, white bread, and whole milk cheese). These same three items either contained the organic label or not, while the remaining five filler items were held constant. Participants completed the same measures as in Study 1. A significant three-way interaction was found on the morality index ($p < .05$). Higher-income consumers were seen as more moral when purchasing healthy and organic food versus unhealthy and conventional food, whereas low-income consumers were seen as immoral when they do the same, although not when the food is merely healthy but not organic.

To address the potential role of price, Study 3 utilized a 2(price: premium, discount) × 2(annual income: $85,000, welfare) between-subjects design. Organic items were priced 20% lower in the discounted pricing condition than the premium condition. Again a significant interaction was found on the morality index ($p < .03$). While wealthy consumers were not judged differently depending upon whether or not organic items were on sale, perceptions of lower-income consumers' morality were significantly higher when they purchased organic items for a discount. This pattern suggests that lower-income consumers' morality can be partially repaired

when they purchase organic food on sale rather than at premium price points. Note also that the null effect for price among the high-income group rules out the possibility that results are simply an artifact of price differences between organic and nonorganic food.

Study 4 manipulated who the food was to be consumed by, adults versus children, and featured a 2(label: child, no label) × 2(household income: $140,000, welfare) between-subjects design. All participants viewed a portion of a grocery list belonging to a family with two children and two adults. Three items were always organic, but half of the participants were presented these items with a children's label [e.g., (children's) organic crackers]. Results showed two main effects (p's < .001). Individuals were more moral when organic food was for children (versus not) and when purchased by wealthy (versus poor) individuals. Interestingly, a family receiving welfare who buys organic food for their children was viewed as equally moral as a wealthy family who buys regular organic food, suggesting that low-income individuals buying for their children can also partially repair the organic stigma.

A final study reveals a consequence of these findings. Participants were invited into the lab and paid cash for their participation. Following a series of unrelated tasks, they were offered the opportunity to donate to a charity providing food to low-income individuals. Participants were told donations would help buy organic or conventional (manipulated between-subjects) food for recipient families. As predicted, the charity itself was rated less favorably when it provided organic food (p = .02), which resulted in reduced monetary donations (p = .05).

In conclusion, results from five studies demonstrate for the first time that consumers not only make moral judgments of each other based merely on food choice, but that these judgments are based on a sliding scale depending on the target's income. Further, we demonstrate actual consequences to charitable organizations of our findings.

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Fear Not, for You Can Help! The Effect of Fear of Failure and Self-Construal on Charitable Giving
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Fear of failure (FF), is a dispositional tendency to avoid situations with possible negative outcomes bearing the risk of feeling failure (Atkinson 1957; Elliot and Thrash 2004), or beliefs about aversive consequences of failing being activated by situations where failure is possible (Lazarus 1991). Individuals high in FF focus on anticipated negative affect resulting from failure, and avoid aversive outcomes and the experience of failure (Rhodewalt 1990). Despite its relevance for a wide number of domains such as education (Bartels and Magun-Jackson 2009), sports (Conroy and Elliot 2004), and healthcare (McCue 1982), FF has received limited attention from marketing, confined to fear appeals in advertising (ie. Burnett et al 1979; LaTour et al 1996). This research investigates FF and the moderating and mediating mechanisms behind the effect in a charitable giving context.

Whereas those with interdependent self-construals base their attitudes and behavior on the thoughts, feelings, and actions of others, those with independent self-construals resort to their own repertoire of thoughts, feelings, and actions (Markus and Kitayama 1991). Because FF causes future uncertainty (Conroy et al 2002; Conroy 2003), it can be interpreted to represent a threat to the self via a reduced level of control over one's life. It is hypothesized that separate self-construals under such a threat will resort to different mechanisms to restore a pre-threat state. Although experiencing a lack of control and a fear of failure is expected to result in perceiving to have little social support for independent self-construals, the opposite is expected for interdependent self-construals. It is further hypothesized that, this mediating mechanism in response to FF will result in a higher likelihood to donate to a charitable cause for interdependent self-construals. While Studies 1 and 2 test these predictions, Study 3 aims to rule out a number of alternative explanations and Study 4 discusses some implications for practice.

Study 1 tested the moderating role of self-construal on the relationship between FF and donation likelihood. Participants (N= 121) were randomly assigned to condition in a 2 (self construal: independent, interdependent) x 3 (fear of failure level: high, low, control) between subjects design. Following the self-construal manipulation (Swaminathan et al. 2007) and based on condition, respondents elaborated on a time when they were either very afraid or somewhat afraid of failing at something, or about their breakfast. As the main dependent measure, participants' likelihood to donate to a fictitious lung cancer foundation was tested (Liu & Aaker 2008). It was hypothesized that those in the interdependent self-construal condition would be more likely to donate when the induced fear of failure was high. The results support the hypothesizing with a significant overall interaction of self-construal with FF level for the main dependent variables of donation interest and willingness. Those in the high-FF-interdependent self-construal condition were more willing to donate, while a reversed effect was observed for low-FF-interdependent vs. independent self-construal conditions.

Study 2 tested the moderating role of perceived control on the relationship between self-construal and donation likelihood under a high FF, with perceived social support investigated as the mediating mechanism. Participants (N= 81) were randomly assigned to condition in a 2 (self-construal: independent, interdependent) x 2 (perceived control: high, low) between subjects design. Self-construal was manipulated as in Study 1. Based on condition, perceived control was manipulated by asking participants to focus on an event that made them feel either in control or not in control of their life. Participants responded to questions about their donation likelihood to a real children's charity. It was expected that when FF was high, participants in an independent self-construal condition would be less likely to donate when the perceived lack of control was made salient. The results support the moderating effect of perceived lack of control, with a significant overall interaction of self-construal with perceived control for the main dependent variables of donation interest and willingness. Under low perceived control, those in the interdependent self-construal condition were more willing to donate. Finally, a bootstrap analysis (Preacher and Hayes 2008) supported the proposed mediation effect of perceived social support.

Study 3 replicated the basic effect, while ruling out alternative explanations. It was shown that donating to a charitable organization signified a desire to embrace others rather than to act in accordance with social norms (i.e. to be seen as doing good by society). Personal involvement was also included as a potential confounding variable in the design. Consistent with our theorizing, there was a significant overall interaction of self-construal with FF level for the main dependent variables of willingness to donate and ($) amount to donate. Those in the high-FF-interdependent self-construal condition were more willing to donate, while a partially significant reversed effect emerged for the low-FF condition. Further, those in the high-FF-interdependent self-construal condition agreed to donate a higher amount of the $10 bonus payment from the experiment should they win the random draw.

Study 4 aimed to include a more practical contribution. By using a fictitious ad for professional employment services, it was hypothesized that advertising messages which evoke a high FF and an interdependent self construal would be more likely to elicit favorable responses from consumers both in terms of interest to donate in the promoted cause, a higher willingness to pay and a higher monetary amount to donate. A 2 (self-construal) x 2 (FF level) ANOVA revealed a significant overall interaction of self-construal with FF level for the main dependent variables of donation interest and willingness. Those in the high-FF-interdependent self-construal had a higher donation interest and willingness to donate to the cancer charity. A significant reversed effect was observed for the low-FF-condition for both dependent measures.

In sum, our research contributes to pro-social behavior more generally and donation behavior more specifically. Specifically, we demonstrate that FF effects extend to a consumer context in the form of charitable giving, and that self-construal has differential effects on the relationship between FF and the willingness to donate. Further, this effect occurs through the mediating role of social

support. A practical contribution is suggesting that, advertising messages using a high FF-interdependent self-construal would be more likely to elicit favorable responses to donation appeals.

I'm Moral, but I Won't Help You: When and Why Moral Identity Does Not Motivate Charitable Giving

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With an increasing number of charitable organizations, consumers are inundated with requests for charitable donations. What factors influence donation likelihood? Moral identity is known to positively influence charitable giving (Aquino and Reed, 2002; Reed and Aquino, 2003). However, if moral identity motivates charitable giving based on the morality of the action, then do these consumers provide aid to all causes and recipients, even those that may be immoral? For instance, would moral identity increase donation likelihood to drug addicts, gamblers, or others seeking aid due to the effects of their immoral behaviors on their lives? Given the need of these immoral individuals, charities do exist to provide them aid, but does moral identity positively influence donation likelihood to such causes? The results of three experiments suggest that higher moral identity does not unconditionally lead to higher donation likelihood.

Though moral identity is positively associated with charitable giving, it is also negatively associated with antisocial or unethical behaviors (Barriga et al., 2001; Sage et al., 2006; Shao et al, 2008). Thus, individuals who place high importance on morality can be more critical of the moral failings of others. For instance, moral identity was found to be linked with condemnation of negative behaviors of others (Wiltemuth et al., 2010). In making a decision to donate to recipients who have engaged in immoral behaviors, individuals with higher moral identity may face a dilemma: is the moral action to donate or to disapprove of recipients' immoral behaviors, thereby not donating? We propose that the latter option may occur such that the positive relationship between moral identity and donation likelihood is dependent on the morality of the donation recipient. This effect should manifest in a two-way interaction between moral identity and recipient morality where moral identity only increases donation likelihood to moral recipients.

Study 1 tested this prediction by examining undergraduate students' donation likelihood to charities supporting AIDS patients or drug addicted patients. Participants in the immoral (moral) recipient condition read that the AIDS or drug addiction patients were (not) personally responsible for their problems (i.e., engaged in unprotected sex or use of illegal drugs vs. occurred through birth or blood transfusion). After indicating donation likelihood on a 7-point scale, participants responded to manipulation checks, demographic information, and Aquino and Reed's (2002) self-importance of moral identity scale. In this and all subsequent studies, we use the five internalization items from the moral identity scale. Regression analysis revealed the expected two-way interaction of moral identity and recipient morality. Specifically, moral identity did not increase donation likelihood for immoral recipients whereas moral identity did increase donation likelihood for moral recipients regardless of charity (i.e., AIDS or drug addicts). Thus, Study 1 results support our theorizing that consumers with higher moral identity do not unconditionally have higher donation likelihoods. Since these consumers are motivated to donate by their desire to engage in moral actions, if the charity recipients are not morally responsible, then those with higher moral identity are not motivated to provide aid.

We sought to replicate this effect with another manipulation of recipient morality as well as to gain insight into the process for which moral identity does not increase donation likelihood to immoral recipients by examining perceptions of deservingness. Thus, in study 2, participants indicated their donation likelihood for a community health clinic supporting patients who were suffering from serious diseases but unable to afford medical treatment due to lack of medical insurance. Recipient morality was manipulated by describing

participants as either jobless due to addictions or working hard at multiple low wage jobs with poor medical benefits. Following donation likelihood, participants responded to two items assessing recipient deservingness and completed the moral identity scale. Regression analysis revealed the significant two-way interaction of moral identity and recipient immorality. The interaction pattern replicated that of Study 1 such that moral identity only increased donation likelihood for moral recipients. Moreover, we conducted bootstrapping analysis, which revealed the mediating role of perceptions of deservingness.

The results of Studies 1 and 2 suggest that those with higher moral identity will not aid individuals who engaged in immoral behavior to cause their plight. However, individuals are likely to differ in the extent to which they choose to express their morality through withholding donations to immoral recipients. We propose the differences in responsiveness to situational variants that characterize individuals with high versus low self-monitoring (Becherer and Richard 1979; Snyder and Tanke 1976) may influence how consumers choose to express their morality when requested to donate to immoral recipients. Specifically, among those with high self-monitoring, who are responsive to situational variations in determining appropriateness of behavior, recipient morality should influence donation likelihood in accord with moral identity because of the situational variance of recipient immorality. In contrast, among those with low self-monitoring, who determine behavioral appropriateness on the basis of their dispositional inner characteristics, moral identity should predict donations regardless of situational variances such as recipient immorality. Thus, we expect a three-way interaction of self-monitoring, moral identity, and recipient morality.

In Study 3, participants indicated their donation likelihood to the community health charity used in Study 2 either for (im)moral recipients. Then, participants responded to questions regarding deservingness as well as the moral identity scale and self-monitoring scale (Snyder and Gangestad, 1986). Regression analysis revealed a significant three-way interaction. Additionally analysis revealed the two-way interaction of moral identity and recipient morality was significant only for high self-monitors but not for low self-monitors, consistent with our prediction. Similar to Study 2, perceptions of deservingness mediated the three-way interaction. These results demonstrate that individuals whose moral identity has high self-importance do not provide aid to others unconditionally. When the donation recipients have engaged in immoral behavior, they are perceived as undeserving of aid and donation likelihood does not increase with moral identity. This effect is stronger for high self-monitors whose behavior is more heavily influenced by the situational variance of recipient morality. As consumers receive more donation requests and competition for charitable dollars increases, research should determine factors that attenuate the positive relationship between moral identity and charitable giving.

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The Fairness Premium in Social Evaluation
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Ask any child and they will tell you: getting $5 is better than getting $1, and getting $10 is better still. It stands to reason, therefore, that the friend who gives these amounts as gifts should be evaluated more favorably as more money is given. Generosity is appreciated and selfishness is not, and evaluations of others should be based on the outcomes of their actions in a relatively linear fashion.

As straightforward as this logic may be, we suggest that people's evaluations routinely violate it. In a series of experiments, we find that people evaluate selfish behavior very negatively, but that they do not evaluate selfless (or extremely generous) behavior more positively than merely fair behavior. This asymmetry appears to emerge because of a premium given to fair actions in social evaluations, rather than a disregard for generosity (e.g. Adams, 1963; Fehr & Schmidt, 1999; Haidt, 2007; Kahneman, Knetsch, & Thaler, 1986; Walster, Berscheid, & Walster, 1978).

In Experiment 1 we recruited participants in a museum of science and industry and described to them a fictional person, "Bob Downing," who completed an experiment in our lab and had the opportunity to donate his payment to charity. When Bob was described as having refused to donate, participants thought he cared little about those less fortunate than he. When Bob was described as having elected to donate, however, participants thought that Bob cared about those less fortunate only to the same degree as when Bob's donation behavior was not described.

Experiment 2 demonstrated a similar effect among classical music concertgoers. These particular concerts advertised a suggested donation amount. Concertgoers evaluated a person, "Tom W.," who either donated twice the suggested amount, exactly the suggested amount, or did not donate at all. Concertgoers evaluated Tom harshly when he did not donate, but similarly positively when he either donated exactly the suggested amount or twice the suggested amount.

In Experiment 3, participants learned that 'Bob Downing' engaged in either a one-shot interaction or repeated interactions in which he divided $6 between himself and another person. In some conditions Bob was generous (gave more than $3 to the other person), in others Bob was fair (gave $3), and in still others Bob was selfish (gave less than $3). When participants saw a one-shot interaction, they evaluated Bob as a similarly warm person when he was fair or generous (and a less warm person when he was selfish). Evaluations of Bob were linear, however, when participants saw Bob in repeated interactions (50 interactions in total). The difference between one-shot and repeated interactions came in evaluations of mostly fair behavior (with fairness judged less favorably in repeated interactions), suggesting that the asymmetry in evaluation stems from a premium given to fairness with limited information.

In Experiment 4, participants again viewed 'Bob Downing' divide money selfishly, fairly, or generously. When asked why they thought Bob made these divisions, participants were least likely to attribute fair behavior (vs. selfish or generous behavior) to reasons inherent to Bob's personality. This suggests that fairness may be valued because it suggests a willingness to follow conventional norms of cooperation.

Mother Teresa was among the most selfless of human beings one could imagine. She might have been disappointed to learn that her self-sacrifice did not receive its due credit in the layperson's eyes. Although a 1997 U.S. News & World Report survey found that 79% of participants believed that she was likely to go to heaven, not far behind were several who are markedly less selfless: Oprah Winfrey (66%), Michael Jordan (65%), and Princess Diana (60%). Our studies suggest that selflessness like Mother Teresa's may get relatively underappreciated for a surprising reason: Because people appreciate fairness so much.

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7.3 Individual Papers: Consumer Choice: When to Decide is to Trade Off and Let Go

Room: Madero A

Chair: Eugene Chan, University of Toronto

Constructing Value from Irrelevant Experience: Activating Frustrated Values From Past Tradeoffs Dynamically Shifts Future, Unrelated Choices

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Traditional (e.g., microeconomic) views have presumed that the values or utilities people attach to various entities are fixed. From this perspective, making a good decision requires a valid process for eliciting what those values are, which may be thought of as equivalent to "looking up" fixed subjective utility measures in a registry. More recent behavioral decision research has largely displaced that presumption with one maintaining that valuation is a labile process. In particular, studies have indicated that decision makers' value assessments depend on a host of conditions that happen to be present at the time of elicitation (e.g., framing and the nature of the required decision; see Slovic 1995, for a review). The resulting consensus has been that values are constructed on the spot, per existing conditions and demands.

The present research proposes that the valuation process is a dynamic one that extends beyond the incidental circumstances surrounding a given decision situation. The proposition we examine is that among the significant contributors to the values that drive people's decisions are also particulars of their recollections of prior decisions and experiences. Many real-life decision problems require the decision maker to make tradeoffs. Thus, choosing Laptop A and therefore enjoying its superior RAM would necessitate the pain of paying more than Laptop B's lower price. The specific hypothesis we examined is that recalling a prior tradeoff situation can reliably remind decision makers that one side of that tradeoff entailed the satisfaction of one value (e.g., for high processing speed), but the frustration of another value (e.g., for saving money). Further, and critically, such recall is predicted to activate the frustrated values from their dormant states, thereby affecting decisions in current contexts that are irrelevant to the original tradeoff situations.

We investigated the dynamic nature of value and the possible processes underlying such value shifts across two studies. In the first study, 62 subjects participated online through Amazon's Mechanical Turk (cf. Goodman, Cryder and Cheema 2012). Each subject was assigned randomly to one of three conditions in which the subject recalled and wrote about a time when the subject: (1) had a *fast*, but *low-quality*, restaurant experience; (2) had a *slow*, but *high-quality*, restaurant experience; or (3) had any restaurant experience, without specific instructions. Following this manipulation, each participant made a hypothetical purchase decision between two cameras. One camera was superior on attribute dimensions commonly recognized as reflective of picture *quality* (megapixels and lens), and the other was superior on an attribute conceptually associated with *speed* (shutter speed).

Consistent with our hypothesis, results indicated that those in Condition 1 (*fast/low-quality* restaurant experience), more often than control subjects, chose the camera that was superior on the frustrated tradeoff value dimension they recalled—quality. Also consistent with our prediction, those in Condition 2 (*slow/high-quality* restaurant experience) were more likely than controls to choose the camera superior on the value frustrated in the recalled tradeoff situation—speed.

To investigate the mechanisms underlying why this value shift occurs, we increased choice difficulty in a second study in order to produce greater choice and attribute tradeoff processing (see Bettman, Luce and Payne 1998, for a review). We predicted that this added option and tradeoff processing would increase the likelihood that the option with the frustrated value would be chosen. We also wanted to show that our effect would generalize to other contexts. One hundred and forty five subjects were randomly assigned to one of two conditions in which the subject recalled and wrote about a time when the subject: (1) had a *fast*, but *low-quality*, doctor's office experience; (2) or had a *slow*, but *high-quality*, doctor's office experience. Following this manipulation, each participant made a hypothetical purchase decision between two trains traveling between cities. One train was superior on attribute dimensions commonly recognized as reflective of train *quality* (i.e., cleanliness), and the other was superior on an attribute conceptually associated with *speed* (i.e., travel time). To determine if greater tradeoff processing increases the likelihood of choosing the option with the frustrated value, we manipulated perceived difficulty of the train choice using a standard fluency paradigm (Novemsky, Dhar, Schwarz and Simonson 2007; Song and Schwarz 2008). Participants were randomly assigned to view the train options in either an (1) easy to read font (i.e., Arial) or a (2) difficult to read font (i.e., Mistral).

Consistent with our hypothesis, participants in the difficult-to-read font condition, as compared to those in the easy-to-read font condition, were more likely to choose the option consistent with their frustrated value. Specifically, those in the difficult decision condition who recalled the *fast/low-quality* doctor's office experience were more likely than those in the easy condition to choose the train that was superior on the frustrated tradeoff value dimension they recalled—quality. Similarly, those in the *slow/high-quality* doctor's office experience condition were more likely to choose the train superior on the value frustrated in the recalled tradeoff situation—speed. Thus, higher tradeoff processing increased choices in favor of the frustrated value.

The present findings lend credence to the fundamental idea introduced in this new line of research, whereby the construction of value is subject to the systematic influences of prior value experiences in contexts that are remote from the current decision situation, in both time and domain. Specifically, in a decision situation involving tradeoffs, frustrated values do not simply go away, e.g., dissipate instantly. They are still active and seek to be satisfied. Subsequent, superficially distinct, decision situations represent opportunities to satisfy those frustrated values. Current studies are directed toward the elaboration of further forces that affect value construction. This

research has important implications for consumer behavior, including how and why consumers shift their product value, and in what circumstances they may be more or less likely to variety seek.

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Polarized Perceptions: When Joint (Vs. Separate) Presentation Leads To Enhanced Perceived Heterogeneity

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How do simultaneous choices made for multiple-other people differ from choices made for a single-other person? In this paper we explore how people make decisions for, and anticipate preferences of, multiple-other people (vs. a single person). We demonstrate three systematic effects when decisions are simultaneously made for multiple people: (1) higher variance is attributed to other's preferences, thereby leading to perception of enhanced preference heterogeneity, (2) other's preferences are viewed as more distant and less similar to self-preferences, thereby leading to reduced false consensus effect, and (3) decision confidence is enhanced and perceived difficulty mitigated. The observed enhancement in preference heterogeneity persists even when decisions remain anonymous, and impression management concerns are low, thereby ruling out any social-signaling motivations. To explain this phenomenon, we propose an underlying mechanism rooted in the cognitive-perceptual tendency for response equalization (Wedell 1995) and representativeness (Tversky and Kahneman 1974). To better understand the underlying mechanism of this effect, we also examine several contextual and chronic influencers.

Introduction

Many decisions require a precise understanding of other's preferences. Gift giving, strategic interactions, surrogate decision-making, and advising: all require the decision-maker to be precisely aware of the characteristics, tastes, and preferences of others. Without being adequately calibrated about others, such decisions will lead to suboptimal outcomes. For instance, if a financial planner is not acutely aware of the risk tolerance of her clients, her investment advise to them will be flawed.

While much of the neoclassical economics literature implicitly assumes a precise knowledge of others, other social sciences disciplines have consistently pointed to systematic biases. Some examples: (i) False consensus effect (FCE), or the projection bias, is a cognitive bias whereby a person tends to overestimate how much other people are similar to her (Ross, Greene, & House, 1977). (ii) People also tend to underestimate other's relative abilities and skills, thereby leading to persistent overconfidence (Svenson 1981, Taylor & Brown 1988). (iii) In other domains, it has been demonstrated that people tend to assume that others are willing to pay

higher amounts for a product than they themselves are (Knetsch & Sinden 1984, Frederick 2011). So while people have been shown to be often miscalibrated about preferences of others, literature has been largely silent about how people's decisions and judgments about others will vary if these decisions are being made for multiple-others versus for an individual-other. In the cited literature, the default paradigm seems to be a "single-other" setting with an implicit assumption that the findings will apply even in multiple-other decision situations. However, unrelated research in choice and judgment has repeatedly demonstrated preference reversals amidst choice options when they are presented jointly versus separately (Hsee, Lowenstein, Blount & Bazerman 1999). This raises the possibility that decisions and judgments about others may also be susceptible to elicitation-mode effects.

In this paper we examine an elicitation-mode induced difference in perceived preference distribution. We find that people perceive others to be less different (from themselves and from each other) when these others are viewed alone (separate-prediction mode, SP). In contrast when multiple others are viewed simultaneously (joint-prediction mode, JP), their tastes and other characteristics are viewed to be much more different from the decision maker and even from each others. In other words, JP (vs. SP) leads to a greater perceived heterogeneity in perceived taste distribution of others. We further posit that the underpinnings of this over-diversification are not exclusively social-motivational, as previous literature has suggested, but rather cognitive-perceptual. We gather evidence for this theorizing by controlling for any social signaling motivations, and demonstrating that over-diversification still persists. Such cognitive underpinnings share the same epistemic legacy as several other decisional heuristics and biases classified under the broad umbrella of representativeness (Kahneman & Tversky 1974).

Empirical Studies

In Study 1 we demonstrate that when making choices for others, individuals fail to optimize decisions by choosing the maximizing option but instead err in favor of over-diversification. We ask participants to choose a sandwich (out of 4 options) for their friend(s). Pretests show that the chicken sandwich is the optimal choice, and therefore the best decision when choosing for somebody else whose preferences are relatively unknown to the participant. In the SP condition, we find that 71% choose this optimal choice for others. In the JP condition, this optimal behavior is demonstrated only for 46% (p<0.001) of the sandwich choices. In Study 2 we replicate this finding in a "prediction" setting which controls for any social or motivational reasons to over-diversify thereby ruling out such alternate explanations. In Study 3 we find that predictions for others' "willingness-to-pay for a consumer product" are more widely distributed in the SP condition relative to the JP condition. In Study 4 and Study 5 we find a similar result for predicting other's "risk preferences" and "height" respectively. These three studies (3-5) also investigated self-other differences (as a measure of false consensus effect) in these domains. Consistent with our prediction, we find that the false consensus weakens in the JP conditions. In the next two studies we explore predicting other's choice (Study 6) and recommending a suitable option for others (Study 7) in a financial decision setting. Participants are given two hypothetical risk profiles and asked to make an optimal investment choice for these profiles (or predict their choices) in the joint- or a separate-presentation setting. In line with our theorizing, we again find that the recommendations/predictions for both profiles are very similar in the SP setting, but very polarized in the JP setting. The FCE also weakens in the JP setting. Additionally we find that decision confidence and perceived ease is enhanced in the JP setting. In the final two studies we unearth the underlying mechanism leading to the observed behavior – the findings indicate that representativeness heuristic is at the heart of this implied heterogeneity (Study 8),and encouraging thoughtful decision making is likely to aggravate this bias instead of ameliorating it (Study 9).

Overall, our results reveal that viewing others jointly brings about the intra-group differences in sharper focus, and they seem very different from each other. In contrast, when looking at someone else in isolation, participants have a higher tendency to project their own self onto that person thereby leading to reduced self-other perceived differences, and a larger false-consensus effect.

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The Maximizing Mindset

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Being the best is great. The goal to maximize outcomes has been advocated as ideal in almost every domain of life. In business, companies strive to maximize profits and returns on investment. In politics, candidates strive to become the most powerful. Even in entertainment, the most popular TV shows, such as "American Idol", "Dancing with the Stars", and "X Factor", center on competition and the crowing of a winner. However, most people, most of the time, do not get to be the best. How does being primed with a mindset of being the best make us feel when we are not the best?

Past research on maximizing has centered on individual differences in chronic behavioral patterns, such that some people consistently try to get the "best" (maximizers) whereas others tend to "satisfice" and settle for "good enough" outcomes (Simon 1955). It has been proposed that maximizers have two key features: the goal to get the best out of any situation and the tendency to compare and search for alternatives (Iyengar, Wells, and Schwartz 2006; Schwartz et al. 2002). Moreover, it has been found that maximizers tend to experience greater regret and lower satisfaction than satisficers (Nenkov et al. 2008; Schwartz et al. 2002). Beyond this pattern of correlation, it remains unclear what causal impact a temporarily activated maximizing mindset might have on various affective responses to particular outcomes.

To explore this question, the present research experimentally activated individuals' tendency to maximize (i.e., mindset priming) via tasks involving comparing and getting the best (e.g., a choice task). In conjunction with this mindset priming, we manipulated different outcomes and measured participants' affective reactions to these outcomes (regret, happiness, satisfaction). We assumed that this experimentally activated maximizing mindset would have a carry-over effect on participants' reactions to outcomes in subsequent tasks. This assumption is based on the extant literature on procedural and mindset priming, which specifies that a cognitive process that is activated in the pursuing of one task remains active and is shifted to subsequent tasks, affecting responses in these tasks as well (Förster and Liberman 2007; Kray, Galinsky, and Wong 2006; Gollwitzer 1990; Gollwitzer, Heckhausen, and Steller 1990; Schooler 2002; Xu and Wyer 2007).

Across six experiments, we tested the impact of the maximizing mindset on regret, happiness, and satisfaction with various outcomes, such as missing the best deal, product malfunction, and non-best feedback regarding an IQ test. Experiment 1a and 1b demonstrated that the maximizing mindset increased regret without impacting happiness when participants missed the best deal. Experiment 2 demonstrated that the maximizing mindset increased regret without impacting satisfaction or happiness when the non-best feedback from an IQ test was close to expectations. To explore the underlying mechanism of Experiment 2, Experiment 3 explicitly manipulated non-best outcomes into either close to or far below expectations and showed that the maximizing mindset increased regret regardless of whether the non-best outcome was close to or far below expectations. Contrastingly, only when the non-best outcome was far below expectations did the maximizing mindset produce a significant negative effect on satisfaction.

Aside from amplifying negative reactions, Experiment 4 showed that when the best outcome was attained the maximizing mindset amplified positive reactions, such as decreasing regret and increasing satisfaction. Lastly, Experiment 5 was designed to show the maximizing mindset is different from just having the goal to get the best or just having a high comparison tendency. Specifically, this experiment showed that the maximizing mindset and the comparative mindset improved task performance, and the maximizing mindset and the goal to get the best amplified regret and dissatisfaction.

The present research documents a new kind of mindset that has not been articulated in prior research yet which has unique effects on specific affective responses. The maximizing mindset is distinguishable from other mindsets (e.g., comparative mindset;

counterfactual mindset, etc.) that have been examined in earlier research. Future research may explore further the unexpected impact of mundane daily tasks on well-being. For example, choosing the tastiest dish from a long menu in a restaurant, watching *American Idol*, and grading students' assignments may all involve temporary activation of the maximizing mindset, which may in turn amplify regrets and dissatisfaction in unrelated life domains.

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The Tyranny of Utilitarian but Democracy of Hedonic Choices

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Andrew Mitchell, University of Toronto, Canada

In 2009, Coca-Cola launched its Freestyle soda machines in cities across the United States. The machines allow consumers to dispense their own soda from 125 choices, with regular and diet versions of Coke, Barq's, and Powerade, among other brands, and soda flavours as unique as guava, orange, and peach. Today, there are over 66,000 "fans" on Facebook, with many commenting that the machines are "the greatest thing ever" and one fan being "heartbroken" that a local Burger King in South Carolina did not have one. This success story seems to go against the argument that offering choices can be detrimental to consumer satisfaction. Indeed, making a choice – even a simple one – is effortful for consumers (Baumeister et al., 1998; Festinger, 1962; Luce et al., 1999; Tversky & Shafir, 1992). Increasing the number of options thus only makes the decision more difficult for consumers. This phenomenon is known as "choice overload" (Fasolo, McClelland, & Todd, 2007; Gourville & Soman, 2005; Iyengar & Lepper, 2000; Schwartz, 2000), among other labels.

In this research, we hypothesize that offering utilitarian choices decreases, but offering hedonic ones increases, consumer satisfaction. Utilitarian choices fulfil instrumental needs, while hedonic choices fulfil experiential desires. Goals research indicates that consumers are driven by goals that they value (Carver & Scheier, 1998). Although hedonic choices fulfil a goal like utilitarian choices, the goal here is in what it symbolizes. Consumers signal their own identity by choosing what products to buy, what attitudes they profess, and what preferences they hold (Levy, 1959; Wernerfelt, 1990). Thus, as hedonic goals are personally-driven, autonomous, and valued, consumers expend more effort to make and be more motivated by hedonic than utilitarian choices. Within the context of offering choices, consumers should thus perceive any interference to making hedonic choices as a restriction on their autonomy and on themselves as human beings, thereby prompting even greater effort towards such goal pursuits. Thus, the difficulty that arises from offering any type of choice should deplete consumers making utilitarian choices, but it should motivate those making hedonic ones. In Experiment 1, participants' task was to choose a birthday card, either for a co-worker (utilitarian) or for a close friend (hedonic). They chose a card from a selection of either 6 or 15 options. Participants making a utilitarian (hedonic) choice were less (more) satisfied from choosing among 15 than among 6 cards. Further analysis revealed that more options increased perceived difficulty regardless of choice type, replicating previous findings regarding choice overload. However, on measures of perceived autonomy, participants making a utilitarian (hedonic) choice perceived less (more) autonomy from choosing among 15 than among 6 cards, Mediation analyses indicate that perceived difficulty lowered satisfaction from utilitarian choices, but perceived autonomy increased it from hedonic ones. Taken together, the results suggest that offering more hedonic choices increases perceived autonomy from choosing, thereby increasing satisfaction.

Experiment 2 tested the hypothesis that making utilitarian choices depletes, while making hedonic choices motivates, consumers. This is because choosing is difficulty and draws upon the same executive mental resources as with most acts (Baumeister et al., 1998; Bruyneel et al., 2006; Vohs et al., 2008; Wang et al., 2010). In this experiment, participants chose a coffee either to stay awake (utilitarian) or to relax (hedonic). They then chose a coffee from either 5 or 18 options. Afterwards, participants completed the three questions on the Cognitive Reflection Test (Frederick, 2005). Results regarding satisfaction from choice paralleled Experiment 1.

Participants making a utilitarian (hedonic) choice were less (more) satisfied from choosing among 18 than among 5 coffees. On the CRT, participants making a utilitarian (hedonic) choice scored lower (higher) after choosing from among 18 than 5 coffees. These findings suggest that making difficulty utilitarian choices depletes consumers, but making difficult hedonic choices motivates them. This follows from the idea that autonomous choices vitalize consumers in both the consumer and social psychology domains (Choi & Fishbach, 2011; Laran & Janiszewski, 2011; Nix et al., 1999; Ryan & Deci, 2008).

Across these two experiments, we find that offering utilitarian choices decreases, while offering hedonic ones increases, consumer satisfaction. This is because utilitarian choices fulfil externally-driven goals, while hedonic choices fulfil personally-driven ones that are more valued and motivating than others. While increasing the number of options makes it more difficult to choose, this difficulty depletes consumers making utilitarian choices, but it motivates those making hedonic ones. With more hedonic choices, consumers become aware of what makes them happy, making them better informed about the decision and themselves (Diener & Biswas-Diener, 2002; Eaton & Lipsey, 1979). Hedonic choices can also offer variety to meet consumers' need for stimulation and to prevent satiation (Redden, 2008; Simonson, 1990). And as consumers pursue what makes them happy, those who are satisfied with their hedonic choices should repeat their purchases and drive in-store traffic (Broniarczyk et al. 1998; Hoch et al. 1999; Kahn and Wansink 2004).

To Schwartz (2000), there is the "tyranny" of choice. But the question is not whether consumers have choices – but rather, it is what type of choice that they are making. His argument that offering choices undermines self-determination only applies to consumers making utilitarian choices. But when consumers make personally-valued, autonomous, hedonic choices, there is what we call the "democracy" of choice. Consumers strive for volition by expressing their tastes, desires, and fantasies (deCharms, 1968; Deci et al., 1994; Moller et al., 2006), such that offering hedonic choices assists in this regard. With no choice at all to express their individuality and themselves, consumers can not perceive themselves as autonomous agents – and as a result, they cease to become human beings.

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7.4 *Individual Papers:* When the Going Gets Tough: Coping with Negative Consumption Situations

Room: El Capistrano

Chair: Elise Chandon Ince, Virginia Tech

Construal and Coping: How I Cope Affects How I Think

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Consumers engage in a variety of coping strategies when confronted with stressful situations. Some consumers may engage in problem-focused coping strategies (i.e., efforts to change the cause of stress; Lazarus and Folkman 1984) while others may tend to employ emotion-focused coping strategies (i.e., efforts to regulate one's emotional responses to the sources of stress; Lazarus and Folkman 1984). Although previous findings in the coping literature enhance our understanding of the factors that influence when consumers employ either approach, little research investigates how the use of specific coping strategies may influence subsequent information processing. This research proposes unique consequences resulting from reliance on either problem-focused or emotion-focused coping by conjoining coping theory with Construal Level Theory (Trope and Liberman 2003, 2010).

We propose that the use of specific coping strategies is associated with systematic variations in construal levels. In particular, we posit that consumers who employ problem-focused coping will adopt lower level construals because they mentally represent their coping in

a concrete and detailed manner. That is, consumers who employ problem-focused coping tend to make a detailed plan, think about possible ways to improve the situation, and think about one part of the problem at a time, implying that they may mentally represent their coping in a concrete manner to regulate the source of their stress. Previous research has suggested that focusing on concrete details is the characteristic of low-level construals (Trope and Liberman 2003). In addition, consumers who use problem-focused coping expect their coping to be successful (e.g., successfully regulate the source of stress directly) to be very likely (Lazarus and Folkman 1984). Prior work in the CLT literature further suggests that likely events or actions are represented in terms of a low-level construal (Todorov et al. 2007). Together, these findings from two literatures imply that consumers who employ problem-focused coping will be more likely to adopt a low-level construal because they expect the positive future consequence of coping to be highly likely.

In contrast, we propose that employing emotion-focused coping will adopt higher level construals because they mentally represent their coping in an abstract and superordinate manner. That is, consumers who engage in emotion-focused coping usually avoid thinking about unpleasant thoughts regarding the stressful situation, and let their negative emotions out in another way so that they feel better, suggesting that they may mentally represent their coping in an abstract manner to regulate their emotional response. It is because people who use emotion-focused coping believe they do not have enough abilities to fix the problem (Sujan et al. 1999) and previous research (Margue et al. 2010) suggest that when people encounter an obstacle that they think it is hard to address, they tend to step back or distance themselves to see the big picture and focus on abstract features. Furthermore, prior research has documented that focusing on abstract aspects of the objects or events is the characteristic of high-level construals (Trope and Liberman 2003). Moreover, the coping literature suggests that consumers who use emotion-focused coping usually expect that the probability that they successfully manage the source of stress directly is low (Lazarus and Folkman 1984). Prior work in the CLT literature further suggests that unlikely events or actions are represented in terms of a high-level construal (Todorov et al. 2007). Thus, these findings from two literatures suggest that consumers who employ emotion-focused coping will be more likely to adopt a high-level construal because they expect the likelihood that they can successfully manage the source of stress directly to be low.

One important implication of the proposed theoretical linkage between coping and construal relates to the persuasiveness of stressful health-related messages. We posit that consumers who employ problem-focused coping when they experience a health-related stress (e.g., the risk of obesity) will be more persuaded by health messages represented at a low-level construal than a high-level construal. Since those consumers who employ problem-focused coping may mentally represent their coping in a concrete and detailed manner, a low-level-construal message that provides concrete features about health strategies (e.g., "We provide you yoga classes once a week") should be more persuasive. Conversely, we propose that consumers who tend to engage in emotion-focused coping will be more persuaded by health messages represented at a high-level of construal as compared to a low-level construal. Since those consumers mentally represent their coping in an abstract manner (e.g., try to feel better), a high-level-construal message that provides abstract information (e.g., "We give your body and mind complete conditioning!") about health strategies should be more persuasive.

In Study 1, we manipulated coping by asking participants to adopt either of two specific coping strategies and then measured construal level with a BIF scale (Vallacher and Wegner 1989). We found that participants in the problem-focused coping ([M=12.28]; vs. emotion-focused coping [M=17.31] and control [M=14.92]) condition adopted lower construal mindsets on the BIF scale ($ps <.03$). In the next two experiments, we manipulated consumer coping as we did in Study 1 and then exposed them to either a high-level construal message or a low-level construal message regarding an education program which is designed to help consumers engage in physical activities so that they could maintain their health. We showed that participants who employed problem-focused coping were more persuaded by a low-level construal health message ($M_{prob\_high-construal}=6.07$ vs. $M_{prob\_low-construal}=7.29$; $p<.001$) while participants who used emotion-focused coping were more persuaded by a high-level construal health message ($M_{emo\_high-construal}=7.37$ vs. $M_{emo\_low-construal}=6.18$; $p<.001$). In a third experiment, we examined the mediating role of processing fluency (please see Figure 1 and 2) because prior research has shown that a match between consumers' psychological states and a construal level of messages results in greater

fluency and thus greater persuasion (Lee and Aaker 2004; Mayer and Tormala 2010). We found that a match between consumer coping and the construal level of message resulted in greater fluency and greater fluency facilitated persuasion (Sobel test: z = -2.89, p<.002).

Our findings contribute to the literature on coping by examining the consequences of the use of different coping strategies on construal level mindsets and by highlighting how specific coping strategies interacts with health messages framed at either high or low levels to drive persuasion. In addition, we contribute to extant research on message framing based on construal level theory by providing a new insight such that the persuasive effects of health messages using different construal levels are contingent on consumers' coping styles. Finally, we also contribute to the match-driven persuasion effects in the context of health messages by documenting the role of processing fluency derived from the match between distinct mental representations of consumers' coping (e.g., consumers with problem-focused coping tend to represent their way of coping in concrete terms) and the construal level of health messages.

Figure 1
Study 3 Results: Attitude
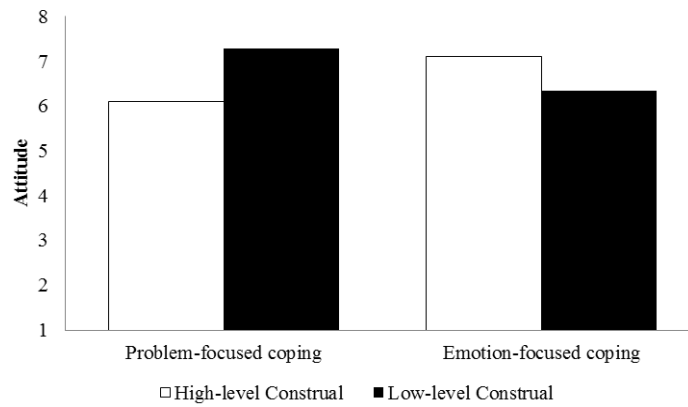
Note: All the contrasts were significant (*ps* <. 05).

Figure 2
Study 3 Results: Fluency
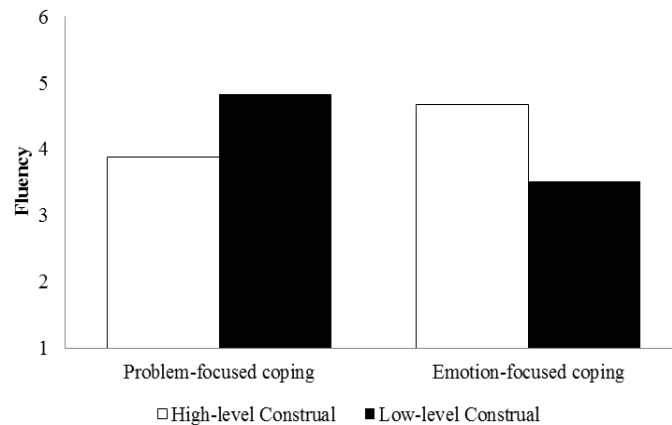
Note: All the contrasts were significant (*ps* <. 05).

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Contagious Disease and Imperfections of the Self

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No one is perfect, even in our own minds. Sometimes especially in our own minds. A number of psychological mechanisms can produce the self-derogating biases that lead people to over-perceive imperfections and flaws in themselves. For instance, social comparison theory considers the use of upward comparisons in motivating people to achieve better outcomes, but in so doing may highlight presumed deficiencies (in body image, competence, etc.) between the self and more idealized comparisons (Gulas and McKeage 2000; Martin and James 1997). Similarly, the spotlight effect involves a process by which people presume that their internal states and external actions are noticed more by others than is actually the case (Gilovich and Savitsky 1999), with their presumed flaws and failures looming large and producing exaggerated anxieties (Savitsky, Epley and Gilovich 2001). In fact, the goal of marketing is often to leverage biases like these in order to show consumers where discrepancies exist between their actual and desired states (or sometimes, to manufacture such discrepancies). The present research investigates a particular aspect of human development that has gained increasing attention—exposure to contagious disease—and its role in shaping both self-perceptions of personal flaws and consumer actions that might be undertaken to address these flaws.

Although it is often not at the forefront of our minds, the threat of acquiring a contagious disease is an everyday possibility. People may possess stable individual differences in the extent they worry about germs, but many situational triggers can also incidentally activate disease concerns (e.g., being near a sneezing person, noticing a poster about cold season or STDs, walking by a hand sanitizer station, watching a media report about a flu epidemic). Emerging research on psychological reactions to disease threat points to a set of mental and behavioral mechanisms that have evolved to minimize the spread of disease-causing pathogens. This set of mechanisms has collectively been termed the *behavioral immune system*, and it functions to promote the early detection and avoidance of disease-relevant cues (Schaller 2011). The behavioral immune system is incredibly prolific in its consequences and has been linked to outcomes from the very basic (e.g., visual attention) to the quite complex (e.g., cultural differences). In the realm of consumer behavior, incidental disease cues have been shown to alter both food preferences and sensitivity to the used vs. new nature of more durable products (Huang, Ackerman and Sedlovskaya 2012; Li and Ackerman 2011). Existing research on the behavioral immune system has concentrated on the influence of contagion cues on external perceptions (e.g., of people and products). No work has yet considered whether self-perceptions and actions are affected by disease threats.

A practical understanding of disease processes suggests specific ways in which the threat of disease might bias self-perceptions. Pathogens do not simply deplete energy or threaten lives, they also fundamentally change our physical bodies and our proclivities for social interaction. For example, increased exposure to pathogens is associated with (both subtle and severe) asymmetries of physical/mental development and with decreased social openness (Schaller 2011). If people are sensitive to the potential consequences of pathogen exposure in others (and evidence suggests that they are), they may manifest elevated concerns about these consequences within themselves. That is, people incidentally exposed to disease threat cues may perceive that they possess more of, or are more concerned about, physical, mental and social flaws. This possibility was tested in two studies.

In Study 1, participants first viewed one of two slideshows featuring either disease-relevant images or control images of architecture (this procedure has been effectively used in prior research to differentially cue contagion threat; e.g., Li and Ackerman 2011). Next, as a measure of self-perceived flaws, they viewed a list of 26 personal characteristics (e.g., facial symmetry, amount of body fat, frequency of displaying embarrassing behaviors) and rated their current self-satisfaction ("How far from ideal are you on…") on each. Lastly, participants rated their overall number of flaws relative to the average person and completed the Belief in a Dangerous World (BDW) scale, which measures general threat sensitivity. Factor analysis indicated the presence of three latent constructs in the characteristic ratings, which were labeled Physical/Mental, Social, and Other forms of fitness ("Other" included relatively changeable

aspects of life that are still important to consumer researchers such as the size of one's music collection or one's hair style). Multivariate analysis on these showed that exposure to the disease slideshow led participants to feel significantly further from ideal on Physical/Mental fitness and (somewhat more weakly) on Social fitness, but not on Other fitness. These effects held even controlling for BDW, suggesting they were specific to disease concerns and not general threat concerns. Finally, participants primed with disease also rated themselves as possessing a significantly higher number of flaws than the average person, again even when controlling for BDW.

Study 2 used a similar method but instead of flaws, participants rated their interest in purchasing 18 products that might be used to alleviate potential flaws. Additionally, participants completed the Perceived Vulnerability to Disease (PVD) scale, a measure of chronic germ worry and infection susceptibility. Factor analysis again suggested a three-factor solution, which were labeled Appearance, Social ability and Other products. Here, we found an interaction between disease prime and PVD such that participants exposed to disease cues were more interested in purchasing appearance-related products, especially when they were chronically worried about germs. No effects were found for the Social ability and Other product constructs in this study.

The current research explores the implications of a particular motivational concern—the desire to avoid contagious disease—for consumer judgment and decision making. In doing so, it also highlights the value of bringing an evolutionary perspective to bear on questions of consumer behavior. Ongoing work is being conducted for this project to develop a more comprehensive and psychometrically sound measure of self-perceived flaws as well as to identify types of actions that might better address the social fitness flaws that are accentuated by disease threats.

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The Illusion of Saving Face: How Products Help Consumers Get Relief from Embarrassment

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Face is the public aspect of self. It can be maintained, enhanced and lost in interpersonal interaction. The loss of face often leads to feelings of embarrassment. As a consequence of the metaphorical link between embarrassment and the concept of losing face, people symbolically cope with embarrassment by choosing products that either hide their face (e.g., sunglasses) or repair it (e.g., face-restoring cosmetics). Moreover, these two symbolic coping strategies have different behavioral consequences. In particular, although symbolically repairing one's face eliminates aversive feelings of embarrassment and restores one's willingness of public exposure, symbolically hiding one's face has no such effects.

The Ironic Effect of Excuses on Consumer Perceptions

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Nora Moran, Virginia Tech, USA*
Rajesh Bagchi, Virginia Tech, USA

He who excuses himself, accuses himself. Gabriel Meurier

Failures happen in all service settings, and fallout is often significant. Consequently there is considerable literature assessing how providers can recover from failures. We investigate whether providing an excuse (vs. not) can have a detrimental effect on consumer service perceptions, specifically looking at minor versus major failures.

Service providers believe that after any failure, proper recovery is essential for maintaining customer satisfaction (Hart, Heskett, and Sasser 2000). Likewise, after failures, consumers appreciate communications from firms (Tax, Brown, and Chandrashekaran 1998), and personnel feel compelled to provide information to alleviate guilt, manage impressions, and distance themselves from failure (Bies and Shapiro 1987; Snyder and Higgins 1988).Although extensive, past literature has not addressed how failure severity affects inferences—in particular, how consumers evaluate minor failures, which are more common and require prompt responses from personnel.

First, we argue that expectations regarding responses from firms depend on failure severity (H1). While those experiencing a major failure might expect a reason for the transgression, those experiencing a minor failure may not —consumers may not wonder about the reason for the minor failure unless it is made explicit. However, once an excuse is offered, recipients elaborate and focus more on the failure, even when an excuse is considered valid. Specifically, we predict that customers' critical evaluations of a minor failure increase when an excuse is provided (H2), thus decreasing customer satisfaction (H3). We then identify a boundary condition, level of suspicion, and show that individuals primed with suspicion of negative ulterior motives are less satisfied after a minor failure when given no excuse (H4), as suspicion prompts individuals to seek out causes for failures.

We test these predictions in three studies, using different failure contexts and excuses. In study 1, we used a 2 failure (major/minor) x 2 excuse (yes/no) between subjects design (N = 57). The scenario indicated that participants were getting their car's battery replaced. We manipulated failure by varying the actual price for the replacement from its prior estimate ($120): $125 for minor, and $170 for major failure. In the excuse condition, the mechanic offered an apology and excuse ("We did not have the right kind of battery for your car and had to order it and that is why your price is higher"), whereas in the no-excuse condition, the mechanic only offered an apology. In addition to main effects, we obtained the predicted failure x excuse interaction (F (1, 53) = 7.48, p < .01; figure1). In the minor failure condition, providing an excuse (vs. not) elicited lower satisfaction ratings (M_{excuse} = 3.3 vs. $M_{no-excuse}$ = 4.7; p < .01). No difference emerged in the major failure condition (M_{excuse} = 2.6 vs. $M_{no-excuse}$ = 2.1; NS)**.**

In study 2, we investigated the process in detail. We used a 2 failure (major/minor) x 2 excuse (yes/no) between subjects design (N = 201). The scenario was identical to that of study 1, except we manipulated delivery delay. At pickup, either the mechanic showed up after a 5 minute-delay (minor failure) or a 30 minute-delay (major failure). In the excuse condition, the mechanic apologized for the delay and offered an excuse ("We did not have the right kind of battery for your car"), but only offered the apology in the no-excuse condition. In addition to main effects, a failure by excuse interaction also emerged (F (1,197) = 9.16, p < .005; figure2). When failure was minor, satisfaction was lower with an excuse (M_{excuse} = 4.3 vs. $M_{no-excuse}$ = 5.5, p < .001). In the major failure condition, no differences emerged (M_{excuse} = 3.8 vs. $M_{no-excuse}$ = 3.8, NS). A marginal two-way failure x excuse interaction also emerged for critical evaluations (F (1, 197) = 3.03, p = .08; figure3); in the minor failure condition, participants were more critical when an excuse was offered (M_{excuse} = 4.2 vs. $M_{no-excuse}$ = 3.5; p < .05). No differences emerged in the major failure condition (M_{excuse} = 4.3 vs. $M_{no-excuse}$ = 4.4; NS). Furthermore, critical evaluations mediated the effect of excuses on satisfaction.

In study 3, we manipulated suspicion by asking participants to either read an article on the potential for unethical behavior among employees (suspicion condition) or a neutral article (control condition) before completing the mechanic scenario from study one (N = 143). We only considered the minor failure condition. As expected, the suspicion x excuse interaction was significant for satisfaction (F (1, 137) = 6.59, p < .01; figure 4). In the control group, participants were marginally less satisfied when an excuse was offered (M_{excuse} = 3.0 vs. $M_{no-excuse}$ = 3.6, p = .09). However, when primed with suspicion, participants were more satisfied when an excuse was offered (M_{excuse} = 4.2 vs. $M_{no-excuse}$ = 3. 5, p < .05). Note that in all studies, irrespective of condition, the provider apologized for the failure. Thus, all participants were aware of the failure.

While prior research suggests that valid excuses lead to positive evaluations (Hill, Baer, and Morgan 2000), we find that provider-relevant valid excuses can be problematic (we conducted several pretests to ensure that excuses were considered valid). Our findings also suggest different processes for evaluating minor versus major failures. By studying service failures from the consumer perspective, we provide a fuller understanding of consumers' immediate reactions to service failures, and enrich both services and excuse-making literature in new ways.

While past research has focused extensively on what wrongdoers can say and do to recover from failures, our results suggest that doing nothing can be advantageous. Thus, there appears to be a significant asymmetry between what both researchers and firms think increases satisfaction and what actually occurs, particularly after minor failures. At a time when the ethos of service is to go above and beyond to keep consumers happy, we suggest that omission of information can do more to improve satisfaction and firm perceptions. Our findings thus are consistent with a quote attributed to Gabriel Meurier that "He who excuses himself, accuses himself."

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7.5 *Symposium:* Mind The Gap: Psychological Distance and Perceptions of Ethicality

Room: Concepcion

Chair: Shahar Ayal, IDC Herzliya, Israel

Nina Mazar, University of Toronto, Canada

Distancing Response to Ethical Dissonance

Rachel Barkan, Ben-Gurion University of the Negev, Israel

Shahar Ayal, IDC Herzliya, Israel*

Francesca Gino, Harvard University, USA

Dan Ariely, Duke University

The term *Ethical Dissonance* refers to the inconsistency between one's unethical behavior and the need to maintain a moral self-image. Consistent with cognitive dissonance, ethical dissonance has strong motivational properties: (1) the dishonest act presents behavioral commitment (Brehm & Cohen, 1962); (2) people are responsible for their dishonest acts (Wicklund & Brehm, 1976); and (3) the dishonest act violates standards or expectations critical for the maintenance of a positive self-concept (Aronson, 1968). Past research has documented several solutions to ethical dissonance, including dismissals, reinterpretations and justifications. Our work focuses on strong cases of ethical dissonance where wrongdoing is undeniable and solutions are ineffective.

In six studies we demonstrate a distancing response. Through this response, people judge the ethically questionable behavior of others more harshly and present themselves to others as virtuous and ultra-honest. Consequently, people dissociate their previous misconduct from the self and bury it as implausible.

In each study we elicited ethical dissonance by asking participants to recall and write in private about a past undeniable unethical behavior they regretted. We compared the effects of experiencing ethical dissonance to various control conditions (e.g., ethically worthy conduct, neutral event, or negative event, as well as reports of unethical actions committed by others). We show that ethical dissonance poses a threat to the self-concept and influences how people judge the ethically questionable behaviors of others as well as the extent to which they present themselves as ultra-honest to others (Studies 1, 2 and 3). We also demonstrate that this double-distancing response is exclusive for ethical dissonance. It arises when participants recall their own ethical misconduct but not when they recall the misconduct of another person (Study 4), nor when they recall general personal failure or ethically-neutral dissonance (Study 5). Finally, we test a boundary condition of the distancing response to ethical dissonance and show the response is triggered

when misconduct is undeniable and hidden, and dissolves when the misconduct can be justified and/or when its exposure is likely (Study 6).

In Study 1, we presented harsh judgment of others. We presented 141 participants with a simplified hiring task in which a candidate's ethicality was clearly questionable, yet advantageous for the hiring firm. Participants evaluated the morality of the candidate and indicated their likelihood of hiring him. Preceding the hiring dilemma, we elicited ethical dissonance in one condition (recalling unethical behavior) and compared its effects on our measures of interest to three control conditions (recalling negative, neutral or worthy action). The findings indicated that recalling ethical misconduct posed a threat to the self and led to tightened ethical criteria and a higher likelihood of rejecting an ethically questionable candidate.

In study 2 we tested moral-self presentation. We presented 152 participants with a simplified task in which we asked participants to advise a friend facing an ethical dilemma between doing what was profitable and what was right. The findings indicated recalling past misconduct led participants to present an ultra-honest self that is incapable of wrongdoing, and to provide over-righteous advice to others.

In Study 3, we tested whether the double-distancing process operates consciously or unconsciously. Ultra-honest self-presentation of 68 participants was measured with Paulhus's (1991a, 1991b) Balanced Inventory of Desirable Responding (BIDR) that pits the unconscious bias of self-deceptive enhancement against deliberate impression management. The findings demonstrated that presenting a better self-image as a result of experiencing ethical dissonance reflects conscious effort of impression management rather than unconscious bias of self-deceptive enhancement.

We designed Studies 4 and 5 to rule out alternative explanations for the distancing response. Ruling out the alternative explanation of ethical salience, Study 4 demonstrated that distancing arises exclusively when participants recall their own ethical misconduct but not when they recall the misconduct of another person. Interestingly, Study 4 extended the demonstration of the distancing response, indicating it involves a stronger tendency to attribute unethical behavior to flawed personality and to discount extenuating circumstances. Further support for the exclusiveness of the phenomenon was indicated in Study 5, in which a distancing response followed ethical dissonance but was not observed for ethically neutral threats to the self or by ethically neutral cognitive dissonance (recall of personal failure that is ethically neutral, or recall of behavior that is inconsistent with important yet ethically neutral values). Finally, Study 6 tested the boundary conditions of the distancing response, indicating the response transpires for undeniable and hidden misconduct, and dissolves if justification is viable and/or if exposure is likely.

Our research complements existing work on *moral cleansing* and *licensing* behaviors and extends the scope of moral-self regulation. Moral cleansing and licensing are commonly described as intra processes that are independent of an "other." Similar to the homeostasis mechanism, downward and upward deviations from a comfortable moral baseline lead people to add or subtract moral points and keep a dynamic balance of the inner self-concept (Jordan et al., 2011; Sachdeva et al., 2009). The *distancing response* we demonstrate is a complementing process that operates at an inter level where a moral self is negotiated against a lacking "other." Unlike moral cleansing and licensing behaviors that are oriented inward, distancing is oriented outward and aims for audience recognition.

Ethical behavior and moral judgment are commonly discussed as if they were interchangeable, despite the likelihood that they are not. Our work provides one example in which intentional disparity between the two allows people to benefit from their own dishonest behavior without compromising their moral ledger.

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The Effect of Construal Level on Consumers' Anticipations Involving Ethical Behavior

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Despite the many lapses in ethical behavior that have attracted widespread attention in recent years, little is known about the cognitive processes that shape people's (un)ethical behavior and expectations of when it will occur. This lack of understanding exists despite substantial research on this topic within marketing. One factor that has contributed to this state of affairs is that most of the relevant investigations have focused simply on the practical implications and applications of ethics in marketing. Limited attention has focused on theory-driven inquiry.

This research offers an initial attempt to fill this void. We do so by drawing on a corpus of work concerning both psychological distance and construal level theory (Liberman &Trope, 2008). Psychological distance refers to the gap that often exists in time, space, familiarity, or likelihood that separates an event or object from the direct and personally experienced reality of the here and now. Moreover, variations in psychological distance have been found to affect people's construal level, which refers to the level of abstraction at which people think about and mentally represent an event in memory (Trope, Liberman, & Wakslak, 2007). Increases in an event's psychological distance (e.g., an event will happen in the more distant future or to a person other than oneself) prompts individuals to think about an event in a more abstract, less detailed manner, while decreases in psychological distance (e.g., an event occurs right now or to the self) elicit thought about the event in a more concrete or specific manner. Social distance, a variable that we examine and one that captures the familiarity dimension of psychological distance, would seem to be of importance in ethical situations for at least two reasons. First, ethical issues generally emerge in social contexts (i.e., ones involving people), making it likely that variation in social distance could be germane in ethical situations. Second, and more critically, because psychological distance regards the self in the here and now as its lowest endpoint or anchor, assessing one's own (as opposed to any other person's) behavior should stimulate an exceptionally concrete representation of the situation.

Importantly, investigations into the effects produced by variations in psychological distance have demonstrated that adoption of a high construal level (i.e., thinking about an event more abstractly) prompts people to place greater priority on the *desirability of pertinent end-states or goals*. In contrast, adoption of a low construal level (i.e., thinking about an event more concretely) leads people to place higher priority on the *feasibility and means used to achieve the end-state or goal*. We found these observations about the effect of construal level on people's priorities striking when applied to ethical contexts. This is so because in such contexts, it is because people aspire to achieve a desirable end-state or higher level goal (e.g., acquire goods at a reduced or no cost) that they may employ a means of attaining the end-state/goal that is feasible but unethical. The theory that underlies our hypotheses integrates the preceding two notions, namely, (a) a high (low) construal level increases the relative importance assigned to desirability (feasibility) aspects of ethics-related situations, and (b) a focus on desirability aspects seemingly encourages unethical behavior by fostering a desire to attain end-states/goals irrespective of ethical considerations, yet a focus on feasibility and means promotes more ethical behavior by heightening the salience of unethical actions. Combining the aforementioned premises and using extant knowledge of factors that influence psychological distance, we derived the following hypotheses. When individuals consider the behavior of an unknown (distal) person and thereby adopt a relatively high construal level, they should anticipate that this person will engage in unethical behavior when the event's psychological distance is greater (i.e., because this further encourages reliance on a higher construal level). But when individuals consider the behavior of the self -- an individual that fosters adoption of an *extremely low construal leve*l -- they may anticipate that the self will largely eschew unethical behavior, irrespective of other less potent factors that alter construal level by varying the psychological distance of the event.

Experiment 1 found support for this hypothesis in nine different ethical scenarios that varied construal level by altering the focal actor (i.e., social distance: the self or an unknown other) as well as the temporal distance (i.e., close vs. far distance) of the event. A

significant two-way interaction revealed that for an unknown other, a more temporally distant event increased the expectation of unethical behavior, but expectations that the self would behave ethically were high regardless of variation in the event's temporal distance.

Study 2 conceptually replicated these findings by replacing the temporal distance manipulation in experiment 1 with a fluency manipulation that varied a novel experiential dimension of psychological distance (Alter & Oppenheimer, 2008). We accomplished this by altering how fluently participants could read or apprehend the scenarios (high vs. low fluency should prompt low vs. high construal level, respectively). Compatible with study 1, when the focal actor was an unknown other, less fluent apprehension of the scenarios (i.e., prompting a higher construal level) increased expectations of unethical behavior; yet, expectations of the self's behavior was ethical regardless of differences in perceptual fluency.

Finally, study 3 sought evidence of the mechanisms that underlie the preceding effects. Consistent with our theorizing, we found that participants generated more thoughts about the event's end-state/goal and its desirability when the expected behavior concerned an unknown other and a temporal distance manipulation prompted participants to further process the scenarios at a higher construal level. But, participants produced more disapproving thoughts about the unethical means of the end-state/goal when the event concerned one's own anticipated behavior (i.e., which prompted use of a very low construal level), and this occurred regardless of variation in the temporal distance factor. Further, mediated moderation found that the number of participants' desirability minus feasibility related

thoughts mediated the effects of the temporal distance factor on participants' expectations that the focal individual would engage in (un)ethical behavior.

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Going the Extra Mile: Defaults as Psychological Barriers to Dishonesty

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Individuals regularly confront situations involving conflicts between behaving honestly and pursuing other economic, social, or personal goals. While dishonesty can be beneficial, it typically comes at a cost. For example, the likelihood of being caught and the magnitude of punishment if caught may create "barriers to dishonesty," same as the effort required to engage and conceal a dishonest act. In addition, there are *psychological costs* to dishonest behavior (Mazar & Ariely, 2006): Most people consider themselves to be honest but engaging in dishonest acts can erode that self-concept. However, recent research suggests that the impact of dishonest acts can vary depending on the focus of attention at the time of the action and the categorization of the act (Mazar, Amir, &Ariely, 2008). Thus, strengthening individuals' moral standards, making them more aware of their personal standards of honesty, or making the acts more explicitly dishonest can create additional "barriers to dishonesty." In this research we extend the previous literature and investigate a factor that previous research suggests could represent another important psychological barrier to dishonesty: the presence or absence of default options.

Spranca, Minsk, and Baron (1991) report a series of studies that suggest individuals view harmful acts of commission (doing something) as more morally reprehensible than acts of omission (doing nothing). However, Spranca et al. (1991) used scenarios describing the actions of others in order to measure participants' reflective judgments about the morality of the acts. More recently, Tepper, and Inzlicht (2010) explored the differences between physical acts of commission and omission in decisions to cheat on a test. They report that acts of omission are associated with more cheating than acts of commission. However, this work does not examine whether there might be additional psychological costs beyond the sheer physical cost of cheating.

One potential psychological barrier to dishonesty is the existence of a default response that must be rejected. Individuals may view acts that override default options as more of a threat to their self-concept than acts that do not override default options. Johnson and Goldstein (2003) have shown that the presence or absence of a default option can significantly influence individuals' tendency to comply with a public policy goal such as organ donation. We intend to explore the role default options can play in encouraging honest behavior by creating an additional psychological barrier to dishonesty while controlling for acts of commission and omission. The mere existence of a default response increases the psychological distance that one needs to go in order to cheat and still maintain the beliefs about one's honesty and thus, represents another potential cost.

In two studies we examined individuals' responses when confronted with a direct conflict between earning more money and responding honestly. In the first study 172 participants completed a computer-based, visual perception task (Mazar & Zhong, 2011). On each of 100 trials participants saw the image of a box with 20 randomly distributed dots for 1 second and were then asked whether the left or right side had more dots. However, participants in the experimental conditions were always paid more for responding that there were more dots on the right side, which created a conflict when there were actually more dots on the left. Participants were instructed to be as accurate as possible.

In addition, we manipulated the physical and psychological costs of dishonesty by contrasting three conditions. In the *Omission*-condition, participants were told that their response would be automatically recorded as "more on the right" unless they pressed the button "more on the left" within two seconds. Thus, cheating for higher pay did not require any physical action from participants. Participants in the *Commission*-condition were forced to give a response indicating which side had more dots before continuing to the next trial. Thus, on trials with more dots on the left, cheating for higher pay required a physical action: actively pressing the button "more on the right." We hypothesized that this added physical effort would make it psychologically harder for participants to cheat. Finally, in the *Super-Commission*-condition, participants were told that their responses would be automatically recorded as "more on the left" unless they pressed the button "more on the right" within 2 seconds. Thus, as in the *Commission*-condition, cheating for higher pay required the same physical action from participants. However, it also required overriding a default, correct answer. Thus, it should be psychologically harder to cheat in the *Super-Commission*-condition despite the same amount of physical effort. Finally, we included a control condition that required an act of commission to respond but involved equal pay for both responses.

Our results show that individuals were significantly more likely to cheat when confronted with an act omission than an act of commission. More importantly, when the act of commission involved overriding a default response that was accurate, cheating behavior was eliminated. This suggests that *overriding* a default, honest response involves greater psychological costs than simply producing a dishonest response. This observation was supported by reaction time data: participants used significantly more time to cheat in the *Super-Commission*-condition than in the *Commission*-condition. We also report evidence suggesting that the lower the physical and psychological barriers to cheating, the more likely were individuals to deceive themselves and reinterpret their dishonest performance. Finally, tests of mediation suggest that our results were not mediated by mood, arousal, or cognitive depletion.

In a follow-up study, 38 participants were asked to answer a number of questions predicting the behavior that we would observe in the four conditions of our experiment. Although these participants had an accurate view of people's relative performance in each of our four conditions, and generally thought of cheaters as having lower moral standards than controls, their judgments about those cheating did not vary by how the cheating was done (i.e. Omission, Commission, Super-Commission). That is, people do not seem to appreciate the role of the physical or psychological distance one needs to go to cheat. Instead they view the world as black or white: Cheating is cheating.

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Infectious Counterfeiting: Labeling Products as Fakes can Contaminate Perceived and Actual Efficacy

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This research suggests that merely presenting products as counterfeits can contaminate them psychologically. Importantly, this can result in poorer perceptions and lower actual efficacy. Briefly, the notion is that counterfeiting is a moral offense, affecting perceptions & efficacy. This is because the moral offense causes a sense of moral disgust (Schnall et al.,2008), which like physical disgust follows sympathetic magic laws (Greene et al., 2001) of contagion and similarity (Frazer 1890/1959). Labeling a product as counterfeit can thus contaminate both that product and similar non-fake products. The results of three experiments support the predicted effect and its explanation.

The goal of Experiment 1 was to study our ideas in the field. In this experiment, 61 experienced-golf players were presented with 2 identical putters (a golf club used to hit the ball into the last hole) and were told that one of them was real and the other one a fake. They were then asked to determine, to the best of their ability, which putter was real and which a fake. Next, they were randomly placed in one of two experimental conditions: putt with the non-fake club first, or putt with the "fake" club first. Their goal in both conditions was to sink the ball in the hole, or get it as close as possible to the hole if they missed it. As predicted, participants played better with the non-fake club than with the "fake" one. Specifically, participants playing with the non-fake club sunk the ball in the hole more than those who played with the "fake" club (14 times versus 7 times; $t(59) = -5.89$, $p < .05$), and brought it closer to the hole when failing to sink it (M=24 versus M=32; $t(59) = 2.58$, $p < .01$).

In Experiment 2, 42 participants were presented with two different Parker fountain pens, and were told that one of them was real and the other a fake. They were asked to use each pen to trace a line from the start of a maze to its end, trying to avoid touching the contours. After completing the task with both pens, participants were asked to evaluate each pen. As predicted, across different measures, pens were rated less favorably when they were said to be fake than when they were said to be non-fake. Specifically, compared to the non-fake pen participants rated the "fake" as significantly less comfortable, of lower quality, and as less appealing. Furthermore, results of the maze task, suggest that deleterious effects of believing that a product is fake may not limited to participants' reported evaluations, and also affect efficacy. Participants who completed the task using the "fake" pens performed significantly worse than those who used the non-fake pens, touching the lines of the maze more frequently. This effect was, in turn, was mediated by participants' attitudes towards using the fake pen, per the procedure recommended by Zhao, Lynch, and Chen (2010). In experiment 3, we examined whether fake products negatively affect similar non-fake products. Eighty three participants were randomly allocated to one of two conditions. In the first condition, participants were presented with 2 different pairs of Chloe (a prestigious designer brand) sunglasses and were told that one of them was real and the other a fake. Participants then tried on the sunglasses, examined them, and compared them to another (third) pair of sunglasses that the experimenter presented. In the second condition participants followed same procedure except that they were told that both sunglasses were non-fake. Results show that participants who first saw a "fake" product rated the subsequent non-fake product lower than participants who first saw a non-fake product. Specifically, compared to participants who first had a non-fake pair of sunglasses, those who first had the "fake pair" reported that they saw significantly less well with the non-fake sunglasses, and rated them significantly lower on comfort, perceived quality and liking. Note that the non-fake product being rated more poorly when it was tested after the "fake" product versus when it was tested after a non-fake one, conflicts with prediction of an alternative account whereby differences in ratings are an artifact of participants' tendency to compare the second pair of sunglasses to the first.

Altogether, this paper illustrates harmful effects that counterfeiting can have from consumers' perspective. We show that merely presenting a products as a counterfeit can hurt perceptions and even objective efficacy. Theoretically, this work adds to the emerging

research streams on psychological contamination, on marketing effects of disgust, and on placebo effects of marketing actions. Practically, our findings, suggest that counterfeiting may be more damaging than previously believed, due to effects we document, and in particular effects on non-fake versions of the product.

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7.6 Conversations: Food Consumption & Policy

Room: Madero B

Discussants: Vishal Singh, New York University

Pierre Chandon, INSEAD

Koert van Ittersum, Georgia Tech

8.1 *Symposium:* **Pay-what-you-want and pay-it-forward: Fairness, Generosity, and Greed**

Room: Espada

Chair: Minah Jung, University of California Berkeley, USA

Leif Nelson, University of California, Berkeley, USA

Dollars and (Non)Sense: Consumer Overpayment in Pay-What-You-Want Contexts

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In seller-controlled pricing, sometimes consumers must accept negative economic utility and overpay (i.e., pay a purchase price above their reference price) for a product or service. However, in buyer-controlled pricing examples of consumer overpayment would be more surprising. Other than in auction research (Capen, Clapp, and Campbell 1971; Cox and Isaac 1984; Ku 2000; Thaler 1988; Tierwiesch, Hann, and Savin (2005) , the question of whether consumers overpay when they control pricing has received little attention.

Pay-What-You-Want (PWYW) pricing is a small but growing practice in which the seller agrees to accept any price that a buyer submits, including zero. From a purely economic utility perspective, buyers should strive to pay the least amount possible for any good or service they wish to acquire (Simon 1995). By definition then, rational consumers should never pay above zero in PWYW settings, let alone pay above their reference price. While ample evidence exists that WTP is frequently greater than zero in PWYW contexts (Fernandez and Nahata 2009; Gneezy, Gneezy, Nelson, and Brown 2010; Kim, Natter, and Spann 2009, 2010; Mak, Zwick, and Rao 2010; Reiner and Traxler 2011), examples of consumer overpayment have neither been documented nor studied in academic literature. Yet, in 2011 the Panera Bread[©] restaurant chain, which operates a number of PYWY restaurants, reported that 20% of its PWYW patrons paid more than the suggested price on the menu, indicating that overpayment does in fact, occur. Our research is focused on the behavior of this segment of consumers. Specifically, we explore both the incidence and magnitude of overpayment—defined as consumers willfully paying more than a reference price-- in PWYW contexts. We further examine the role that reference prices and consumer mindset play during the price generation task. We find that consumer mindset during the pricing process may be more complex than previously thought. Rather than being guided by a single mindset or goal, we show that PWYW consumers possess both a price minimizing economic utility mindset and a price increasing generosity mindset when determining their purchase price. These two mindsets are naturally uncorrelated, with each significantly predicting overpayment. We also show that factors in the selling environment such as whether proceeds will be shared with a charity or if a suggested price is given, affects the salience of each respective mindset, which then influences the likelihood of overpayment.

Study one tested the basic proposition that some consumers will pay above their reference price in PWYW contexts. Seventy-one students participated in a scenario-based experiment in which they were asked to imagine that they could pay whatever they wanted for a breakfast special. The results showed that 37% of participants paid more than their self reported reference price and that the average magnitude of overpayment (WTP-internal reference price) was substantial ($2.72).

Study two examined the relationship between the strength of participants' utility maximizing mindset and overpayment. Forty-six adults participated in an online study where they could PWYW for a cup of lemonade. We measured economic utility and generosity mindsets. 20% of participants significantly overpaid for their lemonade. A logistic regression with overpayment (0=less than or equal to reference price, 1=greater than reference price) as the dependent variable and generosity and economic utility as the independent variables showed that both generosity and economic utility were significantly predictive of overpayment. Note that the correlation between economic utility and generosity was not significant.

Study 3 explores how sellers can make generosity more salient, and thus increase WTP and overpayment. A large PWYW field study by Gneezy et al. (2010) showed that payment amounts significantly increased when 50% of proceeds were shared with a charitable organization. The authors attributed this behavior to shared social responsibility between the buyer and the seller. We believe this SSR acts to reduce the salience of economic utility for buyers and increase the salience of generosity.

171 adults participated in an online study in which they were given the chance to PWYW for a glass of lemonade. We tested four different charitable contribution alternatives—all proceeds to seller, "a portion" to charity, 10% to charity, and 100% to charity. Participants were randomly assigned to one of these four conditions. In addition, we provided half of the participants with a suggested price (ERP), while the other half of the participants were not given this information. Economic utility and generosity mindsets were once again measured at the end of the study.

Economic utility and generosity were uncorrelated and equally salient when the seller kept the proceeds and no ERP was given. The incidence of overpayment was lowest in this condition as well, suggesting that a "tie" goes to generosity. Interestingly, overpayment was highest when only 10% of the proceeds would be shared with a charity.

This paper expands our general understanding of why consumers overpay for products. While prior research has shown that consumers sometimes overpay when they control little or none of the final price of a product, to our knowledge, this is the first paper that shows that consumers will pay above a reference price even when they possess all of the pricing power. We also contribute to our growing understanding of consumer behavior in PWYW settings by demonstrating that consumers not only make non-zero payments in this context, but they also often overpay.

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Are You Really Paying What You Wish? The Interplay of Social Motivations in Consumers' Price Decisions

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Pay-What-You-Wish pricing enables consumers to choose the price paid and this often occurs in social situations. Thus, consumers' choice of how much to pay can become a socially embedded decision where the interactions between the focal consumer, other consumers, and the seller are crucial. We propose a framework for understanding consumers' price decisions, incorporating not only consumers' self-interest motivation, but also social motivations such as fairness toward the seller, prestige sensitivity toward other consumers, and conformity to social signals sent by other consumers. The dynamic interplay of these motivations is examined in four studies.

We predicted that when marketers provide customers with a suggested regular price, consumers would generally pay a price lower than the suggested price due to economic self-interest motivation. However, several factors were expected to moderate this effect. In study 1 we explored the effects of prestige sensitivity and fairness and the interplay of these motivations. Participants imagined that they were at a used bookstore with a close friend (date) and made a price decision for a book. The bookstore cashier was either a classmate who was helping his parents run the bookstore (small social distance from the seller) or no description about the cashier was provided (large social distance condition). We expected that the presence of a date (vs. close friend) would stimulate stronger impression motivation and lead to higher prices through prestige sensitivity (i.e., the desire to signal wealth and status to others). In addition, a small (vs. large) social distance from the seller should increase the price paid through fairness since norms of reciprocity are strong in such social exchanges and people care more about equality in distributions when they have personal or ongoing

relationships with others. When both fairness and prestige motivations are salient, consumers should primarily focus on fairness and should not feel a need to increase the price further based on prestige sensitivity, since their self-interest motivation will limit an unnecessary increase in the price paid. Fairness was expected to be more primary than prestige sensitivity due to its direct relevance to the focal transaction and its characteristics as a moral principle. As expected, participants paid a price lower than the suggested price but they paid a higher price in the presence of a date (vs. close friend) when the social distance from the seller was large. The price offered was generally high when participants were socially close to the seller. Mediation analyses revealed that when social distance was large, the presence of a date (vs. close friend) increased the price through prestige sensitivity. In the presence of a close friend, a small (vs. large) social distance increased the price through fairness. The presence of a date and small social distance from the seller (vs. close friend and large distance) increased the price paid though fairness.

Studies 2a and 2b examined the interplay of self-interest, prestige sensitivity and social signals stimulating conformity. We predicted that social signals indicating the appropriateness of paying a lower price would diminish the importance of paying a higher price based on prestige sensitivity. In study 2a, participants imagined that they were with a frugal (materialistic) date (close friend) when they paid for a ticket at an art museum. A control condition in which participants were alone was also included. We again found that participants paid a price that was lower than the regular price, but a materialistic date (vs. frugal date, best friend or alone) increased the price paid through prestige sensitivity. There were no differences among the frugal date, best friend, and alone conditions. In study 2b, participants made a price decision for a museum ticket when they were with a same-gender admired friend (vs. best friend). Participants either paid first or after the other person paid a relatively low price first. An admired friend (vs. best friend) stimulating impression motivation increased the price paid through prestige sensitivity. However, when an admired friend paid a relatively low price first, this signaled a norm of paying a low price and led participants to offer a similarly low price, diminishing prestige sensitivity.

Study 3 explored the interplay of all relevant motivations. Participants imagined that they went to a used bookstore with a close friend (date) and that they both decided to buy a book. The bookstore was described as either quite profitable (high profitability) or not very profitable (low profitability). Then the other consumer paid a relatively low price or the regular price first. Since we did not expect that conformity would depend on who the other consumer was, the focus of study 3 was to test whether paying a higher price based on fairness (low profitability condition) would be attenuated by a social signal indicating a norm of paying a lower price. When the seller's profitability is high, participants should conform to what the other consumer paid, but participants should not conform to the other person's low price when the seller's profitability is low since the other person's low price would be perceived as an added threat to the seller's profitability. As expected, when profitability was high and fairness was not salient, participants conformed to what the other consumer paid, whereas when profitability was low and fairness was salient, participants only conformed to the other's high (vs. low) price.

Consumers generally take advantage of the opportunities provided by Pay-What-You-Wish pricing by paying less than the regular price, but the prices offered also reflect the social embeddedness of price decisions. Social motivations such as fairness, prestige sensitivity, and conformity often constrain consumers' self-interest and lead to higher price offers. The effect of prestige sensitivity can be attenuated when a social signal indicates the appropriateness of paying a low price. In contrast, the effect of fairness is more central than prestige sensitivity or conformity, and cannot be easily attenuated even when other consumers signal a norm of paying a low price. Implications for marketers in addition to the contributions to the literature examining interpersonal influence and the role of price in consumption decisions are discussed.

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People Pay More When They Pay-It-Forward

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People often follow the norms of market exchange: seeking the lowest possible prices to find the highest possible value. This narrative neglects the fundamental social forces at play in an exchange. Our research considers the consequences for a shift from market-determined fixed prices, to customer-dictated flexible prices. What happens when a company asks its customers to simply pay whatever price they want? That shift–from a pure market transaction to one steeped in fairness and giving–upends established knowledge about consumer behavior, and opens questions about how such a market could work, and when it could thrive.

Pay-what-you-want pricing has grown in popularity, and is most frequently seen in its basic format: a company offers a good or service and the customer can pay any price including zero. Past research highlighted how much small variants can influence the success of such a program. For example, in one large experiment, when people learned that half of their payment would go to charity, people paid six-times as much (Gneezy et al. 2010). That treatment offered a better product to the customer, was maximally profitable for the firm, and also yielded a substantial charitable surplus. This small pricing tweak uniformly increased total social welfare. Our research considers an even more fundamental change to pay-what-you-want pricing (PWYW). What if payments were gifts? What happens when people have an option to pay for someone else (and are told that someone has already paid for them)? Such pay-it-forward pricing (PIF) has identical commercial features (e.g., the option to pay $0), but invokes very different sets of social norms. We predict that people pay more when they pay-forward than pay-what-they-want. In six studies we test this prediction and investigate factors that might explain higher payments under PIF.

In Study 1, museum visitors (N = 311) saw either PWYW or PIF admission prices. As we predicted, people paid more for their admission under PIF than PWYW (M=$3.60 vs. $2.68). This field study suggests that when people pay-what-they-want, they pay more for someone else than they do for themselves.

To increase the generalizability of this finding beyond a non-profit setting, we conducted a 2nd field experiment with a for-profit company, a local coffee vendor. We asked customers (N=173) at a farmers' market to either PWYW or PIF for a cup of coffee. They paid more under PIF than PWYW (M=$3.01 vs. M=$2.46), replicating the results in Study 1.

Perhaps people paid more because they felt something of an obligation for the other customers? Prior research has shown that social preferences are heavily influenced by knowledge of, and experience with the givers and recipients of prosocial acts (Small & Loewenstein 2003; Small & Simonsohn 2008). In Study 3, we tested how social interactions influence payments under PWYW and PIF in a controlled lab setting. Perhaps increased social interaction would differentially influence PWYW and the comparatively socially-oriented PIF pricing schemes. Participants (N=294) interacted with the previous participant (the gift-giver under PIF), the next participant (the gift-receiver under PIF), or no one, immediately prior to the experiment. At the end of the session, participants were presented with a mug and asked to either pay-what-they-want or pay-it-forward to the next participant.

People paid more for a mug under PIF than PWYW (M=$1.79 vs. $1.27). However, social interaction did not influence payments under PIF. Perhaps the social interaction manipulation did not increase payments because all payments were perceived to be anonymous. In Study 4, we tested the role of signaling generosity under PIF. Participants in the treatment conditions explicitly expressed their generosity to the person they were paying-forward on a card. Specifically, they were asked to write a message, the amount paying forward, or both. Participants in the control condition were not asked to write anything.

As we predicted, participants who left a message (M=$2.23) or wrote their payment amount (M=$2.33) paid more than those in the control condition (M=$1.56). These findings suggest that when people can express their generosity, they pay more under PIF. Interestingly, there was a persistent effect that across all conditions in Studies 3 and 4 that people thought that other participants paid more than they did. Furthermore, those estimates of others' payments were heavily influenced by the payment manipulation: people think that others will pay more under PIF than PWYW.

These results suggested that PIF operated in two stages. Something about the manipulation led participants to believe that other people were paying more. Based on that assessment, participants raised their own payments to match their new perceived norms. If that is true, we should be able to eliminate the influence of PIF by informing participants about the payments of others. In Study 5, we tested this prediction by telling half of the participants (N=198) that the previous participant had paid $1.50, whereas the remainder were not told this.

Consistent with our prediction, when people did not know how much the previous participant had paid, they paid more under PIF than under PWYW (M=$2.48 vs. $1.19). When participants learned how much the previous person had paid this effect was eliminated and people paid about the same amount under PIF and PWYW (M=$1.21 vs. $1.23).

In Study 6, we tested whether it is the giving or receiving feature of PIF that produces higher payments. Customers (N=94) at a restaurant were asked to PIF. After their meal, they received a card that reminded them of either receiving or giving a gift. Customers who were reminded of giving paid more (M=$20.42) than those who were reminded of receiving a gift (M=$11.09).
In summary, Pay-it-Forward leads to higher payments than does Pay-What-You-Want. This effect was not influenced by social interaction with the giver or the receiver of the gift. People paid forward higher payments when they expressed their generosity. However, the PIF effect was eliminated when participants had a clear reference price of others' payments. People appear to believe that, because PIF must increase the payments of others, they should increase their own payments to match. Lastly, people pay more when reminded of giving than the receiving a gift.

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Paying What Forward: The Limits of Generosity in Generalized Reciprocity

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Paying it forward is a heart-warming notion, one that has long captured the attention of both luminaries – such as Ralph Waldo Emerson (1841) and Benjamin Franklin (1784) – and laypeople (Hyde, 2000). The concept is simple: A is kind to B, and B—rather than paying that kindness *back* to A—pays it *forward* to C. C then pays that kindness forward to D, and so on, creating a chain of goodwill. Paying kind behavior forward—or "generalized reciprocity"—operates according to a simple maxim: "help anyone, if helped by someone" (Rankin & Taborsky, 2009). On any given day, however, people are the recipients of not only generous behavior ("help"), but also of equal and greedy treatment. Which kind of behavior—equality, greed, or generosity—is more likely to be paid forward? We predicted that while equality would be consistently paid forward, greed will propagate more than generosity.
In our first experiment, we examined paying it forward in the domain of money. In one of four conditions, participants completed a dictator game, splitting $6 between themselves and an anonymous future receiver (*give-only* condition). In the three pay it forward conditions, participants were told that a previous dictator had completed the same game, with the participant as the receiver. They first learned how much money the previous dictator had given them – a *greedy* ($0/$6), *equitable* ($3/$6), or *generous* ($6/$6) split – and then acted as the dictator in another game, splitting an additional $6 between themselves and a different future receiver. As expected,

participants in the *greedy* condition gave the least (*M* = $1.36, *SD* = $1.58), followed by those in the *give-only* condition (*M* = $2.40, *SD* = $1.66), followed together by those in the *equal* (*M* = $3.38, *SD* = $1.63) and *generous* conditions (*M* = $3.71, *SD* = $2.12).

Paying it forward in the real world, of course, often involves more informal exchanges than the disbursement of cash; in any workplace, for example, there are both enjoyable and onerous tasks, and co-workers may divide this labor more or less equitably. Experiment 2 investigated whether those who receive greedy versus generous divisions of labor are more likely to pay forward their treatment, as well as the roles of affect and perceptions of fairness in mediating the extent to which participants paid behavior forward. This experiment was similar to Experiment 1, except that instead of receiving and giving money, participants completed enjoyable and irritating tasks. The enjoyable task involved making free associations to words, while the irritating task involved circling vowels in passages of Italian prose. All participants were given a set of eight tasks – four good and four bad – and were told to complete any four of them and pass on the remaining four to a future participant. Participants could leave any combination of good versus bad tasks for future participants. One group of participants (*give-only* condition) simply completed four tasks and passed on the remainder. In the three pay it forward conditions, participants first learned that a previous participant had been asked to split these eight tasks, and had left them either a *generous* (completing all four bad tasks themselves and leaving the four good tasks for the participant), *greedy* (completing all four good and leaving all four bad tasks), or *equitable* split (completing two of each kind and leaving two of each kind). In these conditions, participants completed the four tasks that the previous participant had ostensibly left for them, then divided eight additional tasks (four good and four bad) between themselves and an unknown future participant. After completing the four tasks that the previous participant had left for them, participants indicated the extent to which they were feeling a variety of positive (e.g., happy) and negative (e.g., upset) affective states.

Replicating Experiment 1, participants in the *greedy* condition (*M* = 1.04, *SD* = .98) gave significantly fewer good tasks than participants in all other conditions. The *give-only* gave the next least (*M* = 1.67, *SD* = .76), though not significantly less than the *equitable* (*M* = 1.95, *SD* = .82) or *generous* conditions (*M* = 1.91, *SD* = 1.14). The *equitable* and *generous* conditions again did not differ from each other. The four conditions also differed significantly on negative affect, such that participants in the greed condition experienced significantly more negative affect than those in the other conditions. As we predicted, this incidental negative affect mediated the link between good tasks received and good tasks paid forward.

These results have both heartening and disheartening implications. We find that people do pass on some degree of kindness to others, but not to the same extent that they received it themselves. Thus the person who awakes to find his long driveway mysteriously cleared of snow and as a result holds the door for three seconds for a co-worker may feel he has "paid forward" a generous act, but the discount rate is sufficiently high that the perpetuation of this chain of good will likely ends there. On the other hand, the person who awakes to find his driveway blocked with snow from his neighbor's efforts to clear her own driveway may continue to pay forward bad deeds, creating a significantly longer chain of ill will.

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8.2 Individual Papers: The Price is Right: Consequences and Perceptions of Pricing Strategies

Room: San Jose

Chair: Lindsay McShane, Wilfrid Laurier University

A Penny Saved Is Another Penny Spurned: The Effect of Promotions on Consumer Impatience

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Consumers enjoy discounts, and retailers appeal to consumers' desire to save money by offering promotions. The present work investigates a potential consequence of exposure to promotions: impatience. Specifically, we propose that promotions heighten consumers' desire for rewards (Wadhwa, Shiv, and Nowlis 2008); such a reward-seeking tendency, in turn, yields desire for instant gratification and thus impatience (Li 2008). Consequently, promotions increase impatience such that consumers are both more willing to spend money to avoid waiting and less willing to wait to obtain more money.

Our proposed account for the impatience consequence of promotions, based on the reward-seeking mindset that promotions trigger, suggests that people with higher predisposed sensitivity toward reward cues should react more intensely to promotions, which possess high incentive value (Chandon, Wansink, and Laurent 2000). Specifically, one relevant measure is the behavioral activation system (BAS) scale, which has been linked to affective response tendencies for impending rewards (Carver and White 1994; Gray 1994). We therefore additionally expect the causal relationship between promotions and impatience to be moderated by BAS sensitivity.

In **Experiment 1**, we tested whether exposure to promotions yields impatience by examining willingness-to-pay (WTP) to avoid waiting. We recruited 72 participants from a national online pool and employed a 2 (between-subjects prime: *promotions* or *control*) X 3 (within-subjects factor: 30-, 60-, and 90-minute wait-times) design. Participants were first asked to evaluate a poster displaying common products for sale (e.g., candy, chips, gum, etc.) according to several criteria (e.g., products, prices, informational content, etc.). While both posters advertised the names and prices of the same set of products, participants in the *promotions* condition were also shown regular, undiscounted prices, which increased the salience of the discounts. Next, in a purportedly unrelated questionnaire, all participants responded to a hypothetical scenario (waiting for a bus) that presented an opportunity to avoid various wait times (30, 60, and 90 minutes) by paying extra money (Leclerc, Schmitt, and Dube 1995).

Consistent with our hypothesis, participants in the *promotions* condition exhibited higher WTP. A mixed ANOVA revealed a between-subjects main effect of poster version on WTP ($p = .014$) and a within-subjects effect across wait-times ($p < .001$). WTP was higher in the *promotions* condition than the *control* condition at each of the 30-minute wait-time increments ($p = .023$, $p = .005$, and $p = .038$, respectively).

The next two experiments were designed to test the hypothesized reward-seeking account for the observed effect in Experiment 1. Based on this account, we expect the causal relationship between promotions and impatience to vary according to BAS sensitivity, given the high incentive value of promotions (Chandon et al. 2000). Therefore, in **Experiment 2**, besides employing a more subtle manipulation and utilizing a different measure of impatience, we also captured BAS sensitivity to assess its moderating effect.

Ninety-three participants from a national online pool were randomly assigned to either a *promotions* or *control* condition. All participants then assessed the technical qualities of 15 photographs. Those in the *promotions* condition were asked to evaluate ten photographs that included promotions-related messages, in addition to five filler photographs. Those in the *control* condition were asked to evaluate ten photographs that included non-promotions-related messages, in addition to the same five fillers. Next, in a purportedly unrelated follow-up questionnaire, participants were asked to make eight binary choices between smaller-sooner and larger-later payoffs (e.g., $10 tomorrow versus $12 in 25 days), which were used to measure impatience (Li 2008). Finally, all participants completed the BAS questionnaire (Carver and White 1994).

Random-effects logistic regression revealed that the difference in the choice outcome between the two conditions was, indeed, moderated by BAS sensitivity ($p = .037$). Consistent with our prediction, participants with higher BAS sensitivity selected more smaller-sooner payoffs in the *promotions* condition, as compared to those in the *control* condition.

Building upon these results, in **Experiment 3**, we not only attempted to replicate the BAS findings from Experiment 2, but also employed yet a different manipulation of promotions and presented participants with consequential, rather than hypothetical, monetary decisions.

Seventy-four students and affiliates of Columbia University were recruited for participation in a lab study and randomly assigned to either a *promotions* or *control* condition. Participants were then presented with a list of 20 retailers and asked to select five stores. Those in the *control* condition were asked to select their five favorite stores, while those in the *promotions* condition were asked to select five stores from which they would be interested in receiving a 10 percent discount. Next, in a purportedly unrelated follow-up questionnaire, participants were asked to make the eight smaller-sooner versus larger-later binary choices used in Experiment 2 (Li 2008). However, prior to making their choices, participants were told they would be entered into a lottery that would pay the chosen amount of money, in the associated amount of time, for one randomly selected question. All participants then completed the BAS questionnaire (Carver and White 1994).

Random-effects logistic regression revealed that the difference in the choice outcome between the *control* and *promotions* conditions was again moderated by BAS sensitivity ($p = .005$), such that participants with higher BAS sensitivity selected more smaller-sooner payoffs in the *promotions* condition, as compared to those in the *control* condition.

Our work contributes new insights to the literature on the psychological effects of promotions. While promotions provide numerous immediate monetary and nonmonetary benefits for consumers (Chandon et al. 2000), an important consequence of promotions that may undermine longer-term consumer welfare is the impatience that exposure to promotions can generate. More broadly, despite the existence of much prior work that has cast doubt on the adage "time is money" (e.g., Leclerc et al. 1995; Zauberman and Lynch 2005), our findings suggest that consumers' valuation of time can be implicitly influenced by a pervasive monetary factor (i.e., price promotions). Paradoxically, although consumers seek out and take advantage of promotions as opportunities to save money, exposure to promotions may "backfire" such that consumers are actually worse off financially. In other words, the bargain itself may be more than consumers bargain for.

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Can price Discounts Backfire? Examining Predictions From Partitioned Pricing, Prospect Theory and Mental Accounting

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Price discounts generally increase sales (Blattberg and Neslin 1990). In some cases however, price discounts may lower quality perceptions (Dodson et al 1978) and thus backfire, reducing sales. Could price discounts backfire when quality is not a concern? We address this question by drawing from research on partitioned prices, prospect theory and mental accounting.

Using partitioned prices, i.e. showing shipping cost separately, increases sales vis-a-vis an equivalent combined price (if shipping costs - in isolation - are perceived as fair; Burman and Biswas, 2007). However, in addition to using partitioned prices, firms also offer price discounts. Can the mere presence of a discount make a "fair" shipping cost appear "less fair"? If so, then price discounts may backfire, by making shipping costs seem less fair and thus reducing sales. To address this issue, we turn to prospect theory and to mental accounting.

Mental accounting indicates that consumers set up rules that separate various revenues and expenditures into "related" and "unrelated" (mental) accounts (Thaler 1985). It appears reasonable to treat shipping cost expenditure as a "loss" and a price discount as a "gain", and this prompts reference to the findings from prospect theory, that it takes 3x gains to compensate for 1x losses (Kahneman et al. 1991). Drawing from both statements above, would consumers assume that any price discount less than 3x shipping cost is somehow "related" to shipping cost (H1)? Next, could the mere presence of a "related" price discount make shipping costs appear less fair (H2)? Finally, could price discounts backfire by making shipping costs appear less fair, thus reducing purchase intentions (H3)? We address these three questions in the studies below.

In Study 1, we examined H1, i.e. whether price discounts less than (or equal to) 3x shipping cost are more likely to be seen as "related" to shipping cost. We asked participants to imagine they were buying a DVD player. Shipping costs were either $5 or $20, and discounts were one of $5, $15, $30, $60 and $120. Participants were asked to write a paragraph or so about the buying situation. Coding the responses, we found that when price discounts were less than 3x shipping costs, participants were significantly more likely to view the discount as "related" to shipping cost (comments included "offsets shipping price", "covers shipping cost" etc.). This result held, irrespective of the actual shipping cost level. These results supported H1.

In Study 2, we examined H2, i.e. whether the mere presence of a "related" price discount makes a shipping cost seem less fair. We asked participants to imagine they were buying a DVD player. Shipping costs were $5, and discounts were one of [zero] or $5 or $60. Participants responded to measures of shipping cost fairness. When prices discounts were [zero], or when price discounts were greater than 3x shipping cost (e.g. $60, i.e. "unrelated"), shipping cost fairness perceptions were significantly higher than when price discounts (e.g. $5, i.e. "related") were less than 3x shipping cost. These results supported H2.

In Study 3, we examined H3, i.e. whether the mere presence of a "related" price discount can reduce purchase intentions, via making shipping costs appear to be less fair. From research referenced earlier, expressing prices in a partitioned format increases purchase intentions vis-a-vis combined format, but only when shipping cost is perceived as fair. Thus, if we were to contrast various partitioned prices (with fair shipping costs) vis-a-vis equivalent combined prices, partitioned prices should show (i) reduced purchase intentions when price discounts were related, as the shipping cost would be perceived as less fair, but (ii) greater purchase intentions when price discount were unrelated. We asked participants to imagine that they were buying a DVD player. This was a 2 (partitioned price: shipping cost =$5 vs. combined price) x 3(price discount: $15 vs. $30 vs. $60) design. A pretest indicated that the shipping cost ($5) was perceived as "fair". Note that only the $15 price discount should have been perceived as being "related" to the shipping cost. In the $15 discount condition, we found no significant differences in purchase intentions across the partitioned price and (equivalent) combined price conditions. In the other (unrelated) discount conditions ($30 and $60), purchase intentions were higher in the partitioned price conditions vis. the (equivalent) combined price conditions. These moderation results (Figure 1) supported H3.

Figure 1: Results of Study 3 and Study 4A

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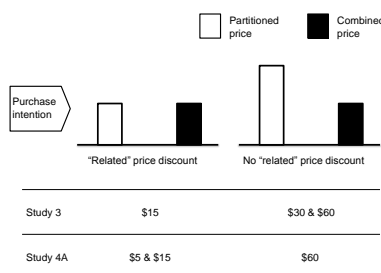
In Studies 4A and 4B, we again examined H3. Here we sought to replicate Study 3 results, as also further examine process using mediation analyses. We asked participants to imagine that they were buying a notebook computer. Study 4A was a 2 (partitioned price: shipping cost =$5 vs. combined price) x 3(price discount: $5 vs. $15 vs. $60) design. A pretest indicated that the shipping cost ($5) was perceived as "fair". Note that only the $5 and the $15 price discounts should have been perceived as being "related" to the shipping cost. In the $5 and $15 discount conditions, we found no significant differences in purchase intentions across the partitioned price and (equivalent) combined price conditions. In the other (unrelated) discount condition ($60), purchase intentions were higher in the partitioned price condition vis–a-vis the (equivalent) combined price condition. These moderation results (Figure 1) supported H3. Study 4B contrasted two cells (i) shipping cost = $5, $5 price discount and (ii) shipping cost = $5, no price discount. Purchase intentions were higher, and shipping cost was perceived as more fair, when no price discount was provided. Further, differences in shipping cost perceptions fully mediated differences in purchase intentions. This mediation result (Figure 2) supported H3.

Figure 2: Results of Study 4B
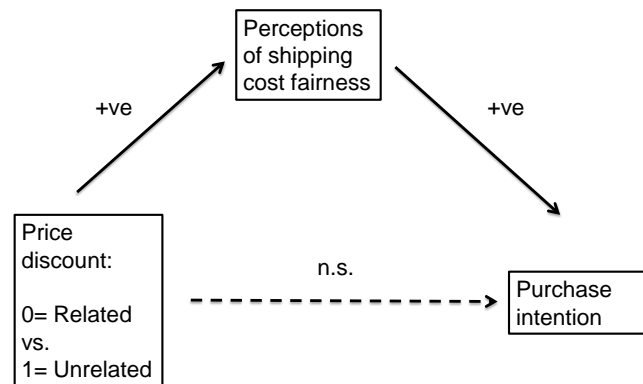
Can price discounts backfire? Here, drawing from partitioned pricing, prospect theory and mental accounting, we identify a wholly new mechanism whereby the mere presence of a price discount can reduce purchase intentions. This paper thus contributes to the literature on how consumers integrate price cues, sometimes in surprising, and counterintuitive ways.

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Consumer Reactance to Conditional Price Promotions

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The marketplace is replete with promotional offers that are conditional on certain additional behaviours. Basically, the motivation of the firm is to have conditions on their promotions to ensure that certain behaviours take place in exchange for the discount. However, in this paper we point out that such conditional price promotions can sometimes backfire, resulting in more cautious decision-making by the consumer.

Building on reactance theory (Brehm 1966) and adding to the growing literature on reactance within consumer contexts (e.g., Fitzsimons 2000; Fitzsimons and Lehmann 2004; Kivetz 2005), we propose that consumers may perceive conditional promotions as intended to influence or control their purchase behaviour, thereby threatening their perceived freedom and self-determination. Consequently, consumers may react against such promotional offers, acting more cautiously in terms of their product choices through

selection of cheaper and fewer options than they otherwise would. This type of cautious behaviour presumably helps consumers to restore their threatened freedoms.

Consistent with our hypothesis, we found that compared to unconditional promotions, conditional promotions reduce consumers' overall spending with the firm as they shift consumer preferences towards cheaper and fewer options as well as lower their commitment with the firm. Further, the results of our experiments underscore the role of reactance in this process.

In Experiment 1, the participants were asked to choose among three types of car rental options that were differently priced based on the features of the available cars. They were also asked to select among several additional products and services that were charged separately from the rental fee. The experiment employed a single factor (no promotion vs. unconditional promotion vs. conditional promotion) between subjects design. Participant in the unconditional promotion condition read that the company is currently offering a special promotion to its customers and that the offer is for 40% off the regular price of any rental. The conditional promotion condition had the sentence "… conditional on the person picking up the car from the branch of the company at the central train station" added to the description in the unconditional promotion condition. Consistent with our hypothesis, we found that participants' total spending was lower in the conditional promotion than in the unconditional promotion ($p < .01$) and in the no promotion condition ($p < .05$). Participants in the conditional promotion preferred cheaper rental options and were willing to spend less on additional services than participants in the unconditional promotion ($p < .01$ and $p < .04$, respectively). Importantly, participants evaluated the two types of promotional offers as equally attractive, ruling out a value-based response explanation ($F < 1$).

In Experiment 2, we looked for evidence for the role of reactance in driving the observed effects. Prior research suggests that reactance is less likely to occur when the restriction of freedom is justifiable or legitimate (Brehm 1966). Thus, we predicted that the conditional promotion would arouse less reactance if the firm's action were perceived as legitimate, mitigating consumers' cautious purchase behaviour. The type of conditional promotion we used was a channel discount. Participants were randomly assigned to the no promotion, high reactance promotion, or low reactance promotion conditions in the context of purchasing a cable TV and Internet service. Participants in the high reactance promotion condition were told that the firm offered a one-time discount of £15 for new subscriptions made over the Internet (rather than by telephone or mail) in an effort to generate traffic on their website. In contrast, participants in the low reactance promotion condition were told that the firm offered the discount for using an online channel because Internet subscriptions were cheaper to process, which in turn allowed them to share the savings with customers. Participants were asked to choose between two TV packages (Base Pack, Max Pack) and among three Internet connection speed (2MB, 4MB, Max Speed). They were also asked if they would add a separately charged telephone service to their chosen bundle. As expected, in the high reactance promotion condition participants' overall expenditure was lower than in the low reactance promotion condition ($p < .01$) and in the no promotion condition ($p < .05$). As such, the former preferred more basic TV packages with lower speed of Internet and were less likely to add a telephone service to their chosen bundle than participants in the low reactance promotion condition and in the control condition.

Due to difficulties in measuring situational reactance, in Experiment 3, we used a trait-level measure to provide evidence of a reactance process. We examined whether our effects are stronger among individuals who are more likely to experience reactance. We predicted that the conditional promotions would induce cautious decision making more among high reactance (vs. low reactance) consumers. The experiment utilized a 2 (Promotion: unconditional vs. conditional) x 2 (Trait Reactance) mixed design. Participants were asked to choose among three differently priced gym membership options as well as three different contract terms available for membership. They also selected the additional services they were most likely to purchase during their membership. The conditional promotion was framed as a referral discount with the sentence "…conditional on the new customer joining with a second person" added to the discount offer description in the unconditional promotion condition. We also measured trait reactance using the Hong Psychological Reactance Scale (Hong and Faedda 1996). As predicted, high reactance participants were willing to spend less on

membership and additional services when the gym offered a conditional promotion than when no condition was attached to the promotion (p < .01). However, there was no corresponding effect among low reactance participants (p = .73).

Overall we demonstrate that promotions that are conditional on certain additional behaviours can sometimes backfire. Our findings delineate the situational and dispositional conditions under which conditional promotions are and are not effective, while also shedding light on the mechanism behind our effects. As such, we provide an important counterpoint to the notion that consumers respond favourably to economic incentives.

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What Does this Price Differential Say about Me? Self-threat and Price Fairness Judgments

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Perceptions of price unfairness have been shown to have significant negative consequences. Dominant frameworks of price fairness, such as transaction utility theory (Thaler 1985) and equity theory (Adams 1965), attribute unfairness perceptions to discrepancies between the consumer's price and some reference price (adjusted for inputs in the case of equity theory). Recent literature, however, finds that ostensibly equivalent price differentials result in discrepant judgments of unfairness (e.g., Darke and Dahl 2003; Haws and Bearden 2006). Although several context-specific factors have been identified to explain these deviations (Bolton, Keh and Alba 2006; Bolton and Alba 2006; Campbell 1999; Vaidyanathan and Aggarwal 2003), no overarching construct has been identified and integrated into the basic reference-price-discrepancy paradigm of price fairness to explain these differences. The current work argues that self-threat is one such factor and, accordingly, examines its ability to explain variance in fairness judgments that cannot be explained by traditional conceptions of price fairness. In particular, we argue that price differentials are capable of conveying self-threatening information and that such information importantly influences the experience of unfairness. We examine threats to two distinct components of identity: consumers' social identity (i.e., perceptions of social worth: Leary 2001) and their personal identity (i.e., self-perceptions of competence, mastery, and efficacy: Skitka 2003), as well as factors that cause price differentials to threaten each.

We argue that, in certain cases, consumers may view price differentials as an indication of what sellers think about them, where relatively high prices convey a lack of respect and value (i.e., a social identity threat). We predict that such inferences are most likely to occur when consumers believe the seller deliberately charged them a higher price (Study 1), and that consumers will feel especially threatened when they value their relationship with the seller (Study 2). In other cases, however, we argue that unfavorable price differentials may instead threaten one's personal identity by triggering feelings of incompetence. For instance, consumers may feel foolish for allowing themselves to be taken advantage of or feel they should have known better. We suggest that such inferences are most likely when consumers feel at least partially to blame for the differential (Study 3). We conducted three scenario-based, between-subjects experiments with student subjects to test these predictions (all results reported based on 7-point scales)

Study 1

Study 1 was examined whether seller deliberateness exacerbates unfairness by enhancing social identity threat. Participants read a scenario where the seller either charged the same price (No Differential), a higher price (Deliberate Differential) or a mistakenly higher price (Mistaken Differential) than another consumer. ANOVAs on unfairness and social identity threat showed significant effects of the manipulation ($F(1, 78) = 67.92$ and 12.55, ps < .001). The Deliberate Differential condition was considered more unfair than both the Mistaken Differential and No Differential conditions (Ms = 5.31 vs. 3.47 and 2.04, ps < .01).The Deliberate Differential condition also led to greater social identity threat (Ms = 4.48 vs. 2.82 and 2.77, ps < .001: no significant difference between Mistaken

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Differential and No Differential ($p = .87$)). Bootstrap analysis showed that the confidence interval surrounding the indirect effect of deliberateness on unfairness via social identity threat in the Differential conditions did not span zero, consistent with the predicted mediation.

Study 2

Study 2 examined whether price differentials allocated by a valued relational partner would be deemed more unfair due to the enhanced social identity threat. Participants read that they had paid more than another consumer for the same camera at the same store. What varied was whether they bought from the same salesperson (*Salesperson:* Same vs. Different), and whether their salesperson was a friend (*Relationship Importance:* High vs. Low). Inferences about social worth were expected to occur primarily in the Same Salesperson conditions (prices offered by a different salesperson should communicate very little about how much the target consumer's salesperson values them), and, in such cases, were expected to be particularly threatening when the salesperson was a friend.

ANOVAs showed the predicted Salesperson by Relationship Importance interactions on unfairness and social identity threat. Within same salesperson conditions, friendship with the salesperson enhanced unfairness and social identity threat (Ms = 5.91 vs. 5.02 and 6.40 vs. 5.32; Fs(1, 84) = 6.39 and 12.20, ps <.05 and < .01; as expected friendship had no effect on social identity threat with different salespeople ($F<1$)). Bootstrap analysis showed that the confidence interval surrounding the indirect effect of Relationship Importance on unfairness via social identity threat in the Same Salesperson conditions did not span zero, consistent with the predicted mediation.

Study 3

Study 3 examined whether personal identity threat is also important to unfairness. Specifically, it examined whether self-blame exacerbates unfairness by enhancing inferred incompetence. We ran a 2 (Price Differential: Yes vs. No) x 2 (Self-Blame: High vs. Low) experiment. Participants read either that another consumer paid the same ($200) or rather a lower price ($150) for a BBQ at another store (Differential). They then read whether or not they could have taken advantage of the lower price (Self-Blame). Consumers should attribute higher self-blame in cases where they could have paid the lower price (manipulation checks, though not reported, demonstrated this). We predicted that, price differentials should have greater implications for consumer incompetence, thus posing a greater personal identity threat and subsequently reducing unfairness in cases of high self-blame.

ANOVAs revealed that participants considered it more unfair and felt more incompetent when they paid more than the other consumer (Ms = 3.53 vs. 2.07 and 4.81 vs. 2.53: Fs(1, 87) = 32.72 and 78.46, ps < .001 and < .01) and when the other sale was available to them (Ms = 3.14 vs. 2.46 and 4.02 vs. 3.31: Fs(1, 87) = 7.31 and 7.54, ps < .01). The interaction was also significant on both measures (Fs(1, 87) = 4.66 and 4.43, ps < .05). As expected, follow up analysis showed that within price differential conditions, high self-blame enhanced perceptions of unfairness and incompetence (Ms = 4.15 vs. 2.91; Ms = 5.43 vs. 4.18; Fs(1, 87) = 6.03 and 11.24; ps <.05 and < .01: no other effects were significant and there was no effect on relational value ($F<1$), which was expected because consumers shopped at different stores). Bootstrap analysis showed that the confidence interval surrounding the indirect effect of Self-Blame on unfairness via incompetence in the price discrepant conditions did not span zero, consistent with the predicted mediation.

Conclusion

The current work demonstrates that both social identity and personal identity threats importantly contribute to the overall experience of unfairness. In doing so it sheds light on why certain price discrepancies are deemed more unfair than others, highlights the

important role of threat in shaping fairness judgments and offers a deeper understanding of the psychological processes underlying consumers' perceptions of price unfairness.

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8.3 Individual Papers: The Hedonic Consumer: Evaluations and Consequences of Hedonic Experiences

Room: Madero A

Chair: Cindy Chan, University of Pennsylvania

First Impressions Matter More When Co-experiencing With Others: Temporal Sequences in Joint Versus Solo Contexts

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Consumption experiences, consisting of a temporal sequence of episodes, may be shared with others (joint context) or experienced alone (solo context). To date, little is understood about the impact of social context on how an experience is processed or the subsequent effects on global, retrospective evaluations. We examine how consumers' temporal sequence preferences are impacted by social context. Specifically, we find an improving sequence preference in solo contexts, but demonstrate an attenuation of this preference in joint contexts. Because individuals feel more connected to others during joint experiences, they hold a more holistic (less analytic) processing style, which contributes to greater weighting of the start in their retrospective evaluations and greater assimilation to the start in their experienced enjoyment.

We argue that consumers feel more bonded to others during joint (vs. solo) experiences. Research on culture and self-construal has found that individuals who feel more socially embedded tend to hold an interdependent self construal and process information holistically—in a top-down, context-dependent style, whereas those who feel less socially embedded process analytically—in a bottom-up, context-independent style (Nisbett et al. 2001; Monga and John 2007). We predict that these processing style differences also characterize the solo versus joint experience distinction.

Although never directly demonstrated in past work, processing style has been presumed to moderate how people integrate sequences of information. Under holistic processing, initial information is likely to be weighted more in summary judgments and provides an overarching frame to which later information is assimilated. Conversely, analytic processing suppresses such top-down perception, facilitating recency effects. For instance, participants in Forgas's (2011) impression formation task who were in a positive (negative) mood were presumed to process holistically (analytically) and exhibited judgments that were impacted more by early (later) presented personality traits, consistent with a primacy (recency) effect.

We hypothesize that in solo contexts, people prefer improving (vs. declining) sequences of episodes (i.e., those beginning with the worst episode and ending with the best episode), consistent with past research on hedonic experiences (Ariely 1998; Kahneman et al., 1993). However, in joint contexts, the improving sequence preference will be attenuated or even reversed, due to more holistic processing resulting in evaluations of later parts of the sequence assimilating to earlier parts of the sequence. Moreover, greater weighting of early episodes may produce higher evaluations for joint experiences that begin with the best episode (declining sequences) versus the worst episode (improving sequence). We tested these predictions in five studies.

Study 1 participants viewed a sequence of 15 art images, presented in an improving or declining order of pre-tested enjoyment. Solo context participants wrote about themselves prior to viewing the images. Joint context participants were asked to introduce themselves to another person and were aware that others were experiencing the same sequence. A pre-test confirmed that participants in the solo (vs. joint) condition exhibited a less holistic style of thinking ($M = 4.45$ vs. 4.86, $F(1,74) = 5.20$, $p < .05$) (Choi et al. 2007). After viewing the sequence, participants indicated their willingness to pay for the experience using a scale. Supporting our hypothesis, there was a significant social context X trend interaction on this measure ($F(1, 178) = 6.69$, $p = .01$), see Figure. Participants in the solo condition exhibited a preference for the improving sequence ($M_{improving} = 2.95$ vs. $M_{declining} = 2.04$, $t(90) = 2.35$, $p = .02$), whereas participants in the joint condition showed no difference ($M_{improving} = 2.39$ vs. $M_{declining} = 2.93$, $t(88) = 1.33$, $p = .18$). Further, in the joint context, evaluations of later images assimilated to evaluations of the start of the sequence, but such assimilation was less pronounced in solo contexts.

We conducted two additional studies with art sequences. In study 2, we manipulated social context by priming self-construal, using a task in which participants encounter singular or plural pronouns (Gardner, Gabriel and Lee 1999). We found a significant interaction between social context and trend on retrospective evaluations ($F(1, 218) = 18.43$, $p < .05$). Under solo priming, participants selected a higher category of payment for the improving sequence ($M = 2.29$) than the declining sequence ($M = 1.81$, $t(106) = 1.79$, $p = .08$). Under joint priming, participants selected a higher category of payment for the declining sequence ($M = 2.75$) than the improving sequence ($M = 1.64$, $t(112) = 4.34$ $p < .05$). In study 3, people in public settings who were with another person (vs. alone) exhibited more assimilation to the start in their evaluations of the art sequence.

Study 4 had a 2 (analytic vs. holistic processing prime) x 2 (improving vs. declining vacation experience trend) between-subjects design. Participants were either asked to find embedded images in a presented scene (analytic prime), or write about what they saw in the scene (holistic prime) (Monga and John 2008). Subsequently, they read about a vacation with events presented in either improving or declining order of pre-tested liking. We found a processing style X trend interaction on participants' willingness to pay for the vacation ($F(1,89) = 4.09$, $p < .05$). Under analytic processing, participants preferred the improving sequence ($M_{improving} = \$1642.86$ vs. $M_{declining} = \$766.67$, $t(43) = 2.10$, $p < .05$), but there was no trend preference under holistic processing ($M_{improving} = \$722.68$ vs. $M_{declining} = \$715.38$, $t(46) < 1$). Study 5 also employed the vacation stimuli, but we manipulated self-construal rather than processing style. Consistent with our predictions, we observed a crossover interaction of self-construal X sequence trend on the willingness to pay measure.

Other unreported analyses support our processing style mechanism and rule out alternative explanations (e.g., mood). Overall, this research demonstrates that social context moderates consumers' sequence preferences. The results have implications for how marketers present experiences under different social situations. This work advances the temporal sequences literature; past research observing an improving sequence preference was conducted in solo contexts, whereas many real-world experiences are shared. We also reveal how processing style differences emerge due to variations in the social context of experiences, whereas past research has examined how processing style is determined by cultural factors.

Figure: Retrospective dollar valuation of art experience in Study
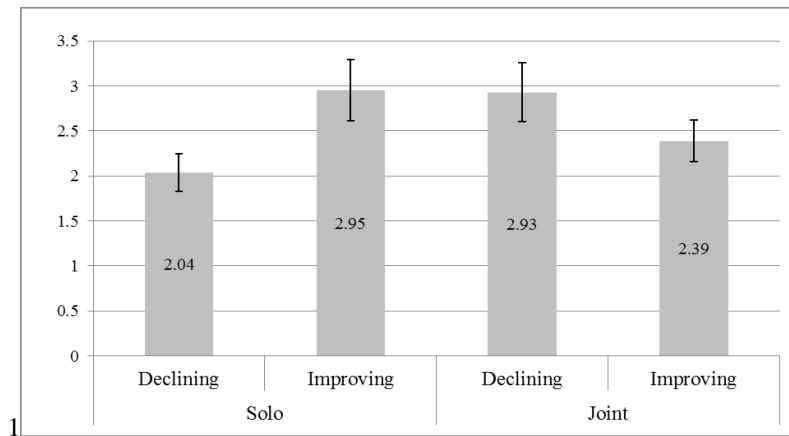
Mean category of dollar valuation selected in Study 1. Error bars represent standard errors of the mean.

The Best and the Bizarre: Prototype and Exemplar-based Retrospective Evaluations of Experiences

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Consumers evaluate past experiences based on overall impressions (prototypes) and specific remembered components (exemplars). The prototype-based memory system converts experience components into an "abstracted representation" (Shreiber and Kahneman, 2000) or "gestalt" (Ariely and Carmon, 2003), which leads to retrospective evaluations based on a limited number of key components, such as trend, peak, and end. The prototype system draws from prototype theories in the categorization literature (e.g. Rosch and Mervis, 1975). Prototypes influence evaluations immediately after an experience and are robust to delay. Distinctive experience components – components that share few features with their surroundings – should have little influence on the prototype.

The exemplar-based memory system represents experience components individually, which leads to retrospective evaluations based on the most contextually accessible components (Montgomery and Unava, 2009). The exemplar system draws from the memory literature which suggests that distinctive information (Hunt, 1995, Hunt and Worthen, 2006) and experiences (Berntsen, 1996, 1998) are more accessible than typical information and experiences. Critically, the privileged accessibility of distinctive components increases with delay.

Four studies test a framework integrating prototype and exemplar models, focusing on the ability of retrieved exemplars (Studies 1 and 2) and the presence of a distinctive peak (Studies 3 and 4) to predict participants' overall retrospective evaluations, immediately after the experience and after a delay. We find that when exemplars are contextually accessible, their ratings flow through to the overall evaluation that remains the same after a delay. However, when the peak component (the most pleasant component of a pleasant experience) is a distinctive one, this particular component does not change the prototype, but becomes an accessible exemplar, which is used to form an overall evaluation. Further, as this distinctive peak is even more easily recalled after a delay, its weight in evaluations increases over time, leading to improved overall evaluations after a delay. These predictions are tested by examining the weight (ß) and overall predictive power (R^2) of models including the ratings of prototypical and distinctive components of the experience on overall evaluations of the experience.

Studies 1 and 2

Study 1 (n = 46) demonstrates in a field setting that distinctive experience components are more likely to be spontaneously recalled and used as inputs to overall evaluations, especially if they are made contextually accessible. Attendees of a large theatre festival completed a short survey while waiting in line for a show. They indicated the overall quality of the festival either before or after listing and rating six shows that they had seen. Finally, participants rated the distinctiveness of the first and last shows on their list on a three item 7-point scale and reported the total number of shows they had seen. Ratings of the six listed shows better predicted the overall evaluation when participants listed the shows before evaluating the festival overall. Festival attendees were more likely to base their overall evaluations on retrieved exemplars (listed shows) when those exemplars were contextually accessible.

Study 2 (n = 98) replicates the results of Study 1 for evaluations of films released in 2011 using a different manipulation for exemplar accessibility: cognitive load. Specific films recalled under load were worse predictors of participants' overall ratings for films released during 2011 when they were recalled under load, as compared to when there was no load.

Studies 3 and 4 go on to examine the role of delay in increasing the accessibility of distinctive peaks that become inputs to overall retrospective evaluations.

Studies 3 and 4

Study 3 (n = 55) examined the role of a distinctive peak before and after a delay. Participants viewed fifteen pieces from the Museum of Modern Art's collection and rated their enjoyment of each. Participants viewed either three paintings and twelve sculptures (paintings distinctive) or twelve paintings and three sculptures (sculptures distinctive). Participants then rated their overall enjoyment of the set of pieces, both immediately and after a delay of three to six weeks. A linear regression model tested the predictive power of components extracted from individual ratings: the peak, end, mean of non-distinctive pieces, mean of distinctive pieces, and whether or not the peak was one of the distinctive pieces.

Without a delay, only the mean of non-distinctive components and peak ratings were significant predictors of the overall liking of the set. After the delay, the mean non-distinctive rating failed to predict retrospective liking of the set, but the peak remained important. Critical to my hypothesis, the presence of a distinctive peak increased overall evaluations, but only after the delay. Study 3 confirms the importance of the peak-dominated prototype, even after a delay, but suggests that distinctive exemplars may amplify the peak effect through a separate, exemplary-based memory system.

Study 4 replicates (4a, n = 82) and reverses (4b, n = 85) the results of Study 3 for experiences with music and jelly beans respectively. A pretest revealed that music was well suited to retrieval of specific exemplars, while jelly beans tended to be thought of in generic, prototypical terms. In both 4a and 4b, we manipulated the presence or absence of a distinctive component in a five part experience. In Study 4a, a distinctive peak increased overall evaluations after a two week delay, supporting the exemplar system. In Study 4b, a distinctive peak decreased overall evaluations immediately after the experience, supporting the prototype system.

Summary

People rely on exemplars when they are contextually accessible (Studies 1 and 2), leading to a disproportionate influence for distinctive peaks on overall evaluations after a delay (Studies 3 and 4a). Non-distinctive peaks remain important with and without delay however (Studies 3 and 4a), and may produce increased overall evaluations in contexts well suited to prototype formation (Study 4b). These findings are of interest to researchers concerned with how consumers represent experiences and construct evaluations, or managers who wish to design experiences that consumers will remember fondly.

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Two Paths from Boredom to Consumption
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Boredom is prevalent in today's society. Naturally in this era, one of the behaviors oriented towards escaping boredom is consumption (Spacks 1995). Indeed, it is not difficult to imagine our bored selves mindlessly reaching for the bowl of jellybeans. But would we instead also reach for the long-neglected kale-wheatgrass juice next to the jellybeans? Here, we empirically address this question of when and why bored individuals would reach out for either the jellybeans or the kale-wheatgrass juice.

Although scarce, past literature has suggested that it is possible for individuals to attribute their experience of boredom either to the situation (Mikulas and Vodanovich 1993) or to the self (Svendsen 2005). Given these viewpoints, we propose that differences in to which source the experience of boredom is attributed would lead to a different consumption means for escape.

Specifically, we propose that when consumers attribute their boredom to the situation they would be drawn to *vices*, because *vices* (e.g., snacks) offer immediate sensory stimulation (Wertenbroch 1998) that can reconcile the inadequately stimulating nature of the situation. On the other hand, we propose that when consumers attribute their boredom to the self they may be looking for something that can help them restore the sense of meaningfulness (van Tilburg and Igou 2011), known to be achievable by investing one's resources into attaining higher-order goals (King et al. 2006). In consumption context, one means to perceive that one is investing to achieve a higher-order goal (e.g., becoming a healthy person) would be to consume *virtues* (Khan et al. 2004), because, by consuming *virtues* (e.g., healthy foods) consumers can restore the sense of meaningfulness that they are engaging in purposeful actions ("I am investing to be healthy.").

Hence, we hypothesize that, whereas consumers under situation-attributed boredom would display a vice-preference, those under self-attributed boredom would display the opposite pattern: a virtue-preference.

Pretest
Confirming our theorizing, participants thought a vice would better offer sensory stimulation than a virtue; whereas a virtue would better provide them with a meaningful purpose than a vice.

Experiment 1
Experiment 1 tested whether consumers under situation-attributed boredom would increase evaluation of a vice whereas those attributing their experience of boredom to the self would increase evaluation of a virtue.

Participants were randomly assigned in a 3 (boredom-attribution: situation vs. self vs. no-boredom) x 2 (product: vice vs. virtue). Participants in the situation-attributed boredom condition read the description of boredom that drew their attention to the *environment* as the source whereas participants in the self-attributed boredom condition read one that drew their attention to the *self* as the source. They also elaborated on how it would feel to experience the respectively described boredom. Then, they indicated willingness-to-pay for either a vice (sundae) or a virtue (asparagus salad) on a \$0-\$10 scale. Baseline participants only completed the product evaluation.

Experiment 1 found that participants under situation-attributed boredom increased evaluation of a vice. However, those under self-attributed boredom increased evaluation of a virtue, compared to those in the other two conditions.

Experiment 2

Experiment 2 tested whether consumers under situation- or self-attributed boredom would still exhibit a preference for either a vice or a virtue, even when *both* options are available.

Participants were randomly assigned in a 3 (boredom-attribution: situation vs. self vs. no-boredom) and were instructed to write about their personal experience of boredom. Additionally, those in the situation-attributed boredom condition were asked to describe *which aspect of the environment* caused boredom whereas those in the self-attributed boredom condition were asked to describe *which aspect of their character* caused boredom. Baseline participants wrote about their room. Then, participants in the two boredom conditions waited 90 seconds on a blank screen for the "second" study to load. Baseline participants moved on without waiting. Then, all participants indicated willingness-to-pay ($0-$10) for *both* a vice (cake) and a virtue (salad). Participants' vice- versus virtue-preference was computed by subtracting their willingness-to-pay for a virtue from that for a vice.

Experiment 2 demonstrated that even when participants were provided with *both* a vice and a virtue, those under situation-attributed boredom paid more for a vice than a virtue (vice-preference). On the other hand, participants under self-attributed boredom paid more for a virtue than a vice (virtue-preference), even when *both* options were available.

Experiment 3

Experiment 3 ruled out the alternative explanation that the virtue-preference of consumers under self-attributed boredom may have been driven by their need to feel better about themselves after attributing boredom to the self rather than by their need to restore meaningfulness.

Participants were randomly assigned in a 2 (boredom-attribution: situation vs. self) x 3 (buffer: meaningfulness, self-enhancement, no-buffer). As in experiment 2, participants first either wrote about their situation-attributed or self-attributed boredom. They then waited 90-seconds for a "second" task, where they had to write about their important possession (Dalton 2008) that either reflected their meaningful purpose in life (meaningfulness buffer) or makes them feel good about themselves (self-enhancement buffer). Participants in the no-buffer conditions did not buffer. Then, participants indicated willingness-to-pay ($0-$10) for both a vice (cookies) and a virtue (salad). Again, participants' vice- versus virtue-preference was computed by subtracting their willingness-to-pay for a virtue from that for a vice.

Experiment 3 found that participants under self-attributed boredom but had been given the opportunity to restore the sense of meaningfulness no longer exhibited a virtue-preference compared to those under situation-attributed boredom, demonstrating that they no longer felt the need to restore meaningfulness via exhibiting a shift in preference toward a virtue. On the other hand, the virtue-preference persisted for participants under self-attributed boredom who had been given the opportunity to feel better about themselves or for those who did not buffer, demonstrating that their need to restore meaningfulness still existed.

In sum, this work provides empirical evidence that boredom is indeed a desire for desires, as Tolstoy noted in *Anna Karenina*, but what kind of path the desire leads to seems to depend on whether one believes the experience of boredom is due to the situation lacking stimulation or to the self lacking meaningfulness.

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Experiential Gifts Are Socially Connecting

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Occasions to give gifts tie up each year. From birthdays to religious holidays, Valentine's Day to Father's Day, each occasion is fraught with the question: What to give? Interpersonal relationships are essential to well-being (Clark and Lemay 2010), and gifts serve as a means to foster these important connections (Ruth, Otnes, and Brunel 1999; Sherry 1983). Gift-giving occasions thus prove to be great opportunities (and liabilities) for relationship building. Therefore, to inform gift-givers of what to give, and to gain insight into the connecting function of gifts, this research empirically investigates what type of gift best connects people—material gifts (objects to be kept in the recipient's possession) or experiential gifts (events that the recipient lives through).

To date, research on material and experiential purchases has focused on the effects of these purchases for oneself. This growing stream of research has found that investing in experiences for oneself can bring greater happiness (Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003), greater satisfaction (Carter and Gilovich 2010), and less regret from missing out (Rosenzweig and Gilovich 2011), compared to material goods. Although this research provides guidance for what to buy to improve one's own well-being, which of these purchases will most positively impact relationships with others remains an open question.

It appears that gift-givers *believe* material purchases make better gifts. Indeed, a survey we conducted among 219 gift-givers revealed that 78% of them had most recently given a material gift. But could this tendency to give material gifts be misguided?

Anthropological research suggests that non-material gifts such as experiences can be more desirable and meaningful (Belk and Coon 1993). For example, one interviewer documented a gift-recipient who "would rather have nothing and spend time together fishing or camping than to have… expensive items" (p. 403).

We therefore predict that giving an experience will be more socially connecting than giving a material gift. We further predict that this effect is driven by the greater emotionality of experiential gifts, and that the positive effect of emotions on connectedness will be stronger when the gifts are shared between gift-givers and recipients. Five field and laboratory studies involving actual gift exchanges tested these hypotheses. Together, these studies provide a better understanding of how gifts can foster closer relationships—a key objective of gift-giving that has been understudied by empirical researchers to date.

In a Father's Day study, fathers rated how connected they felt to their child both before and after Father's Day. They also rated the gift they received in terms of how material and how experiential it was. Results showed that fathers who received more experiential gifts felt more connected to their child after Father's Day, whereas those who received more material gifts showed no significant change in how connected they felt to their child.

The next study demonstrated how the very same gift framed as experiential (vs. material) made gift recipients feel more connected to the gift-giver. Participants were provided with a coffee mug to give as a gift to someone they know. They were randomly assigned to give a mug that was pretested to highlight either the experience of drinking coffee with the words "my coffee time" inscribed on it, or the material component of the mug with the words "my coffee mug" inscribed on it. Recipients of experiential mugs (vs. material mugs) felt more connected to their gift-giver. Thus, the more connecting effect of experiential gifts can be attributed to the experiential (vs. material) nature of the gift, rather than other differences between gifts. Furthermore, many gifts have both experiential and material elements, and these results demonstrate that the benefit of giving an experiential gift can be enjoyed by merely highlighting the experience the gift provides.

Study 3 tested the prediction that experiential gifts are more emotional than material gifts, and this increase in emotions leads to stronger social connections. Participants were asked to recall either a material or experiential gift they had received. They reported how emotional and socially connecting the gift was, as well as how much they liked the gift. Results showed that experiential gifts

elicited more emotions, and these emotions made recipients feel more connected to their gift-giver. The effect of the gift's emotionality significantly mediated the effect of experiential gifts on connectedness, whereas the gift's liking did not.

Study 4 manipulated the emotionality of an experiential gift and measured the subsequent effect on gift recipients' feeling of connection towards their gift-giver. Participants were given a video clip that was either emotional or not to watch as a gift by another participant and reported how close and connected they felt to the person who gave them the gift. There was a significant indirect effect of the gift's emotionality: When recipients experienced the gift as more emotional, they felt more connected to the person who gave them that gift.

The final study was conducted over Mother's Day. In this real-world, emotionally-laden gifting occasion, we again tested for the more connecting effect of receiving an experiential gift (vs. material gift) and the underlying role of emotion. This study also tested the effect that sharing an emotional gift had on the relationship between a mother and child. Mothers who received more experiential gifts felt more connected to their child. This effect was mediated by how emotional the gift made the mothers feel, but not by how much they liked the gift. Moreover, the effect of the gift's emotionality was significantly moderated by joint consumption, such that the effect of emotion on connectedness was stronger when the gift was consumed by the mother and child together.

In summary, this paper explores the effect of purchases on connections *between* people, finding that not all expenditures of money are equally beneficial. Indeed, people's tendency to give material gifts does little to foster the relationship between a gift-giver and recipient. Experiential gifts, in contrast, make recipients feel closer to their gift-giver. So, when deciding on a gift for a loved one, an experiential gift promises greater hope of connection.

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8.4 Individual Papers: Deliberating on Automaticity: System 1 and System 2 Processing
Room: El Capistrano
Chair: Ellie Kyung, Dartmouth College

I... Must... Resist: On the (Un)Controllability of Evaluative Conditioning
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Evaluative conditioning (EC) is defined as the change in liking of initially neutral conditioned stimuli (CS) caused by their pairing with affectively valenced, unconditioned stimuli (US). This basic procedure of pairing stimuli, for example brands, with affective stimuli lies at the heart of branding and advertising strategies and is therefore of central importance to consumer psychology. Whereas there is no doubt that EC effects can be established through conscious propositional reasoning, a long-standing disagreement in the literature concerns whether there can also be a contribution of an unconsciously operating automatic process in the attitude acquisition (Hofmann, De Houwer, Perugini, Baeyens, & Crombez, 2010). A process is defined as automatic if it occurs in the absence of awareness, is uncontrollable and is not influenced by intentionality or processing resources (Bargh, 1994).

In a recent contribution, we showed that previous methods were biased towards the conclusion that EC effects require conscious awareness of the CS – US pairings. Instead, we developed a more unbiased method based on the process dissociation procedure, providing evidence that EC can, in fact, establish attitudinal effects without explicit memory for the pairings (Hütter, Sweldens, Stahl, Unkelbach, & Klauer, 2012). Most recently, we applied the process dissociation procedure to test the predictions from the EC theory proposed by Sweldens, van Osselaer and Janiszewski (2010), who claimed that simultaneous, but not sequential, CS-US presentations

can lead to EC effects without awareness through an implicit affective misattribution process. Consistent with that theory, the process dissociation procedure does indicate unaware EC effects with simultaneous, but not with sequential CS-US presentations (Hütter & Sweldens, in press).

Moving beyond the awareness question, in the current research we present a new method to assess the second proverbial horseman of automaticity in the learning process: the controllability of the EC effect. Specifically, we developed a process dissociation procedure that allows dissociating the effects of controlled processes from uncontrolled processes during the conditioning phase. In the *standard condition*, participants are informed that the USs are informative about the CSs. Participants thus believe that the valence of the USs can be trusted to form an attitude about the CSs. In order to separate controllable from uncontrollable processes involved in this task, a *reversal condition* was designed. The reversal instructions stated that the valence of the USs should actually be opposite to the US valence as it is presented. Participants thus believe that the valence of the US needs to be reversed to form accurate attitudes about the CS. To the extent that the valence transfer in an EC procedure is controllable, participants should be able to reverse the US valence in the generation of their CS attitudes. To the extent that the valence transfer is automatic and uncontrollable, participants will not be able to execute this reversal. Hence, the reversal condition is implemented so that controllable and uncontrollable processes lead to differential evaluations of the CSs. The process dissociation model corresponding to these predictions is depicted in Figure 1.

We conducted two experiments which implemented the standard and reversal conditions in a within-subject (Experiment 1) and a between-subjects (Experiment 2) design. A multinomial processing tree model was then applied to distinguish the relative contributions of controllable valence transfer (estimated by the c-parameter) from automatic valence transfer (estimated by the a-parameter). We used both types of designs as an opportunity for parameter validation. Both experiments indicated a significant *a* parameter, which specifies an uncontrollable EC effect on attitudes. Interestingly, the explicit evaluative ratings of the CSs in the reversal condition do indicate a reversed EC effect (albeit smaller in size than the normal EC effect in the standard condition). The within-subjects design allows for the estimation of individual parameter estimates that can then be entered as a predictor in correlational analyses using the EC effect as the criterion. A hierarchical linear model confirms that the *a* parameter uniformly correlates with the EC effect across instruction conditions, whereas the influence of the *c* parameter is significantly moderated by standard and reversal instructions. A researcher looking only at explicit evaluative ratings would have no means to distinguish the controllable from the uncontrollable components in the emergence of the total EC effect. As these explicit evaluative ratings do indicate a reversed EC effect in the reversal condition, the researcher would probably – erroneously – conclude that EC effects are under conscious control.

Our demonstration of uncontrollable learning in EC has important implications for the study of branding and advertising in general, and for ethicality questions in marketing in particular. Our experiments show that even when consumers believe that a particular advertisement is misleading, they cannot help but be influenced by the affective stimuli included in the commercial. This raises a serious problem for the protection of consumers from unwanted influence. In addition, our research has important implications for dual process theories of learning, suggesting that associative and propositional processes are qualitatively distinct despite recent claims to the contrary (Kruglanski & Gigerenzer, 2011; Mitchell, De Houwer, & Lovibond, 2009).

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The 'Automaticity' of Buying Behavior

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From the moment we wake up to the point of sleep, our daily lives are consumed with choices and decisions—what clothes to wear to work, what to eat for breakfast, mode of transport, potentially infinite number of daily news sources, and so forth. Although on many occasions such actions require conscious cognitive deliberation, the majority of our daily judgments and behaviors are guided by implicit cognition that is spontaneous, effortless, and to a large extent unconscious. An extensive literature in psychology and cognitive science identifies the diagnostic features of 'automaticity' such as lack of awareness, intention and control; efficiency with an ability to perform secondary tasks simultaneously; and behavioral inflexibility (Bargh 1994, Moors and De Houwer 2006, Ashby and Crossley 2012). With repetition in a stable context, behaviors (and thoughts) take the form of automated reflexive responses to external or internal triggers that, once activated, can proceed to completion without a conscious oversight, i.e. take the form of 'habits' (Verplanken & Aarts 1999, Wood & Neal 2007, Danner et. al 2008, Graybiel 2008, Neal, Wood, & Lally 2011). Unlike novel tasks or environments, habitual behaviors in a recurring context have been shown to manifest with minimal influence of intentions or goals (Triandis 1977, Verplanken et al. 2008, Neal et al. 2011).

Although habits have long attracted the interests of philosophers, there has been resurgence in recent years on understanding the underlying cognitive mechanisms. From a theoretical perspective, daily habits provide a rich array of contexts to study the dual-process continuum of deliberative thoughts and automated cognitive processes. On the practical side, habitual behaviors can be extremely useful in that they are fast and efficient, freeing up resources for novel and involved tasks. At the same time, automation and lack of flexibility/control associated with habits can be a curse for behavioral patterns that are detrimental. For example, our daily habitual behaviors display similarities with several neuropsychiatric illnesses and addictions in terms of both behavioral patterns and neural activities in the basal ganglia-based brain circuits (Robinson and Berridge 2003, Graybiel 2008, Ashby et al. 2010). Given that a large proportion of our daily activities can be characterized as habits, the topic has garnered attention of scientists from social psychology, behavioral medicine, and cognitive science (Wood et al. 2002, Graybiel 2008, Marechal 2009, Orbell and Verplanken 2010, Gardner et al 2011, Nilsen et al. 2012, Ashby and Crossley 2012).

This article provides a large scale empirical study on the extent to which our daily shopping behaviors display a level of "habituation" or "automaticity". We utilize a unique database that records the details of grocery shopping histories for a nationwide sample of over 18,000 households. The data are observed for six years (2004-09) and include a wide array of frequently purchased food and non-food products. The context of our study (i.e., grocery shopping) shares several features of previous empirical investigations on habitual behavior using experimental or cross-sectional survey methods. First, grocery shopping is a frequent activity with an average of 2.2 shopping trips per week for a typical US household (FMI, 2011). In addition, the majority of these shopping trips occur in the familiarity of a small set (often single) of neighborhood grocery stores providing a stable context. Finally, consumer involvement for repetitive low-ticket grocery products (as opposed to say fashion or durables) is likely to be low and may display patterns of habitual behavior as theorized in the literature. At the same time, however, there are important differences between our work and previous applications. Foremost, shopping activities in the real word take place in a stimulus-rich environment. A typical supermarket carries over 50,000 unique products, and the mundane act of buying a breakfast cereal involves a choice from over 200 options ("choice overload" in the psychology literature (Iyengar and Lepper 2000, Schwartz 2000)). Although habitual buying behavior (of repeating the favorite product after the initial experimentation) can serve as an important aid, this comfort is under constant threat from the lure of advertising and promotional activities of competitive brands. For instance, in 2011 the CPG industry spent approximately $470 billion in couponing activities alone (NCH, Coupon Facts 2011). Furthermore, the CPG industry is characterized by high level of new product introductions that include new brands as well as modifications (e.g., new flavors) of existing products.

Our approach in this paper is to compute measures of purchase concentrations such as concentration ratios (CR) and the Herfindahl Index (HHI) for a wide variety of product categories. For example, for each household CR1 (CR4) for, say, Laundry Detergents, measures the percentage of dollar over the 6 year period that were allocated to a single (four) items. We then draw upon the theoretical literature to analyze how purchase concentrations vary across households (due to say demographics or purchase frequency) as well as

the type of product (e.g. hedonic vs. utilitarian, level of competition in the category). For instance, the previous literature points out the significant role of stability in the environmental cues in determining habitual behavior (Wood and Neal 2007, Danner et al. 2008, Lally et al. 2010). Thus, we may find a higher level of habitual buying behavior in products with relatively stable contexts as opposed to product categories with a significant level of new product introductions or promotional activities. Similarly, households that tend to shop at a single store may display higher level of habitual buying as opposed to households that frequent many retail outlets (thereby facing different ambience, store layouts, and shelf locations). Our results show a high level of purchase concentration across households and product categories, a phenomenon we loosely call "automaticity" of buying behavior. More interestingly, this behavior is moderated by a variety of household and product specific factors as theorized in the literature.

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Tracing the Impact of Associative Reasoning on Consumer Information Processing
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Human judgment is generally considered to be the product of one of two systems of reasoning, usually labelled System 1 and System 2 (e.g., Stanovich & West, 2000). In this paradigm, System 1 is defined as a "default process" (Evans, 2008), under which intuitive responses are provided. System 2 is considered an "overriding process", which inhibits the automatic responses of System 1 under specific conditions (e.g., Alter, Oppenheimer, Epley, & Eyre, 2007).

One implication of these definitions has been methodological. Most researchers interested in studying System 1 have sought to inhibit System 2 (e.g., with a cognitive load), under the assumption "Shut down System 2, System 1 is left". However, this assumption has recently been challenged as a potential oversimplification of reasoning processes (Keren and Schul, 2009). Keren and Schul (2009) illustrate this idea with a short description of the "not-the-liver" fallacy (Bedford, 1997). In this analogy, a physician claims to have discovered two organs. The first is the liver, which clears toxins from the blood. The second, called "not-the-liver", has for main functions blood circulation, nutrient absorption, waste expulsion, and protection from foreign invaders. The argument for the existence of the "not-the-liver organ" is that, "for when the liver is removed, the body is still able to do all these things and more, until such time as the toxin buildup is fatal" (p.231). In this case, the fallacy is to conclude that what is left after the removal of the liver is one single organ. In the case of dual-reasoning theories, the fallacy is to assume that inhibiting System 2 actually activates a single unitary system, or System 1. Just as "not-the-liver" is known to perform several functions (e.g., blood circulation, nutrient absorption, etc.), similarly, "not-System 2" has been described as associative, evolutionarily old, domain-specific, universal, contextualized, pragmatic, experiential, parallel, stereotypical, rapid, implicit, automatic, instinctive, effortless, non-verbal, and holistic (Evans, 2008). In our project we chose *not* to assume that these attributes describe a single unitary system. Instead, we focus on the study of only one dimension, associative processing, and explore its impact on consumer judgment. It is as if we were, for instance, focusing on the study of blood circulation and of its influence on body functions.

In order to achieve this objective, we built on recent research on mindset activation. A mindset is a cognitive procedure which can be activated by a task and then be applied automatically in another unrelated domain. For instance, Xu and Wyer (2008) studied the comparison mindset, that is, the cognitive procedure associated with comparing different alternatives. We hypothesize that associative reasoning can be assimilated to a cognitive procedure and thus might share similar properties with mindsets. If true, then associative reasoning could be primed in a way similar to mindsets.

Activating an associative mindset means finding a task that requires the direct use of an associative process. We thus developed and pre-tested two such tasks. In the first, participants were asked to associate a series of 15 different first names (e.g., John) with the color

that best fit that name. In the second, they were asked to pair brand names with personalities (Aaker, 1997). For both tasks participants were told that there was no right answer, and encouraged to answer according to their own gut feeling.

We first ran two preliminary studies with the same three conditions: associative priming with each of the two priming tasks, and control. These two studies respectively used dependent variables that were directly linked to associative reasoning: the availability heuristic and the representativeness heuristic (Tversky & Kahneman, 1972, 1974). In both studies, primed participants showed more bias than participants in the control group thereby confirming that priming an associative mindset actually increases reliance on associative reasoning (both *ps*< .05). There was no significant difference between the two priming tasks showing that both were successful at priming an associative mindset. Upon validating our priming method, we decided to investigate the impact of associative reasoning in new domains. The design of study 3 and 4 was similar to study 1 and 2 except that only one priming method was used. In Study 3 the brand association task was used. In study 4 the matching-color task was used.

Study 3 intended to test a phenomenon for which causes are still under debate: the sunk cost fallacy, manifested as a greater tendency for consumers to continue an endeavor once an investment in money, effort, or time has been made. Arkes and Blumer (1985) proposed that people associate the act of wasting with negative feedback (e.g., learning as a child not to waste food) and overgeneralize the rule to situations in which it does not apply. The results of our third study gives further credence to this explanation by demonstrating that priming an associative reasoning does increase the sunk cost effect (*p* < .05).

Study 4 intended to explore the effect of associative reasoning on implicit attitudes. The hypothesis was that our priming may have the potential to strengthen automatic associations and thus to increase implicit biases in an unrelated domain. To test this possibility we used the Implicit Association Test ("IAT"; Greenwald, McGhee, & Schwartz, 1998) and the bias against overweight individuals. Results show that participants primed with an associative mindset actually exhibit more implicit bias against overweight individuals (i.e., were faster to associate images of overweight individuals with negative words) than controls (*p*< .001).

The contribution of this research is two-fold. Methodologically, it proposes an alternative to methods that inhibit System 2. Empirically, it attempts to trace the impact of associative reasoning in domains of consumer judgement that could not be tested by previous methods. Future research is intended to see whether the activation of an associative mindset could affect other domains such as consumer confidence in choice or evaluation of brand extensions.

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Knowing without Remembering: How Articulation Reduces the Accuracy of Numeric Comparisons
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Past research has shown that even when unable to articulate past prices, consumers can judge whether an offer price is lower or higher than that past price (Adaval and Monroe 2002; Monroe and Lee 1999; Thomas and Morwitz 2009; Vanuele and Drèze 2002). However, what underlies this phenomenon where people are able to "know" these prices without actually "remembering" them (Monroe and Lee 1999)? The present research examines this question. We argue that people can know whether a price is lower or higher than a memory-based comparison standard without recalling the comparison standard. We demonstrate that even *attempting* explicit recall of a comparison standard (i.e. recalling a past price) can affect magnitude judgments (i.e. a comparison of whether that past price is higher or lower than a current price).

Common sense suggests that attempting to articulate a reference price should not reduce the accuracy of memory-based price comparisons—indeed, they might serve as the basis for them. However, this naïve view of memory-based comparative judgments might not always be correct. We propose and demonstrate that attempting to explicitly recall the memory-based comparison standard can disrupt the comparison process and thus reduce the accuracy of comparative judgments. We refer to this effect as the *articulation paradox*.

Numerical information can be encoded in memory in multiple formats: Arabic (6), verbal (six), phonetic (/siks/), or as analog magnitudes (Dehaene 1992; Moyer and Landauer 1967). We refer to Arabic and verbal as Symbolic representations in that they symbolize a specific quantity and can be manipulated using logical rules acquired through formal training, like rules of arithmetic. In contrast, Analog representations of magnitudes are spontaneously encoded representations on a putative mental number line. Analog representations are assessed intuitively; just as people can assess the brightness of light or the loudness of sound without deliberative thinking, they can also assess whether the magnitude of a number is small or large without relying on formal arithmetic thinking. Both of these representations—Analog and Symbolic—can form the basis of numerical judgments from memory.

Metacognitive experiences inform how the combination of content and the subjective experience of remembering inform judgment and decision-making based on. While the terminology varies slightly, each of these paradigms describes an element based on the content or information of what is remembered and an element based on the experience of recall itself – a "sheer noetic experience" (memory Koriat 1993, 1995, 2007, Strack 1992, Schwarz 1998). Thus when people make comparative numerical judgments from memory, information is drawn from two sources: (1) a component based on the information they might remember about the previous price, what we will refer to as *content-based* and (2) a component based on the sheer feeling of knowing, what we will refer to as *experience-based*. We posit that the former relies on content-based judgments based on symbolic representations of the actual prices— if they can be remembered—and the latter relies on experience-based judgments that can rely on analog representations that cannot necessarily be articulated.

What happens, then, when people attempt to articulate a comparison standard when making comparative magnitude judgments? Because analog representations tend to be "more primitive"—represented even in children and animals—and serve as the basis of comparative judgments that can be made without consciousness, they tend to be inherently accurate (Dehaene 1992). Because feeling of knowing-based judgments tend to be accurate when the information recalled is correct (Koriat and Goldsmith 1996), interrupting this feeling of knowing can lead people to question their subjective experience and responses (Jacoby & Whitehouse 1989, Strack 1992, Whittlesea et al. 1990). We suggest that simply asking people to remember what they know can make them less accurate in their comparative magnitude judgments—they lose the comparative advantage that feeling of knowing can provide.

Through a series of four studies with nearly 400 participants, we provide evidence for this effect. Both in the domain of prices (experiments 1 - 3) and frequency (experiment 4), respondents were more accurate in their magnitude judgments when not asked to articulate a symbolic representation of the reference point and allowed to rely on their spontaneously generated feeling of knowing. Providing participants with negative feedback, disrupting feeling of knowing, attenuates the difference between those that are asked to articulate a reference point and those that are not, both in the price (experiment 3) and frequency (experiment 4) domains. Finally, in experiment 4, the most conservative test for the articulation paradox, we find *moderated mediation* where feelings of confidence in comparative judgments mediates the effect of articulation on response accuracy for those not provided with negative feedback, but not for those provided with negative feedback.

The empirical results we document make three important contributions. First, we demonstrate a dissociation between magnitude judgments (e.g. was last week's price higher than this week's?) and explicit recall (e.g. what was last week's price?). Second, in examining the theoretical underpinnings of this paradox, we bring together literatures in numerical cognition and models of cognitive

processing, characterizing the mental representations behind numerical judgments: an *analog* representation that can drive a content-based component in metacognitive judgments and a *symbolic* representation that can drive an experience-based component in metacognitive judgments (Dehaene 1992; Koriat 2007).

Finally, in characterizing these representations, we explain the underlying process behind why people can make accurate comparative judgments of numerical magnitude even if they cannot recall the specific numerical comparison standards from memory. The accuracy of these comparative judgments derives from a feeling of knowing based on an accurate, underlying analog system. Together, these contributions lay the groundwork for future work on the interplay of analog and symbolic representations in memory for numeric information during encoding and recall.

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8.5 Symposium: Making Sense of the Senses: The Impact of Different Sensory Cues on Consumer Decision Making

Room: Concepcion

Chair: Monica Wadhwa, INSEAD, Singapore

Vices Lurking in the Dark: The Impact of Background Color on Indulgent Consumption

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Consumers are often influenced by the metaphoric relationship between color and nature of the product. Anecdotal evidence and emerging research suggests that brightness is associated with goodness and purity, whereas darkness is associated with evil and sin (Meier, Robinson, and Clore 2004; Sherman and Clore 2009). For example, in the Bible, Jesus is represented as the "light of the world," whereas Satan is represented as the "prince of darkness." However, just as the allure of Satan's temptations is hard to resist for humans, darkness may as well be associated with pleasure. In support of this view, a pretest revealed that while people consider dark colors more sinful, they also consider dark colors more pleasurable and fun than bright colors. Therefore, we argue that darkness as compared to brightness consists of two conflicting components-1) sin component and 2) pleasure component. In similar vein, indulgent or vice consumption has been characterized as both pleasurable and guilt-evoking in consumer research (Khan and Dhar 2006; Kivetz and Simonson 2002). While consumers are tempted by the pleasure of indulgent consumption, the sinful aspect of the indulgent consumption elicits the unpleasant feelings of guilt, which inhibit consumers from pursuing indulgence.

Drawing upon a synthesis of these perspectives, we hypothesize that dark color cues as compared to bright color cues can either increase or decrease indulgent consumption depending on the mental salience of the concept of pleasure versus the concept of sin. Specifically, when the pleasurable aspect of indulgent consumption is more salient, dark (vs. bright) color cues would enhance consumers' desire and preference for indulgent products. However, when the sinful aspect of indulgent consumption is more salient, dark (vs. bright) color cues would reduce consumers' desire and preference for indulgent products.

We examined our aforementioned hypotheses in four studies, which employed different color cues. In all studies, we kept the hue and chroma dimensions constant and only varied the value (brightness) dimension of the color. In **Study 1**, we examine whether dark (vs. bright) color cues can enhance consumers' desire and preference for indulgent products in a food choice context. Pretests revealed that there were no differences in perceived attractiveness of the pictures in this or any of the subsequent studies. In this study, participants

evaluated an indulgent food item (i.e., a beef and cheese burger) and a healthy food item (i.e., an organic green salad with chicken) in a counterbalanced order. The food items were presented on either a dark or a bright colored background. Participants were first asked to imagine the tastiness of each food item and report their desire to consume each food item. Subsequently, participants were asked to choose between the two viewed food items. We found that, when both the food items were presented on a dark grey (vs. bright grey) background, participants exhibited greater preference for the indulgent food item over the healthy food item. Furthermore, our results revealed that participants' desire for vice over virtue (computed by subtracting the desire score for the salad from the desire score for the beef burger) mediated the effect of background color on food choice (Preacher and Hayes 2008).

In **Study 2**, we demonstrate that the dark versus bright color effect found in the first study is reversed when the sinful aspect of indulgent consumption is made salient to the consumers. In this study, we manipulated participants' focus on either the pleasurable aspect or the sinful aspect of an indulgent food product by directing them to elaborate on either the tastiness (pleasurable aspect) or the calorie content (sinful aspect) of an indulgent food item (movie popcorn) before making their evaluative judgments. We found that participants who focused on the pleasurable aspect (i.e., tastiness) of the movie popcorn reported greater desire for the popcorn when the packaging color (red in this study) was dark (vs. bright). Conversely, when participants focused on the sinful aspect (i.e., calorie content) of the movie popcorn, they reported lower desire for the popcorn when the packaging color was dark (vs. bright).

In **Study 3**, we examined the role of individual difference related to dietary restraint in moderating the impact of dark versus bright color on indulgent food consumption. Specifically, we argue that restrained eaters are more likely to focus on the sinful aspect of indulgent food consumption, whereas non-restrained eaters are more likely to focus on the pleasurable aspect. Consistent with this argument, we found that restrained eaters reported lower willingness-to-pay for an indulgent food product (movie popcorn used in Study-2) when the packaging color was dark (vs. bright). In contrast, non-restrained eaters reported greater willingness-to-pay for the popcorn when the packaging color was dark (vs. bright).

Finally, in **Study 4**, we examined the role of pleasure goal versus health goal salience in moderating the impact of dark versus bright color cues on indulgent consumption. We also included a control condition to serve as a baseline condition. In this study, we used a cupcake as the target indulgent product and manipulated the brightness of the color (blue in this study) of the wrapper. We found that participants who were primed with a pleasure goal reported greater willingness-to-pay for the cupcake when the wrapping color was dark (vs. bright). However, participants who were primed with a health goal reported lower willingness-to-pay for the cupcake when the wrapping color was dark (vs. bright). Further, planned contrasts analyses reveal that those in the dark packaging condition reported greater willingness-to-pay for the cupcake when they were primed with a pleasure goal than when they were primed with no goal (control condition). These participants also reported lower willingness-to-pay for the cupcake when they were primed with a health goal, but not when they were primed with no goal (control condition). However, no significant differences were observed across the bright packaging color conditions. These results provide support for the conceptualization suggesting that the dark versus bright color effect is mainly caused by the two conflicting components associated with dark color cues.

Together, our findings demonstrate that dark (vs. bright) color cues enhance consumers' desire for indulgent consumption when the pleasurable aspect of indulgent consumption is more salient. However, when the sinful aspect of the indulgent consumption is more salient, dark (vs. bright) color cues reduce consumers' desire for indulgent consumption. Across these studies, we ruled out alternative account related to affect. We discuss the theoretical and practical importance of our findings.

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The Evoked-Dynamism Effect: Dynamic Imagery from Static Brand Logos

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Sensory information not only impacts consumer behavior through actual perceptual experiences, but also through imagined experiences. Within the present research, we build upon literature within art and visual design, cognitive psychology, and consumer behavior in order to create a theoretical foundation for the downstream consequences of dynamic imagery on consumer attitudes. We specifically propose and demonstrate "the Evoked-Dynamism Effect," that visually static logos can generate dynamic imagery, including perceptions of movement, ultimately increasing overall attitudes toward the brand.

Logos are frequently the first exposure a consumer has to a brand or company, and serve as a foundation for subsequent information learned. Prior research has explored which characteristics make a good logo in terms of design, consumer acceptance, and recognition (Cohen, 1986; Henderson and Cote 1998; van der Lans et al. 2008). In the present work, we introduce a new aspect of logos – whether they can evoke dynamic imagery. In three studies we demonstrate various ways in which such dynamic imagery can be generated through static logos, how it influences attitudes towards the brand, why this happens, and what moderates the effect.

From the art and design literature, we highlight the role of dynamism as an element of visual grammar (e.g., Leborg, 2006), and build upon this literature by measuring perceptions of movement in both implicit (cursor positioning) and explicit (self-report) ways. From cognitive psychology, we take findings from the representational momentum literature (e.g., Hubbard, 1997), wherein objects seen moving will continue to move in one's memory once the actual movement has ceased, and apply this construct to static images. Additionally, we build on to the sparse literature on dynamic imagery within cognitive psychology and marketing by showing support for perceived movement in static images.

Our primary research question is to what extent visual aspects of a logo can convey movement without actually moving, and the consequential impact of this imagined movement on consumer behavior. In order to answer to this research question, we focus on static visuals able to activate dynamic imagery, rather than images that actually move. Thus, a central hypothesis in the present research is that static logos can generate dynamic imagery (H1; what we called "The Evoked-Dynamism Effect").

The consequences of imagery on consumer behavior have been shown within the prior literature. Most robustly, messages that evoke greater mental imagery result in stronger attitudes toward the brand (e.g., Fitzgerald and Ellen 1992). Building upon these results, we anticipate a static logo that implies greater movement to generate a more positive attitude toward the company (H2). We expect that perceived movement triggered by static visuals, since it is self-perceived and hence self-generated, should create higher levels of engagement. Thus, we hypothesize that engagement mediates the effect of a logo on attitude towards the company (H3). Finally, we suggest that while greater imagery is more engaging and increases brand attitudes, if perceived movement is incongruent with the brand it may also have a negative effect on brand attitude. Thus, we hypothesize that the congruence between evoked movement and desired qualities for the brand (e.g., modern or traditional) will moderate the effect of logo dynamism on attitudes towards the brand (H4).

In the pilot study we showed participants one of two logos (low-dynamism and high-dynamism). Participants rated the logos, and then were asked to remember the original position of the visual portion of the logo. Participants' placement of the visual portion of the high-dynamism logo "moved" compared to the low-dynamism logo, thus supporting the hypothesis that static logos can generate dynamic imagery (H1). We additionally show in the pilot study, as well as in study 1, that a stationary visual that implies movement is able to affect the attitudes toward the company (H2). In **Study 1**, a logo with an inclined seesaw hanging in a diagonal (versus horizontal) position triggered higher dynamic imagery. This dynamic imagery led to higher engagement with the logo, and ultimately increased attitudes toward the company. In **Study 2**, we show how dynamism is conveyed by the visual part of the logo, above and

beyond the brand name, even when the brand name itself is "dynamic" in connotation. Furthermore, the mediating role of engagement was supported (H3).

With the prior studies we have shown the positive consequences of perceived movement resulting from dynamic imagery on attitudes. However, should a company not want to be perceived as dynamic, this perceived movement may not enhance attitudes to the same extent. In **Study 3**, we provide descriptions of a company that are either more modern (more dynamic) or more traditional (less dynamic) and explore the impact of more or less dynamic logos on attitudes toward the company. The findings support our hypothesis (H4) that congruence between the logo and the company establishes one boundary condition for the effects of dynamic logos on attitudes.

Ultimately, our results show dynamic imagery to be an important and underexplored construct within both cognitive psychology and consumer behavior.

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The Preference-Polarization Effect of Music: How Background Music Changes Preferences

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As of October 2011, more than 300 million iPods had been sold worldwide (Albanesius 2011); within the United States alone, nearly half of all adults (47%) reported owning an MP3 player (Pew Research Center 2010). Indeed, music occupies an increasingly significant part of our daily lives. As the number of headphones-wearing consumers sauntering along streets and within retail stores continue to skyrocket, it is important to understand how music can fundamentally change how we think and behave as consumers in this iPod era.

The effects of music on diverse facets of human emotion, cognition, and behavior have been well-documented (Kellaris 2008; North and Hargreaves 2008). In this research, we depart from focusing on specific attributes of music (e.g., tempo and valence) or the association between various types of music and specific types of products or mood. Instead, we extend the literature by examining the fundamental nature of music as an *experiential* stimulus that changes the extent to which people focus on, and are influenced by, their intrinsic attitudes toward a product versus their evaluations of the product's instrumental attributes. Our basic premise is that preferences can be formed in two ways: preferences can be influenced by consummatory aspects that elicit preexisting intrinsic attitudes (intrinsic preferences) or by instrumental attributes that are informative but do not elicit intrinsic attitudes (instrumental preferences). For instance, consumers can form intrinsic preferences for snacks by considering their intrinsic attitudes toward a snack ("how much I like this snack"). Alternatively, they can form instrumental preferences by evaluating its price ("how reasonably this snack is priced") or healthiness ("how healthy this snack is"). We propose that background music can augment the effect of intrinsic preferences on purchase decisions.

That listening to music is a hedonic experience is a well-accepted truism; music, or the "language of the emotions" is widely sought after as a means of achieving particular emotional states. Extant research has shown that music triggers feelings through a number of interrelated and cascading mechanisms, such as emotional contagion and visual imagery (Juslin et al. 2010). Further, mood states—whether positive or negative—induce greater self-focused attention and promote self-directed thinking through greater emotional arousal (Palfai and Salovey 1992; Salovey 1992; Wegner and Giuliano 1980). Consequently, the greater self-focused attention that music induces leads consumers to focus more on their intrinsic attitudes toward a product than on their instrumental evaluation. That

is, background music can increase the weight individuals place on their preexisting intrinsic attitudes, thus polarizing their expressed preferences.

We tested this preference-polarization effect of music in studies 1 and 2 using different product categories and different types of music. In **Study 1**, 206 participants were recruited for a study on "Foreign Movie Evaluation" and randomly assigned to one of three conditions: *Control*, *Slow-Music*, and *Fast-Music*. Participants in both music conditions listened to background music on headphones during the primary task while those in the control condition did not. Participants were shown eight pairs of movies and asked to rate their relative rental preference between each pair. For four of the movie pairs, one movie belonged to the action/crime genre, whereas the other, the romance/comedy genre; the remaining four pairs were designed as control movies and were all documentaries. Consistent with our hypothesis, we found that in the music conditions (vs. control), males and females were more likely to rent action/crime and romance/comedy movies respectively, suggesting stronger intrinsic gender-based preferences when listening to music. This effect was mediated by participants' self-reported movie genre preferences and did not apply to the documentary movies.

In **Study 2** (N=156), we replicated the basic effect in a shopping task involving a selection of snack items commonly available in supermarkets. Rather than relying on gender-specific intrinsic attitudes as in experiment 1, we directly measured participants' intrinsic attitudes toward snacks after the shopping task, thus helping us rule out the potentially confounding role of gender. Additionally, to test whether the observed effect holds across diverse music types, we used a third piece of background music (distinct from the two pieces used earlier). Further, we included a *Noise* condition in which participants were asked to listen to background noise (from a regular supermarket environment) to investigate whether the effect could be explained by cognitive load. Finally, in this experiment, we directly tested whether music mitigates the effect of instrumental attributes on purchase intentions; specifically, we examined whether music attenuated the effect of price while augmenting the effect of intrinsic attitudes on purchase intentions. The results revealed that (1) among participants in the *Music* condition, the more (less) participants liked snacks intrinsically, the more (fewer) snack items they purchased; (2) this effect however did not manifest in the *Noise* condition; (3) whereas participants in the *Control* and *Noise* conditions were influenced by product prices but not their intrinsic attitudes toward snacks in their purchase decisions, those in the *Music* condition were influenced by their intrinsic attitudes but not by price.

Finally, studies 3 and 4 provided support for the hypothesized self-focused-attention mechanism for the effect. In **Study 3**, 52 participants were asked to complete the "Linguistics Implications Form" (LIF; Wegner and Giuliano 1980, 1983) when exposed to background music or not. The form comprises 20 ambiguous sentences that participants had to complete by selecting the pronouns that seemed to fit best; self-focused attention was measured by counting the number of first-person singular pronouns (e.g., I, me, my, mine) that participants chose. The results revealed that participants in the *Music* condition selected more first-person pronouns than those in the *Control* condition, demonstrating greater self-focused attention when exposed to music. We replicated these results conceptually in **Study 4** (N=85) in which half the participants were asked to recall and describe a piece of music that they had listened to, whereas the other half of the participants, a book that they had read. Subsequently, all participants completed the LIF as in experiment 3. Again, participants who thought about a piece of music chose more first-person pronouns than those who thought about a book.

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It Can't Be That Bad If It Smells This Good: Do Pleasant Ambient Odors Diminish the Persuasiveness of Fear Appeals?

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Ambient scenting is now used to calm patients in hospitals (Chappell 2004), psychiatric and substance abuse clinics (LaTorre 2003), assisted living facilities (Ventura 2012), and dental offices (Alsever 2006). And research conducted in dental offices has found that pleasant odors can reduce patients' anxiety levels (Kritsidima, Newton and Asimakopoulou 2010, Lehrner et al. 2005). While such efforts are laudable in terms of their desire to put patients at ease, they may nevertheless result in unintended consequences. Specifically, if pleasant ambient odors reduce feelings of fear and anxiety, they may diminish the effectiveness of fear appeals received in such contexts.

To test these ideas, a pretest (n=30) was first conducted to select two scents (lavender and peppermint) based on pleasantness ratings. Then a main study was conducted, in which participants (n = 236) were randomly assigned to one of six cells in a 3 (scent condition: lavender, peppermint, unscented control) x 2 (message type: low threat, high threat) full factorial. Participants watched an overhead projector screen that featured a pre-recorded presentation of slides containing information about colon cancer. Half were exposed to a low threat message; half to a high threat message. While viewing the message, the scent of lavender, peppermint, or no scent was emitted into the room atmosphere by an electric diffuser.

Fear arousal was measured with four items assessing the extent to which participants reported feeling: fearful, uncomfortable, tense, and nervous while viewing the message (1 = not at all to 5 = extremely; $\alpha = .74$). We conducted an analysis of variance (ANOVA) on fear arousal as a function of scent condition (peppermint, lavender, no scent) and message type (high versus low threat). Scent condition, message type, and the interaction between these two factors were all significant (p's < .05). Inspection of the means shows that peppermint produced less fear (M = 1.45) than did lavender (M = 1.84, $p < .05$) or the unscented control (M = 2.04, $p < .01$) in the low threat message condition, but not in the high threat message condition (p's > .10).

We measured perceived threat of colon cancer with agreement to these items: "You may have first stage colon cancer," "You may have last stage colon cancer," "Your close relatives/friends have colon cancer," "Your close relatives/friends are dying of colon cancer" (1 = not at all, 5 = extremely; $\alpha = .87$). An ANOVA on this measure showed that scent condition, message type, and their interaction were all significant (p's < .05). Perceived susceptibility to the threat was lower in the presence of peppermint for those exposed to the low (not high) threat message ($M_L = 2.14$ vs. $M_H = 2.89$, $p < .01$). A similar pattern was not observed in the presence of lavender ($M_L = 3.10$ vs. $M_H = 3.12$, $p > .95$) or in the unscented control condition ($M_L = 3.12$ vs. $M_H = 3.48$, $p > .10$).

We then conducted a mediation analysis (Baron and Kenny 1986, Preacher and Hayes 2008) to see whether the peppermint scent (IV), by reducing fear (mediator), accounts for the reduced perceived susceptibility to the threat of colon cancer (DV). The continuous variables were mean-centered and the nominal variables were dummy coded for the analyses. We find that the peppermint scent (IV; t = -4.43, $p < .01$) reduces the perceived threat of contracting colon cancer (DV; controlling for the other scent conditions, message type, and their interactions) as well as feelings of fear (mediator, t = -3.50, $p < .01$). Fear (the mediator, t = 2.28, $p < .05$) predicts the perceived susceptibility to the threat (DV) while controlling for peppermint scent (IV, t = -3.84, $p < .01$), whose impact is diminished when the mediator is added to the regression. Further, a nonparametric test of the indirect effect of fear confirms that a 95% bootstrapped confidence interval around it does not contain zero (-.2747 to -.0064). Thus we find that the presence of a peppermint ambient odor while receiving a fear appeal reduces the negative emotional response the message produces, which in turn, reduces perceptions of how susceptible one is to the disease.

One of the implications of the current research for practitioners is that scare tactics may fall on "deaf ears" in pleasantly scented environments, unless the messages are sufficiently threatening. Noncompliance with message prescriptions is therefore more likely when environments have been designed to reduce patient anxiety levels. Medical providers and social marketers may want to take such possibilities into consideration in environmental factor planning.

8.6 *Individual Papers:* Distance Makes the Mind Go Abstract: Psychological Distance and Construal Level

Room: Madero B

Chair: Ernest Baskin, Yale University

Influence of Spatial Reference Frame on Store Preference and Choice

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Imagine a common scenario where a consumer checks her GPS on her smart phone to look for restaurants in the vicinity. The map reveals two restaurants along with other landmarks (e.g., college, supermarket). Research in spatial cognition (Klatzky, 1998) labels processing each restaurant location with reference to either the other restaurant or other landmarks nearby (e.g., west of college) as allocentric reference frame, whereas processing restaurant location with reference to self (e.g., left of me) is classified as egocentric reference frame. If both restaurants are at similar distance from consumer's current location, and one (*other*) restaurant is likely to have more younger (*mixed age*) clientele since it is closer to a college (*supermarket*), will reference frame of a (younger) consumer influence her preference and choice of restaurants/stores varying in social distance (younger clientele and thus, similar and closer; mixed age customers and thus, dissimilar and farther)? Similarly, a consumer wants to purchase medicine and her GPS shows two pharmacies, both at similar distance but one is at an intersection of two streets and thus, likely to be more crowded than the other which is down one of the streets. Will reference frame influence her preference and choice of pharmacy/stores varying on social density?

We investigate these questions and posit that because egocentric (*allocentric*) frame fosters local (*global*) representation (Chen, Chang, & Chang, 2009) and analytical (*holistic*) processing, it evokes concrete (*abstract*) construal and increases preference for stores visited by similar (*dissimilar*) shoppers, and less (*more*) crowded stores. Prior research has ignored the influence of spatial representation on store choice. Similarly, even though Eroglu, Machleit, and Barr (2005) have examined antecedents and consequences of retail crowding, they have ignored moderators that make more vs. less crowded stores more attractive to shop. Finally, research in social distance has not investigated its influence on store preference.

Next, we argue that egocentric (*allocentric*) frame evokes concrete (*abstract*) construal resulting in preference of less (*more*) crowded stores, and of stores visited by similar (*dissimilar*) others. Egocentric representation of two stores constitutes sequential directional information from a person's location to each store (Chen et al., 2009) where individuals focus on each store separately and emphasize on parts (vs. whole), implying analytical processing and concrete construal (Förster, 2009). Conversely, allocentric representation constitutes location information of one store relative to the other (Klatzky, 1998) where individuals focus on gestalt like relationship between locations (Chen et al., 2009) and emphasize on whole (vs. parts), implying holistic processing and abstract construal. Next, Vallacher and Wegner (1989) have shown that people under concrete (*abstract*) construal develop an external (*internal*) locus of control and believe that external environments (*they*) control outcomes in their life. This is likely to make them avoid crowded stores (Hui and Bateson, 1991) which they might believe would obstruct their shopping. Thus,

H1: Reference frame influences consumers' preference/choice of stores varying in social density whereby egocentric (*allocentric*) frame increases preference towards less (*more*) crowded stores.

H2: Construal level mediates the influence of reference frame on preference/choice of stores varying on social density.

Next, research on social distance (Trope & Liberman, 2010) suggests that distal or dissimilar (*proximal or similar*) others' behaviors are construed abstractly *(concretely).* Thus, consumers egocentric (*allocentric*) frame with concrete (*abstract*) construal are drawn towards stimuli that are construed concretely (*abstractly)* (Zhao & Xie, 2011), which in this case are stores frequented by similar (*dissimilar*) shoppers, because they are congruent. Therefore,

H3: Reference frame influences consumers' preference of stores varying in social distance whereby egocentric (*allocentric*) frame increases preference/choice towards stores visited by similar (*dissimilar*) shoppers

H4: Construal level mediates the influence of reference frame on preference/choice of stores varying on social distance.

Participants in Study 1 imagined a DVD purchase scenario in social density part of the study. Similar to Brunye and Taylor (2008), we manipulated egocentric frame by providing directions subjects should take from their apartments to reach each of the two equidistant stores, whereas allocentric frame provided directions with reference to other landmarks (Figures 1a, 1b). We communicated social density by showing pictures of a more vs. less crowded store (Bateson & Hui, 1992). After measuring store preference and choice, and a filler task, participants in the social distance part imagined a grocery purchase scenario. Social distance was conveyed by showing greater percentage of shoppers at a store being younger (*older)*, and thus, more similar (*dissimilar*) to undergraduate participants (Appendix A). Subjects provided their store preference and choice ratings. Reference frame manipulation check (Appendix B) results confirmed that more allocentric vs. egocentric frame subjects agreed with allocentric item ($\chi^2 = 17.05$, $p < 0.05$) and vice versa for egocentric item ($\chi^2 = 12.03$, $p < .05$). Regression analysis with allocentric (*egocentric*) frame coded as 1 (*0*) and reverse coding of scale items revealed that subjects in allocentric (*egocentric*) frame preferred to shop at a more (*less*) crowded store ($\beta = -.89$, $p < 0.01$), and a store frequented more by dissimilar (*similar*) shoppers ($\beta = -.45$, $p = .05$). Similar results for store choice supported H1 and H3. We conducted Study 2 to test mediation by construal level and generalize results of Study 1 by flipping store pictures and two purchase scenarios. We followed same procedure as in Study 1 and measured construal level by asking participants to categorize 20 grocery items in as many-few groups as they deemed fit. We expected abstract (*concrete*) construal to think broadly (*narrower*) and use fewer (*more*) categories (Trope & Liberman, 2010). Results were consistent with those of Study 1 supporting H1 ($\beta = 1.12$, $p = .01$) and H3 ($\beta = 1.24$, $p < 0.05$). For the sake of brevity, mediation analyses results are provided in Figures 2a and 2b. The results show that construal level mediates the main effect of reference frame on store preference/choice varying in social density and social distance supporting H2 and H4.

We contribute to marketing literature by introducing the concept of spatial reference frame and showing how it affects consumers' preference of stores varying on social distance and social density.

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Moving on and away: Psychological closure increases temporal and probabilistic psychological distance
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Psychological closure is the feeling of completeness of an experience, providing a feeling of *pastness* or distance between an experience and the current time (Beike, Adams et al. 2007). A same event can feel like it happened yesterday or like ancient history (Van Boven, Kane et al. 2010), and the notion of closure is important to consumer researchers because it may influence evaluations of the time since a product or service failure, or the likelihood that similar negative events will reoccur. In turn, this could affect the

likelihood of consumers retaliating against a brand, likelihood of re-trying or reconsidering a brand, as well as decisions about insurance to protect from similar outcomes.

In this research, we examine how closure influences evaluations of psychological distance from negative product experiences. We propose and test the role of emotional intensity as a mediating mechanism. Prior research has shown that closure alleviates negative emotion (Beike and Wirth-Beaumont 2005; Li, Wei et al. 2010) and that emotional intensity and psychological distance have a negative relationship (Van Boven, Kane et al. 2010). In the present research we link these constructs to demonstrate that psychological closure is a significant determinant of psychological distance, both perceived temporal distance in Studies 1 and 2, and perceived probabilistic distance in Studies 3 and 4. Further, we explore the role of emotional intensity as both mediator (Study 1 to 4) and moderator (Study 3 & 4) of this process.

Our findings show that, when people experience closure on a negative event, they feel as if the event happened a longer time ago and that a similar problem is less likely to reoccur. This perception was reflected in perceived product quality, purchase intention, and willingness to purchase insurance.

Study 1 was conducted in a university with a top ranked football team. The negative consumer experience was the team's previous football season, which was one of the worst in the school's history. All participants first read a short news clip reminding them of the overall abysmal performance of the team during the season. Next, depending on condition, participants were instructed to provide reasons why they would consider the prior year's football season as "closed" or "not closed." This manipulation task has been successfully used in previous literature (Beike, Adams et al. 2007; Beike, Adams et al. 2010) and was used in all 4 studies of this research. After the closure manipulation, participants reported on 11-point scales their felt emotions (i.e. frustrated, upset) when thinking about the football season. Finally, using measures from previous research (Van Boven, Kane et al. 2010), participants provided perceived temporal distance from the previous football season (0 = *Feels like yesterday*, 10 = *Feels far away*; 0 = *Feels very close*, 10 = *Feels very distant*). As predicted, participants in the high (vs. low) closure condition reported greater temporal distance (*M* = 7.2 *vs.* 5.4; *p* = .003), which was mediated by a significant reduction in emotional intensity (n boots = 5,000; 95% CI(.095, .822)). Study 2 further examined the mechanism by manipulating both closure and emotionality of the experience, and by looking at embarrassment rather than a loss as the negative experience (Dahl, Manchanda et al. 2001). Participants first recalled an embarrassing moment from the past and described it in either an emotional or emotionless manner depending on condition. Next, participants completed the closure manipulation as in study 1. As predicted, there was a significant interaction between closure and description emotionality. Those in the emotional description condition reported significantly higher perceived temporal distance in the high (vs. low) closure condition (*M* = 6.78 *vs.* 5.19; *p* = .004) while there was no significant effect of closure in the low emotion condition. The moderated mediation was also significant. In the emotional description conditions, emotional intensity significantly mediated the effect of closure on perceived temporal distance (n boots = 5,000; 95% CI(.234, .75)), but no effect or mediation was found in the low emotion description condition.

Study 3 and 4 further expanded these results by examining closure on probabilistic distance. In study 3 participants read a negative product review and were instructed to write about why the experience could be thought of as closed or not closed, depending on condition. Participants in the high (vs. low) closure condition thought the likelihood of the problem reoccurring was lower which was also reflected in their evaluations of product quality and purchase intention (*M* = 3.85 *vs.* 3.37; *p* = .032). This was mediated by significant changes in emotional intensity (n boots = 5,000; 95% CI(.015, .213)).

Study 4, like study 2, manipulated both closure and emotionality on participants' own negative product experiences, by manipulating whether participants wrote about it in either an emotional or pallid style, and by whether or not the experience could be considered closed or not. The predicted interaction revealed that, when participants described the event in an emotional manner, high (vs. low)

closure led to a lower willingness to purchase insurance that would protect them from that problem in the future ($M = 3.86$ *vs.* 5.81; $p = .001$). The same moderated mediation pattern as Study 2 emerged. In the emotional description conditions, emotional intensity significantly mediated the effect of closure on probabilistic distance (n boots = 5,000; 95% CI(-.486, -.003)), but no effect or mediation was found in the emotionless description condition.

To summarize, our results demonstrate how closure increases psychological distance as mediated though emotional intensity. With closure participants feel events happened longer ago (Study 1 & 2) and were less likely to reoccur (Study 3 & 4). Manipulation of emotionality and mediation analysis shows how emotional intensity underlies this effect. The findings contribute to the literature on psychological closure and psychological distance by finding it a new consequence and determinant, respectively.

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The Benefits, and Drawbacks, of Strategic Distraction: The Role of Construal Level

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Although most people contend that thoughtful deliberation tends to produce superior decisions, many also agree that too much thought can induce confusion and sometimes undermine judgments. The most provocative support for the minimization of deliberate thought comes from several studies conducted by Dijksterhuis and his colleagues (e.g. Dijksterhuis, et al., 2006). This research increased the debate about the strengths and weaknesses of distraction as a strategic decision tool (for meta-analyses see Strick, et al., 2009, and Acker, 2008).

Rather than joining this debate, a useful approach at this point might be to focus our attention on a more fundamental question, "why does distraction only improve *some* decisions?" In other words, what happens to the information during periods of distraction? To this point the literature has not addressed the specific mechanism that might underlie the interesting effects that have been found following periods of distraction. It is our belief that distracting oneself from the task at hand creates a sense of distance from the issue. We draw on a corpus of work concerning both psychological distance and construal level theory (CLT) (Liberman and Trope 2008) to test specific predictions about the usefulness of strategic distraction as a decision-making tool. According to these theories, increasing psychological distance allows one to see the proverbial forest through the trees by enhancing higher-level, more abstract thinking. This can increase the integration of complex information, while also hindering effective decision-making on tasks that require lower-level, more concrete thinking.

Experiment 1 provided a simple initial test of the hypothesized relationship between construal level and strategic distraction by replicating a fundamental result found in support of CLT by Liberman et al., (2002). Participants viewed a list of camping items and were asked to group the items into logical groups. Consistent with prior research from CLT, we found that when a period of distraction followed the viewing of the list (as opposed to an equal 2 minutes of thoughtful deliberation) participants grouped the items into larger more inclusive groups – indicated a greater propensity for information integration. This difference held even when the number of items recalled was included as a covariate (i.e. although deliberation resulted in more items being recalled, this did not account for the difference we found in grouping between the two groups (distraction and deliberation).

In the second experiment participants were randomly assigned to one of four conditions. Specifically, participants were asked to either deliberate on an image, or to complete an unrelated task, for two minutes. In addition, they were also randomly assigned to complete a task that should be hindered or aided by a period of distraction as a result of the hypothesized change in construal level. In one task, participants viewed a series of fragmented pictures and attempted to perceptually integrate and recognize them. Such an integrative task should benefit from a period of distraction. In the other task, participants were asked to view an image with low-level features that

they would then need to recall (i.e. they were asked to view, and then draw a black and white image of an airplane). Consistent with the hypothesized role of changes in construal level following periods of distraction, a significant 2-way interaction indicated that performance on the image completion task benefitted (was hindered) by a period of distraction (a period of deliberation), while performance on the recollection of low-level details (e.g. number of windows, tail flaps, etc.) was hindered (improved) by a period of distraction (a period of deliberation).

In a final study, a randomized 2x2 design was used to provide additional evidence for the role of construal level on distraction while also providing evidence for the practical implications of the role of construal level on periods of distraction. In this study participants were exposed to two-part messages that were framed in either an abstract or concrete manner and the parts were interrupted by either a period of distraction or deliberation. A significant 2x2 interaction was found which indicated that a period of distraction improved (reduced) perceptions of a message that relied on more abstract (concrete) language and that conversely, a period of deliberation resulted in reduced (improved) perceptions of a message that relied on more abstract (concrete) language. Mediation analysis provided evidence for the role of processing fluency on the evaluations of the promotional messages. Importantly, a control condition in which the two parts of the message were unrelated showed no differences between periods of distraction and deliberation, which indicates that the role of construal level is a result of changes in psychological distance between the message and the decision-maker, and not simply a priming effect that may have resulted from the distraction or deliberation tasks themselves.

Overall, these studies provide important empirical insight into the inconsistencies found in previous studies with respect to the effectiveness of strategic distraction. Whereas work by Payne et al. (2008) indicates that certain boundary conditions can limit the advantage of distraction when rendering complex decisions, the present study offers a theoretical explanation for why this might be so. Specifically, we find that compared to individuals who engage in deliberate consideration, those who are distracted before making a judgment construe the information in a more abstract (versus concrete) manner. This implies that any advantage offered by distraction should be limited to contexts in which decisions are likely to benefit from abstract as opposed to concrete cognition - an observation that nicely aligns with Payne et al.'s (2008) findings. Our hope is that by gaining a better understanding of how a period of distraction operates at a cognitive level, we can not only better illuminate other boundary conditions that limit the advantage of this strategy, but also better anticipate the precise kinds of decision and judgment tasks for which active deliberation or distraction is best suited.

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What was I Thinking?: Effect of Construal Level on Memory-Based Choice
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Construal Level Theory (CLT) argues that one's construal level, or the degree to which one represents information concretely vs. abstractly, has a broad influence on attitudes, choice, and related behavior (Trope & Liberman, 2010). Despite the theory's wide impact, a fundamental aspect of the theory's mechanism is still unclear. Consider a situation where information is encountered long before a decision relevant to that information will be made. For example, consumers encounter most advertisements far from the moment of choice. This type of situation raises an important question about how construal operates: does abstract construal at the time of encountering a stimulus determine the effect of that stimulus on a later choice or does the concrete construal at the time of choice determine the effect of the previously encountered stimulus? In other words, does construal operate at encoding, causing the memory representation to reflect the encoding level of construal or does construal operate at the time of retrieval via differential weighting of information from a construal-free memory representation? In our research, we examine decisions where all the information has been learned before at the moment of choice to discriminate an encoding and a retrieval account of CLT effects.

Across all studies, we use a single paradigm in which participants learn information at one point in time (with or without making a choice) and later make a choice based on their memory of the information they saw before. Construal level at exposure and final choice were independently manipulated.

In Study 1, participants were asked to choose between 2 restaurants that involved desirability/feasibility tradeoffs at time 1. Construal level was manipulated by asking participants to choose a restaurant for this evening or an evening six months from now. Past research suggests that people choosing for a distant point in time have a high construal level and focus on desirability rather than feasibility attributes (Liberman & Trope, 1998). After completing a series of unrelated tasks for 10 minutes, participants were asked to choose between the same two restaurants under either the same or a different temporal construal. This time no information about the restaurants was presented, leaving participants to rely on their memory of the restaurants. An attentional mechanism would produce a main effect of time 1 construal on time 2 choice or an interaction while a weighting mechanism would predict only a main effect of time 2 construal. Only a main effect of time 2 construal was found suggesting that construal level does not influence memory representations, but rather operates through an attribute weighting mechanism.

In study 1, memory for the restaurants' attributes was near ceiling (because of an artificially small number of attributes) which suggests an alternative explanation for the effects: construal level at encoding did not matter because everything was easily remembered. In study 2, participants were asked to pick between vacations with tradeoffs on 8 attributes (4 desirability and 4 feasibility attributes), a situation where memory should be far form perfect allowing a better test of encoding construal effects. Construal was again independently manipulated at encoding and at choice using temporal distance. Again, an analysis of time 2 preferences showed only a significant main effect of time 2 construal suggesting that construal was operating at retrieval but not at encoding. Consistent with this idea, desirability and feasibility attribute recall did not differ between conditions and a mouselab type measure showed that participant attention focused equally on both desirability and feasibility attributes at encoding.

While studies 1 and 2 asked for a choice at time 1 as well as time 2, study 3 did not ask for a choice at time 1 in order to show that choice is not required to establish product memory. Also, we used different types of construal manipulations at time 1 and time 2 to avoid artifactual dominance of the time 2 construal manipulation. Construal at time 1 was manipulated using the how?/why? manipulation that has been shown to reliably change construal level (Freitas, Gollwitzer, & Trope, 2004) while construal at time 2 was manipulated using a temporal distance manipulation similar to those used in the earlier experiments. The results showed only a main effect of time 2 construal consistent with the idea that construal operates only at retrieval.

Finally, to generalize our results to a longer time span, Study 4 used choices between restaurants but with a full day between information exposure and choice. Results were consistent with our previous studies.

In sum, across a series of four studies manipulating the construal level under which participants learned information as well as retrieved it to make choices, we find that construal level at final choice is a major factor in decisions, for both long and short delays. Furthermore, these findings have theoretical implications for CLT suggesting that construal does not seem to influence attention or memory representations, instead operating primarily through attribute weighting at the moment of choice.

We are currently in the process of exploring the intricacies of memory representation under construal. For instance, do temporal construal manipulations act differently than incidental manipulations of construal under certain conditions? Are decisions and subsequent reevaluations made differently depending on whether the construal is related to the decision in question?

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