21st Annual
Robert Mittelstaedt Doctoral Symposium Proceedings

March 29 – 31, 2012

Doctoral Research in Marketing

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ACKNOWLEDGEMENT

The Marketing Department would like to thank the Dean Donde Plowman and the Dean’s Office in the College of Business Administration for the partial financial support for this symposium. We also thank Michelle Jacobs for all of her assistance in organizing the symposium.

ROBERT MITTELSTAEDT DOCTORAL SYMPOSIUM

"The word “symposium” comes from the Greek word “symposion” which, in turn, derives from the Greek verb “sympeninein” which means to drink together. The Merriam Webster dictionary defines symposium as “a convivial party with music and conversation” or “a social gathering at which there is free interchange of ideas.” While the music may be in short supply, I trust that all of you – and especially those of you for whom this is your first time at a meeting like this – find this symposium both intellectually stimulating and socially rewarding. So, again, welcome to the Robert Mittelstaedt Doctoral Symposium."

- Robert Mittelstaedt

Dr. Robert Mittelstaedt retired on August 31, 2002, after 29 years of contributions to the University of Nebraska–Lincoln, College of Business Administration, Marketing Department and our graduate program.

Doctoral students share a common link to Bob. He was more than a fine educator, scholar, and academic citizen. He was also their mentor, friend, counselor, and supporter. He motivated them with his insights, kindness, and countless stories. He stimulated their ideas, made them smile, and warmed their spirits. In addition, Bob and Venita opened their home and hearts to many doctoral students and gave them many forms of moral support. Bob dedicated his career to doctoral education and has served as a role model to both doctoral students and junior faculty.

Bob also introduced macromarketing theory and issues to doctoral students and inspired them, for over 40 years. He has been more than a fine educator and scholar. His insights, seminars, and dedication to the Journal of Macromarketing and Macromarketing Conferences motivated their investigations of important issues in the field, presentations at the Conferences, and publications in JMM.

Despite being retired, Bob was lured back to the department for the 2004 and 2005 fall semesters to teach doctoral seminars.

At the time of Bob’s retirement, the faculty in the Department of Marketing decided to rename the Nebraska Doctoral Symposium to the Robert Mittelstaedt Doctoral Symposium in honor of Bob’s accomplishments at the University of Nebraska–Lincoln.
If you would like to support the Robert Mittelstaedt Doctoral Symposium, send a check made payable to University of Nebraska Foundation (with Mittelstaedt Symposium in the memo area) and forward to the UNL Marketing Department, PO Box 880492, Lincoln, NE 68588-0492
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PROGRAM

21ST ANNUAL ROBERT MITTELSTAEDT DOCTORAL SYMPOSIUM
MARCH 29 – 31, 2012

THURSDAY, MARCH 29 – AFTERNOON

Guests check in at the Embassy Suites, 1040 P Street, (402) 474-1111

THURSDAY, MARCH 29– EVENING (DRESS CASUALLY)

7:00 - 10:00 Welcome Reception and Cocktail Party
Van Brunt Visitors Center, 313 North 13th Street
Finger-foods will be served

FRIDAY, MARCH 30 – MORNING (DRESS PROFESSIONALLY)
LOCATION: REGENTS A

Breakfast available for guests staying at the Embassy Suites

7:45 – 8:00 Welcome
Dr. Jim Gentry, Mittelstaedt Doctoral Symposium Coordinator
Associate Dean Ravi Sohi, Steinhart Foundation Distinguished Professor of Business, College of Business Administration
Dr. Robert Mittelstaedt, Nathan J. Gold Distinguished Professorship in Marketing, Emeritus

8:00 – 8:30 The Psychological Effects of Perceived Scarcity in a Retail Setting and Its Impact on Consumer Buyer Behavior
Shipra Gupta, University of Nebraska–Lincoln

8:30 – 8:40 Discussant: Ashley Otto, University of Cincinnati

8:40 – 8:50 General Discussion

8:50 – 9:00 Break

9:00 – 9:30 Social Disruption in Images of Consumption
Erika Paulson, University of Wisconsin-Madison

9:30 – 9:40 Discussant: Jessica Mikeska, University of Nebraska–Lincoln
9:40 – 9:50  General Discussion

9:50 – 10:00  Break

10:00 – 10:30  **Gaining Entry into Evaluative Consumption Experiences and the Assessment and Awarding of Capital**  
Mya Pronschinske, University of Wyoming

10:30 – 10:40  Discussant: Christopher Lee, University of Oregon

10:40 – 10:50  General Discussion

10:50 – 11:00  Break

11:00 – 11:30  **The Effect of the Variance of User Reviews on Sales: The Moderating Effect of the Variance of Critic Reviews**  
Xuefeng Liu, University of Illinois at Urbana-Champaign

11:30 – 11:40  Discussant: Vamsi Krishna Kanuri, University of Missouri

11:40 – 11:50  General Discussion

11:50 – 1:00  Lunch in the Atrium, P Street Dining area, Embassy Suites

**FRIDAY, MARCH 30 – AFTERNOON**  
**LOCATION: REGENTS A**

1:00 – 1:30  **Exploring Differences in Service Provision in Atypical Services: An Ethnographic Case Study of Service Delivery in Social Services**  
Steven Rayburn, Oklahoma State University

1:30 – 1:40  Discussants: Younhee (Erin) Ha, University of Illinois at Urbana-Champaign and Elise Riker, Arizona State University

1:40 – 1:50  General Discussion

1:50 – 2:00  Break

2:00 – 2:30  **Consumer Brand Relationships and Self-Enhancement: The Interactive Effects of Consumers’ Brand Engagement in the Self and Self-Esteem on Brand Behaviors**  
Richie L. Liu, Washington State University

2:30 – 2:40  Discussant: Olalekan Seriki, University of Oklahoma
2:40 – 2:50 General Discussion
2:50 – 3:00 Break
3:00 – 3:30 **Relativistic Additive and Multinomial Logit Model**
Xin Wang, University of Cincinnati
3:30 – 3:40 Discussant: Tae-Hyung Pyo, University of Iowa
3:40 – 3:50 General Discussion
3:50 – 4:00 Break
4:00 – 4:30 **No Good Deed Goes Unpunished: Citing Sources in Print Advertising Claims**
Leslie Koppenhafer, University of Oregon
4:30 – 4:40 Discussant: Akshaya Vijayalakshmi, Iowa State University
4:40 – 4:50 General Discussion

**FRIDAY, MARCH 30 – EVENING (DRESS CASUALLY)**
**LOCATION: REGENTS DEF**

6:30 – 9:00 Evening Reception and Banquet
  6:30 - Social
  7:00 - Banquet
9:00 – late On your own

**SATURDAY, MARCH 31 – MORNING (DRESS PROFESSIONALLY)**
**LOCATION: REGENTS A**

Breakfast available for guests staying at the Embassy Suites

8:00 – 8:30 **Facing Forward: A Cross Cultural Examination of the Influence of Face in Decision-Making**
Karthik Easwar, The Ohio State University
8:30 – 8:40 Discussant: Mina Kwon, University of Illinois at Urbana-Champaign
8:40 – 8:50 General Discussion
8:50 – 9:00 Break
9:00 – 9:30  Temporal Distance and the Endowment Effect  
Dongwoo Ko, University of Iowa  

9:30 – 9:40  Discussant: Christopher Summers, The Ohio State University  

9:40 – 9:50  General Discussion  

9:50 – 10:00  Break  

10:00 – 10:30  A Neurobiological Investigation of Visual and Verbal Processing  
Meng-Hsien (Jenny) Lin and Kelly More, Iowa State University  

10:30 – 10:40  Discussant: Andrea Webb, University of Wisconsin-Madison  

10:40 – 10:50  General Discussion  

10:50 – 11:00  Break  

11:00 – 11:30  Conflict Resolution through the Principal’s Eyes: A Preliminary Propositional Model  
Aaron Gleiberman, University of Oklahoma  

11:30 – 11:40  Discussant: Bret Leary, University of Wyoming  

11:45 – 11:50  General Discussion  

11:50 – 12:00  Break  

Saturday, March 31 – Afternoon  
Location: Regents A  

12:00 – 12:30  Frontline Displayed Work and Its Customer Satisfaction Consequences  
Sunil Singh, University of Missouri  

12:30 – 12:40  Discussant: Emily Tanner, Oklahoma State University  

12:40 – 12:50  General Discussion  

12:50 – 1:00  Closing
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THE PSYCHOLOGICAL EFFECTS OF PERCEIVED
SCARCITY IN A RETAIL SETTING AND ITS IMPACT
ON CONSUMER BUYER BEHAVIOR

Shipra Gupta, University of Nebraska–Lincoln

ABSTRACT

This paper examines how communication of limited quantity messages by marketers in a retail setting impacts consumers’ purchase intentions. Using a mixed methods approach, the authors explore the phenomenon of perceived scarcity and suggest that, across genders, perceived scarcity creates differential behaviors. Unlike their conventional apparel buying behaviors, males under the condition of perceived scarcity are more likely to exhibit behaviors like urgency to buy. Females, on the other hand, under the same condition are more likely to exhibit in-store hoarding behaviors. The moderating role of need for uniqueness is also tested and the results show that, in general, females are more likely to be sensitive to perceived scarcity messages.

INTRODUCTION

Constraining the opportunity to own or experience an object signals product scarcity. It signifies a loss of freedom and, to negate this loss, people tend to desire products on which such limitations are placed. This loss also influences the perceived value and desirability of those objects thus impacting consumers’ choices (Lynn 1991). Marketers make frequent use of this effect in their marketing communications and use phrases like “limit one per customer,” “limited release,” “only while supplies last” or “limited time only.” Research on scarcity messages has often indicated that such messages when used in marketing communications and promotions have a positive effect on the consumers’ choices (Bozzolo and Brock 1992; Brannon and Brock 2001; Campo, Grijsbrechts, and Nisol 2004; Inman, Peter, and Raghubir 1997; Swami and Khairnar 2003). Though scarcity messages highlighting limited availability of an advertised product have been extensively researched in the academic literature (Aggarwal, Jun, and Huh 2011), the impact of ‘perceived scarcity,’ strategically created by a retailer in the retail environment, has received little attention.

Fast fashion brands like Zara, H&M, and Forever 21 do not use explicit signs to promote sales but implicitly signal their target customers with messages like buy now or it won’t be here tomorrow (Barnes and Lea-Greenwood 2010; Dutta 2002; Moore and Fernie 2004). Fast fashion retailers respond to the latest fashion trends by frequently updating products with a short renewal cycle and turning the inventory at a rapid rate (Byun and Strenquist 2008; Dutta 2002). Along with a short renewal cycle and limited supply, deliberate manipulation of merchandise by these retailers facilitates perceptions of perceived scarcity on the retail floor, thereby creating an atmosphere that leads to a sense of urgency among consumers (Byun and Strenquist 2011; Ton, Corsi, and Dessain 2010). Recently these strategies have also been implemented by other fashion retailers like the Buckle who, similar to fast fashion brands, adopt strategies like short renewal cycle, limited supply, and deliberate merchandise manipulation to maintain inventory freshness, thus treating fashion like food that spoils quickly. Despite the success and growth of these brands, researchers have overlooked the importance of explaining consumers’ psychological and behavioral responses to the unique retail offerings of these retailers. Further there has been no theoretical approach offered to explain consumer behavior in such retail environments.

This research thus intends to investigate that how consumers react to perceived scarcity as, created in a retail environment and how it affects their purchase intentions by creating behaviors like urgency to buy and in-store hoarding. We further suggest that the reaction to perceived scarcity will be different across males and females, thus leading to different buying behaviors across these groups. We
also examine the moderating role of the need for uniqueness in influencing the proposed relationships across genders and theoretically propose a mediating role of anticipated regret on perceived scarcity and urgency to buy. This research thus contributes to a broader theoretical foundation of scarcity effects and helps us to understand the behaviors of consumers with respect to perceived scarcity created in a retail environment. The findings of this study also provide insights into how fashion retailers can impact buyer behavior across genders by creating a sense of perceived scarcity in their retail communications and marketing strategies, thus contributing to the literature on shopping behavior across genders.

**SCARCITY**

Scarcity is a dominant aspect of economic behavior (Verhallen and Robben 2004). Previous research has largely reported that scarcity enhances the perceived value of products and opportunities, thus resulting in higher product desirability, increased quantities purchased, shorter searches, and greater satisfaction with the purchased product (Aggarwal, Yun, and Huh 2011; Lynn 1991). As suggested, scarcity has a positive effect on preferences, but it tends to impact preferences only when consumers believe that market forces (i.e., forces related to demand and supply) create scarcity (Verhallen and Robben 1994). When consumers believe that scarcity is created accidentally or by non-market forces such as a missed order or failed delivery, then scarcity effects on preferences are not found.

There are two different ways to communicate the scarcity of a commodity: limited-time scarcity and limited-quantity scarcity (Cialdini 2008). Under limited-time scarcity (LTS), the offer is made available for a particular period of time, after which the offer becomes unavailable (e.g., “Sale ends this Friday”). Thus the degree of scarcity increases with the course of time. However, in a limited-quantity (LQS) scarcity, the promotional offer is made available for a particular quantity of the product and the degree of scarcity increases with each unit sold (e.g., “Only 100 units available at this price”). Furthermore, quantitative scarcity can arise due to changes in supply or demand, whereas scarcity due to limitation in time can only be due to the supply side (Gierl, Plantsch, and Schweidler 2008). Quantitative scarcity due to supply constitutes itself by a limitation of the available units on the part of the retailer. The classical application of this type is the ‘limited edition’ in which the retailer sets the market quantity and the relevant product is not available after the complete sell-out.

LTS is different from LQS because in LTS, a consumer does not compete against other consumers. As LTS implies that the deal will be there for a particular period of time, the consumer simply has to meet the deadline set by the seller in order to take advantage of the promotional offer (Aggarwal, Jun, and Huh 2011). In contrast, an LQS offer is restricted to a set number of units. Every time an individual purchases a unit, the remaining number of units available for purchase decreases, thus creating a sense of uncertainty. The uncertainty makes an LQS offer seem more restricted and makes it more special, thus amplifying the value of the offer (Bolton and Reed 2004). LQS messages thus motivate consumers to compete with one another for the limited number of items available for purchase. Another reason LQS is more effective than LTS is due to the locus of causality (Meyer 1980). The locus of causality is considered to be internal if one can attribute a phenomenon to factors located with oneself and external if those factors lie outside the individual. Studies suggest that consumers experience more positive feeling if a discount is attributed to internal factors. As LQS is based on a first-come-first basis, consumers benefitting from LQS promotion thus credit themselves for the savings. In case of LTS, the opportunity to take such personal credit is limited thus making LQS more effective than LTS.

The effects of scarcity have largely been examined in the context of advertising messages. Inman, Peter, and Raghubir (1997) and Suri, Kohli, and Monroe (2007) demonstrate that the presence of scarcity in messages actually enhances consumers’ thoughtful analyses. The findings in both the studies suggest that individuals are more motivated to process messages which have scarcity appeals connected to them. Studies also suggest that scarcity messages not only increase the choice of a good, but also increase the willingness to pay (Mittone and Savadori 2009). Swain, Hanna, and Abendroth (2006) studied the impact of promotional messages on consumers’ purchase decisions.
restrictions, especially time restrictions, in influencing consumer purchase intentions. Their findings predict that time restrictions lower purchase intentions by lowering deal evaluations but also suggest that time restrictions increase purchase intentions by creating sense of urgency and anticipated regret. Eisend (2008) examines the impact of scarcity appeals in mass media and suggest the role of ‘third-person effect” in enhancing value perceptions and, subsequently, purchase intentions. The study suggests that people when exposed to scarce product announcements take into consideration the perceived influence of self and the perceived influence on others which further impact their decision making. Further, Aggarwal, Jun, and Huh (2011) examined the relative effectiveness of LTS and LQS appeals in advertisements and the role of brand concept in the relationship between scarcity and purchase intentions. The most significant finding of the study is the differential impact of different types of scarcity messages on consumer purchase intentions, with LQS being more effective than LTS. The study also supports the interaction between scarcity messages and brand concept and suggests that restricted offers will affect purchase intentions more for a symbolic brand than for a functional brand. Lastly, the effects of scarcity messages have also been examined across cultures (Jung and Kellaris 2004). Their findings from a shopping simulation experiment show a positive effect of scarcity on purchase intentions among the participants from a low-context culture as compared to participants from a high-context culture. The study also suggests that the effect of scarcity across cultures is further moderated by product familiarity, uncertainty avoidance, and need for cognitive closures.

Recently, research has examined the impact of scarcity in retail environments. For example, the influence of product scarcity as communicated by empty shelf space in retail stores was examined by Parker and Lehmann (2011) and Van Herpen, Pieters, and Zeelenberg (2009). These studies suggest that shelf-based scarcity in the form of relative stocking level depletion significantly affects consumer preferences and thus promotes increased sales. Nichols (2012) suggests scarcity to be an important antecedent for consumer competitive arousal, where consumers compete to strive against others and thus make their choices accordingly.

The current study suggests that fast fashion retailers strategically create the perception of ‘perceived scarcity’ in their retail stores. We define perceived scarcity as product shortage experienced by the consumer for a particular style or size that is strategically created by the retailer. Product availability is deliberately restricted by inducing quantity constraints such as limiting product quantity per style, thus communicating ‘limited quantity messages’ to the consumers. Further these retailers deliberately adopt strategies like continuous shuffling of merchandise within and across stores, rarely restocking or reselling the merchandise once sold to communicate product unavailability to the consumer. For example, Zara stores besides stocking limited quantities of products per style on the retail floor, differentiate between major sizes (e.g. S, M, L) and minor sizes (e.g. XXS, XXL) and, upon realizing that the store has run out of one of the major sizes for a specific style, move all of the remaining inventory of that style from the retail floor, thus creating a perception of perceived scarcity in the consumer’s mind (Ton, Corsi, and Dessain 2010).

**Theories Related to Scarcity**

Over the last four decades, two different theories related to scarcity have been studied in social psychology: reactance theory (Brehm 1966; Brehm and Brehn 1981; Clee and Wicklund 1980; Wicklund 1974) and commodity theory (Brock 1968; Lynn 1991). Reactance theory proposes that when an individual experiences a threat to his freedom, s/he experiences psychological reactance, a motivational state directed toward the reestablishment of free behavior. On the other hand, commodity theory views a scarce product as a unique or valuable product to possess.

We will review both these theories in the section below to understand better the factors that impact consumer choice under conditions of product unavailability.
Reactance Theory

Reactance theory focuses on an individual’s reaction to the loss of perceived freedom. According to reactance theory, if an individual’s freedom is threatened or eliminated, s/he experiences psychological reactance, which is a motivational state directed toward safeguarding a person’s behavioral freedom (Brehm 1966; Clee and Wicklund 1980; Wicklund 1974). This motivation leads to an intensified desire to accomplish the restricted behavior and simultaneously increases its perceived attractiveness (Brehm and Brehm 1981). Hence, a product’s limited availability or perceived scarcity can connote a threat or loss of personal freedom and therefore may trigger psychological reactance that leads to increased attention, attraction to the unavailable good, and ultimately, increased consumer motivation to obtain that alternative no longer accessible (Ditto and Jemmott 1989; Markus and Schwartz 2010; Worchel and Brehm 1971). Thus, in a situation where an individual can select between Alternative A and Alternative B and that the person is told to pick Alternative B (threatening the freedom to choose Alternative A), the individual is more likely to choose Alternative A in order to restore the freedom to have it, and hence Alternative A becomes more desirable (Brehm and Sensenig 1966; Crawford et al. 2002).

But reactance to the threatened behavior may also occur in a different way and consumers may actually react negatively to product unavailability (Hannah et al. 1975; Min 2003; Stiller 2011; Worchel and Brehm 1971). Min (2003) suggests that when consumers encounter a threat of an unavailable product, they experience negative feelings that motivate them to move in the opposite direction than what is implied by the threat. Hence, when consumers feel the pressure to select a similar alternative that is inaccessible, they get motivated to avoid the similar alternative and rather select a dissimilar alternative in an effort to assert their freedom to choose (i.e., a boomerang effect). Further, Stiller (2011) suggests that reactance arousal leads to consumers’ variety seeking behavior, which serves as an indirect means to regain freedom.

Commodity Theory

Another theoretical approach that explains psychological effects of scarcity is commodity theory. This theory claims that any commodity will be valued to the extent that it is unavailable (Brock 1968; Lynn 1991). Commodity theory argues that individuals evaluate a product as more attractive when it is scarce rather than abundant. Through the lens of commodity theory, much research has tested the following four relationships: a product will be more attractive (1) when the number of suppliers is small, (2) when a restriction on availability is imposed by the seller, (3) when a consumer has to wait to attain the product, and (4) when the consumer has to make an extra effort to obtain the product (Bozzolo and Brock 1992; Brock 1968; Brock and Mazzocco 2003; Lynn and Harris 1997). Commodity theory further suggests that scarcity effects apparently depend on the following three conditions: (1) commodities must be useful and desirable, (2) they must be transferable from one person to another, and (3) they must have the potential to be possessed.

Overall, commodity theory provides an initial understanding of the scarcity effect and consumers’ reactions to scarce goods, but fails to clarify the behavioral mechanism that underlies this motivational process (Verhallen 1982; Worchel 1992). A notable difference between commodity and reactance theory is the focus on variables, such as the degree of expected freedom that impacts the individuals’ response to the choice constraint. Thus behavioral researchers suggest the dominance of reactance theory over commodity theory in explaining consumer’s decision making process under the conditions of product unavailability (Clee and Wicklund 1980).

In the current study, we examine both perspectives of consumer reactance to the threatened behavior aroused due to perceived scarcity, and suggest that different groups (in this case, males and females) will have different associations with the same situational stimulus (i.e. perceived scarcity), thus leading to different buying behaviors across these groups.
URGENCY TO BUY

We define ‘urgency to buy’ as an urge or a desire of the consumer to buy the product right away, thus limiting consumers’ freedom to delay buying decisions. Other researchers define sense of urgency as a felt need to initiate and complete an act in an immediate or near future (Swain, Hanna, and Abendroth 2006). The felt urge to buy derives from Rook’s focus on the sudden and spontaneous urge to buy something (Rook 1987). As per Beatty and Ferrell (1998), urgency to buy is a state of desire that precedes the actual impulse action and is experienced upon encountering an object in the environment.

Both internal cues and external cues can trigger the urge to buy a product (Wansink 1994; Youn and Faber 2000). Internal cues refer to consumers’ self feelings, moods, and emotional states whereas external cues involve retailer-controlled environmental and sensory factors. Studies suggest that atmospheric cues in the retail environment (for example, sights, sounds, and smells) are important external triggers that influence consumers’ urge to buy (Eroglu and Machleit 1993; Mitchell 1994). Additionally, marketing mix cues such as point-of-purchase, displays, promotions, and advertisements can also affect the desire of the consumer to buy the product right away.

The current study suggests that external cues like ‘perceived scarcity’ which are strategically created by the retailer threaten an individual’s freedom to choose the desired product, thus triggering psychological reactance that leads to increased attention, attraction to the unavailable good, and ultimately, increased consumer motivation to buy the product right away. Thus the generation of perceived scarcity by triggering psychological reactance will create a sudden and spontaneous urge in the consumer’s mind, thereby providing an impetus for action that feeds directly into purchase intention. Thus we propose,

H1: Perceived scarcity created within the retail store will lead to higher urgency to buy among consumers.

IN-STORE HOARDING

In general, hoarding is viewed as a type of inventory accumulation and is exhibited when one perceives high levels of risk for being deprived of the product (Frost and Steketee 1998; McKinnon, Smith, and Hunt 1985). Hoarding behaviors are generally observed for necessity products such as food or natural resources (for example, oil and water) and are motivated by the intense urge for immediate possession of an item due to the fear of scarcity or unavailability of a product (Frost and Gross 1993; Lynn 1993; McKinnon, Smith, and Hunt 1985; Verhallen and Robben 1994).

Researchers define ‘in-store hoarding’ as consumers’ desire to possess an item and keep it for themselves while shopping, although not sure whether they want to buy it or not (Strenquist 2007). It occurs due to a sudden urge to possess the merchandise generated due to certain situational factors like scarcity, uncertainty about product availability, or competition among shoppers. Studies also suggest that in-store hoarding can occur due to promotional factors (e.g., sales or special offers) or appealing product factors (e.g., color, quality, or design) (Frost and Steketee 1998). Thus, in-store hoarding is different from regular buying behavior as consumers possess the product without a clear intention of buying and keep it to themselves until they reach a final buying decision.

Literature further suggests that in-store hoarding delivers diverse experiential value to consumers, which in turn, positively influences their hedonic desires, satisfaction, and repatronage intentions (Byun and Strenquist 2011). In general, hedonic satisfaction is derived from an interaction with a store environment, product or services, or from promotional or marketing activities (Sweeney and Soutar 2001). Consumers through the experience of fun and playfulness associated with the buying process are able to seek hedonic satisfaction (Babin et al. 1994; MacInnis and Price 1987). In-store hoarding by providing interaction with the product makes the shopping experience fun and playful, thus fulfilling
consumers’ hedonic desires and encouraging them to keep coming back (Byun and Strenquist 2011). Thus, retailers by encouraging in-store hoarding can actually differentiate from their competitors and further encourage consumers to increase their loyalty to the brand.

The current study suggests that while shopping, under conditions of scarcity and consumers feeling the urge to buy, they are more likely to be actively engaged with products (for example, trying the product), thereby inducing actions like in-store hoarding behaviors. Thus when consumers find a number of products that they perceive as scarce, they not only feel the urge to buy those products but, in order to examine the different choices and make a right decision, they engage into in-store hoarding behaviors. Thus we propose,

H2: Urgency to buy will lead to higher in-store hoarding behaviors among consumers.

THE INFLUENCE OF GENDER ON URGENCY TO BUY AND IN-STORE HOARDING BEHAVIORS

Comparing shopping behavior across gender is an important market segmentation approach and has been used by many researchers. Researchers have found significant differences between males and females in their shopping behaviors (Grewal et al. 2003; Noble et al. 2006; Ottenes and McGrath 2001; Rohm and Swaminathan 2004). Females as compared to males view the shopping process as a leisure activity (Bakewell and Mitchell 2004; Mitchell and Walsh 2004) and an escape (Fischer and Arnold 1990) and thus spend more time shopping (Allegra 2002; Campbell 1997; Zeithaml 1985), visiting more shops (Campbell 1997), and shopping more often (Dhalokia 1999). Generally females view the process of shopping as a social experience and shop for reasons other than just getting a specific item. On the other hand, males exhibit less patience and try to complete the shopping activity in the shortest possible time (Bakewell and Mitchell 2004), prefer top brands as the symbols of economic power (Underhill 1999), and shop for achievement, the so called “shopping to win” (Grewal et al. 2003; Ottenes and McGrath 2001). Thus males when shopping are characterized by a lack of patience and a desire to finish the shopping activity as soon as possible.

Males and females both have also been found to process shopping decisions differently. Generally, decision making consists of affective and cognitive processes (Coley and Burgess 2003; Youn 2000). The affective process refers to feelings, emotions, and moods whereas the cognitive process refers to thinking, understanding, and interpreting information. Consumers who are more susceptible to affective states are more likely to experience an irresistible urge to buy (Dhalokia 2000; Rook 1987; Youn and Faber 2000). On the other hand, consumers who utilize cognition during decision making are more likely to make rational purchase decisions by evaluating information resulting from browsing, comparison shopping, reference group recommendations, and advertisements. Studies suggest that while shopping, females are more likely to engage in cognitive deliberation as compared to males. Thus, females are more involved in the purchase process (Slama and Tashchian 1985), seek information more actively before making purchases (Zeithaml 1985), have a higher tendency to engage with the products, and think through purchase decisions and their possible consequences (Coley and Burgess 2003). Whereas, males tend to exhibit less cognitive processing while shopping, are less likely to browse, and tend to seek and purchase the items they intend to buy, thus showing urgency in their buying behaviors. These disparities in cognitive tendencies become stronger in the case of clothing shopping, because sociocultural pressures regarding appearance management are stronger for females than for males (Chang, Burns, and Francis 2004).

Wheeler and Berger (2007) further suggest that a shopping prime is capable of activating diverse, and sometimes opposite, effects on consumer choice across genders. They found that the same prime (shopping for clothes) activated different associations (purpose-driven vs. possibility-driven associations) between males and females, thus generating diverse effects on consumer choice. Males when shopping
for clothes are likely to shop only for a specific item and only when that item is needed because they see shopping as need-driven and, hence, are mainly motivated to fulfill that need (Campbell 1997). However, for females, shopping for clothes is more of an experience of discovery because they see shopping as enjoyable and derive satisfaction from the whole process.

The current paper suggests that when males and females are subjected to the same ‘perceived scarcity’ prime, it leads to different choice behaviors between them. Males while shopping, tend to exhibit less cognitive behaviors and associate it with need, thus when they are subjected to perceived scarcity, it triggers psychological reactance that creates a sudden and spontaneous urge to buy. On the other hand, females while shopping, tend to exhibit higher cognitive behaviors and associate it with experience and, thus when they are subjected to perceived scarcity, they react negatively to the product unavailability and hence are motivated to seek variety. Thus perceived scarcity creates a boomerang effect for females, instead of creating an urge to buy the scarce product, they seek into variety in order to regain the freedom, enjoyment, and experience that they seek from shopping. Thus,

H3a: Under the conditions of perceived scarcity, males will have higher levels of urgency to buy as compared to females.

The study further suggests that the relationship between urgency to buy and in-store hoarding behavior is different across genders. As argued above, for females, perceived scarcity creates a boomerang effect and they seek variety in order to regain the freedom, enjoyment, and experience that they seek from shopping. Noble et al. (2006) suggest that for females, interaction with the store environment, and different products and services seems enjoyable and adds to their shopping experience. Further, females like to make more rational decisions by indulging in information seeking, comparing, and engaging with products (Coley and Burgess 2003). Hence, they are more likely to adopt in-store hoarding behaviors as such behaviors will facilitate variety seeking, information seeking, and active engagement with the product, hence making the whole process enjoyable. On the other hand, males are instrumental (need-driven) and are more likely to engage in fulfillment of utilitarian goals or the completion of a specific task (Campbell 1997). Further, socialization theory suggests that males are more time conscious than females (Grewal et al. 2003; Nelson 2000). Henceforth, males should be more motivated to buy the product right away rather than adopting in-store hoarding or engaging with the product. Thus,

H3b: Under the conditions of perceived scarcity, females will have higher levels of in-store hoarding behaviors as compared to males.

This study thus suggests differential impacts of perceived scarcity on consumer buying behavior. Males under conditions of perceived scarcity are more likely to exhibit behaviors like urgency to buy whereas females under the same conditions are more likely to exhibit in-store hoarding behaviors. The study further suggests that the above proposed relationships will be moderated by a consumer’s need for uniqueness.

Need for Uniqueness

The need for uniqueness theory suggests that people, especially in Western culture, have a need for separate identity (Snyder and Fromkin 1977). In order to satisfy the need for separate identity and to reclaim their self-esteem, people thus are motivated to adopt self-distinguishing behaviors. Material expressions that differentiate one from the others are highly valuable as they satisfy the need for uniqueness without risking severe social penalties (Snyder 1992). Individuals thus can fulfill their desire for uniqueness by collecting material goods or possessions (Belk 1988; Snyder and Fromkin 1977; Tafarodi et al. 2004). Thus to pursue self-uniqueness, consumers shop at small, less frequented stores or buy rare and customized products (Burns and Warren 1995; Franke and Schreier 2008). Further as clothes
are an image of self, consumers’ need for uniqueness can also be exhibited by acquiring or wearing clothing that helps them establish a unique personal identity as well as unique social image (Tepper and Hoyle 1996). Thus by acquiring a unique product, a person can restore his/her own self-view.

Given that possessions are often perceived as part of the extended self (Belk 1988), studies further suggest that scarcity can serve as a uniqueness attributes and thus consumers who are high in need for uniqueness are likely to desire scarce products (Snyder and Fromkin 1977; Lynn 1991). Self-image enhancement, which occurs via the transference of symbolic meaning from the purchased product to the self, can easily be achieved by acquiring new, exclusive, or scarce products. Hence, consumers having higher need for uniqueness are likely to respond more positively to limited availability conditions by perceiving limited available products as a way of defining themselves as different from their peers.

The current study suggests that males, when subjected to perceived scarcity, are more likely to exhibit a sudden and spontaneous urge to buy. The study further suggests that this relationship will be stronger for males having higher need for uniqueness, as scarce products will help them fulfill their desire for separate identity (Coley and Burgess 2003). Thus, 

H4a: Under the conditions of perceived scarcity, males with high need for uniqueness will be more likely to exhibit higher levels of urgency to buy as compared to males with low need for uniqueness.

Females, on the other hand, when subjected to perceived scarcity, exhibit in-store hoarding behaviors. This relationship will be stronger for females having higher need for uniqueness as the need for differentiating themselves from others will motivate them to hoard items and seek variety in order to reassert their position as a unique individual (Donthu and Gilliland 1996; Workman and Kidd 2000). Thus, 

H4b: Under the conditions of perceived scarcity, females with high need for uniqueness will be more likely to exhibit higher levels of in-store hoarding behaviors as compared to females with low need for uniqueness.

THE MEDIATING ROLE OF ANTICIPATED REGRET

The majority of research in decision making has focused on cognitive factors but recently a growing body of research has emphasized the importance of emotions in decision making. Research examining the relationship between emotion and decision making has focused on emotions like anticipated regret (Bell 1982; Loewenstein et al. 2001; Loomes and Sugden 1982). These anticipated emotions, though not experienced in the immediate present, are expected to be experienced in the future. Bell (1982) and Loomes and Sugden (1982) explicitly incorporated the anticipatory aspects of regret into their model of decision making, called “regret theory.” According to this theory, the choice decision also depends on the feelings evoked by the outcomes of rejected options. People compare the actual outcome with what the outcome would have been if a different choice had been made, and experience emotions as a consequence of this comparison. These emotions include regret if the foregone outcome was better than the actual outcome and rejoicing if the foregone outcome was worse. Studies suggest that these emotional consequences of decisions are furthermore anticipated and taken into account, especially when making decisions in uncertain situations.

Anticipated regret motivates behavior because regret is a particularly pervasive and powerful emotion that people wish to avoid. Several studies suggest that anticipated regret among consumers leads to choices which are safer, thus showing risk-aversion behaviors (Josephs et al. 1992; Li et al. 2010; Richard et al. 1996). Further, in a consumer context, Simonson (1992) suggests that if consumers anticipate that their purchase decision will turn out badly, they are more likely to buy an item currently on
sale (rather than wait for a possible better sale) and are more likely to buy a well-known but more expensive brand. However, other work suggests that when choosing between alternatives, people tend to make regret-minimizing choices rather than risk-minimizing choices which either can be risk-seeking or risk-avoiding (Hetts et al. 2000; Zeelenberg et al. 1996; Zeelenberg and Beattie 1997).

Swain, Hanna, and Abendroth (2006) examined the impact of consumer promotions (for example, discounts) on anticipated regret and purchase intentions. They argue that discounts impact consumers’ purchase intentions by affecting not only the perceived economic outcome but also emotional outcomes like anticipated regret. The study suggests that during discounts, favorable deal evaluations lead to greater anticipated regret which further heightens a consumer’s sense of urgency. Further, Du, Abendroth, and Chandran (2006) examine the moderating role of perceived scarcity on the effects of anticipated regret in bidding decisions. The study suggests that when the auction item is scarce, anticipated regret over losing the chance to get a bargain is likely to have a dominant effect on bidding. However, when the auction item is not scarce, regret over winning but overpaying is likely to have a dominant effect on bidding.

The current study suggests that perceived scarcity impacts urgency to buy not only directly, but also indirectly by affecting anticipated regret. Retailers, by controlling the amount of product on the retail shelf, facilitate consumers’ uncertainty about product availability. Consumers under the situation of uncertainty are more likely to anticipate the consequences of their decisions and buy the product immediately to avoid the regret of waiting and ending up without the desired product. Thus anticipated regret plays a complex role and partially mediates the effect of perceived scarcity on urgency to buy. Thus,

\[ H5a: \] Perceived scarcity created within the retail store will lead to higher anticipated regret among the consumers.

\[ H5b: \] The higher the anticipated regret, the higher is the urgency to buy among the consumers.

**METHOD**

The purpose of this research is to examine the effect of ‘perceived scarcity,’ strategically created by a retailer in the retail environment, in creating consumer behaviors like urgency to buy and in-store hoarding. To date, researchers have not explicitly described constructs like perceived scarcity and urgency to buy. Further, due to the lack of literature, few or no items exist to measure these constructs. Hence to understand these constructs better and how they impact consumer buying behavior, the study follows a mixed methods approach and unfolds in two phases (Creswell and Clark 2010). The purpose of the first phase is to understand the phenomenon of perceived scarcity and its impact on consumer’s purchase intentions from a retailer’s perspective, which is accomplished by interviewing store managers (see figure 1). The analyses of qualitative interviews are then used to build the second, quantitative phase. On the basis of interviews and the literature review, we develop constructs like perceived scarcity and urgency to buy that along with existing measures are used to test the proposed hypotheses. The next section describes the qualitative phase and results.
Figure 1: Visual Diagram of the Procedures Used

**Phase One**

**Qualitative Data Collection**
- Procedures:
  - One-on-one semi-structured interviews (store managers) n = 6
- Products:
  - Transcripts
  - Field notes

**Qualitative Data Analysis**
- Procedures:
  - Coding
  - Thematic development
- Products:
  - Coded text
  - Three themes (perceived scarcity, urgency to buy, and in-store hoarding)

**Qualitative Results**
- Procedures:
  - Describe themes
- Products:
  - Description of three themes (perceived scarcity, urgency to buy, and in-store hoarding)

**Develop Instrument**
- Procedures:
  - Consider themes and existing literature to generate initial items for perceived scarcity and urgency to buy
  - Use existing items to measure in-store hoarding and need for uniqueness
  - Evaluate the quality of the measurements in terms of clarity, reliability, and validity of scales
  - Marketing Professor = 1
  - Marketing undergraduates = 31

**Products:**
- 13 items across 4 constructs

**Phase Two**

**Quantitative Data Collection**
- Procedures:
  - Survey with four constructs and demographic items (consumers); n = 77

**Quantitative Data Analysis**
- Procedures:
  - Scale reliability
  - Confirmatory factor analysis
  - Hypotheses testing
- Products:
  - Cronbach alpha
  - Factor loadings
  - Fit indices
  - Correlations

**Quantitative Results**
- Procedures:
  - Summarize results
- Products:
  - Results examining the impact of perceived scarcity on consumer buying behavior
QUALITATIVE INQUIRY

Participants and Data Collection

To explore the phenomenon of perceived scarcity and its impact on consumer buying behavior, face-to-face interviews were conducted with six store managers working in fashion stores like Buckle and H&M located across Midwestern and Northeastern United States. The participants’ have been store managers for the respective stores from 2 to 15 years (M = 7.7, SD = 5.8) and their ages varied from 24 to 40 years (M = 29.9, SD = 5.4).

Open-ended questions were drafted in such a way as to help the interviewees think about their role as store managers. Some of the important questions included their roles as merchandisers, visual merchandisers, and team leaders and how these roles impacted consumers’ buying behaviors. Questions were often followed by additional probes for more detailed explanations. Detailed field notes were taken by the interviewer. All participants gave the interviewer permission to record the sessions. Interviews were conducted until the point of theoretical saturation was reached (Lindlof 1995). Interviews ranged in length from 30 to 50 minutes and each was later transcribed for data analysis.

Data Analysis

Glasser and Strauss’ (1967) method for constant comparison and Miles and Huberman’s (1994) method for coding qualitative data were used to analyze the qualitative data. Two researchers, including the interviewer, first read the transcriptions to obtain the overall flavor of the interviewees’ responses. Then next to each answer, labels were generated to reflect the initial coding. From these labels, themes were identified by sorting the labels into concrete categories and sub-categories. The categorizations reflected similarity in responses and frequency of responses. The transcripts were again reread along with the field notes and frequently occurring expressions and other important observations were also included in the respective themes. Several initial themes emerged from this process which included scarcity, sense of urgency, arrival of merchandise on a daily basis, shuffling of merchandise across the stores, daily rotation of merchandise, in-store hoarding behaviors, freshness created within the store, store manager’s flexibility, and retail employee’s personal involvement with the customers. These themes were then reviewed to determine how they were relevant in explaining the phenomenon of perceived scarcity, urgency-to-buy, and in-store hoarding. As a result, several initial themes, such as scarcity, arrival of merchandise on a daily basis, shuffling of merchandise across the stores, and daily merchandise rotation were combined and some themes, such as freshness created within the store and personal involvement with the customers, were discarded. In the end, we had three major themes that examined the phenomenon of perceived scarcity and its impact on consumer buying behavior. Finally, we reread the responses and categorized them into one of the three themes to ensure goodness of fit (Patton 1990).

Results

Perceived Scarcity

Perceived scarcity included limited supply of the merchandise and deliberate manipulation of merchandise availability by the retailer. Some of the various strategies used to manipulate the merchandise availability included shuffling of merchandise across stores, daily rotation of merchandise within store, strategically controlling for the sizes and styles within the store, and not restocking or reselling the merchandise once sold. Kelly, store manager for now six years, said that getting limited supply of merchandise from the corporate office created a perceived scarcity in the store. “We aren’t going to get 40 to 50 of that shirt. We are going to get just two small, two mediums, two large, an extra-large, and that’s it. Getting one or two of each size creates a sense of scarcity in the consumer mind.” The limited supply theme was consistent across all the interviews and most store managers suggested that keeping a shallow or wide assortment of merchandise rather than in-depth merchandise assortment created perceived scarcity in the mind of the consumer.
Tanya, a store manager for two years, thought that regular shuffling of merchandise both across different sister stores and within stores created a perception of scarcity. “We at our store continuously sent the slow moving products to the sister stores who are actually selling those products. Also we get freight everyday and we rotate our product on a daily basis. The freshening up of the store through all this shuffling creates a perception of scarcity as the consumer might think that this particular merchandise was here yesterday but now it is gone.” According to Amy, a store manager for almost fifteen years, their brand successfully created scarcity perceptions in the store. “Most consumers at most retailers will assume that they can come back and there will still be your size or style to choose from. However at our stores, we keep a limited number of products per size, style, and color and the consumer knows that it’s here today, gone tomorrow. We also get the freight daily, shuffle our merchandise often across and within stores on almost a daily basis, and are known for not restocking or reselling the item once sold. This all creates a scarcity perception in the consumer’s mind.”

**Urgency to Buy**

We defined urgency to buy as an urge or a desire of the consumer to buy the product right away, thus limiting consumers’ freedom to delay a buying decision. This definition was well supported across all the interviews. Chelsea, store manager for almost nine years, said that as a retail brand they train their shoppers to sense the urgency to buy. “The consumer soon realizes that at our store, once the product is gone, it’s gone. So there is urgency. Oh my Gosh! I came here last weekend. It’s not here anymore. Where did it go? I want to make sure that I get it today, no matter what.” Further, most interviewed store managers thought that the perceived product scarcity lead to the urgency to buy. As per Jenny (a store manager for two years) noted, “The way we carry our product does communicate the sense of urgency to the consumer. By getting new freight daily and not getting a huge selection (by getting one of each size), it creates an ‘urgency’ to want to buy it.”

One interesting theme that emerged from most of the interviews was the role of sales associates in creating the sense of urgency in the consumer’s mind. As per Casey (a store manager for almost twelve years), “Consumers notice the urgency to buy based on not only the perceived scarcity of the merchandise but our teammates (sales associates) also help them realize and think about the sense of urgency. Through personnel touch, sales associates communicate to the customer that the product they might be interested in, the size will go fast. Hence it’s better to buy the product right away rather than delaying the buying decision.”

**In-Store Hoarding**

In-store hoarding includes consumers’ desire to possess an item and keep it for themselves while shopping, although they are not sure whether they want to buy it or not. According to the store managers, most of the consumers upon realizing the perceived scarcity created in the store exhibited in-store hoarding behaviors. Tanya said, “In our store, during shopping we limit seven items per consumer. But I have seen consumers grabbing more than 21 items and hoarding them all across the stores and even taking them to trial rooms.” According to Kelly, who has been a store manager for different brands (most of which were not fast fashion ones), in-store hoarding behaviors were quite different across brands. “Consumers in this store like to hoard lots of items. This is very different from what I have seen in my previous job, where I was working as a store manager for a different brand. There consumers did not hoard as much as they like to do here.”

**QUANTITATIVE ANALYSIS**

**Instrument Development**

For perceived scarcity and urgency to buy, initial items generated from interviews were incorporated with the measurements that were adapted from previous studies or derived from conceptual discussion in the literature. For in-store hoarding, a two-item scale developed by Byun and Sternquist
(2008) was used. For need for uniqueness, a three-item scale was adopted from consumers’ need for uniqueness scale (Tian, Bearden, and Hunter 2001). All items were measured on five-point Likert-type scales ranging from strongly agree (5) to strongly disagree (1). A faculty member and 31 undergraduate students in marketing evaluated the quality of the measurements in terms of clarity, reliability, and validity of the scales. The items were modified on the basis of their recommendations. Table 1 presents the final measurement items used for all four constructs in this study.

Table 1: Scale Item-Construct Loading of Constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Item -</th>
<th>Construct loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Standardized</td>
</tr>
<tr>
<td><strong>Perceived Scarcity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, I found that there were a limited number of products per size, style, and color</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, I found that the products of interest were often scarce in my size</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, I found that the styles or the products that I was interested in were almost out of stock</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, I found that this store sells out and rarely resells the same merchandise/product</td>
<td>0.41</td>
<td></td>
</tr>
<tr>
<td><strong>Urgency to Buy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, when I find products of interest, I buy them immediately</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, when I find products of interest, I buy them even though I had not intended to purchase them</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>In this store, if I don't buy the product of interest right away, it is very likely that I won't have a chance to purchase it later</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>While shopping in this store, when I find products of interest, I buy them without considering the consequences</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td><strong>In-store Hoarding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I found products of interest in this store, I hurried to grab them and kept them to myself while shopping</td>
<td>0.94</td>
<td></td>
</tr>
<tr>
<td>Once I picked up a product, I did not want to put it down although I was not sure if I would buy it or not</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td><strong>Need for Uniqueness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often, when buying merchandise, an important goal is to find something that communicates my uniqueness</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>I actively seek to develop my personnel uniqueness by buying special products or brands</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>I often try to avoid products or brands that I know are brought by the general population</td>
<td>0.81</td>
<td></td>
</tr>
</tbody>
</table>

**Sample and Data Collection**

Data were collected from a large Midwestern shopping complex and consisted of 77 consumers. These participants were selected by the researcher on the basis of the criterion of whether they have physically shopped at stores like Zara, H&M, Forever 21, and Buckle. If the participants fulfilled the above requirement, they were then selected to complete the questionnaire and were also given a five-dollar cash incentive for completing the questionnaire. Fifty-five participants were female and their ages
varied from 19 to 65 years (M = 26.05, SD = 11.35). The rest of the participants were male (22) and their ages varied from 19 to 52 years (M = 27.09, SD = 9.07). Based on the demographic profile, most of the participants had some level of higher education (45%) and were mostly employed with family incomes between $50,000 and $75,000.

**Data Analysis**

Following Anderson and Gerbing (1988), the measurement model was assessed through structural equation modeling. A confirmatory factor analysis was conducted to test the adequacy and fit of the measurement model with the observed data. The results indicated good overall fit between the constructs and the observed data (Hu and Bentler 1999). The overall fit of the model was $\chi^2 (59) = 80.568$, $p > 0.05$, CFI = 0.901, RMSEA = 0.055, and SRMR = 0.100. CFI exceeded the recommended 0.90 threshold level (Bollen 1989; Hoyle and Panter 1995; Hu and Bentler 1999). Similarly, RMSEA was below the recommended 0.06 threshold level (Hu and Bentler 1999) and SRMR was below the recommended 0.10 threshold level (Kline 2005).

According to Anderson and Gerbing (1988), by determining whether each indicator’s estimated pattern coefficient on its proposed underlying construct is significant (greater than twice its standard error), convergent validity for the model can be assessed. An examination of the indicator loadings indicated that all were significant, thus suggesting convergent validity. The data also supported discriminant validity of the measures. We examined pairs of measures using the constrained and unconstrained model in a series of chi-square difference tests (Anderson and Gerbing 1988). The test results consistently indicated that for each pair of constructs, the unconstrained models fit the data significantly better than their constrained counterparts, thus suggesting discriminant validity. Further, the Cronbach’s alphas for perceived scarcity, urgency to buy, in-store hoarding, and need for uniqueness were 0.732, 0.662, 0.752, and 0.625 respectively, thus indicating an acceptable reliability (Nunnally 1978).

**Hypotheses Testing**

Having validated the measurement model, the four hypotheses were tested using Pearson correlations and univariate ANOVAs. To test H1, a Pearson correlation coefficient was run to examine if a direct relationship between perceived scarcity and urgency to buy existed as hypothesized. The correlation between perceived scarcity and urgency to buy was $r = 0.21$, $p < 0.05$. The mean scores for perceived scarcity and urgency to buy were 2.9 and 3.2 respectively. The results suggested a significant direct relationship between perceived scarcity and urgency to buy, thus supporting H1.

Similarly to test H2, a Pearson correlation coefficient was run to examine if a direct relationship between urgency to buy and in-store hoarding existed as hypothesized. The correlation between urgency to buy and in-store hoarding was $r = 0.50$, $p < 0.001$. The mean scores for urgency to buy and in-store hoarding were 3.2 and 3.3 respectively. The results suggested a significant direct relationship between urgency to buy and in-store hoarding, thus supporting H2.

To examine the differential impact of perceived scarcity on urgency to buy and in-store hoarding across males and females, two separate univariate ANOVAs were conducted. A significant difference was found in the level of urgency to buy across males and females, $F (1, 75) = 7.56$, $p < 0.05$. Males had a higher level of urgency to buy (3.5) as compared to females (2.8). The results supported H3a, thus suggesting that under the conditions of perceived scarcity, males have higher levels of urgency to buy as compared to females. Similarly, a significant difference was found in the level of in-store hoarding across males and females, $F (1, 75) = 6.93$, $p < 0.05$. Females had a higher level of in-store hoarding (3.6) as compared to males (2.9), thus supporting H3b.
To test H4a and H4b, two separate univariate ANOVAs were conducted to examine the moderating effect of need for uniqueness on urgency to buy and in-store hoarding behavior across males and females respectively. The need for uniqueness through a median split was changed from a continuous variable to a dichotomous categorical variable before conducting ANOVA analysis. Men and women with high need for uniqueness were coded as 1 whereas ones with low need for uniqueness were coded as 2. A significant difference was found in the level of urgency to buy across the two male groups, $F(1, 20) = 6.07, p < 0.05$. Males with high need for uniqueness (3.2) had a higher level of urgency to buy as compared to males with low need for uniqueness (2.6). The results supported H4a, thus suggesting that under the conditions of perceived scarcity, males with high need for uniqueness are more likely to exhibit behaviors like urgency to buy. However, for H4b, no significant difference was found in the level of in-store hoarding behavior across the two female groups, $F(1, 53) = 0.68, p > 0.05$. The result suggested no differences in the in-store hoarding behaviors across females with high need for uniqueness (3.6) and females with low need for uniqueness (3.4), thus not supporting H4b.

Though not hypothesized, we also examined the moderating effect of need for uniqueness on urgency to buy and in-store hoarding behavior across females and males respectively. No significant difference was found in the level of urgency to buy across the two female groups, $F(1, 53) = 2.34, p > 0.05$. The results suggested no differences in the urgency to buy behaviors across females with high need for uniqueness (3.6) and females with low need for uniqueness (3.4). Similarly, no significant difference was found in the in-store hoarding behaviors across the two male groups, $F(1, 21) = 0.48, p > 0.05$. Thus, there were no differences in the in-store hoarding behaviors across males with high need for uniqueness (3.2) and males with low need for uniqueness (2.6).

**DISCUSSION**

How consumers react to perceive scarcity communicated by marketers in a retail setting has been academically overlooked despite its far-reaching implications for fashion retail and related industries. This study attempts to address this question and suggests that communication of limited quantity messages creates consumer behaviors like urgency to buy and in-store hoarding. Further, the preliminary findings suggest that perceived scarcity creates differential buying behaviors across genders. Males under the condition of perceived scarcity are more likely to exhibit behaviors like urgency to buy whereas females under the same condition are more likely to exhibit in-store hoarding behaviors. The study further explores the role of need for uniqueness in moderating the proposed relationships across genders. Males with high need for uniqueness tend to have high levels of urgency to buy whereas across females, there seems to be no impact of need for uniqueness in influencing the in-store hoarding behaviors. The study thus suggests that, in general, females tend to react more sensitively to perceived scarcity, thus taking possession of the items as a way to reduce perceived risk or uncertainty about product availability.

By examining how implicit scarcity signals impact consumer buying behavior, this research broadly contributes to the literature on scarcity. Further, by suggesting strong differences in males and females choice behaviors from the same environmental stimuli (perceived scarcity), this study makes a significant contribution to the literature of shopping behavior across genders. Last, from a methodological standpoint, this research contributes to the consumer and retail literature by introducing, defining, and operationalizing the construct, “urgency to buy.”

Managerially, the research presents insights into two important areas: (1) how perceived scarcity communicated within a retail setting influences consumer shopping patterns and (2) how perceived scarcity differentially impacts males and females. The results suggest that fashion retailers by creating perceived scarcity may be able to actually influence both males and females into buying their products. Thus, by generating the perception of perceived scarcity, fashion retailers may not only attract female consumers but also may motivate male consumers to buy, despite their having been, in general, less motivated to buy apparel products (Chang, Burns, and Francis 2004).
FUTURE DIRECTIONS

The findings in this study are preliminary and thus a detailed examination of psychological impacts of perceived scarcity on consumer buying behavior is imperative. In future studies, we intend to measure the proposed mediating role of anticipated regret on perceived scarcity and urgency to buy. Further, given that data are being collected from consumers shopping at fast fashion retailers and non-fast fashion retailers, a comparative analysis of proposed hypotheses across these two types of retailers will be fruitful. The analyses across the two types of retailers may help us understand the concept of fast fashion from a consumer’s perspective, which to date has not been explored systematically.
REFERENCES


SOCIAL DISRUPTION IN IMAGES OF CONSUMPTION

Erika L. Paulson & Thomas C. O’Guinn, University of Wisconsin-Madison

When did the future switch from being a promise to being a threat? - Chuck Palahniuk

WELCOME TO THE RISK SOCIETY

The Exxon Valdez oil spill, the Persian Gulf War, the Great Recession. The Gulf Coast oil spill, the Iraq war, the Great Depression. These disruptive events have all been pivotal moments in the American social consciousness, with effects that linger for years and ranging from altered consumer behavior to new social policy. These events are so important that social theorists such as Beck, Douglas, and Giddens have proposed that the accumulation of these social disruptions, these risks, and their uniquely unpredictable and incalculable side effects are the defining characteristic of our time - what has come to be known as the risk society (Wilkinson 2001). Consumers and marketers are key players in this; both are impacted and implicated.

Social Disruptions

Because of the new nature of risk and the mediated way consumers interact with risk, when these events occur they may become broadly covered in media discourse, widely shared among people, and thus commonly experienced. When this happens, we encapsulate the event, the ensuing discourse, and its impact on a wide swath of society with the term social disruption. In the research reported here, we investigate three particular social disruptions: the Exxon Valdez oil spill, the Persian Gulf War, and the Great Recession as exemplars of disruptive events marked by the centrality of risk in their social construction.

Media Importance

These events do not only affect a small geographic area or a subset of the population. Mass media coverage means that nearly everyone can experience a mediated version of the event and its aftermath 24 hours a day. This mediated experience may be comforting and help ease fears, or just as likely the mediated experience can be graphic and visceral, amplifying the response to the event (Ungar 1998; 2008). The role of the media, while pivotal in the consumer experience, is not always clear. Particularly in Beck’s conception of the risk society the media plays a privileged but under-theorized, “uneven, underdeveloped, and often contradictory” role in the way risk, and the risk society as a whole, is socially constructed (Cottle 1998 p.25). Understanding the outcomes of such events relies on a clear grasp of how the key mediating factor, the media, operates.

Three streams of literature point to the importance of disruptive events, the media, and advertising in understanding the risk society. However, they have rarely borrowed from one another (Kitzinger 1999). We have already noted the far-reaching impact that the risk society thesis has had on the sociological literature, as well as the importance the theory ascribes to the media. Communication researchers have developed their own theories of the media and its role in the social construction of crisis events. Analysis of news coverage shows how the media systematically privileges certain stories (what we think about), and certain telling of the story (how we think about it). However, the applicability of these news models is untested in the advertising domain. Advertising remains empirically unstudied within this context, but theorized to be one of a number of competing voices attempting to deny or leverage risk by amplifying it and leveraging it. Finally, the crisis management literature is concerned with the perspective of the firm(s) that is involved in a crisis and how it should or should not respond. However, such a perspective neglects the larger field of advertising.
Advertising is a substantial portion of the media we consume – whether subsidizing programs, discreetly placed in the programming, or advertising directly to the consumer during commercial breaks or between editorial content. To understand the role of the media in the risk society, the range of voices that construct that risk, and how to respond to the risk, it is crucial to ask how advertising comments on, and responds to, these social disruptions. How does advertising as an institution serving itself and its clients behave in the risk society? Are there responses systematic and biased? This line of research could help consumer behavior move into the institutional domain and thus extend our field’s reach.

Research Questions

What is the message during a social disruption, and how does it play into the already complex system of competing voices? If we expect firms that are directly involved to speak out through media representatives, press releases, or corporate image advertising in an attempt to mitigate the damage to their reputation, what do other firms in the industry do? Can they capitalize on the weakness of a competitor or are they implicated in the crisis? What about closely related industries? When a voice speaks out, is the message clear and unequivocal, or is a message avoided altogether in an attempt not to rattle consumers? Our analysis shows that the industry itself advocates a silence during issues of crisis, preferring not to risk raising negative consumer perceptions. In addition, they perform a counterintuitive move that allows them to “actively erase” the event, effectively avoiding the issue while simultaneously comforting the consumer. Incorporating advertising is not a derivative move but presents new questions, novel observations, and new theoretical directions.

LITERATURE REVIEW

To understand how advertising as an institution responds to social disruptions, we draw together literature from three domains: sociology, communications, and marketing. In particular we use theoretical conceptions of the risk society, media reassurance, and crisis management. Each focuses on a crucial component of our empirical context - disruptive events, media response, and corporations. Within this synthesized theory, our results reveal a systematic and here-to-fore unpredicted institutional response to social disruption.

Theoretical Approaches to the Risk Society

The risk society has been conceptualized by a number of important social theorists including Anthony Giddens (1991), Mary Douglas (Douglas and Wildavsky 1983), and Ulrich Beck (1992). Each describes risk as the defining characteristic of our time. Each has been extended, critiqued, compared, and reviewed (Ekberg 2007; Wilkinson 2001; Mythen 2007), providing a rich theoretical tradition on which to draw. Because Beck’s work privileges the media, it will be the focus of our review of the risk society.

In the tradition of German sociological theorizing (Mythen 2007), Beck compares our current second reflexive modernity with two previous epochs, each defined by its relationship to risk. Traditional societies faced natural risks that were prone to external, exogenous explanations of risk such as god or fate. In contrast, in industrial societies risk is more manmade and endogenous, created as part and parcel of new technologies. However, science is able to mitigate these risks and the promise of progress remains largely unquestioned. In the third and final type of society which has come to characterize our late modern society (since the 1980s) the risks can no longer be mitigated and overwhelm the sense of progress. Risks are increasingly unpredictable, globalized, and manmade. The social “bads” subsume the social “goods” that characterized industrial society.

The media is particularly important because the side effects of the risks are often difficult to observe directly. While risks exist in some real form, manmade and technological risks such as radiation are difficult to observe directly. Government agencies, political actors, social organizations, and corporate interests compete to define and describe risks in their best interests. Experts often deny responsibility and
blame others. The news stories are framed, spun and filtered through an increasingly perspective-based news media. As a result, the public scrutinizes technology, criticizes progress, and develops the reflexive orientation that is necessary for political action. Risk in the contemporary epoch has become something different altogether, and companies, their brands and their customers are all involved and affected. Beck writes that risks ‘can be changed, magnified, dramatized or minimized within knowledge, and to that extent they are particularly open to social definition and construction’ (Beck 1992: 23, emphasis in original). Put another way, he who best controls the response wins.

This social construction is thereby crucial to our understanding of social disruptions, and the messages designed to shape subsequent consumer behavior.

The Role of the Media in Communicating Risk

While Beck leaves the role of the media under-theorized, communications research has explored it extensively. Most risk-related communications research investigates the role of the news media in a risk crisis. This research has proceeded largely independent of sociological developments in the risk society tradition and could contribute greatly to our understanding of how the agents of consumer communication systematically respond. However, as she notes, this research focuses almost exclusively on news reporting.

In a review of risk and the media, Kitzinger (1999) describes two general perspectives: the ideal role of the media and the social construction of risk. Traditional literature investigates risk reporting to determine how closely it matches the statements of experts. The experts, and how they are chosen is primarily what is studied. The media is often criticized for being sensational, attending to rare but dramatic threats while failing to provide coverage of more likely but less glamorous or grotesque events. In addition, the media has been criticized for ignoring risks after they have run out of newsworthiness but before the threat has passed.

Media Reassurances

Interestingly, there is some research that suggests the media may actually underrepresent the threat. Sheldon Ungar suggests that the media shifts to reassuring coverage when a threat becomes a “hot crisis” that is when it is unpredictable, startling, but also represents potential imminent personal threat. In describing news coverage of the Ebola outbreak, Ungar notes a number of “interpretive packages” used to discuss the threat. The first mutation-contagion package attempts to animate the problem, convince the public of the danger. However, this soon transitioned to a containment package in which a clear moderation of reports was noted – conflicting claims and reversals were common. Finally a disease detective interpretive package emerged in which agencies were depicted as tracking down the threat and containing it (Ungar 1998).

This same process is repeated, albeit over a longer time period, in coverage of the bird flu (Ungar 2008). Initial packages were alarming, describing the projected number of deaths, the lethality of the flu, and the possibility of mutation. A mixed form emerges midway through with fewer fearful aspects and decreased death tolls. Assurances such as agency preparedness and medical promise of a cure are actively improvised. In the third phase a hot crisis emerges – the bird flu is cited in the EU and presented a personal threat to readers. Under such conditions the media preferred a containment package in which the pandemic was no longer inevitable, no death toll numbers were described, and its effect on birds but not humans was emphasized. As the perceived risk shifts, the media offers a reassurance.

This is an example of newer research that focuses on the social construction of risk. A number of theoretical perspectives considers multiple actors. Many of these mention the role of corporations but rarely elaborate. For example, in the social amplification of risk framework (Kasperson et al. 1998) institutional processes are mentioned but not elaborated. More recent work has tried to account for the
power of institutions, corporations and governments, viewing risk as a “field of contest” in which
government agencies, corporations, political campaigns and pressure groups compete to advance their
particular definition of a risk and secure public opinion and action such as votes, donations, or purchases
(Petts et al 2000).

Dake (1992) elaborates on the production of news, emphasizing not only journalists and social
activist organizations but also corporations, trade organizations, legal offices, and consulting firms. In
describing the corporate role he notes that “many corporations, in turn, throw the weight of their wealth
into the fray, collectively investing billions of dollars to increase safety even as images of disaster –
Bhopal, Chernobyl, Three Mile Island – become powerful tools for their opponents and sources of
mistrust and conflict throughout the ideological landscape.” (Dake 1992:25). The social constructionist
perspective is explicit.

From this research it is clear that corporations and their advertising can play an important role in
the social construction of risk. And yet their role remains under-theorized, relatively unexplored, and
conspicuously absent. What exact messages are they likely to transmit or to suppress?

**The Role of the Corporation in Responding to Crisis**

The role of the firm has been terribly under-examined from a communications perspective,
although two streams of literature provide some important insights. The field of crisis management
specializes in helping firms who experience a crisis of any kind salvage their reputation and try to correct
misperceptions. While these communications do not always take the form of paid advertisements, they
suggest some ways in which firms implicated in an event may wish to respond. In addition, the
advertising trade press often covers advertising developments in affected industries and suggests courses
of action. This second source provides invaluable insight into potential responses and rationale behind
them.

*Crisis Management*

The field of corporate crisis management suggests that when involved, firms must speak out and
attempt to salvage their reputation. The Exxon Valdez oil spill generated much research examining the
corporate response to the crisis. Communication patterns analyzed in the news were found to be
defensive, damaging corporate credibility, antagonizing the public, and leading to a perception of
corporate arrogance (Tyler 1992). However, Tierney and Webb (1995) used a dramaturgical analysis to
identify salvaging strategies that the firm employed including enhancing their competence, controlling
information, personalizing the event, and attempting to redefine the event, although audiences rarely
cooperated in these strategies.

*Trade Press*

The advertising trade press often comments on ad campaigns run in the wake of a disaster and
suggests a course of action for those concerned about how events should impact their advertising. The
trade press often notes ad campaigns surrounding crises, including an apology ad after the Exxon spill and
one trying to correct public perceptions of Prince William Sound. The cut back in Exxon’s ad spending
was also noted after the spill.

Clear parallels are evident in the Gulf Oil Spill nearly two decades later, during which an editorial
suggests that marketers should stay clear of the crisis lest they are seen as capitalizing on it (Wheaton
2010). Other advertising observers note the oil industry’s general silence are surprised that Shell would
launch a campaign in the wake of such a disaster (Bush 2010). The only beneficiary seems to be Dawn,
whose longstanding animal rescue efforts garner positive attention for the firm (Neff 2010).
Advertising’s immediate response to the Persian Gulf War was to cut advertising, particularly during news coverage of the war (Winters 1991 – cover story; Donaton and Walley 1991; Hill et al. 1991). Advertisers were initially attempting to avoid the negative halo around conflict and bad news. As the war drew out advertising tactics evolved and there were a variety of opinions expressed about what is a best practice – clients react cautiously, many changing the schedule rather than the ads. Executives suggested that industries such as the military and airlines pull their ads so they aren’t seen as profiteering while others make sure their existing ads are in good taste (Lafayette and Levin 1991). These are often repeated as other wars or terrorist attacks make headlines (Liodice 2003; Sanders and Atkinson 2003)

However, the advice is not universal and many advocate at least some role for continued advertising. An editorial (1991) notes that corporations with military roles may find tasteful ads garner positive attention, and that advertising helps a battered economy a provides entertainment and humor that help consumers cope (also Elkin 2001; Cardona 2003; Hartfield 2003 – distraction and escapism during other wars and terrorist attacks). Other brands take a more active role, promoting patriotism (Serafin and Horton 1991) and visibly supporting troops (Dangoli 1991) which consumers reportedly don’t consider exploitative or inappropriate (Hume 1991 – Gallup Poll). Young (2005) examines advertising during war and says that while continued advertising is generally agreed upon, the content is not (Young 2005). Colford (1991) noted in the cover article of Advertising Age that 72 hours after the Persian gulf war cease fire the military launched ads. (For a review of advertising during war see Tansey, Hyman and Brown 1992; Young 2005).

Expanding our analysis to include economic recessions also complicates the picture. In contrast to recommendations during war and disaster to cut, curtail, or censor ads – advertising during a recession is widely recognized as an important strategy and one well recognized in the academic literature (Kamber 2002; Tellis and Tellis 2009). However, research shows that many firms actually cut spending (Picard 2001).

The message content during a recession is also of interest. For example, Quelch and Jocz (2009) suggest that advertisers need to empathize with the plight of cash strapped and uncertain consumers. The recession is considered an opportunity to bolster trust with a worried consumer – the authors suggest offering consumers reassuring messages, emotional connections, and empathy. Re-segmenting consumers according to their response to the recession is advocated, along with messages tailored to each segment. Some consumers are likely to care about price, others want to be reassured that they deserve the product because they are successful.

Previous business cycles also suggest possible changes we may observe. Advertising historian Marchand describes how advertising all but ignored the economic fallout of the great depression in its early years: “Even in 1933, most national advertisements offered no direct reflection of the existence of the depression” (p.288). When firms eventually responded the content was oblique. Some reinterpreted the success ethic and chose to show “compensatory satisfactions” to help reassure consumers (Marchand 1986).

The style and message also changed. Price deals and brassy styles were particularly noted. During the Great Depression of the 1930s Marchand (1986) describes advertising’s increasing use of coupons, price discounts, premiums, contests, and appeals to economy (p.288). Shama also hypothesizes price offers, discounts, and sales to be a major advertising strategy in a recession (1978: 47). Very direct stylistic changes in response to the recession were also noted. The style of ads becomes more bold and unrestrained – large text, loud headlines, competitive copy, “broken art” style, bleed pages that extend to the margins, and the increasing use of images and a comic strip format are all noted. In addition, the type of appeal changed. In a content analysis of 8 decades of American advertising Belk and Pollay also find that during the Great Depression utilitarian appeals were more popular than “less palatable” luxury

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appeals. However, status appeals were also at their height during the Great Depression, offering consumers a chance to fantasize about future consumption and hope for the future.

From the analysis it appears that advertisers have many options during a crisis. If they are directly implicated they can attempt to shore up their image using corporate social responsibility advertising. They can ignore the event and advertise as usual, they can shift their ad buys to avoid negative associations, they can censor their message to make sure it is dutifully sober and in good taste, or they can attempt to soothe the consumer with messages of comfort, security, or escape.

A Subtle Response

This last possibility is the most intriguing. Two works reference a more subtle and indirect response. Belk and Polay (1985) note that the number of living rooms increased during the depression and explain the increase as a return to family values as a buffer against the economic turmoil. The product mix also responds. There is an increase in health and beauty aids during the same period, which the authors describe as helping to restore a positive sense of self for consumers shaken by the Great Depression. This carries intriguing implications for advertising. We may not see American flags, natural vistas, or blatant price deals.

Another way of addressing dramatic social disruptions is described by Holt (2004). To help consumers resolve the contradiction between an existing national ideology and their own life experiences, advertisements use populist settings. For example, the national ideology of the 1950s and 1960s, one of scientific bureaucracy, was often coercive and emasculating for men. It strongly competed with earlier ideologies of individualism. To resolve this tension Mountain Dew used the Hillbilly myth in the populist world of Appalachia – a world where men were free of the confines of scientific bureaucracy and could revel in sex and violence. Mountain Dew later used the populist worlds of the Redneck south to resolve the conflict between the wall-street frontier and real decline in working class earnings of the late 1970s. Volkswagen used the populist worlds of bohemia and later indie art. Harley Davidson used the populist world of outlaw biker and later gunfighter. Budweiser has relied on the populist worlds of artisan craftsmen, the rural swamp, and the inner city. While some of these populist worlds are easier to discern than others, they suggest one way in which advertising may help resolve conflict for consumers.

The literature has demonstrated the importance of risks in defining the character of our times, the importance of the media, but has neglected to investigate the actual response of advertisers, who not only represent an important part of the media but often subsidize the news and programming more frequently considered. The advertising trade press notes a number of response options for various firms while the marketing literature offers a few intriguing but relatively untheorized suggestions. To understand the role of the firm in the social construction of risk it is necessary to investigate it empirically.

RESEARCH METHOD

To accomplish this, we investigate three social disruptions and the way advertisers responded using a content analysis of mass circulation advertising. The results are compared across events to offer an empirical generalization that will help drive the research forward.

To answer these research questions a number of methodological decisions must be made including the social changes to investigate, the type of data to use, the most appropriate sampling procedure, the means of data collection, and the method of analysis. Each will be described. While it is possible to examine a sample of ads for any evidence of engagement with a major social change, doing so makes the research more of an interpretive study and less an empirical investigation. Because such exploratory work has already been carried out (Marchand, etc.) we choose a more systematic investigation. We choose to begin our investigation by identifying three major social changes around
which we could structure our inquiry. We continue by describing the events that were chosen, the sample of ads that was chosen to evaluate, and the content analysis that was performed.

Selecting Events

After consulting social histories we drew up a list of over twenty such changes in the past thirty years including gay rights, religiosity, employment, various international conflicts, and technological change. Each event was judged against a set of three criteria; we wanted events that were well-defined temporally and in the public imagination, widespread and prominent in the national media, and resulted in some change to public opinions, attitudes, or thoughts as measured in the General Social Survey, Pew research studies, or by pollsters (Roper iPoll). To investigate the change in a systematic manner, we choose the three that were empirically supported. However, we note that Beck’s concept of a risk society is not any single event nor the cumulative effect of such risks but is the reflexive political orientation that may arise in the populace.

For each, three months were also selected for study: one prior to the change, one during it, and one after. To increase the consistency of the sample the month chosen remains the same. In most cases the time period between observations is also the same.

The Great Recession – December 2007 to June 2009

The “great recession” was selected because the start and end dates are clear, the impact is spread across the country and the world. Additionally, the business cycle has a long lasting and relatively well researched effect on business and advertising. The recession lasted from December 2007 to June 2009 (as determined by the National Bureau for Economic Research). The dates chosen for sampling were November 2006, as housing prices began to soften and before the subprime mortgage crisis which began in earnest. November 2008 was in the middle of the recession. For the third period we choose November 2010 after the official end of the recession.

Persian Gulf War – August 2 1990 to February 28 1991

The Gulf War lasted from August 2, 1990 to February 28, 1991. First, a date in the middle of the conflict was selected, November 1990. Dates before and after were then selected: November 1988 and November 1992. The Gulf War was selected because it has a well-defined time frame and large national polls suggest a widespread shift in public opinion.

Exxon Valdez spill March 24th, 1989

The final major social change to be investigated is the increasing environmentalism that took hold after the Exxon Valdez oil spill. The dates selected were May 1987, May 1989 (2 months after the spill and allowing advertisers time to change their campaigns), and May 1992.

Selecting Advertising

With the events selected, data about advertising’s response had to be collected. This is possible to obtain in a variety of ways. Advertising can be requested from individual product and brand manufacturers, although the full response of advertising would not be visible. Advertisers themselves could be interviewed for their responses, although answers are subject to hindsight and response bias and again a large sample would be difficult to assemble. Television ads are rarely archived. However, magazines are archived, and the ads along with them. These provide a snapshot of advertising during a specific period in history and were selected as the source of data.

Examining advertising from magazines with highest circulation also allows a window into the images that a large proportion of the population is exposed to. First, we identified magazines that were consistently in the top ten publications by total paid and verified circulation (obtained from the Audie
Bureau of Circulations) in 1990, 2000 and 2010, covering the three time periods in question. We find that seven publications remain among the top ten with the highest circulation: AARP the Magazine (formerly Modern Maturity), Reader's Digest, Better Homes and Gardens, National Geographic, Good Housekeeping, Family Circle and Ladies Home Journal.

From among these we eliminated Good housekeeping and Ladies Home Journal because the content and ads largely replicate those of the similarly positioned but higher circulation Better Homes and Gardens.

We also recognize that at least some of these magazines privilege a solidly middle class, female, readership. Because we were interested in the range of mass media that is produced we chose to include the most highest circulation publications that targeted men, young adults, the affluent, African Americans, and business or news readers. This resulted in the addition of six magazines to our sample: Sports Illustrated, Seventeen, Southern Living, Ebony, Newsweek and Time.

All the ads from each issue (or all issues for weekly publications) were recorded using digital photographs. These were gathered from five different libraries spread through three cities over two weeks in October 2010. The ads were gathered from the November 2010 issues as they were released.

Ads that were a full page or larger were analyzed. Limiting the ads selected is a common practice. For example, many researchers only examine ads that contain people (Belkaoui and Belkaoui 1976), or minorities (Kassarjian 1969). Others include only ads that picture the interior or exterior of a home (Belk and Pollay 1985). The size of the ad also plays a role. For example, in their examination of the time orientation of ads Gross and Sheth limit the ads to those that are 2 inches by one column large or larger. Thomas and Triebar (2000), in their examination of race, class and status limit the sample to full page ads. We have followed their criteria and limited the sample to ads which occupy a full page or more. Doing so captures the vast majority of ads, focusing attention on those that the reader is also likely to pay attention to (Rosbergen, Pieters, and Wedel 1997 found that even among different segments of consumers the Headline gained the most attention as measured by gaze duration). Much of what is eliminated by attending to full page ads are the smaller “back of book” ads that closely resemble classified ads – they are often small, in black and white, and composed largely of text.

Despite the straightforward criteria, questions inevitably arise during data collection. Should magazine inserts, special advertising sections, or repeat ads be included? Inserts were excluded for three reasons. First they are often smaller than one page and so do not meet the sampling criteria, they are likely to fall out or be removed from magazines and so including them may introduce uncertainty into the sample, and inserts are often supplement a full-page ad in which case the ad is already included in the sample. A number of “special advertising sections” were also present. These sections are clearly marked and contain content and traditional ads that are both funded by advertisers. In such cases only the full-page ads were included. Repeat ads were also included in order to provide an accurate image of how advertisers respond to massive social disruptions. While this gives more weight to larger, more prolific advertisers doing so provides a sample that captures the reality of social change.

Occasionally issues, pages, or parts of pages can be missing. Missing issues were easily identified from a gap in the numbering, confirmed with an online database search, and retrieved from another collection. Often missing pages could be identified because half of a two-page ad was missing. In these cases it was possible to compare the ad to a repeat of it in our sample. There was only one issue that was subject to many missing pages and for which the library had inserted a note. We feel confident that very few were missing. Finally, parts of ads were occasionally missing. Comparing the missing pieces with duplicate ads shows that most often the piece taken was a coupon. For those ads for which there was no repeat to compare it to, and when the missing piece suggested a coupon (torn in the correct shape, from a
specific spot, not corresponding to content on other side of page) it was coded as such. By and large the sample was in good shape, and was largely free from missing issues and ads.

**Coding Scheme**

To analyze the advertisements, a coding scheme was developed. The literature was scoured for potential responses to a massive social disruption. For example, Shama (1978?) describes the likely increase in price appeals and promotions in response to a recession, Belk and Pollay (1985) describe the increased use of status appeals during the Great Depression, while Holt (2002) describes how (iconic) advertising retreats into a variety of populist worlds. In addition, logical steps to counteract a massive social change could include picturing the unspoiled environment (during the Valdez oil spill), patriotism (during the Gulf war) or education (during the recession) or family members and friends (during any of the events). These were included. In some cases the ads themselves suggested certain responses to social events that were included in the coding. In particular, the depiction of physical strength was noted during the gulf war. A total of 13 items were examined. During coding this list was refined to 9 because some proved difficult to identify consistently. Five are reported in the analysis here and summarized in table 1.

To establish the reliability of the coding effort a subsample of 314 ads were selected from the sample and coded by a group of three coders – a graduate student and two undergraduate students. The sample of ads included three different publications from three different years. The inter-rater reliability ranged from 0.7128 for safety appeals to 0.9370 for mention or images of family, with an average inter-rater reliability of 0.8416. The inter-rater reliability is high because the coding scheme simply identifies the presence or absence of specific aspects of an ad. In addition, it provides confidence that the full sample of nearly 5,000 ads can be coded by a single coder.
Table 1: Abbreviated Coding Scheme and Reliability Measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Rationale</th>
<th>Included</th>
<th>Excluded</th>
<th>Cohen’s Alpha IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deal</td>
<td>Recession (Shama 1978)</td>
<td>Coupon, sale, price cut, discount, rebate, tax credit, free gift, contests</td>
<td>Good value for the money, warranty, guarantee, free information</td>
<td>0.8864</td>
</tr>
<tr>
<td>Patriotism</td>
<td>Tansey, Hyman and Brown 1992</td>
<td>American flag, bald eagle, RWB color scheme, topline text citing “America”</td>
<td>References to other countries, specific regions within the US, “national”</td>
<td>0.8558</td>
</tr>
<tr>
<td>Landscape</td>
<td>Birkland and Lawrence 2002</td>
<td>Landscape pictured incl. lakes, mountains, desert, fields. Stylized landscapes (painted or illustrated).</td>
<td>Blurred or obscured vista. Close-up of natural elements (sand, water). Citiscapes, lawn, gardens.</td>
<td>0.8767</td>
</tr>
<tr>
<td>Home</td>
<td>Belk and Polay (19__)</td>
<td>Interior or exterior of home including yard, patio, and garden. References to home including “homemade.”</td>
<td>Home appears in the distant background, is significantly cropped or blurred. Only farmland.</td>
<td>0.8600</td>
</tr>
<tr>
<td>Other World</td>
<td>Holt 2002</td>
<td>Other cultures, subcultures, exotic locales, historic American cultures incl. cowboys, hippies.</td>
<td>Other countries that share a modern culture with the united states (i.e. Urban China).</td>
<td>0.8745</td>
</tr>
</tbody>
</table>

N=316
Also coded for the presence or absence of coupons (0.8864), luxury (0.8509), strength (0.8402), safety (0.7128), family (0.9370), and new (0.7403).
Additional items were discarded during the coding process when it became evident there was significant confusion (natural, education, memory)

ANALYSIS

In our analysis we examine each event separately, describe the findings we would expect based on the literature and compare then to our empirical results. We address events in the order they occurred: the Exxon Valdez oil spill, the Persian Gulf War, and the Great Recession. We then synthesize the findings to suggest how advertising as an institution uses a strategy of active erasure to respond to social disruptions.

Advertising in the Wake of the Exxon Valdez

The oil spill of the Exxon Valdez held the American imagination captive. The news reported constantly, with panoramic images of the Prince William Sound, before and after shots of the oil spilling out of the wrecked ship, and heart wrenching images of marine animals covered in the slick. The media dissect who is to blame and implicitly suggest who can be exonerated. The amplified consequences of Beck’s risk society are evident.
Although “green” advertising has been all the rage in recent years, the oil spill over two decades ago also changed public opinion and is likely to result in a change in advertising. For example, the number of people agreeing that we spend “Too Little” on improving and protecting the environment, as reported in the General Social Survey, before the spill is 67.7%. It jumps nearly 10 percentage points to 76.1% agreement in 1989 – the year of the spill, and stays high in 1990 (76.0%) and 1991 (71.3%) and drops back to 59.4% in 1993. The number of survey questions, as reported by Roper’s iPoll also peaked in 1990, demonstrating an important level of interest. Birkland and Lawrence (2002) suggest that the spill created tension between America’s exploitation of natural resources and identification with the wilderness (symbolized by Alaska’s Prince William Sound) that advertising may seek to resolve.

How do advertisers respond? The trade press would seem to advocate silence, with crisis management for the firm involved. What about everyone else? In our sample, only a handful of ads are from any organization related to the energy industry. No one actually address the spill outright. But there are other options – advertisers could use exotic populist worlds to help consumers cope or escape from the stress. However, we do not find any significant change in the number of populist worlds shown.

What we do observe is a significant drop in the number of ads showing landscapes. Before the spill, 11.2% of ads employed images of landscapes as a primary visual device. In the months immediately after the event this number drops significantly to 6.9% of ads. Clearly advertising as a whole has chosen to help consumers forget the event by actively erasing any image that could trigger associations with the spill for consumers. To bolster this finding, we also note that images of the home (the exterior or the interior) increase significantly – from 10.1% of ads showing the home before the spill to 13.9% showing the home immediately afterward. This is an intriguing finding but does it hold for other social disruptions?
Advertising in the Wake of the Persian Gulf War

The Persian Gulf War was another dramatic, heavily televised social disruption with implications for advertisers? We would expect that at least some advertisers would choose to leverage the disruption and highlight their participation in military production, commitment to military personnel, or general patriotism. We know that public patriotism increased during the Persian Gulf war. For example, the percent of people reporting complete agreement with the statement “I am very patriotic” in the General Social Survey before the war (Smith et al. 2011) was 34.4%. Surveys from the Roper’s iPoll database show similar results. Fully half of the population reports agreeing with the statement “I am very patriotic” before the war. That amount jumps to 65% during the war, and falling back after about one year. During the war it jumps to 61.7% (1991) and by 1993 is back near pre-war levels at 41.9% (1993). Consumers are also more favorable to products made in the United States during the War (Serafin and Horton 1991; Loro 1991). The same survey also shows that the Gulf War prompted increased acceptance of military spending. Commentators report that 78% of the American public doesn’t consider ads supporting troops exploitative or inappropriate, and 30% of adults are more likely to purchase from companies who ran ads expressing such support for the troops (58% said it had no impact, Hume 1991). Clearly the war triggered feelings of patriotism and nationalism that may be leveraged in advertising. We may see patriotic color schemes, American symbols such as the flag or the bald eagle, or the inclusion of military characters.

From the data we see that ads that the number of ads that contain elements of patriotism actually decreases significantly – from 11.2% before the war began to 6.5% at the midpoint of the war. Again, we also observe an increase in the images of homes – which jump from 10.3% of ads including a home before the war to 15.6% at the midpoint of the war. Again, the story that is emerging is one of active
erasure. Images of patriotism that could associate the brand with the war, however positive, are erased. Comforting images of the home emerge as well.

Table 2: Advertising Appeals and the Persian Gulf War

<table>
<thead>
<tr>
<th>Proportion</th>
<th>1988</th>
<th>1990</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patriotism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exotic World</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Advertising in the Wake of the Great Recession

From the literature it appears that when faced with a recession advertisers are encouraged to continue advertising, although many are unable to do so. Advertisers may attempt to empathize with consumers, or offer compensatory satisfactions. The style becomes loud with large text, headlines, and competitive copy (Marchand 1985). Despite the conflicting claims it seems reasonable to expect price appeals and promotions increase, and possibly status appeals as well (Marchand 1986; Belk and Pollay 1985; Shama 1981).

Additionally, we may see an increase in populism, anti-intellectualism, escape or fantasy, and appeals to simplicity or traditional values. Changes can be expected in advertising because recessions and depressions affect consumer beliefs, attitudes, and behavior. For example, Shama (1983) describes a segment of consumers that are unable to maintain their current lifestyle during times of stagflation and rather than working harder choose instead to become “voluntary simplifiers.”

Surprisingly, the results show that advertising does not dramatically increase the number of “deal” appeals recession this remains at 11.2% - a not significant change. Only after the recession is officially over do such appeals increase significantly to be used in 17.8% of ads. This is an interesting finding and one which supports Marchand’s (1986) observation that advertisers do not respond to a depression (or in this case a recession) immediately.
A significant change we do observe is the drop in images of homes. Before the great recession 18.8% of ads show images of the home. This drops significantly to 13.4% at the midpoint of the recession. This is uprising as Belk and Pollay (1985) note that images of family rooms increase during the great depression as a way of soothing consumers and comforting them. However, the nature of the Great recession, and the housing crisis that precipitated it, makes this a sensible finding. Again advertisers appear loathe to associate their brand with any distressing or even potentially distressing imagery. In this case the home, which formerly offered comfort to the consumer, becomes associated with the crisis itself and is unavailable as a reassuring image.

Figure 3: Advertising Appeals and the Great Recession

Active Erasure

The active erasure of social disruptions is staggering when one considers that of the nearly 5,000 ads in our sample only 21 ads referenced the disruption, even implicitly. This number represents less than one half of one percent. Eight of those 21 were advocacy ads by a proximal trade organization. For example, the nuclear industry ran a number of ads during the gulf war promoting a decreased reliance on foreign oil. Additional analyses also suggest that it is not a function of the industry, the firm, or the success of a brand that give rise to these findings.

Of these direct responses, some offered a product to fix the problem, such as recycled plastic bags that promoted environmentalism and fought pollution similar (but not the same as) that dramatically
publicized by the Exxon Valdez oil spill. Others used the problem to grab attention and then shift it onto the product. For example an ad for Ten.O.Six showed a face superimposed on a panoramic landscape with the headline “fighting dirt and pollution” while the copy goes on to mention that this fight is for the dirt on your face. However, these remain rare exceptions to the rule of active erasure.

We see clear evidence that significant systematic variation in advertising immediately following a social disruption comes from active erasure. Brands attempt to create a world in which the disruption doesn’t exist, helping to calm consumers and offer an escape, however temporary.

DISCUSSION

This paper presents work on an important, but rarely studied aspect of marketing and consumer behavior: institutional response in the context of the risk society. The theory employed here is a synthesis of extant literature in three fields. We tested this against data drawn from three significant disruptive events. The data are remarkably consistent in their patterns. Advertising, as an institution, predictably attempts to erase visual cues and other narratives that would lead consumers to place their brands within these disturbing scenarios and exemplars of risk in the social sphere. Put simply, they erase it; they make it go away, until the crisis subsides. Then the uncontaminated scenes, backdrops and tropes return. These data and subsequent studies could contribute to our larger and fuller understanding of consumer behavior, and marketing. The implications range from practical to political to theoretical.
REFERENCES


APPENDIX A: CODING SHEET

Coding ads:

Magazine title

Issue month-year code

Brand name – include all product names (Campbell’s AND chicken soup). If there is more than one brand, include both separated by a comma.

Headline – largest text on the page.

Slogan/tagline – short phrase usually located at lower right hand corner of the page, near the brand logo. Used by the brand for a relatively long period of time (vs. the headline which varies by ad).

Category:
- Auto – includes automobiles, car rental, car parts,
- Travel – includes airlines, cruises, travel destinations
- Clothing – including footwear, outdoor gear, and accessories such as jewelry and watches.
- Collectibles – collector plates, Christmas ornaments, coins.
- Education – schools, certificate programs, educational products and supplies, etc. Excludes books (entertainment).
- Electronics and appliances – includes large (fridge) and small appliances (stand mixer) and consumer electronics (cell phones, computers or typewriters).
- Entertainment – television programs or channels, musicals, book clubs, children’s toys.
- Financial products and services – includes banks, credit cards, insurance,
- Food and Beverage – includes ingredients, prepared food, fast food, restaurants, pet food, sweeteners, and commodity organizations (California milk, avocado growers association).
- Grooming and hygiene – includes makeup, beauty products, skin care, shampoos, personal and feminine hygiene, pregnancy tests,
- Home improvement and decorating – siding, flooring, interior design products, and construction-related items
- Household supplies – consumables used in the home such as laundry detergent or paper towels.
- Medicine and health care – includes prescription and over-the-counter medicines, herbal remedies, products with a primarily medical purpose (orthopedic shoes),
- Misc. – organization membership
- Philanthropy - charitable organizations such as the Salvation Army and corporate giving.

When coding, remember that the product is less important than the appeal. Examine only the image and headline. Smaller text that supports a point can be included as notes in the last column. [highlighted in the original coding sheet]
**Engagement:** does this ad directly or indirectly (“changing times”) address the gulf war, the Exxon Valdez oil spill, or the recession anywhere in the text? Code it as direct or indirect with a dash and include the phrase.

**Patriotism** – text that mentions “America” or “Americans,” images of the American flag, a conspicuous red, white, and blue or stars and stripes theme (other than regularly used in logo such as AARP), and national landmarks when they have patriotic significance (examples include the liberty bell or Mt. Rushmore).

**Strength** - Particular physical, mental, or emotional strength is pictured or reference. Products that promise to kill, destroy, conquer, or use other strong language.

**Landscape** - the scenery is one of natural beauty or the sublime. Includes mountains, rivers, lakes, farms, desert, coastline, and specific locales such as the grand canyon or Yellowstone geysers. Can include text mentions of a specific spot known for its natural beauty.
- Excludes cityscapes, gardens (cultivated beauty), and animals

**Natural** – the product (rather than the setting) is made of natural ingredients as described in the text or evident in the images. References to the elements, animals, vegetables, minerals, farming, unadulterated, purity (of product), organic (Pollay 1983).

**Luxury appeal** (things) – “Explicitly mentions luxury (or related terms such as leisure, pleasure, regal, or pampered or else depicts such pleasures visually (depictions should be judged to be clearly more comfortable, lavish, or opulent than most middle class homes of the same period)” (Belk and Pollay 1985). Associations with wealth, affluence, elitism, taste, elegance, and affluent lifestyle or executive status are included as luxury appeals (*affluence* is described by Thomas and Treiber 2000). Keywords may include expensive, rich, valuable, highly regarded, costly, extravagant, exorbitant, luxurious, priceless (Pollay 1983).
- Excludes “affordable luxury” items that more specifically emphasize price

**Education appeal** – the product may be an education course or product described as improving educational success (breakfast foods, Crayola markers, children’s learning software such as Leapfrog). May also include an educational institution as part of the background, as well as text describing learning how to make, judge, evaluate, or appreciate products. Includes connoisseurship. An example is learning to cook Chinese food. This includes Pollay’s (1983) wisdom appeal which includes keywords such as knowledge, education, awareness, intelligence, curiosity, comprehension, expertise, judgment.

**Populist world/heritage** – includes southern rednecks, Appalachian hillbillies, Coastal fishermen, Colonial settlers, Native Americans in traditional garb, western Frontiersmen, ranchers, or images of indigenous peoples/tribes or the more distant past (ex. Ancient Egyptians or Romans). This theme includes nostalgic themes, personal memories (often in sepia toned photos). This often includes traditional appeals that use language such as classic, historical, antique, legendary, time-honored, long-standing, venerable, nostalgic (Pollay 1983)

**Family and Friends** – when a group of people are present or referenced in the text. Describe the relationship, for example couple, siblings, mother and daughter, extended family, childhood friends.
- Excludes groups of people at work or at daycare, classmates, teammates, or band-mates.
GAINING ENTRY INTO EVALUATIVE CONSUMPTION EXPERIENCES AND THE ASSESSMENT AND AWARDING OF CAPITAL

Mya Pronschinske & Kent Drummond
University of Wyoming

Smilers wear a crown, losers wear a frown. (Miss Congeniality 2000).

Who will be declared the winner? Distinguishing and determining distinction within a field provides an opportunity for social structuring. Within the field of consumer research, there is a declared winner each year for the Robert Ferber Award and Sidney J. Levy Award that honors an outstanding dissertation article published in the preceding year. This award is determined by a set of judges who are selected due to their cultural capital in the field, that is their knowledge and ability to critique what is deemed appropriate and outstanding to the field. While the winners of the award may not be physically crowned champion, there is still a distinction awarded and a nice line added to their curriculum vitae.

Opposite to distinguishing a winner, our literature is rife with studies that highlight the strong communal aspects of consumption experiences. From skydiving (Celsi, Rose and Leigh 1993), to the Burning Man festival (Kozinets 2002), to a river-rafting trip (Arnould and Price 1993), to community-supported agriculture groups (Thompson and Coskuner-Balli 2007), researchers emphasize that while individuals must first pay an entry fee to participate in an experience, the value they receive from that experience lies mainly in the fact that they experience it with others.

But is that always the case? Recently, Tumbat and Belk (2011) underscore tensions between communitas and individual-level goals. Through their ethnography of Mount Everest climbers utilizing guide services, these authors suggest that participants may have competitive, singularized goals motivating their entry into an experience. Participating in such an experience allows themselves to test their own boundaries and willpower to see how far they are willing to go to achieve their goal. These goals not only motivate entry, but they also cause tensions during the experience itself. A group of individuals must work together to conquer Mount Everest, but that sense of communitas is threatened every step of the way by individual, competition-based goals.

Referring back to the example of article awards stemming from dissertation work, one notices that that judges declare who is the winner in the contest. In fact, there is a very large class of experiences in which individuals compete, in hopes of being declared “the winner” by one or more of judges. We call these competitive, judge-based consumption experiences (CJCE’s). Gaining acceptance into a highly selective college, being chosen by an employer as the top choice for a job, gaining admittance into a club or honorary society, an animal receiving the blue ribbon award at a show, are just a few of the experiences that fall into this category. In order to be successful, individuals (and animals) must first meet a set of minimum requirements in order to compete against one another; then this pool of pre-screened contestants must attract the attention and ultimate favor of one or more judges. The goal is to be chosen the winner, the most outstanding embodiment of a published set of criteria, the exemplar of the group’s standards.

Essential to CJCE’s is their subjective quality. Judges may agree on what standards should be measured, but they often disagree on how to measure the standards – not to mention the extent to which certain individuals do or do not meet them. College admissions committees, job search committees, and even animal show judges agonize over their decisions precisely because the attributes they hope to memorialize are so ambiguous. Descriptors such as “outstanding,” “fit” and “has the look” are difficult to operationalize, which in turn allows for a great deal of ambiguity, anxiety, and “play” between judges and
contestants. Individuals must fit in, but they must also stand out. How they negotiate this paradox is the focus of the present study.

Specifically, this study explores the processual nature of a CJCE, a beauty pageant. It considers the barriers of entry into a field that limits who is even able to participate in the evaluation. The analysis is conducted at the field level (including data points from judges, the directors, coaches, and the contestants) to understand how capital and rank is assessed in the field. Consumers use specific strategies of fitting in and standing out to increase their evaluations in the field. After the judging occurs, the outcome consists of a separation of one clear winner and the others. The winner receives an increase in symbolic and erotic capital within the field. Some non-winner participants use the experience as a learning opportunity to develop their skills for reentry and evaluation, while others discontinue the experience altogether.

In the following sections, the paper is organized as follows first a theoretical overview of Bourdieu’s conceptualization of the field and various forms of capital. Next, we look at previous work in consumer behavior studies where the participants engage in evaluative consumption experiences. We consider varying dimensions of self-evaluated contexts versus when there is a judge that does the evaluating. Also, we recognize that some competitions are open for anyone to participate while others require a certain level of capital to be realized before even being allowed to enter. After the methods are presented, the authors expound the barriers of entry into the specific field that dictates whom is even able to enter and then consider the process nature of how the field determines a winner. The article concludes with the discussion and implications for theory.

BOURDIEUIAN CONSTRUCTS AS A LENS ON THE FIELD

Because of the subjective nature of CJCE’s, Pierre Bourdieu’s work (1984, 1985, 1993) is essential to understanding their social patterning. One of the key terms is a field which is demarcated as when individuals or institutions engage in the same activity, there is always a structured system of social positions, structured internally through the power relations between all stakeholders involved. Bourdieu states that the rules of the game dictate how people come to achieve or preserve their power and specifically “there have to be stakes and people prepared to play the game, endowed with the habitus that implies knowledge and recognition of the immanent laws of the field, the stakes, and so on” (1993, 72).

This analysis addresses the field construction of an evaluative experience in which there is a clearly defined winner who through success gains higher capital in the field. The term capital was suggested by Bourdieu as consisting of three different types: economic, cultural, and social. Later in his work, Bourdieu and Wacquant (1992) suggested that there is a fourth form of capital: symbolic capital as being socially recognized and allowing members to claim prestige, respect, and legitimize authority in a given field. Recently, work has argued that there is an additional capital to Bourdieu’s original conceptualization of three types of capital, this one suggesting that attractiveness increases one’s erotic capital. This idea of erotic capital is defined by Hakim (2010) and she suggests has been previously overlooked because this is a form of capital that goes beyond beauty to include “sex appeal, charm and social skills, physical fitness and liveliness, sexual competence and skills in self-presentation”.

Bourdieu (1985) takes a stance that social space is constructed and constantly reconstructed by stating that “the structure of the social world is defined at every moment by the structure and distribution of capital and profits characteristics of the different particular fields” (734), and capital is situated at the center as there is a hierarchy “of different forms of capital” (737). These forms consist of economic, cultural, social, and later symbolic capital. Economic capital is the assessment of the accumulation of money or other assets such as property. Cultural capital includes the information and knowledge of goods deemed appropriate such as art, music, and literature. Social capital is an individual’s network of family, friends, acquaintances, and contacts that are able and willing to assist the individual in numerous ways.
Finally, *symbolic capital* is being socially recognized and assesses the individual’s legitimacy in the field. A final, critical term in Bourdieu’s schema is *habitus*. Habitus denotes a set of acquired schemes of perceptions, appreciations, and dispositions toward certain behaviors or items, including our tastes, which orient our practices and give them meaning. Habitus links individual actions within social systems and is constantly evolving and shaped by the interactions of individuals within the social structure.

Consumer behavior scholars have recognized the importance of Bourdieu’s ideas on social structures and his work has been extended to include contextual studies of institutional spaces such as the field of the middle-class home décor (Halle 1993), field of the museum (Prior 2002), field of indie music consumption (Arsel and Thompson 2011), and the field of metropolitan Turkish hair salons (Üstüner and Thompson 2012). Specifically, Üstüner and Thompson (2012) suggest that the fields can be a place where capital is contested, in this case symbolic capital between the different roles that service workers hold. Specifically, this research recognizes a field that is structured on the tenets of competition and prestige where there is one clear winner (rather than a hierarchy of roles). Further, this research is situated within the previous literature that suggests that consumers engage in experiences that allows them to be evaluated. In the next section, we review these studies.

**EVALUATIVE CONSUMPTION EXPERIENCES**

What constitutes a consumption opportunity for evaluation? In this research, evaluative experiences are broadly defined as the opportunity in which one’s skills, competence, and/or performance is evaluated against oneself and/or relative to others. This definition allows for a continuum of evaluation, ranging from who does the evaluating, the self (e.g., assessing relative to prior individual performance or against others engaging in the same experience) or an external other, in most cases a judge (e.g., assessing and determining who has achieved excellence). Experiences may be situated in fields that are demarcated as requiring previous capital to enter or being open, in the sense that besides a financial investment, anyone may partake in the experience.

Focusing on the when the self performs the evaluating, products may be used as a checkpoint to assess one’s own competence in a task (fig. 1, top left). For example, Dahl and Moreau (2007) suggest that a creative product, such as paint-by-number kits, informs a consumer of their competence with a task. They further suggest that when specific instructions for the task are given to the consumer, the consumer is likely to “feel proficient, even the first time through a task” (Dahl and Moreau 2007, 362). Highlighting that consumer’s may be successful on their first attempt demonstrates that creative kits are located in a field that is open and does not require certain capitals for entry. Thus, any consumer has the opportunity to gain competency through the completion of the task.

Participating in an extraordinary thrill experience also allows for an individual to assess their own skills (fig. 1, top left). These experiences are typically framed as a strongly communal experience; Tumbat and Belk (2011) however suggest that individual, competitive notions may also be a driving force motivating the experience. For example, the first jump skydiving allows for an assessment of accomplishment for an individual as highlighted from a jumper’s quote: “‘You really did it’. So I was thinking to myself, ‘You really let go’” (Celsi et al. 1993, 7). Participating in these experiences may provide a sense of personal growth and intensification of self (Price and Arnould 1993). The focus may also highlight one’s abilities versus other’s abilities. This is exemplified through client Corry’s statement about other clients “there are people here that have never climbed mountains before that have never put crampons on before” referring that there are different hierarchies among the climbers and he has more experience than *those* people. All of these experiences require financial investment; however the experience is declared open by not requiring previous capital in the field as further evidenced by Corry’s statement that some clients “hand over $50,000 to $60,000 to somebody and expect them to take you to the top” revealing that no previous experience is required to enter the field.
An activity may involve others to assess one’s position comparative to the field (fig. 1, top left), for example, Holt and Thompson’s (2004) discourse about Robert, the athletic man-of-action, provides an illustration of a consumer seeking and enjoying competitive opportunities through participating in auto racing. In auto racing, there is a single winner and he discusses as that he was not a winner for many years as he finished at the rear however now, through working hard, he finishes “first, second, third in the races that I race in” (430). For him, getting out on the racetrack provides him the opportunity to gauge his abilities (in his case, manhood) against his competitors. He likes winning, and gravitates toward the “manly sports” shying away from other sports such as golf or tennis as Robert states, “I’d have to beat the guy I’m playing with. I mean that’s very important to me… competitive aspect of it” (430). Additionally, Holt and Thompson (2004) summarize his discourse well by stating “Robert wanted to be the hero in a contest that the world considers a legitimate man-of-action pursuit” (430). In auto racing, an individual assesses his/her abilities against the other drivers or individual successes over time.
Likewise, a recent study by Üstüner and Thompson (2012) examines the competitive aspects of hairdressers in Turkey (fig. 1, top right). Competitive status games exist between hairdressers and consumers. While the hairdressers that are able to demonstrate exceptional knowledge of all aspects of hairstyling are able to hold the highest position in the salon, the customers denote that the hairdressers still come from a different (and lower) background is comparison to their middle-class or upper-middle-class society. In this setting, the hairdressers are constantly self-monitoring their progress as Kaya states that “you should improve your abilities, but at the same time you need to improve yourself. You need to talk well. You need to have ideas” (Üstüner and Thompson 2012, 804) in reference to hopes of social upward mobility. Hairdressers have low cultural capital in the field and thus are constantly self-evaluating and striving to gain standing in this field.

Similarly, evaluating oneself relative to others provides a justification for being an authentic member of the field (fig. 1, top right). For example, attendees at Burning Man festival constantly assess their own participation relative to others in the field. When an individual acts like a consumer, they are deemed as inauthentic because the true mission of Burning Man is an anticommercial event (Kozinets 2002). The ‘weekend-only’ attendees provide a reference point to be deemed as outsiders and external to the true attendees (Kozinets 2002, 25). Attendee Angel Rae utilizes her music knowledge to connect across various sub-cultures at the event and is afforded higher cultural capital (Kozinets 2002). It is these instances of uses of cultural capital that leans this participatory event into the closed capital region. Further, Arsel and Thompson (2011) highlight that field-dependent capital is strengthened when consumers engage in activities to distinguish the field (that protects it from negative stereotypes) from what the field is not.

In the previous examples, individual selves are making distinctions about the field. However, we also recognize that there are many experiences in which an external judge determines the outcome (fig. 1, bottom right). Within the consumer research literature Peñaloza (2000), during her data collection on the commodification of the American West, attended “20 other entertainment performances, including wagon driving competitions, horse and dog pulls, and riding contests” (87) and “thirteen junior and professional contestants showed cattle, lambs, and hogs, and a baby contest and a rough-riding tournament provided entertainment” (88). Here, the animal’s accomplishments are transferred to the contestants who show the animals, as she notes that the winning animal’s showman receives money in the form of college scholarships due to their animal’s success. However, there is still the experience of being (in this case, the animal as an extension of the self) judged and evaluated relative to others. In this case, the fate of the winning is determined by how best the animal exemplifies the desired traits of the particular breed. Due to the fact that animals are entered by specific breed, the animal essentially has met symbolic capital requirements and through the evaluation may achieve higher levels of symbolic capital within their breed.

Gaining entry into college involves preparing an application, sending in an entry fee, and waiting for external others to evaluate the application and deem that you will be a successful and productive member of the University. Allen (2002) describes the fit-like-a-glove (FLAG) framework in which consumers use verbiage such as “it was the perfect fit” to justify their previous decision choices specifically in the research context of choosing the University the informants were currently attending. However, he identifies that due to conditioning of habitus, and many class and gender-based norms that many of the students were pre-destined, in the sense that these conditions became part of their identity, and thus lead to their decision to attend college. Due to their norms internalized at a young age coming from their working class parents, education was prioritized (Allen 2002). However, each student still had to engage in the admissions process, and wait for an external judge to grant admittance into the University.
In summary, we argue that most studies of experiences within the CCT tradition have focused on evaluative opportunities for the self (fig. 1, top left and right). These studies have focused mainly on when the consumer engages in activities that allow themselves to assess their own skills. Relatively few (Allen 2002, Peñaloza 2000) recognize that some consumption experiences are contingent upon a judge declaring that one can participate and/or hold a substantial rank in the field. The objective of this study is to explore a field that limits entrance, the consumers that participate and what the strategies are employed to garner the attention of the judges, and thus extend the view of competitive, judge-based consumption experiences. In the next section, we discuss the method used for ethnography in the field of beauty pageants.

RESEARCH CONTEXT AND METHOD

During the past twenty-two months, the first author has participated in three beauty pageants as a contestant and garnered a top-five finish at one of the pageants which has opened up the opportunities to attend exclusive events within the pageant field (e.g., guest of state-level pageant for a different system and viewing party for international contest), to judge pageants, and interact with the general public while wearing the crown and sash at parades and charity functions. Varying these forms of engagement within the field of interest allows the researcher to address the constraints of studying at the macro-level (Wallendorf and Arnould 1991). Going beyond the views of the contestants, we were also interested in other key stakeholders in the field (e.g., directors, judges, coaches, photographers). The specific pageants for full participant observation as a contestant were strategically chosen as the first author had already ‘aged out’ of some systems, thus through secondary data searches on the Internet, the researcher chose a pageant system in which she met the base requirements of being a woman younger than 27 years old, at least 5’4” in height, and never been married.

The data set is thus made up of seven types of data. First, participant observation at three beauty pageants as a full-fledged contestant included interactions and conversations between contestants, sensory experiences of transforming the body into ‘pageant ready’, and the conversations and actions by the pageant staff were captured in audio files, scratch notes, drawings, which were dependent on the researcher’s role at that time (Emerson et al. 1995). For example, the audio files were taken when the researcher was able to leave the group for a moment so that it wouldn’t be intrusive to the field of interest. Second, the second author, and first author’s advisor, participated in one of the pageants by gaining access from the director to allow the advisor to observe the preparations during the days leading up to the pageant and also in-person at the final performance. Third, the authors have taken over 300 photographs and videos of the first author’s experiences in the backstage areas while participating and front stage while observing as a member of the audience or judge in order to add to the written account. As a supplement, photo CDs were made available to all contestants at each pageant. Each pageant event has a professional photographer and videographer there to capture all the action. These CDs and DVDs were bought and coded separately from the personal accounts. Fourth, a material repository includes the crown and sash, and numerous sponsored gifts given to the author as a contestant of the pageant. Fifth, in-context interviews and phone interviews following the interactions with informants provide emic descriptions and accounts of multiple roles (e.g., contestants, directors, judges, coaches, expert staff) within the field (table 1). Expert staff consists of professional hair and makeup artists, and runway walking experts such as professional models. All names are pseudonyms. The first author conducted the eighteen interviews. The sixth data category includes documents from the pageant such as the delegate handbook, program, and itinerary of events. Seventh, local and national news articles, websites, and online posts were archived throughout the immersion. The authors then employed NVIVO for organization, search, and open and axial coding. Analysis was conducted as the authors iteratively moved between the conceptualization of the field, patterns that emerged from the data (Thompson 1997), and the literature. Through this hermeneutic process, we developed a theoretical sociological structuring of a field that limits entry and utilizes judges to dictate the embodied epitome of a field’s member, in this case the crowned champion.
### Table 1
Ethnographic Study Key Informants

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age</th>
<th>Role</th>
<th>Sex</th>
<th>Highest Rank in Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misty</td>
<td>47</td>
<td>Coach</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
<tr>
<td>Jessica</td>
<td>42</td>
<td>Director (National-level)</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
<tr>
<td>Michael</td>
<td>27</td>
<td>Director (State-level)</td>
<td>Male</td>
<td>Never competed</td>
</tr>
<tr>
<td>Everett</td>
<td>49</td>
<td>Director (National-level)</td>
<td>Male</td>
<td>Never competed</td>
</tr>
<tr>
<td>Sarah</td>
<td>41</td>
<td>Director (State-level)</td>
<td>Female</td>
<td>Never competed</td>
</tr>
<tr>
<td>Bethany</td>
<td>30</td>
<td>Judge/Coach</td>
<td>Female</td>
<td>Competed at state level</td>
</tr>
<tr>
<td>Nancy</td>
<td>63</td>
<td>Judge</td>
<td>Female</td>
<td>Never competed</td>
</tr>
<tr>
<td>Courtney</td>
<td>19</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
<tr>
<td>Kari</td>
<td>21</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
<tr>
<td>Hannah</td>
<td>26</td>
<td>Contestant</td>
<td>Female</td>
<td>Competed at state level</td>
</tr>
<tr>
<td>Susan</td>
<td>24</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at national level</td>
</tr>
<tr>
<td>Candy</td>
<td>24</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
<tr>
<td>Nora</td>
<td>35</td>
<td>Expert Staff/Director (National-level)</td>
<td>Female</td>
<td>Won at national level</td>
</tr>
<tr>
<td>Darcy</td>
<td>26</td>
<td>Expert Staff</td>
<td>Female</td>
<td>Won at national level</td>
</tr>
<tr>
<td>Deborah</td>
<td>26</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at national level</td>
</tr>
<tr>
<td>Jenny</td>
<td>20</td>
<td>Contestant</td>
<td>Female</td>
<td>Appointed at state level</td>
</tr>
<tr>
<td>Carla</td>
<td>22</td>
<td>Contestant</td>
<td>Female</td>
<td>Appointed at state level</td>
</tr>
<tr>
<td>Linda</td>
<td>25</td>
<td>Contestant</td>
<td>Female</td>
<td>Won at state level</td>
</tr>
</tbody>
</table>

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**A SOCIOLOGICAL STRUCTURING OF COMPETITIVE, JUDGE-BASED CONSUMPTION EXPERIENCES**

**Entering a Field**

*Who Gets to Participate? Boundaries of Entry*

Restrictions for entry define the ideal form of beauty as to even be able to walk across the stage; for example, contestants of Miss pageants must first satisfy the age, marital status restriction, have been born a female, and residency requirements. Within the pageant field, there are subfields of different pageant systems. Each subfield system may have different categories for evaluation and thus have varying views about who should constitute a contestant. Each contestant, regardless of the individual pageant, signs an affidavit acknowledging and agreeing to stipulations. Specifically, the Miss Earth pageant system dictates that the national candidate must be at least 18 years old and not over the age of 26 by the date of the pageant. According to the Miss Universe/Miss USA pageant, there is a requirement that all
contestants be at least 18 years of age and under age 27 by February 1st in the year that they would compete at the Miss Universe pageant. The Miss America contest requires that the contestants are a bit younger with the contestants having to be at least seventeen years old and the maximum age of 24 years old. For the contestants, they feel pressure with getting older and no longer having the chance to walk across the stage as a contestant.

_Hannah (contestant):_ This is my last year to compete. I seriously really want to win. This is my fourth attempt at the crown and since I will be ageing out, this is my last shot. I wish I could just stop time as I feel if I could have a bit more time, I really think I could win. I know I sound sort of be desperate right now but I have accomplished all the other goals that I have set for myself and this one has me stumped.

The pageant field dictates who and who is not able to enter as a contestant. This is quite different from the Mount Everest climbers where if like the informant Vera whom has the financial resources, may buy their way into the extraordinary experience (and not feel guilty about doing it either) (Tumbat and Belk 2011). Further, Philip, a guide, recognizes that “in the West, people are conditioned to believe they can buy anything” (Tumbat and Belk 2011, 54) similarly to Rifkin (2000) who suggests that we are in an ‘age of access.’ However, the pageant field doesn’t care how about much money one has, there is a restrictive limited age frame in which one has the opportunity to win the crown. As the field requires that the contestants come from certain locale, age groups, marital status, etc., the Miss pageants dictate that the women be between the ages of 17 and 26, thus associating beauty with youth. Further stipulations include the requirement of having to be single and not given birth to a child and also having been born a natural female (pageant handbook).

The terms and conditions for the entry into a beauty pageant field convey different messages on the ideal of femininity, with contestants being judged based upon their age and marital status. Since these terms and conditions limit those who are able to participate in the pageant, the people who do not meet these specific criteria, both by being outside the age limit or by being sexually ineligible, are not considered a potential contestant for the Miss pageants and therefore if they want to compete in the field must look elsewhere. Contestants seek out other pageant systems that include their excluded group (e.g., Mrs. pageants contestants are married, Ms. pageants were created for a pageant to include career women who may wait longer than age 26 to get married and to include divorced or widowed women who are excluded from the Mrs. pageants, Petite pageants for contestants that are 5’6” or 5’5” and less in height, child beauty pageants to include those under the age of 18, Mr. pageants to include men either married or single, Mr. and Miss gay pageants to include ambassadors for Gay and Human Rights). This list is not exhaustive but provides a look into the entire field of pageantry as the process of evaluation at each pageant subfield remains the same and there is still one distinguished winner. Also, each pageant subfield system has their own set of restrictions for entry. This inquiry recognizes that there are numerous subfield systems in the field of pageants however does not investigate these other pageant subfield systems that have started throughout the years to offer a place for excluded contestants to compete; rather this research looks at the contestants who enter the field in its original form of Miss beauty pageants – young, unmarried, and never been married women.

_Learning the ‘Rules of the Game’_

If you meet the criteria to enter, then you are able to participate in the pageant field. The field dictates how you should dress, wear your hair, speak, and also dictates your sexual relationships. For example, even if you enter the game and achieve at the highest level earning a crown of distinction, you must always adhere to the restrictions put on the contestants to enter the field as the contestants must agree to remain single throughout their reign. Nora, a pageant director, and Deborah, a contestant who won a national title, discusses that a pageant queen must always at least appear single in public.
Nora (Director): You are only young once and this is your only time to wear the crown. Some girls make stupid mistakes throughout their reign and do not understand what a pageant queen really is. A queen is a representation for her community, state, or for her nation and they must realize that people are always watching them. The majority of the watching comes from men as they like to look at the girls and for these men; the girl no longer becomes desirable when she is taken. One of my queens brought her boyfriend to a public appearance and totally crossed the line as the boyfriend got jealous and almost got in a fight with one of the men who came to the autograph signing. I told her that in private she could keep a boyfriend but when in the public eye – she needed to be single.

Deborah (contestant): When I won, my boyfriend knew he had to postpone our engagement. We had talked about getting married but since I finally won the title, I couldn’t get engaged yet. There was no way that I could put a ring on my ring finger and be in the public eye. If I did that, I would have to give up my crown because I signed a contract to remain single throughout my reign and my boyfriend knew that I wouldn’t want to give my title up. I worked so many years and fought through two years as first-runner up, so this crown means so much to me as I was able to accomplish my goal. So he waited and on the night before I gave up my crown, my boyfriend became my fiancé.

These accounts by different stakeholders demonstrate the adherence to the rules and regulations set forth by the subfield. Some people may see this antiquated as this reflects a purported virgin status which portrays them as chaste and innocent (Banet-Weiser 1999, 223). However, pageants challenge the view that women are supposed to be demure and fulfill the societal standards of femininity and rather highlight the tensions within a woman. Thus, their external and internal qualities of femininity are expected to be aligned. Conversely though, the contestant’s requirement to be single may also cause them to be seen as sexually available which indicates a sexualization and objectification of contestants when they participate in the pageant. Women are characteristically supposed to be sexually submissive and are expected to take on a subordinate role but their single status may in turn cause them to be seen as an active sexual being. Their single status will put them in a position to seek sexual intimacy and showcasing them in this light allows them to be seen as active participants who are not restricted in their stereotypical role of the passive submissiveness.

Preparing to become a contestant of a pageant requires an active body. A contestant is asked to get in ‘pageant ready’ shape. Contestants work to manipulate the shape of their body particularly to prepare for the swimsuit competition. The swimsuit ‘bathing beauties’ in the origin of pageants as the Miss America pageant was the first to begin in 1921 and then the Miss Universe pageant started as a promotional event for Catalina Swimwear in 1952 (Birnbaum 2006). While pageants have moved away from the strict evaluation of swimsuit bodies only (and reserved that for the Hawaiian Tropic contests), to include other judging areas, the contestants still feel the pressure of walking across the stage in heels and a bikini. According to the pageant delegate handbook, personality in swimsuit competition is judged on the following:

Your personality and confidence in which you display on stage and do you have an attractive feminine body for your body type. While being physically fit is important, we also want to make sure you are healthy. We are not seeking the thinnest young lady with six-pack abs, we seek the real you. Healthy skin is also considered.

While some of the subfield pageant systems outside of the Miss division do not include the swimsuit competition. The Miss contestants speak about how there is pressure to look a certain way as there are many eyes gazing their way. Similar to preparing for a battle, Candy discusses in detail all the work she puts in before the pageant to get her talent and body in appropriate shape for evaluation:
Candy (contestant): I wake up every morning at around 4:30 a.m. and head to the gym before I have to be at work at 8:00 a.m. At the end of the workday around 4:00 p.m., I return to the gym to take ballet and Pilates classes. It is important to have a toned body but that is not all, as I also take lessons with a voice coach to perfect my talent portion of the competition.

Interviewer: Did you prepare like this for the state competition?

Candy (contestant): Oh no, at the state level you can win without being super in-shape however everyone expects that you get your body into tip-top shape before the televised national pageant. I don’t want to be the chubby girl that every living room across the country comments and laughs at. I don’t want to let one thing that I can control cost me the crown.

Control is a common theme in the field of pageants as it suggested that the contestant who can best control and demonstrate this control to the entire field is the contestant that comes out on top. Further, Bethany, a recognized coach in the field, adds:

Bethany (coach): I advise my clients to give three months before a pageant to get their body in pageant shape. No one can maintain it all year and it is quite unhealthy to restrict during the entire year. I tell my clients that I wouldn’t want them to lose over something that they had control over. If a contestant’s body is taken care of, it shows that she is able to keep her internal desires under control too.

Both Candy’s and Bethany’s descriptions of the link between external and internal control is also echoed by the statement of “the person who feels good (inner condition) is the one who looks good (outer body condition) and therefore is ‘good’, in a moral sense” (Joy and Venkatesh 1994, 349). Along a similar vein, Maurer and Sobal (1999) discuss the link as “shaping one’s body has become a way to shape one’s self” (82). The barriers of the body become blurred as there is a suggestion that there is no separation between the external and internal body rather that there is congruence between a well-taken cared for body leads to an evaluation of a controlled inner self.

Evaluation of Capital within the Field

The pageant field becomes a variety of stakeholders converge, including directors, coaches and their staff, judges, the media, the audience, and of course, the contestants. Without any of these, it simply would not be a pageant. Evaluations occur by the members of the field with the focal point on the individual contestant.

“What other systems have you competed in?” “How many pageants have you done?” These are common questions used by the contestants to assess another contestant’s symbolic capital in the field. They use the rank in other pageants to determine one’s prestige in the field. This is similar to the work of Üstüner and Thompson (2012) as they suggest that there is a ranking hierarchy of roles amongst Turkish hair salon workers. However, in the pageant field, all contestants are called to perform the same role and practices regardless of their previous symbolic capital. All contestants have the same opportunity to walk across the stage and be judged. Courtney recognizes that pageants are an evaluation and she contends that the evaluation occurs to assess one’s external body, through her storied statement of:

Courtney (contestant): It is a beauty pageant at the end of the day, obviously you are judged on how you look. It’s nice if you can speak well and all that but really they only care about how you are on the outside. Some of these girls come here and think that they actually have a chance against us girls who have been competing since we were in diapers. Well, they don’t know how to walk and pose like me and honestly, don’t really stand a chance. (Emphasis added).
Courtney is a highly experienced member of the field having begun participating in child pageants when she was only three weeks old and having self-declared as “doing over a thousand pageants” and “having appeared on the television show Toddlers and Tiaras”. She states that before the pageant even begins that there are contestants who have higher symbolic capital in the field (as evidenced by previous pageant successes). However, in the moment of evaluation, judges are instructed by the pageant delegate handbook:

Judges will be instructed on only score each phase of competition within the parameters of that particular segment and not to let previous phases influence their score. Judges score each delegate without consulting or discussing with other members of the judging panel.

Thus, in essence, it doesn’t matter what your previous capital is; rather, current capital is what counts, which is determined in the moment. Some contestants win on their first attempt at a pageant and against Courtney’s rant, may actually stand a chance. Take for example Candy who has never competed in a pageant and discusses her story:

*Candy (contestant):* I’m not what you would call a typical pageant girl. Actually, this was first pageant experience. I’ve always wanted to do one but have been too busy with my undergraduate and master’s degrees to feel like I could take the time off if I actually won. So, I just waited until this summer when I finished my master degree and had my last year of eligibility before ageing out, so I thought I’d give it try and wouldn’t you know, I actually won my state competition. I now get to represent my state at the national level. After winning is when I actually got nervous, this is when I realized my place in the field that other girls have been doing this their entire lives. To catch up, I am working with a coach to teach me the *pageant ways.* (Emphasis added).

Candy received high symbolic capital in the field without ever achieving it before. This is quite different from the idea of the salon workers in recent research (Üstüner and Thompson, 2012) who can only advance up the ranks through hard work. The pageant field does not discriminate among previous roles. Each contestant is given a clean slate, and any contestant can become the winner.

The judges hold the fate of each contestant in their hands as the judges assign a score for each individual area of scoring. Beauty pageants are, according to Hakim (2011), “the most holistic assessment of erotic capital … where a panel of judges rate contestants in the round, not just on facial beauty” (216). This speaks to the encompassing evaluation of the contestants’ beauty but also other elements of assessments the elements of erotic capital such as social grace, likeability, and presentation of the self. The contestants speak about the subjective nature of pageants and refer to the field’s commonplace statement of “a different day, a different set of judges, and a different winner”. Judges suggest clear strategies for evaluating such a subjective field as pageants.

*Nancy (judge):* When I judge, I am looking for the things that the contestant’s do correctly. Each contestant starts with a blank slate for me and then I base my evaluation on the things she does on-stage. I am looking for a relaxed smile, eye contact with me, and a confident walk.

*Bethany (judge):* Being a former contestant has helped me understand the pressure that the contestants are feeling while on stage. I remember trying to enact all the things that I had practiced and so badly wanted to perform perfectly. Each contestant has either worked with a pageant coach or at least by herself in the ways that she wants to pose and walk. So since I expect a perfect performance due to all the practice, I am looking the contestant to do something wrong. I start each girl at a perfect score and then begin to deduct points for the wobbles, miss-steps she takes, or not smiling and not making enough eye contact.
Strategies for Increasing Field-Dependent Capital: Fitting In and Standing Out

At the end of the contest, only one contestant will be named the winner and allowed to wear the crown. Thus, to determine this winner, there has to be distinguished distinction between the contestants. The contestants make choices about how to stand out amongst the crowd and the judges make explicit evaluations of the contestants through the forced rating systems to determine the winner. This echoes Bourdieu’s (1984) concept of distinction – “taste classifies, and it classifies the classifier. Social subject, classified by their classifications, distinguish themselves by the distinctions they make” (6). Further, Holt (1998) suggests that cultural capital does not reside in the object itself but rather the way in which the object is consumed. The ability to discriminate what is appropriate is an attribute that the judges look for when evaluating a contestant’s choices of clothing. Specifically, the pageant delegate handbook from one of the pageants that the author competed in states that:

This is not a clothes contest! Our judges will be instructed NOT to allow the apparent value of one’s wardrobe to influence their overall decision nor take into consideration clothing EXCEPT if the clothing is inappropriate, not in good taste or reflects poorly on you, your image and the image of the pageant… Make sure it is properly fitting and makes a lasting impression. In the end it is YOU, who is being judged, but the gown is the “wrapping on the package” so to speak, and it should allow you to present yourself in the best way possible.

Each contestant has agency in the choice of which clothes and style of dress best represent them. Evening gown choice of color and style becomes a point of differentiation for the contestants. All contestants are required to wear the same outfit for opening number and swimsuit, thus the evening gown competition is their chance to show their personality. The pageant delegate handbook discusses the evening gown competition by stating that:

You will need a full-length gown for this phase of competition. Your evening gown should be age appropriate and flattering to you. Your gown should reflect who you are, your style and flair for fashion… Keep your particular body type and coloring in mind when choosing your gown.

The only stipulation is on the length of the gown. Other than the length, the contestants get to choose the fabric, shape, and color of the gown. When choosing the gown color, Jenny, a contestant and Misty, a coach, discuss about how there is a standard selection across the field:

Jenny (contestant): When choosing my evening gown color, I did a little research using Google images to see what color gowns the winners from the previous ten years were wearing. You know there is that saying in the pageant world of winning white, well that is exactly what I found as five contestants won in white and two others were in nude dresses, so very close to white. So, I of course also went with a white gown.

Misty (coach): My girls, they wear white. It’s just too big of a risk not to wear white. White is a safe color because everyone likes white. It is not one of those colors that elicit strong emotional reactions. I tell my girls that they want the judges to look at them, not at the dress.

These vignettes, by both a contestant and a coach, illustrate the dominant choice in color of evening gowns. Many contestants choose this color gown to fit in and not provoke a negative emotional response. This color choice may also be aligned with the notion to convey femininity and purity (aligned with being young and unmarried); Labrequre and Milne (2011) suggest that the color white positively affects evaluations of perceived sincerity. However, in a strategic move to stand out amongst the sea of whites, one contestant Kari confronts Bourdieu’s (1984) notion of the “natural facility” (255) toward the ‘right’ ways to consume, as a point of distinction from her fellow competitors:
Kari (contestant): My gown just had to be purple. It is my favorite color and one that most pageant girls do not choose. Most girls are scared to choose anything other than the standard white, nude, or black gowns, thus I will stand out in my purple gown. And, purple is totally me, by wearing this color gown it tells the judges that I am regal and sophisticated.

Susan (contestant): I chose a yellow gown. I worked with a pageant coach to determine the right gown for my body shape and skin color. We Latina girls can get away with a bright colored evening gown because we have the personality to match it… and yellow is a happy color, and who doesn’t want a happy pageant queen?

During the only part of the pageant where the contestants are allowed to choose their own attire, these contestants use this opportunity as their chance to stand out. On the crowded stage, where all the contestants possess some level of erotic capital (for even being allowed to enter), these contestants use products to distinguish themselves from the group. Specifically, gown choice becomes a point of differentiation. Susan’s comment about a particular ethnic group gravitating toward bright colors is echoed by Schouten and McAlexander (1995) who suggest that within “various subgroups there is a propensity toward homogeneity” (48). Thus, contestants navigate the line of being daring to being considered a fashion no-no. During an exclusive watch party where only members of the field are invited, there is a constant assessment of gowns saying “that is a typical pageant gown”, “pushed the line just enough into high fashion”, and “oh no, that went too far, huge faux-pas”. Thus, here the field allows agency however operating as a field, there is enough structure to punish one’s choices if they go against the traditionally accepted norms of the field.

Outcomes

One Winner

At the conclusion of the evening, after the contestant’s external and internal beauty is assessed (with an emphasis on the external); there is only one contestant who will win the title. This is a point of conflict for the contestants as they are supposed to appear as a kind, caring person who puts others first. However in this moment, one woman is afforded the opportunity to have the power, and dominance over the rest of her peers. The one woman left standing is distinguished from the rest by receiving a crown and sash which furthers her distinction from the others. Specifically, those items act as a signifier that propagates Westernized culture of individualistic success. There is an emphasis that only one contestant gets to wear the crown and through this reward, is afforded higher capital in the field than her peers. Symbolic capital is quantified as there is a natural ranking of the contestants that occur. By becoming the winner, the field garners a greater respect and labels the winner a pageant queen. Pageants may recognize a court of the top five with honorary distinction. This is a public display of the contestants’ authenticity and increased symbolic capital in the field. Pageants are also as suggested by Hakim (2011), a validation of their erotic capital.

The Others

Even though most contestants do not walk away with the crown, some discuss how just participating has been a great experience. Even though they do not receive any designation within the field, they discuss personal growth from the experience. For example, Deborah discusses that winning can be a process:

Deborah (contestant): It took me many, many years before I actually captured the crown. I went home devastated because I felt like a loser each of those times. I would cry and be bummed out for a couple of weeks but when I received my scores and comments from the judges in the mail, I would get excited again and use their negativity as motivation to try again next year.
For Deborah, she learned so much and gain feedback from the judges that help her eventually move into the winner category. Other contestants do not have the same tenacity as Deborah and the example of Robert in Holt and Thompson (2004) who believe through hard work, that they will get to become a winner. Other contestants simply end their tenure with the field suggesting that:

*Linda (contestant):* I can’t believe that she won. How was I not in the top five? I guess they actually want a girl that cares about the environment. I am not going to start wearing Toms and carry recycled bags just to win. I am done with this pageant.

For Linda, she may not be able perform in ways which the field calls for however that are deemed inauthentic to her. Dealing with wins and losses becomes an important aspect of which contestants use the evaluative experience as a chance to increase their skill set so that when they re-enter the field, they have greater cultural capital and social capital than their competitors. Cultural capital in that the contestants learn what gown choices work, how to walk a certain way for that pageant subfield system, etc. Knowledge about what the subfield system is ‘looking for’ is invaluable to a contestant who desires to re-enter into the pageant system. Social capital becomes an important resource in the field as the more pageants a contestant does, the more chance they will have the same judge, and be viewed as a person who is willing to work hard to achieve their goals.
Figure 2
A Sociological Structuring of Competitive, Judge-Based Consumption Experiences

If Allowed to Enter Subfield – Learn the ‘Rules of the Game’

Evaluation of Capital

Strategies:
1. Fitting In
2. Standing Out

Performance-enhanced through the experience

Outcomes

Winner

The Others

Higher Symbolic Capital
Higher Erotic Capital

*The different geometric shapes designate interlinked sites of evaluation in the pageant field (i.e., judges, the audience, coaches, the director, expert staff, other contestants, etc.)
DISCUSSION

As illustrated in figure 2, the field restricts who is able to enter, influences how the participants act, and dictates who is awarded the increased capital. Recognizing that we now live in what Pine and Gilmore (1999) deem as the ‘experience economy’ which this is further fueled by the notions of paid-for access to experiences (Rifkin 2000), consumers actively seek out and make substantial financial investments for opportunities to be declared the winner. The figure also demonstrates that there are tensions of fitting into the field which Bourdieu suggests is the habitus in which the individuals in the field internalize the behaviors and practices of the field as their own. On the other hand, the contestants recognize that this is a competition, and use strategies of distinction to stand out amongst the crowd. Bourdieu suggests that this distinction operates when the individual is able to discriminate between the beautiful and the ugly. Pageant contestants make these decisions with their choice of dress and style for the contest.

Consumer researchers have suggested that consumers participate in performances as proposed by Deighton (1992) and he has suggested that a pageant falls under the category of a festive performance. From the audience’s perspective, this could be correct however when you consider the competitive motivations and influence of other competitors (actors) in the experience, the pageant field simply cannot be reduced to only a performance. Rather, a pageant operates as a competitive, judge-based consumption experience in which there is a winner and one or many losers. Deighton’s (1992) conceptualization could be enhanced by distinguishing the difference between an individual and collective outcome. It could be labeled as a third dimension of individual outcome – collective outcome. It is where skill performance (e.g., golf and chess are naturally individual games) takes on an individual focus while thrill performance (i.e., rafting and fraternity rush) and show performance (i.e., ballet and theater) are both focused on the collective outcome with multiple actors benefiting from the performance. Further, skill performance as Üstüner and Thompson (2012) suggest that rural migrants “must become competent in cultural capital practices that have currency in the social worlds of their more affluent clientele” (797). Due to the rural migrants (individuals) increasing their cultural capital, they benefit by being able to increase their individual rank. Thus, the inclusion of Bourdieu’s work on capitals within a field, and the recent work by Hakim (2011) on erotic capital garners a contribution when other people are assessing one’s rank.

The pageant field labels certain contestants as winner, and the contestants come to the field with the hope of being that one contestant who is deemed the winner. However, during the experience to become the outright winner, contestants may perform in ways that highlight the ways in which they are a ‘typical pageant girl’, thus questioning the authenticity of their actions. It is interesting to question the interactions of the contestants external to the structured field of a beauty contest. Are they performing acts authentic to the self (Arnould and Price 2000)? Further research into the differences between every-day and pageant practices would be a fruitful pursuit. Photo journal logs could provide a glimpse into the varying consumption practices while acting as a member of the pageant field versus ordinary, routine days.

From a psychological perspective, Ryan and Deci (2000) suggest that cognitive evaluation theory (CET) assesses “people’s inherent growth tendencies and innate psychological needs that are the basis for their self-motivation” (68). They focus on a participant’s underlying needs for autonomy and competence. Similar to the suggestion of some contestants who enjoy the evaluative experience thanks to their feedback to improve their performance for next time, Ryan and Deci (2000) suggest that receiving feedback can positively influence an individual’s intrinsic motivation in that context. It is interesting to ponder if the influence of previous perceived competence in the field (i.e., won before versus having no experience) will influence the claim of causing an increased intrinsic motivation to act. Longitudinal studies of contestants could provide insight into how learning within a field operates overtime. Could a contestant learn too much about that field that she becomes too homogenous (and blend in) since the field still calls for an individual to stand out amongst the crowd?
The contribution of this work is crystallizing and developing the notion that consumers seek out and enjoy participating in an experience that allows them to be evaluated. Specifically, judges (albeit subjective) provide an affirmation that an individual has achieved the highest levels of capital within a field. Also, the process nature of displaying capital for assessment with the hope of increasing one’s capital becomes a contribution to the theory as it suggests that consumers may be continuously looking for ways to increase their capital and be deemed a winner. Consequently, this research highlights that consumers are actively navigating the paradox of standing out while fitting in.
REFERENCES


THE EFFECT OF THE VARIANCE OF USER REVIEWS ON SALES:
THE MODERATING EFFECT OF THE VARIANCE OF CRITIC REVIEWS

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INTRODUCTION

User reviews are recognized as an important source of information for consumers (Sonnier, McAlister, and Rutz 2011). In reviews, users usually describe the pros and cons of a product, and give an overall rating on the basis of their true use experience. Therefore, user reviews (URs hereafter) have value to perspective buyers (Richins 1983), and thus have the potential to significantly influence demands of search products and experience products alike, such as bath and beauty products (Moe and Trusov 2011), movies (Liu 2006), books (Chevalier and Mayzlin 2006), TV shows (Godes and Mayzlin 2004), software (Zhou and Duan 2011), and cameras (Lee and Bradlow 2001). Banerjee (1992) suggests that rational agents may ignore their own private information in favor of information inferred from others’ behavior.

Prior literature shows that both the valence and the variance of users ratings could impact sales (e.g., Sun 2012; Basuroy, Chatterjee, and Ravid 2003). Valence is the average rating of URs. In almost all cases, users rate the product higher if they like the product than not, so potential consumers are more likely to purchase a product receiving a greater average rating (Dellarocas et al 2007; Chevalier and Mayzlin 2006). However, existing search on the effect of the variance of user ratings demonstrates mixed findings. For instance, Zhu and Zhang (2010) find that the variance of URs has a negative effect on sales only when the product is not popular. Sun (2011) shows that variance has a positive effect if and only if the average of user ratings is low. Moe and Trusov (2011) demonstrate a positive effect of variance on sales, which suggests that products targeting mass markets enjoy greater sales if the URs are highly inconsistent than otherwise. Zhang (2006) tests the effect of variance on box office performance, but finds it to be insignificant in the early weeks after a movie’ opening.

The current study focuses on the effect of variance, and tries to address the mixed findings. In the research context of this study, the variance of user ratings measures the heterogeneity of user evaluations. Obviously, it delivers unique information about a product beyond that of valence. In an extreme case, let us assume that two books are of interest to a customer. One book receives a neutral average rating (e.g., 3 out of 5 stars) with all user ratings being the same, but the other obtains the same average rating with a half of user ratings being extremely positive (e.g., 5 out of 5 stars) and the other half extremely negative (e.g., 1 out of 5 stars). It is very likely that the customer interprets the two piece of heterogeneity information differently, and as a result, demands for the two books would be affected. Move and Trusov (2011) show that variance has comparable effect on sales as valence does in terms of both the direction and the size. So, variance information is also valuable to manufacturers, since they may make better demand forecasts if they understand correctly how consumers interpret this information (Sun2011) under different situations.

Although all potential buyers understand that a high variance of user ratings indicates someone like the product but some others don’t, their inference of this simple fact may not be similarly homogeneous. On one hand, the variance may reflect the positioning of a product. A product targeting a mass market usually has smaller variance of user ratings than those targeting a niche market. In this case, variance has value in the sense that potential buyers can judge their mismatch cost on the basis of the variance of URs, ----the cost is smaller if the variance is lower than otherwise. Therefore, high variance would lead to low demand. On the other hand, the variances may simply reflect that some important features of the product are inherently horizontal. For a laptop, for example, higher CPU speed, greater hard disk capacity and lower prices, are universally desirable, so they are vertical attributes and
consumers always want more (or even less in terms of price). However, color (e.g., black vs. white, or neon blue, royal blue, vs. sky blue) is a horizontal feature on which consumers do not have consistent preference. Therefore, a customer who has a strong preference towards a typical color may rate a laptop very negatively after he finds its color to be not exactly what he wants. In other words, high variance may indicate that the product is controversial in some important aspects, and customers do not have consistent preference along these aspects. Such controversy might trigger curiosity and execute a positive effect on sales, since prospective consumers could be interested in knowing where the controversy comes from, what he will feel after actually using the product, how some consumers still like the product given other hate it, and verse vice. In this case, the variance has value in the sense that potential buyers may realize this product is controversial in certain aspects. In the current study, we argue that one of the two above psychological underpinnings may dominate the other under different conditions. Specifically, we conjecture that the overall effect of variance of user ratings depends on the variance of critic ratings, as elaborated in the next session below.

The motivation and contribution of this article is threefold. At first, we investigate the effect of the variance of user and critic reviews on purchase simultaneously. Critic reviews (CRs hereafter) is also an important source for consumers who plan to make a purchase. Eliashberg and Shugan (1977) find that the valence of CRs could determine the overall sales of a product. Basuroy, Desai, and Talukdar (2006) find that the variance of CRs has significant effect on sales, and the effect becomes stronger when the advertising budget is higher and/or the movie is a sequel. Therefore, discussions of the effect of user reviews without considering the effect of CRs are at least incomplete, if not biased. More importantly, in most cases CRs may not be consistent with URs. Therefore, how consumers interpret the inconsistencies, reconcile them, and evaluate focal products accordingly is crucial to understand the overall effect of online URs. To our knowledge, this paper is the first one to address this important theoretical question. Second, unlike most existing studies, we test our model by using the secondary data on two distinct markets, ----one of which is movie industry and the other one digital camera industry. Therefore, our findings have stronger external validity. Third, we establish the moderating effects of product quality and product type. That is, we examined how consumers’ interpretations of the three types of inconsistencies vary, depending on the product equality and product type. Therefore, the findings of this study provide meaningful suggestions to marketers about how to manage online reviews strategically.

In this study, we find that in general, the variance of URs has a negative effect on demand. However, this effect reverses when the variance of CRs is also high, especially when the product quality is high, or the product is an extension. We conjecture that this happens because when both variances are high, customers are more likely to attribute the variances to the controversy nature of the product. Therefore, their curiosity is triggered. The increase of curiosity leads to greater sales when the product quality is high, or the perceived risk is low. These findings are important for firms in the sense that managers can act accordingly on the basis of the variance of URs. For instance, managers may deliberately link their websites to CRs with large disagreement when the variance of URs is big. In this case, the high variance of URs may elicit positive effects on sales.

In the next section, we review the existing literature pertaining to the effects of online reviews. We then develop our hypotheses and test the effects by using the second data about the movie industry and digital camera industry in U.S. Included are the behavior explanations of our hypotheses. Finally, the theoretical and managerial contributions are highlighted, and the limitations of the current study and the future directions are discussed.
CONCEPTUAL FRAMEWORK

Unlike URs, CRs are often provided by third parties who have sufficient knowledge and capability to test the product quality, and compare and contrast it with other rival products on the same market. Although CRs are supposed to be an objective proxy of the inherent quality of a product, reviews provided by different critics could be different for reasons such that critics give the same feature different importance, or simply because experts do not have the same level of knowledge or expertise. Focus, a smart phone model manufactured by Samsung, for example, receives very different ratings from different critics. At Consumer Report it was rated as 64/100 but at CNET it was rated as 4/5. Although consumers may not expect the CRs to be exactly the same, large differences among critics could impact how customers perceive the product, and thus impact sales (Chen, Liu and Zhang 2012; Duan et. Al, 2008).

Discussions of the effects of URs without considering the impact of CRs simultaneously are very likely to be incorrect for at least two reasons. First, CRs are usually published much early before any UR is available. That is, CRs could be the only source of independent information about a product for a certain period of time. Therefore, they may affect the sales and the content and/or volume of URs at early stage after product lunch (Wenqi Zhou and Wenjing Duan 2010), and then execute long term influence through social dynamic (Moe and Truscov 2011). Second, CRs are regarded as being more objective and credible (Hann, Dijkstra and Dijkstra 2005). So potential consumers may still resort to CRs even after URs are available.

Prior literature suggests that the variance of CRs matter (Basuroy, Desai, and Talukdar 2006; Clemons, Gao and Hitt 2006), although the findings are also somehow mixed. West and Broniarczyk (1996) find that potential consumers do try to interpret the disagreement among critics, and their inference significantly impacts choices. Specifically, they show that when the average rating of critics is below an expected level, consumers prefer the alternative which receives high variation of ratings because such an option still has some chance to meet their threshold level. Conversely, when the average rating suggests that a product has a higher than expected level of quality, consumers prefer the alternative on which critics have smaller disagreements. In this way, prospective buyers could avoid selecting a product whose actual quality falls below the threshold. Sun (2010) has similar findings. See table 1 to get the summary of relevant literature.

More importantly, in many cases CRs are different from URs since they are provided by two groups of people with different level of expertise on the basis of quite different criteria. Samsung Transform, another smart phone model made by Samsung, is rated as 3.5/5.0 by a critic at CNET, but the average rating of 85 users at the same website was only 2.0/5.0. So the reality is, when seeking the online reviews, perspective consumers face three sources of potential inconsistency: inconsistency within CRs, within URs, and between user and critic reviews.

Firms must understand how consumers interpret the variance information of URs and CRs, and how they reconcile the inconsistencies between the critic and user reviews to predict the overall effect of online reviews. CRs, as mentioned above, usually are the technological reports of lab tests by independent third parties. Thus, they are supposed to be objective and therefore consistent (Hann, Dijkstra and Dijkstra 2005). When CRs are sufficiently different instead, potential consumers might try to make sense of this unexpectation. Some studies suggest that people may actually spend more time deliberating the unexpected information rather than expected one, and recall the former better (Stangor and McMilian 1992). We conjecture that the unexpectation could be attributed to two sources. On one hand, literature in psychology finds that message content determines perceived credibility of the information source (Walster, Aronson, and Abrahams 1966; Swinyard 1981). In the online critic review context, it is possible that at least the credibility of some critics is perceived to be questionable when potential buyers find that the critics, ----who are supposed to be objective and consistent, ---- give conflicting recommendations. This might decrease sales, since CRs cannot mitigate uncertainty about product quality any more. On the
other hand, the variance of CRs could indicate that even critics cannot arrive at agreements about a product. Therefore, the product per se may be controversial in certain sense. For example, critics may debate over whether some features of a product are necessary, or whether the material used to make the products is safe in the long run. The differences among CRs could reflect such a nature. In this case, critic variance may trigger curiosity (Sun 2011).
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<td>Ads enhance the effect of valence.</td>
<td>Valence</td>
<td>Ads enhance the effect of valence.</td>
<td>×</td>
</tr>
</tbody>
</table>
Table 1. Previous Empirical Study about the Effects of CRs and URs –Continued

<table>
<thead>
<tr>
<th>STUDIES</th>
<th>KEY CRs METRICS</th>
<th>EFFECTS OF CRs ON REVENUES</th>
<th>KEY URs METRICS</th>
<th>EFFECTS OF URs ON REVENUES</th>
<th>HOW CRs AND URs WORK JOINTLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhou and Duan 2011</td>
<td>Valence</td>
<td>Valence increases software downloads.</td>
<td>Volume</td>
<td>The volume increases software downloads.</td>
<td>The URs volume mediates the effect of CRs valence on software download.</td>
</tr>
<tr>
<td><strong>Our study</strong></td>
<td><strong>Valence Variance</strong></td>
<td><strong>The valence (not variance) increases sales.</strong></td>
<td><strong>Valence variance</strong></td>
<td><strong>While the valence increases sales, the variance decreases sales.</strong></td>
<td>(1) The interaction effect of URs variance and CRs variance is positive.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2) URs variance increases sales for high quality and improved products when CRs variance is high, and decrease sales for other types of products.</td>
</tr>
</tbody>
</table>

Those two different interpretations have different consequences. We hypothesize that the variance of CRs plays a moderating role on the impact of the variance of URs because different mechanisms might be triggered. Specifically, as elaborated above, the high variance of URs could be either interpreted as a high mismatch cost, or the controversial nature of certain aspects of a product. Consumers could apply either explanation, if the variance of CRs is not available. However, when the variance of CRs is also high, controversial nature of the product could be used to interpret both the high variance of URs and CRs, on the basis of the prediction of the covariation theory (Kelly 1967).

Covariate theory states that people attribute events to a reason if it satisfies the principle of consensus, ----that is, different behavior and events could be explained by the same reason. In the present research context, a majority of customers may attribute the high variance of CRs and URs to the possibility that the focal product has a controversial nature, and thus is likely to be applied. Therefore, when both CRs and URs have large variance, curiosity will increase, which means customers have more interest in the product.

Curiosity may increase sales. Based on prior literature, we conjecture that this is true when product quality is high and/or perceived risk of purchase is low. Curiosity elicited by high variance of URs and CRs coexists with the concern about mismatch costs, or the ambiguity about the credibility of critics. These downsides could be mitigated or even eliminated under certain conditions. In practice, firms have multiple ways to signal the quality of their products, and consumers also actively seek such information to differentiate good products from bad ones. For instance, in the movie industry, to a large degree budgets could represent the quality of a movie (Basher, Desal, and Talukdar 2006). With a large budget, studios could afford buying a story of high quality, and invite reward winning movie stars to act in the movie. Therefore, large producing budgets reliably predict the quality of a movie. Mismatch costs are low when product quality is high than when it is low, because in this case the product could deliver services that is supposed to deliver in an above average level, and meet the basic expectations of customers to the product. Therefore, the social (e.g., social face) and economic costs (e.g., time and money) associated with the purchase of a high quality product is low. Moreover, the concern of the credibility of critics could be eliminated by the fact that the product quality is high. The reason is that critic reviews help customers to judge the unobservable quality of a product. When there are other cues to
reveal the quality of a product, the informational value of CRs decreases dramatically, and the questionable credibility of critics won’t have a negative effect on sales. As a result, we hypothesize that when there are other signals indicating the focal product is of high quality, curiosity would increase sales. We hypothesize that:

H1: The variance of URs has a positive effect on sales when the variance of CRs is high and the quality of the product is high;

Perceived risk of a purchase plays an important moderating role also. For instance, Campbell and Goodstein (2001) find that moderate incongruity has positive effect on evaluations when the perceive risk is low. That is, consumers prefer a product which is moderately incongruous with an evoked product category schema than a product which is congruous with the schema. However, the effect reverses when the perceived risk associated with a purchase is high. Similarly, Gürhan-Canli and Batra (2004) find that corporate image associations (e.g., a company’s associations for innovation and of trustworthiness) have a greater impact on consumer evaluations when a high level of risk is perceived. In the context of current research, curiosity could have an impact on purchase, depending on the level of perceived risk. If the perceived risk is low, curiosity elicited by high variance of URs and CRs should increase purchase. As mentioned before, the essential function of URs and CRs is to reveal information about some unobservable aspects of a product (e.g., its quality) and decrease uncertainty associated with a purchase. When a product is an updated version of an existing product (e.g., a sequel movie), consumers usually already have some information to judge the quality of the new generation on the basis of sales data or their own use experience of the old generation. Therefore, their concerns about mismatch costs and the questionable credibility of critics could be addressed by other available information. In addition, the updated generation is usually developed on the basis of a successful existing product. As a result, the perceived risk of purchasing an updated version is low. So curiosity elicited by high variance of URs and CRs might increase sales when the product is a sequel.

H2: The variance of URs has a positive effect on sales when the variance of CRs is high and the product is an updated version of an existing product;

EMPIRICAL FINDINGS
We test our conceptual framework in two empirical studies with the hope that we can generalize our findings to different contexts. In study 1, we use data about 136 movies released in the U.S. market during December 2009 to December 2010. The prices of all movies are roughly the same, so our findings are free of the influence of prices. This dataset is longitudinal in nature (n=136 movies, t=8 weeks). In study 2 we use data on 90 cameras. The variables, definitions, measures, and data sources for both Study 1 and Study 2 could be seen in table 2.
Figure 1
The Effects of User reviews on Sales

STUDY 1

Data and Measures

We collected weekly box office and theater count data on all movies released during December 2009 to December 2010 from Boxofficemojo. The movie characteristics such as release time, distribution studio, production budget, genre, Motion Picture Association of America (MPAA) ratings, and sequel were gathered from IMDB and The-numbers. CRs were collected from Metacritic (Chen, Liu, and Zhang 2012), and URs were from Yahoo!movie (Chintagunta, Gopinath, and Venkataraman 2010; Moon, Bergey, and Iacobucci 2010). Metacritic summarizes reviews from major critics and media outlets, such as Variety, Washington Post, Rolling Stone, and The New York Time. On Metacritic each critic assigns a score from 0 to 100 to indicate his or her overall attitude towards a movie. The ratings of URs from Yahoo!Movie range from F to A+. These ratings were translated to a numeric number from 1 to 13. We also recorded the date when the critics were posted online. In our dataset, all CRs were posted before a movie’s release, but the URs were after the opening week till the eighth week later (Chen, Liu, and Zhang 2012; Moon, Bergey, and Iacobucci 2010).

We identify three measures for both URs and CRs—variance, valence, and volume. The variance is operationalized as the standard deviation of URs (CRs) ratings (Moe and Trusov 2011; Sun 2012). Valence is the average numerical value of URs (CRs) ratings (Chevalier and Mayzlin 2006; Moon, Bergey, and Iacobucci 2010); and volume represents the number of URs (CRs) (Liu 2006; Moon, Bergey, and Iacobucci 2010).

In Study 1, producing budget was used as a proxy variable for movie quality. Big budget movies could have powerful star, lavish sets and costumes, expensive digital manipulations, and special effects (Bassuoy, Chatterjee, and Ravid 2003). So movies of high budget are usually considered as high quality and exciting. The product type (product extensions or new product) was measured as the perceived risk. Sequel movies are extensions of parent movies’ commercial success and is likely perceived to be low risk (Basuoy, Desai, and Talukdar 2006; Hennig-Thurau, Houston, and Heitjans 2009). Table 3 provides the key descriptive statistics.
Table 2
Variables, Measurement, and Data Sources

<table>
<thead>
<tr>
<th>Variables</th>
<th>Study 1 Meanings and Measures (Data Sources)</th>
<th>Study 2 Meanings and Measures (Data Sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>Weekly box office (in dollars; Boxofficemojo)</td>
<td>Sales rank of digital cameras at Amazon (if a camera has different ranks, we use the average; Amazon)</td>
</tr>
<tr>
<td>Weekly URs Volume</td>
<td>The number of weekly URs (Yahoo!Movie)</td>
<td>The total number of URs (Amazon)</td>
</tr>
<tr>
<td>Weekly URs Valence</td>
<td>The mean of weekly URs (F=1; A+=13; Yahoo)</td>
<td>The mean of URs (one star=1; five star=5; Amazon)</td>
</tr>
<tr>
<td>Weekly URs Variance</td>
<td>The standard deviation (SD) of weekly URs (Yahoo)</td>
<td>The SD of URs (Amazon)</td>
</tr>
<tr>
<td>Distribution</td>
<td>The number of weekly distributed theaters (Boxofficemojo)</td>
<td></td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance</td>
<td>The SD of URs until this week (Yahoo)</td>
<td>The SD of URs (Amazon)</td>
</tr>
<tr>
<td><strong>Moderators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRs Variance</td>
<td>The SD of CRs published before a movie’s release (Metacritic)</td>
<td>The SD of CRs (Testseek)</td>
</tr>
<tr>
<td>Quality</td>
<td>Production budget (million dollars; The-numbers)</td>
<td>High brand quality (1=Canon and Nikon; 0=others; Dpreview)</td>
</tr>
<tr>
<td>Product Type</td>
<td>1=sequel movies (product extension), 0=others (newness product) (The-numbers)</td>
<td>1=improved camera in a series; 0= newness camera in a series (Dpreview)</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Valence</td>
<td>The mean of URs until this week (Yahoo)</td>
<td>The mean of URs (Amazon)</td>
</tr>
<tr>
<td>URs Volume</td>
<td>The total number of URs until this week (Yahoo)</td>
<td>The total number of URs (Amazon)</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>The mean of CRs published before movie’s release (0-100; Metacritic)</td>
<td>The mean of CRs (1-100; Testseek)</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>The number of CRs published before movie’s release (Metacritic)</td>
<td>The total number of CRs (Testseek)</td>
</tr>
<tr>
<td>Week</td>
<td>The number of weeks since release (Boxofficemojo)</td>
<td>The number of weeks from launch to our data collection date (Dpreview)</td>
</tr>
<tr>
<td>Competition</td>
<td>The market share of top 12 movies at each week (Boxofficemojo)</td>
<td></td>
</tr>
<tr>
<td>Studio</td>
<td>1=distributed by 8 major studios, 0=others (The-numbers)</td>
<td></td>
</tr>
<tr>
<td>MPAA</td>
<td>MPAA ratings (1=R movie, 0=others) (The-numbers)</td>
<td></td>
</tr>
<tr>
<td>Genre</td>
<td>Movie genre (1=horror, 0=others) (The-numbers)</td>
<td></td>
</tr>
<tr>
<td>Weekend</td>
<td>1=released at weekend, 0=others (The-numbers)</td>
<td></td>
</tr>
<tr>
<td>Season</td>
<td>1=released at 7 major holidays, 0=others (The-numbers)</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td>The price of the camera (Amazon)</td>
</tr>
</tbody>
</table>

Notes: 8 major studios are MGM/UA, BV, Fox, Sony, WB, Miramax, Paramount, Universal; 7 major holidays are Thanksgiving, Christmas, New Year, Presidents, Memorial, Independence, and Labor.
Table 3
Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th></th>
<th>Min. Study 1</th>
<th>Min. Study 2</th>
<th>Max. Study 1</th>
<th>Max. Study 2</th>
<th>Mean Study 1</th>
<th>Mean Study 2</th>
<th>SD Study 1</th>
<th>SD Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. URs Variance</td>
<td>0.441</td>
<td>0</td>
<td>5.683</td>
<td>1.773</td>
<td>3.692</td>
<td>1.119</td>
<td>0.716</td>
<td>0.357</td>
</tr>
<tr>
<td>3. URs Valence</td>
<td>3.196</td>
<td>2.4</td>
<td>12.778</td>
<td>4.889</td>
<td>8.763</td>
<td>4.063</td>
<td>1.834</td>
<td>0.519</td>
</tr>
<tr>
<td>6. Quality</td>
<td>0.588</td>
<td>0</td>
<td>5.561</td>
<td>1</td>
<td>3.897</td>
<td>0.3</td>
<td>0.866</td>
<td>0.461</td>
</tr>
<tr>
<td>7. Product type</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.15</td>
<td>0.522</td>
<td>0.357</td>
<td>0.502</td>
</tr>
</tbody>
</table>

Notes: Sales and Quality (production budget) are log-transformed in Study 1.

Model Specification
To capture the dynamic interrelations between firms’ actions and moviegoers’ behavior, we use Seemingly Unrelated Regression (SUR) which could estimate theoretically related sets of equations simultaneously. In addition, SUR could deal with two major concerns of our model. First, several variables in the model are either independent or dependent variables in different equations, which raises the concern of endogeneity. Second, the error terms of different equations are likely to be correlated because of possible omitted variables. Failure to account for these concerns would produce biased estimates. SUR model is appropriate to address these concerns (Fang 2008; Zellner 1962). We test the following five equations simultaneously:

Log (Sales_{it})=\alpha_{1,0} + \beta_{1,1}URs Variance_{i,t-1} + \beta_{1,2}URs Variance_{i,t-1} \times CRs Variance_{i} + \beta_{1,3}URs Variance_{i,t-1} \times CRs Variance_{i} \times Quality_{i} + \beta_{1,4}URs Variance_{i,t-1} \times CRs Variance_{i} \times Product Type_{i} + \beta_{1,5}CRs Variance_{i} + \beta_{1,6}Quality_{i} + \beta_{1,7}Product Type_{i} + \beta_{1,8}URs Volume_{i,t-1} + \beta_{1,9}URs Valence_{i,t-1} + \beta_{1,10}CRs Volume_{i} + \beta_{1,11}CRs Valence_{i} + \beta_{1,12}Competition_{t} + \beta_{1,13}log(Sales_{i,t-1}) + \beta_{1,14}log(Week_{i}) + \beta_{1,15}log(Theater_{i}) + \varepsilon_{1,i,t}

Log (Weekly URs Variance_{i,t})=\alpha_{2,0} + \beta_{2,1}URs Variance_{i,t-1} + \beta_{2,2}CRs Variance_{i} + \beta_{2,3}Quality_{i} + \beta_{2,4}Product Type_{i} + \beta_{2,5}URs Volume_{i,t-1} + \beta_{2,6}URs Valence_{i,t-1} + \beta_{2,7}CRs Volume_{i} + \beta_{2,8}CRs Valence_{i} + \beta_{2,9}Competition_{t} + \beta_{2,10}log(Sales_{i,t-1}) + \beta_{2,11}log(Week_{i}) + \beta_{2,12}log(Theater_{i}) + \beta_{2,13}MPAA_{i} + \beta_{2,14}Studio_{i} + \beta_{2,15}Weekend_{i} + \beta_{2,16}Season_{i} + \beta_{2,17}Genre_{i} + \varepsilon_{2,i,t}

Log (Weekly URs Volume_{i,t})=\alpha_{3,0} + \beta_{3,1}URs Variance_{i,t-1} + \beta_{3,2}CRs Variance_{i} + \beta_{3,3}Quality_{i} + \beta_{3,4}Product Type_{i} + \beta_{3,5}URs Volume_{i,t-1} + \beta_{3,6}URs Valence_{i,t-1} + \beta_{3,7}CRs Volume_{i} + \beta_{3,8}CRs Valence_{i} + \beta_{3,9}Competition_{t} + \beta_{3,10}log(Sales_{i,t-1}) + \beta_{3,11}log(Week_{i}) + \beta_{3,12}log(Theater_{i}) + \beta_{3,13}MPAA_{i} + \beta_{3,14}Studio_{i} + \beta_{3,15}Weekend_{i} + \beta_{3,16}Season_{i} + \beta_{3,17}Genre_{i} + \varepsilon_{3,i,t}
The five dependent variables are movie box office at week t \((Sales_{i,t})\), the variance of URs ratings at week t \((Weekly URs Variance_{i,t})\), the number of URs at week t \((Weekly URs Volume_{i,t})\), the mean of URs ratings at week t \((Weekly URs Valence_{i,t})\), and the number of distributed theaters at week t \((Theaters_{i,t})\). For movie box office equation, the key independent variable is the variance of URs ratings until week t-1 \((URs Variance_{i,t-1})\); the moderators are variance of CRs ratings \((CRs Variance_i)\), movie production budget \((Quality_i)\), and movie sequel dummy \((Product Type_i)\). For the remaining control variables, \(URs Volume\) denotes the accumulated number of URs until previous week; \(URs Valence\) denotes the mean of URs ratings until previous week; \(CRs Volume\) denotes the number of CRs published before a movie’s release; \(CRs Valence\) denotes the mean of CRs ratings; \(Competition\) denotes the market share of Top 12 movies each week. Other control variables are the number of weeks since initial release \((Week)\), MPAA rating \((1=R\) rating; \(0=\)others), Studio \((1=\)distributed by 8 big studios; \(0=\)others), Weekend \((1=\)opened at weekend days; \(0=\)others), Season \((1=\)opened at 7 major holidays), and Genre \((1=\)horror movies; \(0=\)others).

**Estimation Results**

We first test the model by using all the independent variables and control variables without the interaction terms. Next, we add the interaction between the variance of URs and CRs. And then we add the two three-way interaction whose effects are elaborated in H1 and H2. The results could be seen in Table 4. Table 5 reports the estimates of other four equations in Model 3. As shown in Table 4, the improvements of the models with interaction terms over the baseline model are significant. To further demonstrate the significant interaction effects, we conduct slope analysis (Aiken and West, 1991; Fang 2008). We present the results of the simple slope analysis in Table 6.
Table 4
The Effects of URs on Movie Box Office

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>DV= log (Weekly Box Office)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
</tr>
<tr>
<td>URs Variance</td>
<td>-0.073 (-3.517)**</td>
</tr>
<tr>
<td>CRs Variance</td>
<td>-0.003 (-1.117)</td>
</tr>
<tr>
<td>Quality (log(Budget))</td>
<td>0.097 (6.655)**</td>
</tr>
<tr>
<td>Product Type (1=Sequel)</td>
<td>-0.059 (-1.99)**</td>
</tr>
<tr>
<td><strong>Moderating Effects</strong></td>
<td></td>
</tr>
<tr>
<td>URs Variance × CRs Variance</td>
<td>0.007 (2.280)**</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Quality</td>
<td>H1</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Product Type</td>
<td>H2</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
</tr>
<tr>
<td>URs Volume</td>
<td>0.004 (1.627)</td>
</tr>
<tr>
<td>URs Valence</td>
<td>0.026 (3.22)**</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>-0.030 (-0.129)</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>0.005 (5.478)**</td>
</tr>
<tr>
<td>Competition</td>
<td>-0.288 (-1.187)</td>
</tr>
<tr>
<td>Log (lagged box office)</td>
<td>0.837 (38.416)**</td>
</tr>
<tr>
<td>Log (Week)</td>
<td>-0.224 (-4.603)**</td>
</tr>
<tr>
<td>Log (Theaters)</td>
<td>0.186 (7.902)**</td>
</tr>
<tr>
<td>Constant</td>
<td>0.985 (2.73)**</td>
</tr>
<tr>
<td># Observations</td>
<td>827</td>
</tr>
<tr>
<td>R²</td>
<td>0.9696</td>
</tr>
<tr>
<td>Incremental R² test P-value</td>
<td></td>
</tr>
</tbody>
</table>

*  p < .1; ** p < .05; *** p < .01

Note: (a) t-values are in parentheses; (b) quality (production budget) is log-transformation and mean-centered; (c) to enhance readability, we multiplied coefficients of URs volume and CRs volume by 100.
Table 5  
Results of Other Four Equations in Seemingly Unrelated Regression System

<table>
<thead>
<tr>
<th>DV= log (URs Variance)</th>
<th>DV= log (URs Volume)</th>
<th>DV= log (URs Valence)</th>
<th>DV= log (Theater)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 4</strong></td>
<td><strong>Model 5</strong></td>
<td><strong>Model 6</strong></td>
<td><strong>Model 7</strong></td>
</tr>
<tr>
<td>URs Variance</td>
<td>21.848 (9.328)***</td>
<td>-16.160 (-4.087)***</td>
<td>-0.043 (-0.029)</td>
</tr>
<tr>
<td>CRs Variance</td>
<td>-0.675 (-2.323)**</td>
<td>0.463 (0.962)</td>
<td>0.014 (0.077)</td>
</tr>
<tr>
<td>URs Volume</td>
<td>0.007 (2.559)***</td>
<td>0.071 (15.485)***</td>
<td>-0.003 (-1.539)*</td>
</tr>
<tr>
<td>URs Valence</td>
<td>-1.622 (-1.796)**</td>
<td>-3.125 (-2.040)**</td>
<td>9.459 (16.902)***</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>0.086 (0.307)</td>
<td>0.210 (0.458)</td>
<td>-0.011 (-0.061)</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>0.076 (0.732)</td>
<td>0.153 (0.895)</td>
<td>-0.049 (-0.763)</td>
</tr>
<tr>
<td>Quality (log(budget))</td>
<td>-0.003 (-0.155)</td>
<td>0.041 (1.419)*</td>
<td>0.008 (0.786)</td>
</tr>
<tr>
<td>Product Type (1=sequel)</td>
<td>-0.003 (-0.106)</td>
<td>-0.214 (-3.973)***</td>
<td>0.002 (0.085)</td>
</tr>
<tr>
<td>Competition</td>
<td>0.098 (0.355)</td>
<td>0.611 (1.350)</td>
<td>-0.134 (-0.799)</td>
</tr>
<tr>
<td>Log(lagged box office)</td>
<td>0.044 (3.148)***</td>
<td>0.482 (22.168)***</td>
<td>-0.002 (-0.196)</td>
</tr>
<tr>
<td>MPAA rating (1=R movies)</td>
<td>0.028 (0.971)</td>
<td>-0.274 (-6.037)***</td>
<td>-0.038 (-2.196)**</td>
</tr>
<tr>
<td>Studio (1=big studio)</td>
<td>-0.063 (-2.412)**</td>
<td>-0.063 (-1.503)*</td>
<td>0.038 (2.341)***</td>
</tr>
<tr>
<td>Weekend (1=weekend opened)</td>
<td>0.015 (0.415)</td>
<td>0.035 (0.573)</td>
<td>-0.018 (-0.776)</td>
</tr>
<tr>
<td>Season (1=major holidays opened)</td>
<td>0.087 (1.177)</td>
<td>-0.043 (-0.365)</td>
<td>0.019 (0.425)</td>
</tr>
<tr>
<td>Genre (1=horror movies)</td>
<td>-0.004 (-0.158)</td>
<td>0.159 (3.605)***</td>
<td>-0.019 (-1.166)</td>
</tr>
<tr>
<td>log(Week)</td>
<td>-0.048 (-0.916)</td>
<td>-1.062 (-11.90)***</td>
<td>0.072 (2.231)**</td>
</tr>
<tr>
<td>log (Lagged Theaters)</td>
<td></td>
<td></td>
<td>0.645 (26.98)***</td>
</tr>
<tr>
<td>Constant</td>
<td>0.154 (0.381)</td>
<td>-3.095 (-4.715)***</td>
<td>1.488 (6.093)***</td>
</tr>
<tr>
<td># Observations</td>
<td>735</td>
<td>826</td>
<td>787</td>
</tr>
<tr>
<td>R²</td>
<td>0.266</td>
<td>0.832</td>
<td>0.465</td>
</tr>
</tbody>
</table>

*p<.1; **p<.05; ***p<.01

Note: (a) t-values are in parentheses; (b) quality (production budget) is log-transformation and mean-centered; (c) to enhance readability, we multiplied coefficients of three URs (CRs) metrics by 100.

From Model 3 we know that the interaction effect between URs variance and CRs variance on sales is significant (β=.009, p<.01). Under both high and low levels of production budgets and two levels of sequel, the positive interaction effects between URs variance and CRs variance are significant. The movie production budget positively moderates the interaction effect between URs variance and CRs variance (β=.002, p<.05; H1 supported); and this is also true for sequel (β=.004, p<.05; H2 supported).
### Table 6

**Simple Slope Analyses**

<table>
<thead>
<tr>
<th>URs Variance × CRs Variance</th>
<th>Effects of URs Variance</th>
<th>Effects of CRs Variance</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High CRs Variance</td>
<td>Low CRs Variance</td>
<td></td>
</tr>
<tr>
<td>High Budget</td>
<td>0.0132</td>
<td>0.0842</td>
<td>-0.1310</td>
</tr>
<tr>
<td>(3.803)***</td>
<td>(2.024)**</td>
<td>(-4.087)***</td>
<td></td>
</tr>
<tr>
<td>Low Budget</td>
<td>0.0051</td>
<td>0.0994</td>
<td>-0.1833</td>
</tr>
<tr>
<td>(1.642)*</td>
<td>(-2.602)***</td>
<td>(-5.322)***</td>
<td></td>
</tr>
<tr>
<td>Se quel</td>
<td>0.0131</td>
<td>0.0837</td>
<td>-0.1311</td>
</tr>
<tr>
<td>(3.715)***</td>
<td>(1.666)**</td>
<td>(-3.79)***</td>
<td></td>
</tr>
<tr>
<td>Non-sequel</td>
<td>0.0092</td>
<td>-0.0058</td>
<td>-0.1566</td>
</tr>
<tr>
<td>(2.925)***</td>
<td>(-0.173)</td>
<td>(-4.799)***</td>
<td></td>
</tr>
</tbody>
</table>

* p < .1; ** p < .05; *** p < .01. *Note: t-values are in parentheses.*

From table 6 we know when CRs variance is high, the effect of URs variance on box office is insignificant (Slope = -.006, n.s.); however, when CRs variance is low, URs variance has a negative effect on box office (Slope = -.157, p < .01). When production budget is high, URs variance has a significantly positive effect on movie box office when CRs variance is also high (Slope = .084, p < .05; H1 supported); however, this effect becomes negative when CRs variance is low (Slope = -.131, p < .01). When production budget is low, URs variance has significantly negative effects no matter CRs variance is high or low (Slope = -.099, p < .01; Slope = -.183, p < .01). Furthermore, for sequel movies, URs variance has a significantly positive effect on movie box office when CRs variance is also high (Slope = .084, p < .05; H2 supported); however, this effect becomes negative when CRs variance is low (Slope = -.131, p < .01).

**Robustness Analysis**

To enhance confidence in our results, we conduct several robustness tests to evaluate the same effects (1) by using CRs that are published at the opening week and (2) by splitting URs into two categories, one that are posted at a movie’s early life cycle (1-4 weeks) and the other one that are posted in later life cycle (5-8 weeks)). Results in Table 7 indicate that the interaction effect between CRs variance and URs variance is still positive. Furthermore, budget and sequel positively moderate above interaction, which provide further support to H1 and H2.

We also test the curvilinear effect of URs variance on movie box office. Results show that when CRs variance is high, a higher URs variance could increase box office when product budget is also high, but it would decrease box office when budget is low (H1 supported). Moreover, when CRs variance is low, the effects URs variance on box office is U shape. However, sequel has no significant moderating effects.
<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance</td>
<td>-0.271 (-3.053) ***</td>
<td>-0.155 (-1.598) *</td>
<td>-0.991 (-4.24) ***</td>
</tr>
<tr>
<td>URs Variance × URs Variance</td>
<td></td>
<td></td>
<td>0.132 (3.371) ***</td>
</tr>
<tr>
<td>CRs Variance</td>
<td>-0.058 (-2.505) ***</td>
<td>-0.040 (-1.589) *</td>
<td>-0.063 (-2.72) ***</td>
</tr>
<tr>
<td>Quality (log(Budget))</td>
<td>0.025 (0.523)</td>
<td>-0.005 (-0.102)</td>
<td>-0.058 (-1.460) *</td>
</tr>
<tr>
<td>Product Type (1=Sequel)</td>
<td>-0.315 (-2.386) ***</td>
<td>-0.430 (-3.448) ***</td>
<td>-0.160 (-1.336) *</td>
</tr>
<tr>
<td><strong>Moderating Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance × CRs Variance</td>
<td>0.013 (2.178) **</td>
<td>0.009 (1.357) *</td>
<td>0.032 (2.053) **</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Quality</td>
<td>0.002 (2.354) ***</td>
<td>0.001 (1.400) *</td>
<td>0.005 (2.216) **</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Product Type</td>
<td>0.004 (1.922) **</td>
<td>0.007 (3.323) ***</td>
<td>-0.001 (-0.098)</td>
</tr>
<tr>
<td>URs Variance × URs Variance × CRs Variance</td>
<td></td>
<td></td>
<td>-0.004 (-1.663) **</td>
</tr>
<tr>
<td>URs Variance × URs Variance × CRs Variance × Quality</td>
<td></td>
<td></td>
<td>-0.001 (-1.136)</td>
</tr>
<tr>
<td>URs Variance × URs Variance × CRs Variance × Product Type</td>
<td></td>
<td></td>
<td>0.001 (0.659)</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Volume</td>
<td>0.004 (0.897)</td>
<td>0.008 (2.776) ***</td>
<td>0.005 (2.028) **</td>
</tr>
<tr>
<td>URs Valence</td>
<td>0.028 (2.501) ***</td>
<td>0.030 (2.682) ***</td>
<td>0.035 (4.364) ***</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>-0.003 (-0.890)</td>
<td>-0.004 (-1.198)</td>
<td>0.002 (0.905)</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>0.005 (3.352) ***</td>
<td>0.005 (3.855) ***</td>
<td>0.004 (5.070) ***</td>
</tr>
<tr>
<td>Competition</td>
<td>0.100 (0.294)</td>
<td>-0.039 (-0.121)</td>
<td>-0.000 (-0.001)</td>
</tr>
<tr>
<td>Log (lagged box office)</td>
<td>0.846 (27.55) ***</td>
<td>0.711 (22.91) ***</td>
<td>0.776 (35.55) ***</td>
</tr>
<tr>
<td>Log (Week)</td>
<td>-0.449 (-5.522) ***</td>
<td>0.174 (1.707) **</td>
<td>-0.250 (-5.33) ***</td>
</tr>
<tr>
<td>Log (Theaters)</td>
<td>0.130 (4.198) ***</td>
<td>0.404 (11.398) ***</td>
<td>0.268 (11.32)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.115 (3.435) ***</td>
<td>0.795 (1.267)</td>
<td>2.603 (5.72) ***</td>
</tr>
<tr>
<td># Observations</td>
<td>356</td>
<td>471</td>
<td>827</td>
</tr>
<tr>
<td>R²</td>
<td>0.936</td>
<td>0.969</td>
<td>0.973</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.933</td>
<td>0.968</td>
<td>0.972</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05; ***p < .01

Note: (a) t-values are in parentheses; (b) quality (production budget) is log-transformation and mean-centered; (c) to enhance readability, we multiplied coefficients of URs volume by 100.
STUDY 2

Data and Measures

We collected camera sales rank data from Amazon (data collection date is March 1, 2012; the following relative variables are based on this date). Other information such as launch time, price, and brand name was either from Amazon or Dpreview.com.

CRs were collected from Testseek.com, and URs were collected from Amazon. Testseek summarizes reviews from major critics and media outlets, such as CNET, Camera Labs, stuff.tv, and Photography Blog. Testseek assigns each critic review a percentage ranging from 1% to 100% as a critic score. The ratings of URs from Amazon span 1 star to 5 stars. Like in study 1, the star ratings were translated to a numeric value from 1 to 5. Our sample includes 90 digital camera models launched from February 2008 to November 2011 in U.S. market.

For the critic and URs data, following Study 1, we also identify three measures of reviews—variance, valence, and volume. The key measure was the variance. The camera quality was measured as whether the camera is manufactured by a well know brand or not. Brand name communicates unobservable quality (Erdem and Swait 1998) and is a sale-independent default-independent signal (Kirmani and Rao 2000). On the digital camera market, Canon and Nikon are the biggest two players and are regarded as leading brands. Thus, we categorized camera quality as a dummy variable (1=Canon and Nikon brands; 0=others). The product type (product extensions or new products) was also measured as a dummy variable. For a camera series (e.g., Sony Alpha SLT series), later launched models (e.g., Sony Alpha SLT A55) are improved versions of early generations (e.g., Sony Alpha SLT A33). Therefore, they are extensions. Thus, we categorized it as a dummy variable (1 =improved camera models; 0 = the earliest launched model in the same series). Table 3 provides the key descriptive statistics.

Model Specification

SUR is also used to analyze data in study 2. Because firm’s action data (i.e., distribution) are not available, in Study 2 we do not estimate the corresponding equation. Moreover, URs volume and URs valence have no significant effect on sales rank in Sales Equation, so we delete these two equations. Thus, the final SUR system contains two equations as follows:

Sales Rank $i = \alpha_{10} + \beta_{1,1}URs \text{ Variance}_i + \beta_{1,2}URs \text{ Variance}_i \times CRs \text{ Variance}_i$

$+ \beta_{1,3}URs \text{ Variance}_i \times CRs \text{ Variance}_i \times Quality_i$

$+ \beta_{1,4}URs \text{ Variance}_i \times CRs \text{ Variance}_i \times Product \text{ Type}_i + \beta_{1,5}CRs \text{ Variance}_i$

$+ \beta_{1,6}Quality_i + \beta_{1,7}Product \text{ Type}_i + \beta_{1,8}URs \text{ Volume}_i + \beta_{1,9}URs \text{ Valence}_i$

$+ \beta_{1,10}CRs \text{ Volume}_i + \beta_{1,11}CRs \text{ Valence}_i + \beta_{1,12}Week_i + \beta_{1,13}Price_i + \varepsilon_{1,i}$

URs Volume $i = \alpha_{2,0} + \beta_{2,5}CRs \text{ Variance}_i + \beta_{2,6}Quality_i + \beta_{2,7}Product \text{ Type}_i + \beta_{2,10}CRs \text{ Volume}_i + \beta_{2,11}CRs \text{ Valence}_i + \beta_{2,12}Week_i + \beta_{2,13}Price_i + \varepsilon_{2,i}$

For sales rank equation, the key independent variable is URs Variance (the variance of URs ratings); the moderators are CRs Variance (variance of CRs ratings), Quality (high brand names, 1=Canon and Nikon, 0=others), and Product Type (1=improved camera models in one series; 0=others). For the remaining control variables, URs Volume denotes the number of URs until our data collection date (March 1, 2012); URs Valence denotes the mean of URs ratings; CRs Volume denotes the number of CRs;
CRs Valence denotes the mean of CRs ratings; Week denotes the number of weeks since initial launched date to our data collection date; Price is the original price in dollars at Amazon.

**Estimation Results**

Table 8 and Table 9 represented results of SUR estimation and simple slope analysis pertaining to the camera data. Moreover, to test the robustness of above estimation, we also use Median Quantile Regression (Koenker 2005) to estimate Sales rank equation. Results are consistent with SUR regression and are presented in Table 8.
### Table 8
The Effects of User Reviews on Sales Rank

**DV= Camera Sales Rank**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>SUR Estimation</th>
<th>Median Quantile Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 11</td>
<td>Model 12</td>
</tr>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance</td>
<td>-34.110 (0.980)</td>
<td>162.349 (1.813)**</td>
</tr>
<tr>
<td>CRs Variance</td>
<td>5.127 (1.476)*</td>
<td>25.029 (2.765)**</td>
</tr>
<tr>
<td>Quality (log(Budget))</td>
<td>-48.713 (-2.302)**</td>
<td>-56.432 (-2.715)**</td>
</tr>
<tr>
<td>Product Type (1=Sequel)</td>
<td>-4.957 (-0.293)</td>
<td>6.356 (0.372)</td>
</tr>
<tr>
<td><strong>Moderating Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance × CRs Variance</td>
<td>-18.056 (-2.369)**</td>
<td>-15.899 (-2.069)**</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Quality</td>
<td>-6.572 (-1.488)*</td>
<td>-7.49 (-2.212)**</td>
</tr>
<tr>
<td>URs Variance × CRs Variance × Product Type</td>
<td>-2.706 (-0.740)</td>
<td>-2.727 (-0.669)</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Volume</td>
<td>-0.504 (-4.706)***</td>
<td>-0.513 (-4.934)***</td>
</tr>
<tr>
<td>URs Valence</td>
<td>-4.642 (-0.187)</td>
<td>-0.246 (-0.010)</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>0.814 (1.161)</td>
<td>1.1760 (1.687)**</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>-4.076 (-2.169)**</td>
<td>-4.079 (-2.237)**</td>
</tr>
<tr>
<td>Week</td>
<td>1.023 (3.460)**</td>
<td>1.095 (3.796)**</td>
</tr>
<tr>
<td>Price</td>
<td>-0.008 (-0.609)</td>
<td>-0.01 (-0.741)</td>
</tr>
<tr>
<td>Constant</td>
<td>456.586 (2.598)***</td>
<td>205.112 (1.021)</td>
</tr>
<tr>
<td># Observations</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>R²</td>
<td>0.574</td>
<td>0.599</td>
</tr>
<tr>
<td>Incremental R² test P-value</td>
<td>.03**</td>
<td>.057*</td>
</tr>
</tbody>
</table>

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As to the effects of URs variance on sales, the results of Model 13 indicate that the interaction between URs variance and CRs variance is significant ($\beta=-14.86, p<.05; H1$ supported). Note that the sales rank is negatively coded. Moreover, quality moderates the interaction effect between URs variance and CRs variance ($\beta=-7.49, p<.05; H1$ supported). However, H2 is not supported. Camera improvement positively moderates the interaction effect between URs variance and CRs variance, but only insignificantly ($\beta=-2.727, n.s.; H2$ unsupported). The results of simple slope analysis in Table 9 provide more insight into above moderating effects.

Table 9
Simple Slope Analysis in Study 2

<table>
<thead>
<tr>
<th>URs Variance × CRs Variance</th>
<th>Effects of High CRs Variance</th>
<th>Effects of Low CRs Variance</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality</td>
<td>(-2.557)**</td>
<td>(-2.074)**</td>
<td>(1.119)</td>
</tr>
<tr>
<td></td>
<td>-22.471</td>
<td>-184.442</td>
<td>71.156</td>
</tr>
<tr>
<td>Low quality</td>
<td>(-2.069)**</td>
<td>(-1.401)*</td>
<td>(1.632)*</td>
</tr>
<tr>
<td></td>
<td>-15.899</td>
<td>-81.649</td>
<td>99.193</td>
</tr>
<tr>
<td>Sequel</td>
<td>(-2.398)**</td>
<td>(-2.209)**</td>
<td>(1.467)*</td>
</tr>
<tr>
<td></td>
<td>-18.604</td>
<td>-123.971</td>
<td>87.650</td>
</tr>
<tr>
<td>Non-sequel</td>
<td>(-2.069)**</td>
<td>(-1.401)*</td>
<td>(1.632)*</td>
</tr>
<tr>
<td></td>
<td>-15.899</td>
<td>-81.649</td>
<td>99.193</td>
</tr>
</tbody>
</table>

*p< .1; **p< .05; ***p< .01. Note: t-values are in parentheses.

From the simple slope analysis, we know that when camera is of high quality (e.g., the brand is a high-end brand) URs variance has a significantly negative effect on sales rank when CRs variance is also high ($Slope=-184.4, p<.05; H1$ supported). Moreover, for improved camera models, URs variance has a significantly negative effect on sales rank when CRs variance is also high ($Slope= -123.97, p<.05; H2$ supported).

DISCUSSION

We investigate how URs variance and CRs variance jointly influence sales. Study 1 is a longitudinal study by using data on movies and Study 2 is a cross-sectional study by using data on digital cameras. Findings from the two studies consistently suggest that (1) URs variance hurts sales (supported in Study 1 and 2); (2) However, when CRs variance is also high, URs variance could increase sales (insignificant in Study 1, significant in Study 2); (3) When product quality is also high or when the perceived risk is low (e.g., the product is an extension), URs variance increases sales (supported in Study 1 and 2). We also do an additional study to further understand how CRs and URs jointly take effect, and discuss the implications of our research. Limitations and future research opportunities are also discussed.

Additional Analysis

The methods we used in this additional analysis are the same as in Study 1 and Study 2. Table 10 and Table 11 show the results. In this analysis, we are mainly interested in the effect of URs valence and CRs valence on sales rank.
Table 10
Additional Analysis: the Effects of URs Valence on Sales Rank

<table>
<thead>
<tr>
<th></th>
<th>DV= log (Weekly Movie Box Office)</th>
<th></th>
<th>DV= Digital Camera Sales Rank</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 15</td>
<td>Model 11</td>
<td>Model 16</td>
</tr>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Valence</td>
<td>0.026 (3.220)***</td>
<td>-0.070 (-2.971)***</td>
<td>-4.642 (-0.187)</td>
<td>526.927 (3.157)***</td>
</tr>
<tr>
<td>CRs Valence</td>
<td>0.005 (5.478)***</td>
<td>-0.009 (-2.575)***</td>
<td>-4.076 (-2.169)**</td>
<td>25.629 (2.775)***</td>
</tr>
<tr>
<td>Quality</td>
<td>0.097 (6.655)***</td>
<td>0.155 (4.714)***</td>
<td>-48.713 (-2.302)**</td>
<td>-113.47 (-0.886)</td>
</tr>
<tr>
<td>Product Type</td>
<td>-0.059 (-1.990)**</td>
<td>0.063 (0.728)</td>
<td>-4.957 (-0.293)</td>
<td>-198.3 (-2.129)**</td>
</tr>
<tr>
<td><strong>Moderating Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Valence × CRs Valence</td>
<td>0.0021 (-1.382)*</td>
<td></td>
<td>-7.746 (-3.312)**</td>
<td></td>
</tr>
<tr>
<td>URs Valence × CRs Valence × Quality</td>
<td>0.00012 (-2.064)**</td>
<td></td>
<td>0.19 (0.48)</td>
<td></td>
</tr>
<tr>
<td>URs Valence × CRs Valence × Product Type</td>
<td>-0.00021 (-1.382)*</td>
<td></td>
<td>0.631 (2.129)**</td>
<td></td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URs Variance</td>
<td>-0.073 (-3.517)***</td>
<td>-0.060 (-2.819)***</td>
<td>-34.11 (-0.980)</td>
<td>-51.43 (-1.531)*</td>
</tr>
<tr>
<td>CRs Variance</td>
<td>-0.003 (-1.117)</td>
<td>0.000 (-0.119)</td>
<td>5.127 (1.476)*</td>
<td>4.808 (1.454)*</td>
</tr>
<tr>
<td>URs Volume</td>
<td>0.004 (1.627)*</td>
<td>0.004 (1.471)*</td>
<td>-0.504 (-4.706)***</td>
<td>-0.521 (-5.11)***</td>
</tr>
<tr>
<td>CRs Volume</td>
<td>-0.030 (-0.129)</td>
<td>-0.089 (-0.378)</td>
<td>0.814 (1.161)</td>
<td>1.109 (1.624)*</td>
</tr>
<tr>
<td>Log (Week)</td>
<td>-0.224 (-4.603)***</td>
<td>-0.234 (-4.88)***</td>
<td>1.023 (3.460)***</td>
<td>1.224 (4.19)***</td>
</tr>
<tr>
<td>Competition</td>
<td>-0.288 (-1.187)</td>
<td>-0.242 (-1.008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log(lagged box office)</td>
<td>0.837 (38.42)***</td>
<td>0.821 (38.02)***</td>
<td>1.023 (3.460)***</td>
<td>1.224 (4.19)***</td>
</tr>
<tr>
<td>Log (Theaters)</td>
<td>0.186 (7.902)***</td>
<td>0.206 (8.822)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td></td>
<td>-0.008 (-0.609)</td>
<td>0.004 (0.289)</td>
</tr>
<tr>
<td>constant</td>
<td>0.985 (2.730)***</td>
<td>1.777 (4.504)***</td>
<td>456.586 (2.598)***</td>
<td>-1561.3 (-2.375)***</td>
</tr>
<tr>
<td># Observations</td>
<td>827</td>
<td>827</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>R²</td>
<td>0.969</td>
<td>0.9705</td>
<td>0.5739</td>
<td>0.6272</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.969</td>
<td>0.9699</td>
<td>0.52</td>
<td>0.563</td>
</tr>
<tr>
<td>Incremental R² test P-value</td>
<td>.00***</td>
<td></td>
<td></td>
<td>.017**</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05; ***p < .01. Note: (a) t-values are in parentheses; (b) quality (production budget) is log-transformation and mean-centered in movie industry; (c) to enhance readability, we multiplied coefficients of URs volume and CRs volume by 100 in movie industry.
Table 11
Simple Slope Analysis in Additional Analysis

<table>
<thead>
<tr>
<th>URs Valence × CRs Valence</th>
<th>Effects of URs Valence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movie Industry</td>
</tr>
<tr>
<td></td>
<td>High CRs Variance</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>High Quality</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(3.663)***</td>
</tr>
<tr>
<td>Low Quality</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(4.576)***</td>
</tr>
<tr>
<td>Improved Product</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(3.601)***</td>
</tr>
<tr>
<td>New Product</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(4.226)***</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05; ***p < .01. Note: t-values are in parentheses.

Table 10 presents the SUR regression results. URs valence could improve new product revenues (supported in both movie and camera industries). CRs valence increases this positive effect (supported in both movie and camera industries). Moreover, the effect is stronger when quality is low and the product is new (supported in both movie and camera industries). This happens probably because the same positive valence looms large when people do not expect the product to receive positive reviews. Table 11 shows the simple slope analysis results. However, the results indicate that when CRs valence is low, URs valence has no effect on new product revenues (supported in both movie and camera industries), suggesting that consumers are more strongly impacted by CRs than URs.

**Theatrical Contributions**

This article contributes to literature in three important ways. At first, to our knowledge this is the first article that investigates the effect of the variance of URs and CRs simultaneously. Previous literature reveals mixed findings about the effect of the variance of URs. Our research suggests that conclusions about this effect without considering the variance of CRs are at most incomplete, if not wrong at all. We demonstrate that high variance of URs could elicit positive effects, for example, when the variance of CRs is high. Second, we find that product quality and perceived risk moderate the joint effect of the variance of URs and CRs. Specifically, the positive interaction between the variance of URs and CRs is even enhanced when product quality is high or when the perceived risk is low (e.g., when a product is an extension). Third, we also find a positive interaction between the valence of URs and CRs. This effect suggests that instead of simply being a mediator of the valence of CRs as proposed by Zhou and Duan (2011), the valence of URs has its own effect on sales and this effect would be enhanced when the valence of CRs is high.

**Implications for Practice**

The findings of this research also have important implications for practice. URs have significant value to customers. Although in most cases firms (e.g., manufacturers and retailers) cannot manipulate the
ratings of URs and thus are unable to impact their variance directly, this research suggests that firms still have room to mitigate the possible negative effect and/or enhance the possible positive effect of the variance of URs. When the variance of URs is high, managers may want to present the CRs with high disagreement to customers. This can be achieved by present the CRs directly on their websites, or link their websites to those CRs.

**Limitations and Future Research**

One limitation is that we do not verify the behavior mechanism we propose in this study. Specifically, we conjecture that when the variance of both URs and CRs are high, consumers will have greater curiosity towards the focal product. This mechanism is important but is not tested because of the lack of corresponding data. However, this could be tested by behavior studies. Further research may take this into consideration. The second limitation is that some variables are not available in the second study. Therefore, the applications of findings in that study need to secure cautions. It may be possible that a full set of data produces different results, thus implying that the joint effect of the variance of URs and CRs on sales are different, depending on the focal products is a search product or an experiential product.
REFERENCES


EXPLORING DIFFERENCES IN SERVICE PROVISION IN ATYPICAL SERVICES: AN ETHNOGRAPHIC CASE STUDY OF SERVICE DELIVERY IN SOCIAL SERVICES

Steven W. Rayburn, Oklahoma State University

“My father always said ‘take it easy when you have your head in a lion’s mouth.’ This was certainly true now, and I needed this woman for my survival. … ‘I don’t have any food for my two older children,’ I told her. ‘I also don’t have any money or bus tickets to get home.’ … ‘I see your kind every day’, she said. ‘Want everything you can get.’” (Morgan 1993: , originally printed 1977)

This four decade old quote illustrates some of the feelings associated with receiving services when service captivity defines the context. It would be easy to assume this is simply an artifact of a system that has since been repaired. Unfortunately, as seen in the next quote, this is not necessarily the case.

“Two weeks passed, and the card remained empty. Christie called the case worker. ‘She got real snotty,’ Christie remembered. ‘Well, didn’t I tell you you were supposed to send some documentation?’ … ‘I was like, have you checked your mail?’ No, as it turned out, the caseworker’s mail had piled up unread. She was like ‘Well, I got people waiting up to two, three months on food stamps.’ … And she didn’t get back with me.” (Shipler 2005: , p41)

Service related problems persist in social service delivery. The presence of service captivity in this context changes service delivery. Though there are many captive service, social services is perhaps a more intense form of service captivity because people are often very dependent on the service; in some cases, for their and their family’s survival.

INTRODUCTION

The service experiences of consumers held in service captivity may be qualitatively different than that of typical consumers. As developed in my research, service captivity refers to a consumer’s perception that s/he has no options for obtaining a needed service other than the current provider. Service captivity may be real or imagined but the effect is one of creating a power imbalance in favor of the service provider. This imbalance creates consumers who are dependent upon the service provider regardless of the quality of the service provided and service providers who may act as gatekeepers for necessary services. In social services, for example, it is reported that services are often provided without consideration of individual’s immediate emotional or physical needs, resulting in delays and occasionally in unwarranted denial of services (Caplow 1994, Morgan 1993, Shipler 2005). This project examines the degree to which traditional thought regarding service logic may fail in atypical service encounters involving service captivity.

I explore the manifestation of service imperatives drawn from the Service Dominant Logic (SDL) of marketing literature in a context of service captivity. These are (1) operant resource delivery, (2) consumer/provider relationship importance, (3) customer centricity, (4) customer value co-creation and (5) consumer resource integration. Service ideals suggest successful services deliver operant resources, are built on relationships, are customer centric, customers are always co-creators of value, and that integration of consumer resources is important to service provision (e.g., Vargo and Lusch 2004). Given that these imperatives were developed for traditional service contexts, how must they be altered to
accommodate the presence of service captivity? In other words, what is the lived service experience of consumers and providers when service captivity defines the context?

A call for Transformative Service Research (TSR) has made explicit the need to apply the cumulative knowledge in service marketing to identify how, when, and where services and service providers can or do impact the well-being of consumers, their families, communities, and society at large (Ostrom et al. 2010, Rosenbaum et al. 2011, Anderson et al. 2012). From this perspective, I identify key themes in service delivery of social services, a context of service captivity, based on prior Policy, Marketing and Society, Poverty, and Vulnerability literatures to confront with what is accepted as “ideal” from a service research perspective. Additionally, the potential service captivity impact on consumer vulnerability is described.

This study contributes to current service research with an explication of service captivity, a phenomenon previously unaddressed in services research. Also from a service captivity perspective, it extends key service logic concepts to identify how they may differ in the presence of atypical service provision. Additionally, this study will be conducted in a context as yet unexplored in service marketing research. Together, these contribute to better understanding the veracity of service logic and quality assumptions underlying much current service research. Finally, by identifying how service ideals manifest differently, this research can contribute to the well-being of both consumers and providers though understanding the impact of service design in the presence of service captivity. This provides information needed for development of improved service delivery processes and procedures that result in more beneficial service outcomes for consumers as well as for better work design for service providers. Propositions are developed throughout to guide research into the lived experience of service captivity.

SERVICE CAPTIVITY

Research has begun to examine bottom-of-the-pyramid consumers in locales around the globe, offering insight to the considerable consumption restrictions consumers face and the effect these have on their well-being (Martin and Hill 2012, Viswanathan et al. 2010). Prior studies of disadvantaged and vulnerable populations have exposed the limited choices and predatory conditions these consumers face (Alwitt and Donley 1997, Chung and Myers 1999). And, policy research has illuminated the controlling nature of service provision to impoverished consumers (Allen 1993, Hill and Macan 1996a). Common to all of these is the lack of choice, loss of control, and seeming powerlessness of consumers to consume in a self-determined fashion. In these and other situations, consumers are largely, and sometimes completely, dependent on service providers for needed or desired resources.

Building on the cumulative knowledge of these literatures, I develop the concept of service captivity. Moving beyond Mittelstaedt’s (2009) conceptualization of constrained choice, service captivity is consumers’ perception of complete dependence upon a particular service provider to acquire a specific resource; the consumer perceives no option for obtaining a service other than the current provider. This also extends Hirschman’s (1970) concept of captive consumers dependent on monopolistic providers to include all consumers perceptually dependent on a single service provider. All consumers face restrictions in consumption choice (Botti et al. 2008, Inman et al. 1997); for some this is a way of life. Service captivity, real or imagined, is an extreme form of consumption restriction.

Antecedents to Service Captivity

Consumers desire choice in consumption (Botti and McGill 2006). Even in the presence of completely chance situations, consumers prefer to exercise choice in “influencing” outcomes (Langer 1975). However, to perceive choice at least one alternative must exist that is as desirable as the current option (Steiner 1979). When there is a large discrepancy in the attractiveness of alternatives in a choice set, consumers report low (or no) feelings of choice (Harvey and Johnston 1973, Jellison and Harvey
As a result, in the presence of a perceived “take it or leave it” situations consumers will not feel choice and will feel trapped, captive, in their current service situation.

Control is also instrumental to satisfaction in marketplace interactions (Hui and Bateson 1991). Psychological and interpersonal theories both point to the ability of individuals to competently engage and influence (i.e., control) their environment as a vital basic need (Deci and Ryan 2000, Schultz 1996). Perceptions of control are intimately entwined with perceptions of choice; such that in the presence of choice perceptions of control increase (Averill 1973, Hui and Bateson 1991, Wortman 1975). Understanding that full access and choice are not guaranteed in the marketplace (Layton 2007) and that the ability to control resources and outcomes are contextually based (Rucker and Galinsky 2008), it is reasonable that all consumers can, from time to time, be thrust into positions of perceptual captive to a service provider.

P1: When consumer choice and control are markedly constrained, consumers will perceive service captivity

**Consequences of Service Captivity**

All consumers do not have equal access to market assortments (Layton 2007). Everyone faces consumption restrictions in some fashion at least occasionally; these can be real or imagined. In service captivity, consumers may have one or more of many reactions. Individuals feeling a lack of power, feeling that they are not in control, may compensate through conspicuous consumption (Rucker and Galinsky 2008); they may operate in a safety first mode and remain economically disadvantaged though choices to avoid risk (Scott 1976); or even rebel (Hirschman and Hill 2000). Botti and colleagues (2008) summarize suggesting choice constrained consumers will comply, adapt, bend/break rules, or even rebel. Hirschman (1970) on the other hand, proposes these consumers will often resort to voice, since this is the “best” option for dependent consumers.

P2: Though service captivity will result in differential responses by consumers, voice will be most common due to dependency in these relationships

**Exit from Service Captivity**

Consumers leave typical service providers daily. This threat is reduced, but not eliminated, by service captivity. When consumers leave a captive service situation, they will do so with little or no prospect of acquiring the service elsewhere. When they can, it is often at an increased cost. If the service is highly needed, as in social services, exit could exacerbate disadvantage and vulnerability. Yet it occurs. For example, consumers leave social service while still qualifying and needing the associated resources to escape the hassle and humiliation of a captive situation (Shipler 2005).

P3: Consumers exit service captivity despite hardships incurred to remove themselves from some function of the service delivery process

However, in some captive services, the alternative to not participate is not perceptually viable since the service provides basic physiological needs such as food, clothing, health, or shelter. As a consumer in service captivity the perception of not being able to leave the service without sacrificing basic needs may be so prevalent that individuals may submit to service deficiencies that would be intolerable in a typical service encounter. As consumers have few or no options, they must participate in the system to receive provision. Developed in detail in subsequent sections, service captivity allows for service delivery to be different than current service thought promotes as proper service delivery.

P4: Service captivity will change the manifestation of SDL service ideals
SERVICE-DOMINANT LOGIC

Over the past few years a new logic has taken hold as the new dominant logic for marketing, the Service-Dominant Logic (SDL) of marketing. Having been around since prior to Adam Smith’s *Wealth of Nations* and never fully disappearing, Vargo and Lusch (2004) have re-presented the idea that all economies are based on service provision and service-for-service exchange (for a brief history of the concepts informing service-dominant logic see: Vargo and Lusch 2004, Vargo and Morgan 2005). This has created much discussion, praise, and critique.

Original work on the S-D logic summarized the new logic as focused on co-creation of value, relationships, customer centricity, and intangible resources and offered foundational premises for the understanding of marketing and marketing systems (Lusch and Vargo 2006, Vargo and Lusch 2004, Vargo and Lusch 2008, Vargo and Lusch 2006). This, coupled with admonition that service represents the provision of benefits for other parties (Vargo and Morgan 2005), suggests that this logic should apply to any service context. However confronting SDL foundational premises with service captivity suggests this is not the case.

Foundational premises one, two, three, and five are axiomatic; they present the argument that everything is a service performance. This research has no issue with this assumption. Service is still provided, however, the manifestation of the service, as described in other foundational premises, may be different than anticipated based solely on SDL.

Foundational premise four suggests that operant resources are the fundamental source of competitive advantage. However, operant resources, such as knowledge or skill, are not the focus of some captive services. For example in some institutional social service provision, some information is provided in the form of consultation, pamphlets, etc., but the prominent portion of resource provision occurs through delivery of financial support. In others, no information is offered. This is the transfer and use of goods, in the form of financial assistance. To perform the service, delivery of resources that develop consumers’ knowledge and skills seldom occurs. This financial “good” is of course used by customers to obtain needed basic services, however this often occurs at only a subsistence level (Alwitt 1995, Hill and Macan 1996b, Hill and Stephens 1997). Low level provision of financial support, coupled with a lack of provision of the operant resources needed for competent and empowered consumption may contribute little to the betterment of social service consumers on their quest to self-sufficiency.

Foundational premises six and seven discuss the creation of value and the value proposition. Building on the recurrent themes of consumer co-creation of value and value-in-use, these foundational premises speak to determination of value by the consumer, which implies the consumer has some metric with which to evaluate the service offering. This also assumes that the firm only offers a value proposition that is met favorably or dis-favorably by consumers.

When consumers are captive, the institution does not propose a value but rather determines the service value. The amount of food stamps received, for example, is set forth as a result of an internally devised metric, based on income and family size. The consumer has no input in the value they extract from the organization. The offering stands as presented with little, or no, opportunity for adjustment or customization based on the expressed needs and/or desires of the consumer. The consumer does not participate in determining the value of the offering. The role of the consumer in service captivity is not a partnership role as in SDL, but is more one of accepting the organizations’ offering and complying with service delivery requirements.

Foundational premise eight states that a service-centered view is inherently customer oriented and relational. These aspects of service delivery are increasingly important to service research as can be evidenced in recent publications. The organizational importance and manifestation of these concepts
changes in the presence of service captivity. Current research on service efforts to lower consumption constraints in areas outside typical institutionalized social service systems, specifically social entrepreneurship, suggests that those forming these firms are doing so with a focus on customer needs and wants, understanding the root of the problem and organizing to combat it (Bloom 2009). However, research speaking to the more institutional social service providers sees at a history of top-down decision making and policy implementation aimed primarily at maintaining status quo and appeasing more mainstream constituents (Hill and Macan 1996a, Hill and Macan 1996b, Hill and Stephens 1997). Other commentary speaks directly about institutional service providers ignoring specific needs of consumers (Morgan 1993, Shipler 2005). The perspective of those guiding the organization and their view of the service’s consumers differentially influences the importance of customer orientation and relationships across organizations.

Those in power to change institutional social service systems are seldom in position to understand how the system is impacting its consumers. They are often removed not only from this level of society but also from levels between. These individuals may have no concept of what lived poverty is, yet they are tasked with prescribing what is needed to alleviate it. As a result, the institutions appear to continue on with little adjustment to the delivery of the service other than pushing money at the problem and hoping it will go away. It does not, because no one appears to know what it really takes to bring these consumers to self-sufficiency. This information will be available to those that focus on consumers, develop relationships, and then work to fulfill needs and solve problems.

Foundational premise nine describes all actors in service delivery processes as resource integrators. This is not often the case in service captivity. Front-line providers in captive services (i.e., social services) appear more concerned with monitoring compliance than in determining the resources of consumers (Hill and Macan 1996b). In healthcare, providers that identify consumer resources and integrate them in the service experience witness the greatest health outcomes for consumers, while those ignorant to these resources create confusion and anger among patients (Lee et al. 1999). When providers offer services on which the consumer is dependent it may be easier to design the service so that providers seek compliance rather than actively engage the consumer in the service delivery process. This short-circuits the ability to integrate resources with the consumer.

Foundational premise ten is also axiomatic. Consumers do differentially and personally determine the end value of the service offering. They determine whether or not the service is worth what they receive in relation to what it costs, financially and otherwise. However, in service captivity, particularly that based on need and involving dependency, value determination may result in “inflated” value attributed to the service; relative to the costs incurred. Best illustrated in social services, service captive consumers report interactions that would lead consumers to exit a typical service provider (Shipler 2005). Few leave, however, due to service delivery processes; they are stuck.

A typical service customer has the option to leave and will often do so in the process of receiving a particular deficient service. In the case of service captivity the consumer may not perceive this same ability. As consumers have few or no options, they must participate in the system to receive provision. Service captivity fundamentally changes the form, importance, and/or existence of service ideals in service processes and delivery.

P5: In the presence of service captivity the importance of and/or the manifestation of the delivery of operant resources, co-creation of value, relationships between consumers and the firm, firm consumer-centricity, and consumer resource integration will fall and/or be different from SDL assumptions
Supplemental Nutrition Assistance Program (SNAP): A Special Case

This research will concentrate on SNAP, one of the two largest social welfare projects in the United States (Hill and Macan 1996a), as an example of social service. This concentration is due in part to the large amount of individuals directly impacted by SNAP provision; psychologically, emotionally, and physically. Over 35 million individuals, 16 million households are receiving food stamps with an estimated direct to consumer expenditure by the government of over 4.7 billion dollars on a monthly basis as of July 2009 (fns.usda.gov 2009). These numbers had been rising over the previous several months, possibly due to the economic recession, but at the lowest in the prior four year period, just under 26 million individuals, over 11.5 million households were receiving assistance (fns.usda.gov 2009).

The buying power alone of this group of consumers is enough to warrant marketing examination; beyond this, the impact on recipients of interacting with the social service system and workers therein is important. Service research understands the impact that interactions may have on the customer, particularly in forming general perceptions of the benefits of being involved in the service or what is received from the service (Bitner 1990, Bolton et al. 2006, Parasuraman et al. 1988, Shostack 1977, Smith et al. 1999, Zeithaml et al. 1996). Key too much of this, is the importance placed on the boundary spanner of the service, in this case the social service caseworker (Brady and Cronin Jr. 2001, Shostack 1977). As such, SNAP is further considered due to the direct consumer behavior implications that may arise as a result of treatment customers receive from these boundary spanners. How individuals are interacted with may impact them both psychologically and emotionally potentially resulting in behavioral reactions. Several questions can be asked in reference to the possible adaptation individuals make in reaction to social service interactions. During this first stage of research, the concentration is on understanding the provision of food stamps as a captive service, examining possible structural, process, and interaction implications; precursors to behavioral reactions at home and in the marketplace.

Consumers are impacted by the manner in which their services are delivered. In services marketing it is well understood and taken for granted that service workers in the firm directly influence service transaction outcomes. “Services are often inextricably entwined with their human representatives. In many fields, a person is perceived to be the service” (Shostack 1977: ; p79). This will be the case in service captivity, perhaps to an exaggerated extent. For example, in social services the interaction between social worker and consumer is often held in isolation, away from other consumers and away from supervisors; away from “witnesses” other than their own families. Many social service consumers feel they have no control or could “get in trouble” dependent on interactions with social workers and others feel they are not listened to and their true needs are dismissed (Hill and Stephens 1997, Morgan 1993, Shipler 2005).

P6: Consumers experience service captivity as a lived experience of encountering social services and in interactions with service providers

This research proposes three broad problematic service delivery themes – resource allocation, resource sensitivity, and boundary spanners – in social service delivery. These manifest based on the service captivity consumers encounter when engaging institutional social services for assistance.

Resource Allocation

Resources Delivered

This first issue in social service provision is service delivery policy and design regarding resource allocation. Social services increase what consumers have to exchange to help them out of poverty and to balance exchange (Alwitt 1995). However, these programs are built on the notion of “less eligibility”, the provision of resources at a level directly below that obtainable by an individual with a minimum wage position (Hill and Stephens 1997, Hill and Macan 1996b). As a result, many consumers complain that
there is more month than money (Hill and Stephens 1997, Shipler 2005). Though programs deliver financial resources to consumers it is at a level that leaves them still economically disadvantaged.

This focus on providing for the poor at a level of living lower than that obtainable through minimum wage work is supposed to provide an incentive to remove oneself from welfare, but welfare rolls continue to grow (fns.usda.gov 2009). Instead, consumers work illicitly, at legal occupations, receive help from friends and relatives, and/or work at illegal means to supplement the supplemental income (Hill and Stephens 1997, Edin and Lein 1997). Until we understand better what it means to break free from poverty, providing such levels of assistance with penalties for earning additional monies may continue to be ineffective. One of the key tenants of service provision according service logic is to understand the needs of customer. Currently, there is little explicit consideration of consumers’ needs, beyond financial, in delivery of some social services.

Service logic explicitly suggests operate resources – knowledge, skills, etc. – are the fundamental source of competitive advantage in market exchange (Vargo and Lusch 2004). In the case of social services operate resources are vital to assist in the ultimate goal of self-sufficient exit to be realized. However, this type of resource is not the focus of social services. Some information is provided in the form of consultation, pamphlets, etc, but the prominent portion of resource provision occurs through direct delivery of financial support. This financial support is of course used by customers to obtain needed services, however this occurs at only a subsistence level (Alwitt 1995, Hill and Macan 1996b, Hill and Stephens 1997). Low levels of financial support, coupled with a lack of the operate resources needed for empowerment to self-sufficiency may further contribute to the plight of the poor.

Simply handing out money is ineffective, consumers need understanding from providers of what their needs are beyond financial support (Anonymous 2006, Viswanathan et al. 2009). Beyond financial needs, many consumers may also be cognitively, psychologically, or emotionally ill-equipped to deal with their marketplace. A key issue here is the lack of understanding of what is required to live, not to subsist. A consumer-centric approach would be to seek an understanding from consumers of what resources are needed to allow for a quality of life above subsistence, beyond their obvious financial needs.

Dependency and Choice

Beyond the level of resources delivered, or the lack of operate resource provision, impoverished consumers are also highly dependent on social services to balance what they have to exchange in the marketplace (Alwitt 1995). Dependency is often accompanied by limited choice and loss of control. Choice and control are not only vital to marketplace satisfaction, but are considered basic human needs to interpersonal and psychological theorists (Deci and Ryan 2000, Hui and Bateson 1991, Schultz 1996). When choice and control are constrained there exists the potential for disadvantage to become vulnerability among other negative consumer outcomes (Baker et al. 2005, Mittelstadt et al. 2009). All consumers do not have equal access to market assortments (Layton 2007); the poor are often constrained in their market choices and have limited purchasing power. Social services are meant to balance the playing field, at least financially. In the process, social services can be emancipatory or controlling (Beresford and Croft 2004). In current form, social service delivery design mimics consumers’ constrained choice and control in the marketplace; services are provided based on strict eligibility and compliance guidelines. This may exacerbate the negative outcomes of marketplace constraints.

Privacy

Since the inception of social services systems in the United States, women deemed deserving of aid had to subject their living arrangements as well as their sexual lives to public scrutiny to ensure continued benefits (Hill and Macan 1996a). What must be disclosed has changed over time, but social service consumers are still required to meet eligibility requirements and this requires disclosure. The issue
is not provision of information but feelings of a lack of privacy and a prying into “personal business” this can impose on consumers (Hill and Stephens 1997, Shipler 2005). Information such as household composition, income (if any) and any change that may occur is to be supplied to caseworkers and kept continually current (Hill and Macan 1996b). This creates paperwork issues that are difficult and burdensome (Harrington 1981); as well as opportunities to terminate or delay benefits (Shipler 2005). To avoid repercussions some “fail” to report changes and though this is fraud and can cause individuals to lose benefits, reporting may also result in lost benefits (Hill and Macan 1996b). In other cases, difficulty in dealing with the system creates situations where consumers forfeit rights to social services, though eligible, to rid themselves of the hassle, and humiliation (Shipler 2005).

Resource Sensitivity

Hill (2002) suggests improving the lives of the poor requires resource sensitivity; building on strengths and compensating weaknesses. Disadvantaged consumers receive a smaller portion of economic resources than others, creating the need for social service programs to deliver these economic resources. Public programs compensate this weakness but do little to build strengths. The poor are adept at using their personal resources, primarily social capital, to cope with poverty or health issues and to gain some control over their lives (Hill 2002, Lee et al. 1999). Successful poverty to self-sufficiency programs across the globe harness consumers’ social capital and other resources to allow them to exert control over their lives and to help themselves (Anonymous 2006, Viswanathan et al. 2009). This is possible through an explicit understanding of the consumer.

Resources are available to all consumers. The type and amount of resources will vary, but employing these to the benefit of the consumer is a way to encourage self-sufficiency and self-help. It has been said that “to minimize vulnerability, marketers and public policy makers must exploit resource strengths, eliminate resource weaknesses, or use some combination of both” (Lee et al. 1999: p238). It is also suggested that “public policy makers interested in improving the consumer lives of the poor are urged to pass legislation that is resource sensitive, recognizing the inherent benefit of building on strengths instead of solely compensating for weaknesses (Hill 2002: p213). Individuals have resources to use in living life; social services must integrate these into the facilitation of the goal of self-sufficiency. This is not occurring in many current institutional social services.

Boundary Spanners

Though not often directly discussed in socially relevant marketing literature, boundary spanners both directly and indirectly impact issues such as privacy and choice and they facilitate resource sensitivity, consumer-centricity, and value co-creation (Hill 2002, Hill and Macan 1996a, Lee et al. 1999). Boundary spanners are highly important for quality service provision (Berry 1995, Parasuraman et al. 1988, Brady and Cronin Jr. 2001) and understanding between boundary spanners and consumers is key for satisfactory service provision (Mohr and Bitner 1991). In fact, consumers often perceive boundary spanners as the service (Cook et al. 2002, Shostack 1977). These are amplified in social services since consumers are highly dependent on social service caseworkers to obtain the service. The concept of a service worker being entwined with the service is possibly nowhere more true than in the case of social service provision. The consumer often has no choice as to who the service worker is handling their situation; good service worker or bad, the consumer is stuck with them.

Currently these interactions have several issues, purportedly resulting in various negative consumer feelings. Consumer feelings exist of being in trouble, loss of privacy, loss of control, humiliation, and frustration (Hill 2002, Hill and Stephens 1997, Morgan 1993, Shipler 2005). There are often delays in processing of claims, resulting in individuals doing without needed resources for extended periods and it is not unknown for social service workers to illegitimately dissuade consumers from filling out applications, effectively refusing service to consumers that may vitally need assistance (Shipler 2005). These are flaws in the system, but the flaws are simply a part of doing business with social service;
consumers are often afraid to “buck the system” fearing retaliation from social workers (Hill and Stephens 1997, Morgan 1993, Shipler 2005). Knowing these issues exist, and fearing denial of assistance places social service consumers at disadvantage from the onset; fearing for existence places undue burden upon them emotionally, psychologically, and possibly physically.

P7: In examination of the lived service captivity experience of social service consumers, issues related to resource allocation, resource sensitivity, and boundary spanners will manifest

VULNERABILITY IN SERVICE CAPTIVITY

Since publication of The Disadvantaged Consumer (Andreasen 1975) a proliferation of research in socially relevant marketing and has produced an understanding of many issues pressing upon these consumers. Exploration in this area began with a focus on the “qualities” of the individuals who were considered vulnerable or disadvantaged and this many times related to ethnicity, race and/or income (i.e., Caplovitz 1963, Smith and Cooper-martin 1997). Recent research suggests, however, moving from a focus on the vulnerable or disadvantaged groups and focusing instead on what processes and/or structures contribute to causing vulnerability for these groups (Baker et al. 2005). Whatever approach used, the best understanding comes from examining the vulnerable or disadvantaged populations from their own vantage point (Baker et al. 2005). As such, this research approaches the understanding of vulnerability from the lens of consumers’ service captivity. This research is aimed at an understanding of the processes and structures inherent to social service and the impact interactions with these have on consumers. It will focus on consumers’ interactions with providers while experiencing service captivity as a possible element contributing to consumer vulnerability. Seldom considered, if at all, is how the captive service systems in which consumers find themselves influence the level of emancipation or vulnerability they experience. Specifically, no one has examined how receiving social service assistance and the interactions therein contribute to these experiences.

Social services support further exchange that provides products and services previously unattainable to these consumers, yet essential to subsistence. As described, to obtain such resources requires submitting to considerable disclosure, compliance, and privacy related issues (Hill and Macan 1996a, Hill and Stephens 1997, Shipler 2005). Processes inherent to this are important to understand how they might impact individual’s disadvantage and vulnerability. If the goal of social services is the self-sufficient exit of consumers from the system, the interactions consumers have with the system are the processes by which this occurs. Understanding these offers insight to exchange in this system and how it impacts consumer emancipation or vulnerability.

This captive service has the potential to reduce consumer disadvantage but the interactions by which this occur have been described as less than positive (Harrington 1981, Shipler 2005). If this is the case, the service delivery process can exacerbate consumers’ felt vulnerability in the process leading to less than optimal outcomes. Identifying, acknowledging, and “solving” vulnerability is a key approach to socially relevant research (Baker and Mason 2012). It is important in this research to identify and understand the potential unintended consumer consequences resulting from service captivity interactions.

P8: Service captivity in social service provision can inadvertently result in exacerbation of consumers’ felt vulnerability as they interact with providers.
SUMMARY

Service captivity has the potential to allow service deviation from what is considered prudent based on the Service-Dominant Logic of Marketing. This paper has provided research propositions related to service captivity, service captivity applied to conceptual underpinnings of SDL, and service captivity in the context of social services and its influence on consumers’ felt vulnerability. These and other questions related to service captivity warrant further consideration. I propose research to explore these propositions in the specific context of SNAP. Ethnographic case study methods can be used to beginning exploring inside the black box that is service delivery in service captivity. With this method and the tools inherent, the lived experience of consumers in service captivity can be explored and understanding developed.
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CONSUMER BRAND RELATIONSHIPS AND SELF-ENHANCEMENT: 
THE INTERACTIVE EFFECTS OF CONSUMERS’ 
BRAND ENGAGEMENT IN THE SELF AND SELF-ESTEEM 
ON BRAND BEHAVIORS

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INTRODUCTION

Consumer brand relationships have drawn considerable attention from marketing scholars (e.g., MacInnis, Park, & Priester, 2009), with research demonstrating that these relationships have meaningful implications for consumers and firms (e.g., Aaker, Fournier, & Brasel, 2004; Fournier, 1998; Sprott, Czellar, & Spangenberg, 2009). For example, Aggarwal (2004) empirically demonstrated that interpersonal norms which guide human relationships are also seen in interactions between consumers and brands. Additionally, consumers’ relationships with brands have been shown to impact willingness to pay and repeat purchase behavior (Sheth & Parvatiyar, 1995; Stern, 1997). More recently in the literature, the role of consumers’ brand relationships in the self-concept has been explored to understand better the psychological connections consumers have with the important brands in their lives (e.g., Escalas & Bettman, 2003; Johnson, Matear, & Thomson, 2011; Sprott et al., 2009). This work has demonstrated that consumers vary in their tendency to construct their self-concepts through associations with possessions such as products and brands (Belk, 1988; Ferraro, Escalas, & Bettman, 2011; Rindfleisch, Burroughs, & Wong, 2009; Tian & Belk, 2005). Moreover, Sprott et al. (2009) recently furthered the theoretical notion of such self-brand connections with their development of a psychometrically sound measure referred to as brand engagement in the self-concept (BESC).

Although the field knows much about the connections between brands and the self, more research is required to understand how these connections can enhance consumer’s self-concept. To date, only a few studies have examined this issue and have shown that a temporary decrease in one’s self-view can influence consumers to select products that repair a self-threat (e.g., Gao, Wheeler, & Shiv, 2009; Sivanathan & Pettit, 2010). Given that most people prefer to maintain a positive self-view (Brown, Collins, & Schmidt, 1988), it follows that this self-enhancing motive (e.g., Leary, 2007) should extend to consumer brand relationships. We aim to contribute to the existing self-brand literature by examining the interactive effects of brand-related self-schemas and self-esteem on important brand outcomes. In particular, this research builds on the premise that those more likely to include brands in their self-concept will have a higher likelihood of maintaining relationships with brands in order to influence self-esteem. As a general hypothesis, we assume that consumers who have a higher tendency to incorporate brands in their self-concept will defer to meaningful brands to self-enhance their lowered esteem. To test this hypothesis, we examine the relationship among self-esteem, BESC, and brand preferences. Below, we review relevant literature, develop the theoretical underpinnings of BESC moderating the effect self-esteem has on brand choice, and report two studies evaluating our hypotheses.

THEORETICAL BACKGROUND

Self-Concept, Self-Esteem, & Self-Enhancement

The multifaceted self-concept began to gain ground in the late 1970s (Swann & Bosson, 2010) with Markus (1977) unveiling the notion that people could be directed by stored information (e.g., past experiences) regarding one’s self. It was suggested that these cognitive self-schemas were used to make judgments, decisions, and even provide motive for future behavior (Markus, 1977; 1983). The multidimensional self was not entirely new after the publication of the seminal piece by Markus (1977). James (1890) first introduced us to the idea of the various facets of the self such as the empirical (physical) self and spiritual (beliefs) self. However, the ideas presented by James (1890) were temporarily
replaced in social psychology with research directed towards understanding social approval within the self (Swann & Bosson, 2010). Work by Markus (1977; 1983) had not only reverted back to the self-concept as originally described by James (1890), but also inspired a whole line of research examining various dimensions of the multidimensional self. For example, self-concept research has examined the independent versus interdependent self (e.g., Singelis, 1994), public versus private self (e.g., Feningstein, Scheier, & Buss, 1975), actual versus ideal self (e.g., Higgins, 1987), individualistic versus collectivistic self (e.g., Luhtanen & Crocker, 1992) to name a few. Extending the self literature, Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman (1996) established that a person’s self-concept varies in stability and how soundly it is defined. As a result, the dynamic nature of the self-concept has allowed it to be recognized as two different components, knowledge and evaluative (Campbell, 1990).

The evaluative component of one’s self-concept is influential, and most are not able to prevent a decrease in self-esteem when the self-concept is attacked (Baumeister, Campbell, Krueger, and Vohs, 2003). Due to differing information in each self-schema, people vary in how they formulate their evaluation of themselves (Crocker & Wolfe, 2001). Overall, people want to feel good about themselves, but how they do this fluctuates from one person to the next. While one person might incorporate important people into the self-schema (RISC; Cross, Bacon & Morris, 2000; Cross, Morris, & Gore, 2002) and use meaningful others to determine their self-worth, these methods could prove futile to another. Regardless of what actually makes up one’s self-concept, it is accepted that people have a strong desire to maintain positive views of their self (Brown et al., 1988). This has been conceptualized as the self-enhancement motive (e.g., Leary, 2007), and can be found in influential social psychology theories such as terror management (e.g., Greenberg, Pyszczynski, & Solomon, 1986) and positive illusions (e.g., Murray, Holmes, & Griffin, 1996).

### Consumer Brand Relationships & BESC

The contemporary view of brand relationships commenced with Fournier (1998) who first proposed the notion that relationships consumers form with brands are similar to human relationships. In a qualitative study, Fournier (1998) showed that the origin of brand relationships can be attributed to the meanings consumers place on brands that they use in their daily lives. Work by Escalas & Bettman (2003) empirically supported Fournier (1998) by showing that consumers form connections with brands and that within such brand relationships consumers can construct their self-concept via congruency of brand-user and self-image associations. These researchers also demonstrated that consumers will approach (avoid) brands that they do (not) want to be identified with. Related research by Chaplin & John (2005) provides insight that brand relationships can begin in early middle childhood. Once formed, it was shown that consumer brand relationships have the ability to fulfill self-defining purposes such as social approval and self-representation (Aaker, 1997; Fournier, 1998). Additionally, empirical research revealed that consumers expect brands to follow relationship norms and hold them accountable when brands fail to do so (Aggarwal, 2004). Similarly, Aaker et al. (2004) showed that brand transgressions (e.g., recall on an automobile part) can negatively impact consumers’ long standing relationships with sincere brands and positively affect short-lived relationships with exciting brands. More recently, Johnson et al. (2011) demonstrate that the combination of brand transgressions and self-brand connections will likely lead to retaliation by a consumer via word of mouth or extreme actions such as vandalism.

Marketers have long accepted that possessions can become integrated within a person’s self-concept (e.g., James, 1890). This represents the theoretical basis of Belk’s (1988) influential treatment of the extended self, resulting in the birth of the self-brand connections research (e.g., Escalas & Bettman, 2003; 2005). The interest in the inclusion of brands as part of the self has led to the acknowledgement that consumers vary in the tendency to construct their self-concepts through associations with brands (Belk, 1988; Sprott et al., 2009; Tian & Belk, 2005). Sprott et al. (2009) expand on this idea with their development of the individual difference measure known as brand engagement in the self-concept.
(BESC). BESC is defined as a consumer’s general propensity to incorporate important brands in the self-concept (Sprott et al., 2009).

The studies reported by Sprott et al. (2009) demonstrate that consumers who construe their self-concept in terms of their favorite (multiple) brands influences important reactions to brand marketing. In particular, Sprott et al. (2009) demonstrate that consumers with a higher tendency to include meaningful brands in their self-concept are able to access favorite (vs. least favorite) brands more easily from memory. Additionally, consumers with higher (vs. lower) levels of BESC show better recall of branded products which they own, as well as more focus in incidental brand exposure (Sprott et al., 2009). BESC also is shown to influence consumers’ attention to favorite brands that are overtly marked, as well as to brand loyalty (operationalized by time insensitivity for waiting on new products to be offered by their favorite brands).

Research in psychology by Cross and colleagues is significant to the development of BESC; specifically, people (to a greater or lesser extent) include important others in their self-concepts (Cross, Bacon & Morris, 2000; Cross, Morris, & Gore, 2002). While a relational interdependent self-construal (RISC) is focused on important others, BESC is concerned about the differential inclusion of brands in consumers’ self-concepts. There is an important distinction between BESC and prior research on related branding constructs, such as self-brand connections (Escalas, 2004; Escalas & Bettman, 2003) and attachment to possessions (Ball & Tasaki, 1992). In particular, while other self-brand constructs are often restricted to a relationship with a specific brand or object, BESC is viewed as a generalized tendency for consumers to include multiple brands as part of the self-concept (Sprott et al., 2009). Thus, BESC addresses an inherent limitation associated with prior self-brand relationships by providing a broader understanding of the relationships between consumers and multiple brands in their lives.

Theoretical Reasoning

Prior research of the self-enhancement motive within consumer behavior has focused on the use of identity relevant products to boost a consumer’s self-view that is threatened. For example, Gao et al. (2009) lower self-esteem by having participants write about their intelligence with their non-dominant hand resulting in preference for “intelligent” products (e.g., pens) to repair their self-view. More recently, Sivanathan & Pettit (2010) extend Gao et al. (2009) by showing that lowered self-views would result in the selection of high (vs. low) status goods (e.g., rare photograph, watch worn only by a few people). These findings are not surprising given that low self-esteem provides opportunities for consumer self-enhancement, and influences consumers to choose particular products to improve a low self-concept (Assael, 1981; Wicklund & Gollwitzer, 1982).

A crucial aspect not yet examined within the self-brand connections literature is how consumer brand relationships lend support to the self-enhancement motive. Gao et al. (2009) and Sivanathan & Pettit (2010) do not consider the role of the brand-schema in their research nor consumer brand relationships in general. According to Markus (1983), the self-schema can guide behavior. This notion, in conjunction with the various facets of the self-concept (Markus, 1977), suggests that a brand schema could potentially influence consumption behavior. Since BESC theoretically represents one component of a consumer’s self-schema, it follows that brand-related schemas can facilitate self-enhancement with important brands when overall self-evaluation is low. Thus, we hypothesize:

H1: The importance of brand engagement in the self-concept (BESC) moderates the effect of self-esteem on preferences for meaningful brands (self-enhancement motive).

Important brands play a more critical role in the self-concepts for high BESC consumers than for those lower in BESC (Sprott et al., 2009). Given the centrality of brands for these consumers, one would expect that high (vs. low) BESC consumers would be more likely to form and appreciate consumer brand
relationships. For this reason, a self-enhancement effect would be expected to manifest on preferences for meaningful brands for those consumers whose brands play a significant role in defining the self-concept. For those low in BESC, the self-enhancement effect is less likely to appear in the selection of meaningful brands to boost self-esteem. Because low BESC consumers are less concerned about brands in defining the self, it is reasonable to expect that these consumers will not choose important brands to self-enhance when self-esteem is low.

H2: High BESC consumers will select meaningful brands when self-esteem is low (self-enhancement motive); no such effects will emerge for low BESC consumers.

METHOD

Study 1

In this first study, the interactive effect of global self-esteem and one’s brand self-schema are examined in the context of national and private label brands (an area as yet to be explored within the self-brand literature). For purposes of the current study, national brands (in comparison to private label brands) are viewed by consumers as more self-expressive given the image of these brands established in the marketplace (Richardson, Dick, & Jain, 1994). As such, consumers are more likely to form connections with national (vs. private) brands, which can facilitate self-enhancement.

Design and Procedure

The study was conducted in a classroom setting with undergraduate students participating for extra course credit (N = 76). Participants began by completing the BESC scale (Sprott et al., 2009; see Appendix A) and global self-esteem (Rosenberg, 1965; see Appendix B) in a survey presented as unrelated to the main study. For the study, participants were provided with a shopping task in which they were asked to spend $40 among 7 grocery categories. The goal of shopping was presented as the need to refill their food pantries and to meet varying tastes of some upcoming guests (Manning, Sprott, & Miyazaki, 1998). Each grocery category included both national and private label brands. Participants indicated the desired quantity of each item. Lastly, responses to a demand artifact question appearing at the end of the survey suggested that none of the participants linked the apparently unrelated survey with the focal choice task.

Results

BESC was measured with the eight-item scale developed and validated by Sprott et al. (2009) and measured on a seven-item scale. The BESC scale showed a high level of internal consistency (α = .94) and produced average values similar to those reported in the literature (M = 4.05, SD = 1.40). Global self-esteem was assessed using a seven-point scale and Rosenberg’s (1965) ten-item measure (α = .81, M = 1.87, SD = 0.69). BESC and global self-esteem are clearly distinct constructs, given that the two scales were uncorrelated (r = .07, ns) and appropriately loaded on two separate factors. The dependent measure was the percentage of national label brands selected based on the total number of products selected.

Multiple linear regression was performed following the procedures of Aiken and West (1991). In particular, national label brand choice (represented as a percentage of national brands over all selected products) was regressed on mean-centered BESC, mean-centered self-esteem, and the interaction between those independent variables. Two significant effects emerged from this regression analysis (R² = .18). The first was a main effect for BESC, whereby research participants higher (vs. lower) in BESC generally favored national label brands over private label brands, t(75) = 3.39, p = .001. The second was a two-way interaction between BESC and global self-esteem, t(75) = 2.70, p < .01. To probe this interaction, we estimated two regression slopes at low (one SD below the mean) vs. high (one SD above the mean) BESC levels. The only significant slope emerging was the one estimated at the high BESC level, t(75) = -2.51, p = .01; the other slope test, low BESC level, was not significant, t(75) = 1.39, ns. These results (as
depicted in Figure 1) indicated that high BESC participants selected more national (vs. private) label brands when their self-esteem was low as opposed to high.

Figure 1
Results for BESC x Self-Esteem (Measured)

Discussion

The results supported our expectation for the interactive effects of global self-esteem and a brand-related schema. In particular, high BESC consumers selected more national (vs. private) label brands when their self-concept was low (vs. high). This finding is logical given an individual’s preference to maintain a positive self-concept (Brown et al., 1988), and desire to select products that build-up the self (e.g., Gao et al., 2009; Sivanathan & Pettit, 2010). Additionally, this study provided evidence that consumers who are high in BESC with a low self-worth will prefer a brand image that is more expressive (e.g., national label brands) as a means for self-enhancement. National brands as an outlet for self-enhancement can be attributed to consumers using branded possessions characterized by value-expressive features for self-extension purposes (Belk, 1988; Tian & Belk, 2005).

While encouraging, the results from this study relied on correlational data. This type of data hinders our ability to make firm conclusions regarding causality. We address this issue in study 2 by conducting an experiment in which self-esteem is manipulated rather than measured.
Study 2

The purpose of the second study is twofold. First, we wanted to extend the findings in study 1 by demonstrating that the moderating effect of BESC also applies when self-esteem is manipulated (as a contextual factor) instead of measured (as a trait). The other motive for this study was to replicate the results in study 1. Obtaining consistent results with multiple studies would support the generalizability of consumer brand relationships being able to self-enhance a person’s worth. The backdrop of the dependent variable in study 2 is the shopping scenario used in study 1 that included national and private label brands.

Design and Procedure

The experimental design of study 2 followed that of study 1 with the only difference being the manipulation of self-esteem. In order to decrease the self-esteem of our participants, we utilize challenging quantitative problems similar to those found on the Graduate Record Examinations (GRE). The GRE problems used in our study were adapted from practice problems found on the GRE website (see Appendix C). Specifically, four problems for each of the two varying levels were presented to participants. We chose the scenario of completing hard or simple GRE math problems due to an individual’s self-esteem being tied to the achievements within a vested setting (Crocker, Karpinski, Quinn, & Chase, 2003). Since our intended subject pool was university undergraduates, it made sense to utilize a scenario in which our participants are engaged in.

Before running the main experiment, two independent pre-tests were conducted. In the first pre-test, five selected individuals, without prior knowledge of the main study, confirmed that the eight adapted GRE problems were properly classified as hard or easy. The time provided in the pre-test was equivalent to the time allocation in the actual GRE (approximately 1.5 minutes per problem). The second pretest ensured that the experimental conditions significantly differed in the evaluation of self-esteem and ruled out mood as an alternative explanation for the main study. In the second pre-test (N = 41), a different sample of undergraduates was used and extra course credit was given. Participants were assigned randomly to either the control condition (4 easy GRE math problems) or the manipulation condition (4 hard GRE math problems) and completed the pre-test online within a designated timeframe. The cover story was that we were studying consumers’ information processing and concentration ability (Sivanathan & Pettit, 2010). Participants were given a total time of 6 minutes to complete assigned questions. Next, participants were either exposed to no feedback in the control condition or were provided the message that they scored in the bottom 10% of their university population that had taken the exam in the manipulation condition (Sivanathan & Pettit, 2010). Lastly, participants then completed the 20-item Positive & Negative Affect Schedule (PANAS) mood scale (Watson, Clark, & Tellegen, 1988) followed by a self-report of their esteem with a one-item self-esteem measure (“I have high self-esteem,” anchored at 1, strongly disagree, and 7, strongly agree; Gao et al., 2009; Robins, Hendin, & Trzesniewski, 2001).

The main study was conducted in a lab environment with another sample of undergraduate students participating for extra course credit (N = 143). Upon arrival at the lab, participants completed the BESC measure in a survey presented as unrelated to the main experiment. For the experiment, research participants were randomly assigned to four GRE problems (hard vs. easy; previously pre-tested) in a between-subjects design. Further, administration of the experimental conditions (e.g., cover story, time limit, and feedback) were consistent with the second pre-test. After either receiving negative feedback or none, participants completed the shopping task as in study 1. Lastly, participants completed a demand artifact question at the end of the experiment. None of the participants linked the apparently unrelated experimental conditions with the focal choice task.
Results
Manipulation Checks

During the pre-test, participants reported their mood with the PANAS scale and level of self-esteem (Gao et al., 2009; Robins et al., 2001; Watson et al., 1988). The 20-item PANAS scale showed no significant difference between conditions for negative or positive mood (both ps > .05). Based on the non-significant findings for PANAS, mood could be ruled out as an alternative explanation for preference of national over private label brands.

As expected, participants that completed the difficult GRE problems reported significantly lower self-esteem (M = 4.50) after receiving negative feedback than those participants in the control condition (M = 5.26), t(39) = 2.08, p < .05. These results suggested that our manipulation of self-esteem was successful and not confounded with mood.

Hypothesis Tests

Similar to study 1, the BESC scale showed a high level of internal consistency (α = .93) and produced average values similar to those reported in the literature (M = 4.00, SD = 1.18). The two experimental conditions served as the other independent variable and was coded as a dummy variable (control, D = 0, and lowered self-esteem, D = 1). The dependent measure was again the percentage of national label brands selected based on the total number of products selected.

We estimated a multiple linear regression following the procedures of Aiken and West (1991). As in study 1, national label brand choice (represented as a percentage of national brands over all selected products) was regressed on mean-centered BESC, the self-esteem condition, and the interaction between those independent variables. One significant effect emerged from this regression analysis (R² = .19); in particular, the two-way interaction between BESC and experimental condition, t(140) = -2.21, p < .05. To probe this interaction, we estimated two regression slopes at low (one SD below the mean) vs. high (one SD above the mean) BESC levels. The only significant slope emerging was the one estimated at the high BESC level, t(140) = 1.95, p = .05; the other slope test, low BESC level, was not significant, t(140) = -1.21, ns. These results (as depicted in Figure 2) indicated that high BESC participants selected more national (vs. private) label brands when their self-esteem was lowered.
Figure 2
Results for BESC x Self-Esteem (Manipulated)

GENERAL DISCUSSION

The present research aimed to extend past research on the self-enhancement motive (e.g., Leary, 2007) to the realm of consumer brand relationships. Our specific focus within the growing brand relationship literature was self-brand connections (e.g., Escalas & Bettman, 2003; 2005; Johnson et al., 2011; Sprott et al., 2009). In two studies, we examine the moderating effects of BESC with regard to preferences for meaningful brands as a way to self-enhance low self-esteem. In particular, both the correlational study and experiment demonstrated that people higher in BESC selected more national than private label brands when self-esteem was measured to be lower and manipulated. The moderating effect of BESC on the self-enhancement motive was not significant in study 1 or 2 for those consumers lower in BESC. In order to observe the hypothesized effects, we utilize the context of national and private label brands. National (vs. private) label brands are more self-expressive from the images of these brands established by advertising and extrinsic cues (Goldsmith, Flynn, Goldsmith, & Stacey, 2010; Richardson et al., 1994; Rosen, 1984). From this, consumers have a higher probability of connecting with national brands. On the whole, our findings provide support for our expectation that when self-esteem is low and brands are incorporated into the self-concept, consumers will self-enhance with important brands.

While prior studies have shown that a decrease in one’s self-view can influence consumers to select products that repair a self-threat (e.g., Gao et al., 2009; Sivanathan & Pettit, 2010), to our knowledge, no prior studies have explored self-enhancement effects within self-brand connections and more generally, consumer brand relationships. However, our findings go beyond merely replicating self-enhancement within another context. The fact that low BESC consumers did not demonstrate a self-enhancement motive heightens the importance of brand relationships for individuals high in BESC. Brands used for self-enhancement suggest that these particular brands carry significant meaning, likely from a consumer brand relationship. The notion of brand relationships facilitating self-enhancement carries weight when considering that meaningful individuals (e.g., spouse) integrated in the self can build up a self-concept that has a lowered self-esteem (Aron, Paris, & Aron, 1995).
One of BESC’s theoretical contributions is a broader perspective of the relationships between consumers and brands that was previously a limitation in related literature (Sprott et al., 2009). The insight to be gained from BESC in conjunction with the self-enhancement motive is a better theoretical understanding of the type and degree of relationship consumers will have with brands. In particular, an individual who has a higher likelihood of possessing a brand schema (e.g., high BESC) is more apt to form meaningful relationships with brands. If brands are used to define one’s self-concept, then the resulting important brand relationships will then have the capability to make people feel better when self-esteem is lowered. If one does not include brands as part of the self (e.g., low BESC), then significant consumer brand relationships are not likely to be formed. Thus, consumer brand relationships that are not symbolic will not be able to self-enhance. The consumer brand relationship not formed from the self-concept is likely to be more transactional than enduring. While our empirical work did not directly examine the particular brands used in forming the self-concept of our participants, national and private brands do have distinct characteristics that vary in allowing one to form connections. Despite not using the actual brands forming one’s self-concept, findings from our two studies begin to address the ability of consumer brand relationships to self-enhance.

FUTURE DIRECTIONS

Despite the potential of the present results, several limitations of the study are recognized. First, the participants randomly assigned to the easy GRE quantitative problems (control condition) may not have been in a baseline condition. Completion of the simple math problems may have allowed a self-enhancement of these participants’ self-evaluation. The inclusion of a true control condition will allow a more accurate comparison with those whose esteem is lowered via a manipulation. Thus, running the experiment again with a condition not completing GRE problems would provide robustness for the findings in study 2. Along with a different control condition, findings could be extended by enhancing self-esteem in an experimental condition rather than decreasing it. By demonstrating empirically that the self-enhancement motive washes out for those high in BESC provides valuable insight on the boundary conditions for our initial results. Third, both studies used the same context (national and private label brands) for demonstrating consumers’ self-enhancement. Although low self-esteem (trait and manipulated) results in the preference for national over private brands multiple times, another context is needed to allow for more generalized results. Demonstrating the effects in another brand domain such as luxury (vs. non-luxury) brands or hedonic (vs. utilitarian) brands would further support our proposition for the ability of consumer brand relationships to self-enhance. In addition, showing the mechanism is crucial to empirically validate our contention that consumer brand relationships can self-enhance. In closing, our initial empirical results and future studies have the potential to demonstrate whether the relationships consumers have with brands can self-enhance. This research represents the first step towards this theoretical model.
APPENDIX A

BESC Items

1. I have a special bond with the brands that I like.
2. I consider my favorite brands to be a part of myself.
3. I often feel a personal connection between my brands and me.
4. Part of me is defined by important brands in my life.
5. I feel as if I have a close personal connection with the brands I most prefer.
6. I can identify with important brands in my life.
7. There are links between the brands that I prefer and how I view myself.
8. My favorite brands are an important indication of who I am.

a Sprott et al. (2009)

APPENDIX B

Self-Esteem Items

1. On the whole, I am satisfied with myself.\textsuperscript{b}
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.\textsuperscript{b}
4. I am able to do things as well as most other people.\textsuperscript{b}
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I am a person of worth, at least on an equal plane with others.\textsuperscript{b}
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.\textsuperscript{b}

a Rosenberg (1965)
b Reverse-scored
APPENDIX C

Easy GRE Problems
1. If $5x + 32 = 4 - 2x$, what is the value of $x$?
   A. $-4$
   B. $-3$
   C. $4$
   D. $7$
   E. $12$

2. Which of the following numbers is farthest from the number 1 on the number line?
   A. $-10$
   B. $-5$
   C. $0$
   D. $5$
   E. $10$

3. Which two of the following numbers have a product that is greater than 60? Please select two numbers for this problem.
   A. $-9$
   B. $-7$
   C. $6$
   D. $8$
   E. $1$

4. What is the arithmetic mean of 12, 13, and 14?
   A. $12$
   B. $13$
   C. $14$
   D. $13.5$
   E. $12.5$

Difficult GRE Problems
1. What is the value of $x$?
   \[
   (2x)^{\frac{1}{2}} (x^{-\frac{1}{2}}) = 2^4
   \]
   A. $\{2^{\frac{1}{2}}\}$
   B. $\{2^{\frac{1}{2}}\}$
   C. $2^n$
   D. $2$

2. If $1 + x + x^2 + x^3 = 60$, then the average (arithmetic mean) of $x + x^2 + x^3 + x^4$ is equal to which of the following?
   A. $12x$
   B. $15x$
   C. $20x$
   D. $30x$
   E. $60x$

3. If $x$, $y$, and $z$ are positive integers and $3x = 4y = 7z$, then the least possible value of $x + y + z$ is
   A. $33$
   B. $40$
   C. $49$
   D. $61$
   E. $84$

4. Which of the following expresses the area of the shaded region in the figure below?
   \[
   A. x^2 - \frac{y^2}{2}
   
   B. x^2 + \frac{y^2}{2}
   
   C. x^2 - \frac{y^2}{4}
   
   D. x^2 + xy
   
   E. \frac{x^2 - xy}{4}
   \]
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INTRODUCTION

Certain properties of human choice behavior are widely accepted today as core principles of behavioral economics and cognitive psychology. Foremost is loss aversion (Kahneman & Tversky 1979, 1984, 1986, 1991), which is a special case of diminishing sensitivity from privileged base points (Fechner 1860, Weber in Ross & Murray 1996, Hastie & Dawes 2001, Trope & Lieberman 2010). A preponderance of evidence also suggests that human information processing is more complex than the robust, but cognitively naïve compensatory rule. Decision weights used to combine disparate information are most likely non-complementary (Allais 1953, Ellsberg 1961, Shafir 1993) and sub-additive (Tversky & Fox 1995, Tversky & Wakker 1995, Wu & Gonzalez 1996, Fox and See 2003). Encouragingly, many of these properties have been derived from behavioral axioms, which bolsters their reasonableness (Luce 2000, Ng, Luce, Marley 2009; Prelec 1998; Marley & Louviere 2005, Marley & Pihlens 2011).

Despite overwhelming support, neither loss aversion nor non-complementarity is faithfully reflected in statistical estimates from the multinomial logit model (MNL), the workhorse of all choice models. Furthermore, using the MNL to model non-compensatory rules is difficult and has been accomplished for only a few cases (Gilbride & Allenby 2004). It is fair to say that there is a disconnect between the modeling of choice using the MNL, our cumulative understanding of the psychological processes involved in actual choice behavior, and formal links of behavior to the mathematics of choice.

The Multinomial Logit Model

The multinomial logit (MNL) model expresses utility as the sum of two components \( \tilde{U}(z) = V_z + \tilde{\varepsilon}_z \), where \( V_z \) represents aspects that option \( z \) shares with other options; i.e., ‘levels’ on common attributes. These levels convey material information to the decision-maker, hence systematically influence his or her choice. On the other hand, the term \( \tilde{\varepsilon}_z \) carries no information of psychological significance. Its role is to support the probabilistic mechanics that bridge the gap from observable data to the decision-maker’s unobservable reflections about a choice. Ironically, since McFadden’s (1974) publication of the MNL, efforts to generalize the model have focused almost exclusively on relaxing assumptions about the error component of utility rather than the systematic component (McFadden 2000). In this paper, we show that more detailed modeling of systematic utility (vs. the covariance structure of errors) offers the potential for improved understanding of how individuals transform material information into choices and provides a way to link the MNL’s statistical theory to developments in cognitive psychology and axiomatic measurement.

Note that the MNL’s probability mechanism is agnostic about the functional form of systematic utility and its scaling. The following equivalent formulas highlight each point. (\( \chi \) is a set of options including \( z \). The loose notation is formalized in the next section.)

\[
P(z|\chi) = \frac{e^{V_z}}{\sum_{x,z \in \chi} e^{V_x}} \quad (1a) \]
\[
P(z|\chi) = \left( \frac{e^{V_z}}{\sum_{x \in \chi} e^{V_x}} \right) \left( \sum_{x \in \chi} e^{V_x} \right) = \frac{1}{\sum_{x \in \chi} e^{V_x-z}} \quad (1b) \]

The standard form (1a) reminds us that the probability that \( z \) is chosen depends only on the total values of the options under consideration not on the functional form that generates these values. The additive form \( V_z = \sum_{i \in \chi \setminus z} \mu_{z(i)} = \langle z \cdot \mu \rangle \) is but one undistinguished possibility. Form (1b) shows that the scale for
systematic utility has no natural origin; only differences between utilities influence an option’s probability of being selected.

Granted, generalizing the logit model by generalizing its error structure has increased the model’s flexibility to fit data. Furthermore, the additive form is simple and predicts well (Cui & Curry 2005). Nevertheless, the state of affairs is less than satisfying. There is a disconnect between the econometric branch of choice theory, emphasizing statistical estimates from discrete-choice data (McFadden, Louviere & Woodworth, etc.), the axiomatic branch, emphasizing formalized representation theorems (Luce, Prelec, etc.), and the behavioral branch, emphasizing controlled experimentation (Kahneman, Tversky, etc). The lack of cohesion between the econometric and behavioral views is dramatically illustrated by the fact that the working hypothesis of additive utility that garnered McFadden the 2000 Nobel Prize in Economics was implicitly called to question by the award two years later to Kahneman for his revelations about loss aversion and the general failure of additivity. Stott’s (2006) menagerie of 256 combinations of value functions and probability weighting functions further suggests a lack of unification.

In this paper, we use a functional equation representation of utility to link experimentally verified properties of choice, such as loss aversion. We explore three specific forms of the generalized representation, the positive and negative p-additive representations of Ng et al (2009) and relativistic additivity, a form explored sparingly in early writings (Luce and Marley 1969; Luce and Narens 1976) but since dormant. The p-additive forms are important because they satisfy Holder’s axioms leading to representations in $\langle 1, \geq, +, - \rangle$ that can model gains and losses (joint receipts) in gambles. These forms also lead to absolute scales because they have privileged origins and are bounded above ($\delta = +1$) and below ($\delta = -1$). We show that the p-additive representations are specific solutions to the functional equation we employ in our general representation. Relativistic addition also solves the equation and we show that it naturally accommodates loss aversion, nests both Fechnerian and non-Fechnerian utility functions (Debreu 1958), and has other properties investigated here for the first time.

**Notation**

We adopt the notation used in Marley and Pihlens (2011) with minor modifications. We assume there are $m$ attributes, usually with $m \geq 2$ and we let $M = \{1, \ldots, m\}$. Attribute $Q(i)$, $i = 1, \ldots, m$ has $q(i)$ levels. A profile (i.e., a multi-attribute option) is an $m$-component vector with the $i^{th}$ component taking on one of the $q(i)$ levels for that component. Thus, we have a set of size $Q(m) = \prod_{i=1}^{m} q(i)$ of possible profiles; we denote this set $Q = Q(1) \times \cdots \times Q(m)$ so that $Q$ is the Cartesian product of the attributes viewed as sets of levels. We let $D(P)$ with $P \subseteq Q$ denote the design; i.e., the set of profiles that occur in the study and $\mathcal{Z} \subseteq P$ be a specific choice set containing a typical profile denoted $z = (z_1, \ldots, z_m)$, where $z_i$ is the level of attribute $i$ in profile $z$. When needed we reference other profiles $x = \{x_i\}, y = \{y_i\}$ and introduce additional notation.

**GENERALIZED ADDITIVE REPRESENTATIONS**

**Representations of Profiles**

This section develops a functional equation, solutions of which yield specific, non-additive representations of systematic utility, hence generalized MNL models. Each solution defines a different abstract binary operator to replace standard addition when summing partworth utilities. Call a function $F$ of two variables associative if for every $x, y, z$ in its domain

$$F[F(x,y), z] = F[x, F(y,z)]$$

(2)
Assume $F$ is strictly increasing in each argument, then under weak mathematical conditions (see Aczél 1966, Theorem p. 256) the general continuous solution of (2) has the form,

$$F(x, y) = f^{-1}[f(x) + f(y)]$$

with continuous and strictly monotone $f$. Note that commutativity follows directly from this representation. If we define the binary operation $x \oplus y = F(x, y)$, then (3) generalizes to any associative binary operation.

**Generalized MNL Models**

Formal application of the above reasoning leads to the following generalized additive form, stated as Proposition 1.

**Proposition 1:** $u(z) = f^{-1}\left(\sum_{i=1}^{m} f[u_i(z_i)]\right)$ i.e., $f[u(z)] = \sum_{i=1}^{m} f[u_i(z_i)]$. (4)

We can study specific forms of the generalized additive utility function (4) by studying particular solution functions $f$ and their corresponding inverse functions. In particular, for the multinomial logit model (MNL), we have the following forms and the $f$ that creates each of them, stated as corollaries to Proposition 1.

**Corollary 1.1.** The identity function $f(x) : x \rightarrow x$, then $u$ is additive over the component representations $u_i$, yielding the standard MNL.

**Corollary 1.2.** Assume that for all $i = 1, \ldots, m$ and all $z_i$, that $u_i(z_i) \geq -1$ and that for $x \geq -1$, there is $\alpha > 0$ such that $f(x) : x \rightarrow \left(1 + \frac{1}{\alpha}\right) \log(x+1)$, this gives the p-additive representation of Ng, Luce, and Marley (2009) with $\delta = +1$. In particular, when $m=2$,

$$u(z) = u_1(z_1) + u_2(z_2) + u_1(z_1) \cdot u_2(z_2)$$

(5)

**Corollary 1.3.** Assume that for all $i = 1, \ldots, m$ and all $z_i$, that $u_i(z_i) \leq 1$ and that for $x \leq 1$, there is $\alpha > 0$ such that $f(x) : x \rightarrow \left(1 - \frac{1}{\alpha}\right) \log(1-x)$, this gives the p-additive representation of Ng, Luce, and Marley (2009) with $\delta = -1$. In particular, when $m=2$,

$$u(z) = u_1(z_1) + u_2(z_2) - u_1(z_1) \cdot u_2(z_2)$$

(6)

**Corollary 1.4.** Assume that there is $c > 0$ such that for all $i = 1, \ldots, m$ and all $z_i$, $-c \leq u_i(z_i) \leq c$ and that for $-c \leq x \leq c$, there is $\alpha > 0$ such that $f(x) : x \rightarrow \left(1 + \frac{1}{\alpha}\right) \log\left(\frac{c+x}{c-x}\right)$, this gives the relativistic-additive representation of Luce and Narens (1976). In particular, when $m=2$,

$$u(z) = \frac{u_1(z_1) + u_2(z_2)}{1 + \frac{u_1(z_1) + u_2(z_2)}{c_i}}$$

(7)

Note that (7) adds just one new parameter ($c$) to the conventional MNL. This added degree of freedom permits the new form to exhibit important properties, ranging from additive, Fechnerian to non-Fechnerian (Stott 2006), depending on whether an option is highly valued or not.

**Fundamental Properties**

Results (5)-(7) are special cases of an abstract binary operator, which takes on a specific functional form depending on how $f$ is instantiated. Because each of these specific cases is a solution to
(4), they share the following properties. (To simplify notation, let \( r, s, t \in \Omega \), where \( \Omega \) is the appropriately defined domain of a given \( f \). For example, for relativistic addition, \( r \in \Omega \iff -c \leq r \leq c \).

**Proposition 2.** For \( r, s, t \in \Omega \), the induced binary operator \( \oplus \), satisfies:

i. **Commutativity:** \( (r \oplus s) = (s \oplus r) \)

ii. **Associativity:** \( r \oplus (s \oplus t) = (r \oplus s) \oplus (r \oplus t) = (s \oplus r) \oplus (t \oplus r) \)

iii. **Neutral element:** \( r \oplus \eta = \eta \oplus r = r \)

iv. **Closure:** if \( r, s \in \Omega \), then \( r \oplus s \in \Omega \)

v. **Element inverse:** \( r \oplus r^{-1} = r^{-1} \oplus r = \eta \)

**Corollary 2.1.** \( (\Omega, \oplus) \) is an Abelian Group.

vi. **Distributivity:** Let \( n \otimes r \equiv r \oplus r \oplus \cdots \oplus r \) and \( \sum_{\oplus} \) denote the iterative sum operator for \( \oplus \) as in

\[
\sum_{j=1}^{n} r_j \equiv r_1 \oplus r_2 \oplus \cdots \oplus r_j ,
\]

then \( \oplus \) is distributive with respect to \( \otimes \); i.e., \( r \otimes (s \oplus t) = (r \otimes s) \oplus (r \otimes t) = (s \otimes r) \oplus (t \otimes r) \).

**Corollary 2.2.** Monotonicity: Let \( x \oplus y \equiv \{x, y\} = \{x \cup y\} \) be a bundle of two options; \( x \) and \( y \) with corresponding partworths \( [u_1(x), \ldots, u_m(x)] \) and \( [u_1(y), \ldots, u_m(y)] \), and define \( x \oplus y \) as component-wise addition; i.e., \( u_i(x) \oplus u_i(y) \forall i = 1, m \), then \( z \succ x \iff (z \oplus y) \succ (x \oplus y) \).

Furthermore, because \( f \) and \( f^{-1} \) are monotone, the generalized form (4) offers a means to compute statistical estimates via maximum likelihood estimation.

**THE RELATIVISTIC MULTINOMIAL LOGIT MODEL**

**Relativistic Addition**

In the remainder of this paper, we focus on non-negative relativistic addition, labeled \( \rho \)-addition, which bounds utility from below by zero rather than by \(-c\); i.e., \( u(\mathbf{z}) \in [0, c^\rho] \). Replacing standard addition with \( \rho \)-addition in the multinomial logit model imbues the model with theoretically and behaviorally relevant properties. In the following sections, we show that the MNL\(_\rho\) model exhibits a generalized form of non-complementarity found in behavioral experiments (see Fox & See 2003) and simultaneously captures compensatory and non-compensatory behavior in attribute tradeoffs. The model supports non-parallel (non-Fechnerian), radial iso-utility contours (Stott 2006), hence exhibits increasing marginal rates of substitution as total value increases. We show that non-negativity is a sufficient condition to support loss aversion (Kahneman & Tversky 1986, 1991).
Generalized Non-Complementarity

Definition 1: Let $\Omega_{c^+} \equiv \{0^+ \cup 0\}$ have supremum $c^+ < \infty$ and define the binary operator
\[
\rho(r, s) : \Omega_{c^+} \times \Omega_{c^+} \to \Omega_{c^+}, \quad \text{as} \quad \rho(r, s) \equiv r \oplus s \equiv \frac{r + s}{1 + c^+}.
\]
This operator inherits commutativity, associativity, distributivity, monotonicity, and zero from its generalized form (4) and is closed; i.e., $r, s \in \Omega_{c^+} \Rightarrow r \oplus s \in \Omega_{c^+}$.

Definition 2: $\sum_{i=1}^{m} u_i(z_i) \equiv u_1(z_1) \oplus u_2(z_2) \oplus \cdots \oplus u_m(z_m)$.

Lemma 1: $\rho(r, s)$ satisfies $r \oplus s \leq r + s \ \forall r, s \in \Omega_{c^+}$ and more generally $u(z) \equiv \sum_{i=1}^{m} u_i(z_i) \equiv U(z)$, a property we refer to as generalized non-complementarity.

We index the departure of $\oplus$ from additivity precisely in section 4.2. This type of contractive behavior faithfully represents cognitive processes in two important domains, the first inspired by Allais (1953) (losses loom larger than gains) and the second inspired by Ellsberg (1961) (preference for risk over uncertainty). These behaviors are special cases of the more fundamental property diminishing sensitivity discussed next.

Diminishing sensitivity of relativistic-addition

Lemma 2: $\rho(r, s)$ is monotonically increasing in $r$ and $s$ at a decreasing rate, thus it is everywhere concave.

Lemma 2 supports two types of diminishing sensitivity, physiological and psychological. Physiological diminishment is sufficient to yield psychological diminishment but not necessary. Diminishing sensitivity means that the sensed magnitude of an event decreases with distance from one or more natural boundaries. The boundary may be a mental construct (psychological), or physiological (Fechner 1860, Weber in Ross & Murray 1996). In behavioral economics, Prelec (1998) formalized the psychological weighting function that decreases in sensitivity as one approaches certainty or impossibility, mental constructs that serve as psychological bounds. Diminishing sensitivity is known to occur for all human senses (Dehaene 2003) and animal experiments confirm the same phenomenon in primates (Nieder et al 2002, Nieder & Miller 2003).

Value is non-negative

The most natural psychological boundary in counting is “none”. Thus we should expect diminishing sensitivity as we move further from none. In its simplest form, diminishing sensitivity is captured by the perception that (10-5) > (110-105) (Trope & Liberman 2010; King and Janiszewski 2011). A fundamental property of $\oplus$ is that as $c^+ \to 0$ total value is increasingly compressed from above. Values, such as 110 and 105, bump up against the natural upper bound as that bound pushes down to shrink the domain $[0, c^+]$. Thus when a system’s algebra uses $\rho$-addition (vs. standard addition), diminishing sensitivity is built directly into the system’s arithmetic. In the context of the MNL$_\rho$, this means that statistical estimates will naturally exhibit diminishing sensitivity, a feature that is unobtainable with standard arithmetic. The foregoing properties are summarized in Theorem 1 for the MNL$_\rho$ model.

---

1 We refer to this property as generalized non-complementarity rather than sub-additivity because sub-additivity is a unary property; i.e., $g(r+s) \leq g(r)+g(s)$; e.g., the square root function is sub-additive.
Theorem 1: The systematic component of utility in the relativistic multinomial logit model, 
\[ u(z) = \sum_{i=1}^{m} u_i(z_i) \] is closed in \( \Omega_{e_i} \), exhibits generalized non-complementarity, and increases monotonically in partworth utility, \( u_i(z_i) \forall i \) at a decreasing rate, thus is everywhere concave.

ISO-UTILITY CONTOURS AND THE ADDITIVITY GAP

Iso-Utility Contours

In this section, we define iso-utility contours in two-attributes and use the difference between iso-utility contours under + vs. \( \oplus \) as a basis to explicitly index the additivity gap that \( \rho \)-addition induces in a utility function. We show elsewhere that the two-dimensional argument extends to the general case (Curry, Wang, Marley 2012). We use an un-subscripted argument, such as \( u(z) \), to signal that the argument varies continuously over the range of levels on attribute \( i \). Thus, we invoke solvability (level ‘density’) in the range of levels when discussing iso-utility contours. In practice some attributes are be non-divisible. In these cases, the contour is defined by inter-level interpolation using the partworth utility function specified by the analyst, additive or \( \rho \)-additive.

Definition 3 Iso-Utility Contour (2d): An iso-utility contour for choice options comprising two attributes is the locus of partworth utilities \( u_1(z), u_2(z) \) such that; (i) \( u_1(z) + u_2(z) = \kappa \) or (ii) \( u_1(z) \oplus u_2(z) = \kappa \), where \( \kappa \in [0,c^+] \). (The subscript on \( \kappa \) is dropped when it is clear by context.)

Because total utility is the same for each point on a given iso-utility contour, a decision-maker is indifferent between any two such options. Hence, we use the terms iso-utility contour and indifference curve interchangeably.

Lemma 3: \( \kappa \)-Indifference: With two attributes, the indifference curve \( u_1(z) \oplus u_2(z) = \kappa \) is the locus of points with coordinates:

\[
u(z), u_2(z) = u_1(z), \frac{c^2 [u_1(z) - \kappa]}{u_1(z)(\kappa - c^2)} \tag{8}\]

Furthermore, the point \((s,s)\) at the intersection of this indifference curve and the 45° ray from the origin is the positive solution to the second-degree polynomial in \( u_1(z) \).

\[
k^2u_1(z)^2 - 2u_1(z)c^2 + \kappa c^2 = 0 \tag{9}\]

Two Measures of the Additivity Gap for \( \oplus \) vs. +

We use Lemma 3 to define two measures of the additivity gap induced into a multinomial logit utility function by \( \oplus \) (see Tversky & Wakker 1995; Fox and See 2003). These measures exploit completely different properties of the relationship between + and \( \oplus \) indifference curves. Without loss of generality, we set \( c^2 = 1 \). From Lemma 3, consider the point \( s \) given by the root of second degree polynomial (9) in \( s \) that lies in the \([0,1]\) interval and the point \( a \) defined by \( u_1(z) = \kappa - u_2(z) \iff u_1(z) = \frac{1}{2} \kappa = a \). This point lies at the intersection of the linear indifference curve \( u_1(z) + u_2(z) = \kappa \) and the 45° ray from the origin.

Definition 4: Linear Gap. \( L_{\text{gap}} \) is the Euclidean distance along the 45° ray from the point \((a,a)\) on the linear indifference curve to the point \((s,s)\) on the \( \kappa \)-indifference curve, where \( u_1(z) + u_2(z) = \kappa = u_1(z) \oplus u_2(z) \).

\[
L_{\text{gap}} = \left[ 2 \left( s - \frac{1}{2} \kappa \right)^2 \right]^{\frac{1}{2}} = \left[ 2 \left( \text{root}_{s(0,1)} \left\{ \kappa s^2 - 2s + \kappa = 0 \right\} - \frac{1}{2} \kappa \right)^2 \right]^{\frac{1}{2}} \tag{10}\]
Definition 5: Area Gap. $\kappa gap$ is the difference of areas under the indifference curves with respect to $\rho$-additivity $u_2(z)_{\ominus} = \frac{u_1(z) - \kappa}{u_1(z) - 1}$ and standard additivity $u_2(z)_{+} = -u_1(z) + \kappa$, respectively.

$$\kappa gap = \int_{z=0}^{\kappa} u_2(z)_{\ominus} dz - \int_{z=0}^{\kappa} u_2(z)_{+} dz = 1 + \left(\frac{1}{\kappa^2} - 1\right) \cdot \ln(1 - \kappa^2)$$

(11)

$\rho$-Addition and Choice Behavior

The additivity gap is negligible when a choice option’s total utility is small relative to $c^+$ because in these cases the $\rho$-iso-utility contours are nearly linear in two-dimensions and are (nearly) linear hypersurfaces in higher dimensions. The gap increases monotonically as partworth utility increases in either attribute. One immediate consequence of the increasing gap is that $\rho$-addition naturally incorporates non-compensatory behavior in a continuously moderated fashion as the overall utility of a choice object increases. The standard additive model exhibits the same magnitude of (unlimited-) compensatory behavior regardless of the absolute level of overall utility for a choice object; i.e., the utility of a choice option does not satiate (Lee and Allenby, 2011, p. 6). Furthermore, because it uses the logit function, the standard MNL is Fechnerian (Debreu 1958); i.e., its iso-utility contours are parallel. (See also Stott 2006, p. 124.)

The MNL$_\rho$ model exhibits limited compensation. It supports compensatory behavior when an object is not particularly valued overall. However, as an option’s utility increases, the $\rho$-additive total utility function exhibits less and less compensatory behavior as iso-utility contours become radial and non-parallel; i.e., non-Fechnerian. Thus, the marginal rate of substitution between attributes is an increasing function of utility. As one attribute or the other begins to dominate, the other attribute must exhibit disproportionately enhanced utility to re-achieve indifference. (Referencing ahead, we formalize this idea in Corollary 3.1.) The only exception is on the $45^\circ$ ray where an object’s utility comprises balance on each attribute. The implied mental activity is to simplify a decision by focusing on fewer rather than more attributes once a given attribute (or, more generally, a given subset of attributes) begins to win the utility war. At this point, other attributes are increasingly powerless to override momentum. The only exceptions are in the very central region of the utility space where no attribute has a decisive utility lead. When a decision-maker considers more than two attributes, there are multiple conditional tipping points where one attribute wins and others are marginalized. This type of cognitive behavior mimics the psychological construction of decision heuristics (Gigerenzer & Gaissmaier 2011). Empirical studies support this well-known phenomenon (Gigerenzer et al 1999, p. 97-118; Gigerenzer & Goldstein 1996).

These results foreshadow that choice behavior can differ markedly under $\rho$-addition vs. standard addition. We follow up on this idea and in the longer version of this paper (Curry, Wang, Marley 2012), showing that random utility theory using $\rho$-additivity naturally supports preference reversals in certain cases. We turn our immediate attention to connections between $\rho$-additivity and the important principle of loss aversion (Kahneman & Tversky 1979).

$\rho$-ADDITIVITY AND LOSS AVERSION

Loss Aversion

Kahneman and Tversky (1986, 1991) found that human value functions reference an idiosyncratic initial state and are concave for gains, but convex and steeper for losses. (See also Fox and See p. 307.) Therefore, individuals should be loss averse; changes that are equal in face value from the initial state, but in opposite directions, will engender different cognitive values. For example, if an individual’s initial wealth state is $100$, then the utility of winning fifty dollars, $U_g(50)$ is less in absolute magnitude than
the (dis-) utility of losing $50, $U_l(−50)$. Therefore, the inequality $U_l(−50) < U_l(50)$ holds. Since publication, accumulated empirical evidence strongly supports the loss aversion hypothesis. Today it has become conventional wisdom in cognitive psychology and behavioral economics (e.g., Tom et al. 2007; Tversky & Fox 1995; Tversky & Wakker 1995; Wu & Gonzalez 1996).

The Status Quo, Losses, and Gains

By definition, loss aversion requires an initial utility state. This construct has been treated without deep formalization in most published work. For example, in their original *Econometrica* article, Kahneman and Tversky (1979, p. 274) say simply; “Gains and losses, of course, are defined relative to some neutral reference point. The reference point usually corresponds to the current asset position, in which case gains and losses coincide with the actual amounts that are received or paid.” This description emphasizes monetary wealth in a quasi-accounting framework to the exclusion of emotional states or non-financial notions. The following remark by Hastie and Dawes is typical of modern treatments. “The addition of a moveable reference level is the major difference between prospect theory and traditional economic utility theories.” (Hastie and Dawes 2001, p. 216.) They emphasize that the reference point changes as a function of a decision, but neither the precise nature nor the origins of the reference point are discussed.

In discrete-choice experiments (DCEs), the analyst presents sets of options to respondents. These options are characterized by their levels on a common set of attributes, and (often) include a “no choice” option to represent the status quo. However, the status quo cannot be a member of the class of options because it cannot be defined by levels on the attributes under study. It is an “outside good” (Allenby 2012). For example in a DCE that poses a choice among electric cars, the construct “remaining in your current state” cannot be characterized by levels on attributes such as battery life, miles per charge, or time to recharge. A status quo evoked by a DCE is a localized baseline often constructed during the experiment. It is not a mental image of the respondent’s general state of wealth or well-being; i.e., losing $10 in a gamble does not generally influence an individual’s physical health. Even in the context of a gamble, once you have agreed to take part and lose, I cannot return you to your pre-bet state simply by giving your $10 back. You may feel guilty accepting this “gift” or may experience other emotions that strongly influence your value judgment about the transaction. Very few individuals would definitively feel that after betting, losing $10, and then having $10 given back to them that they were experiencing a utility state identical to where they began. This argument holds *a fortiori* if you win the gamble and I take your winnings away.

Modern formalizations of the status quo similarly lack development. For example, Ng, et al (2009, p. 274) use the identity element of their Abelian group as the status quo, which yields the equivalence $(x ⊕ y)^{-1} \sim (x^{-1} ⊕ y^{-1})$. Although this property holds for relativistic addition over its entire range $(-c, +c)$, for $\rho$-additivity we know only that associativity and commutativity hold. Because our algebraic structure is non-negative, additive inverses may not exist for some elements. Therefore, we relax the idea that the status-quo can be represented by a distinguished element that can be characterized by the same attributes as the choice options. Rather, we view the localized status-quo as the projection from a higher dimensional space of a complex object into the attribute space characterizing choice options. This object has properties that can be further explored mathematically apart from its implications for choice among the options at hand.
The Status-Quo Projection

**Definition 6:** The status quo is the set of points, \([q]\) such that \(u(q)\) for all \(q\). For example, if the options are two-dimensional, then the equivalence class \([q]\) is such that \(u(z_1, z_2) \equiv \sum_{i=1}^{n} u_i(z_i)\). This is the set of points coinciding with the iso-utility curve at \(\kappa_q\), not a single element in the space. Each option in this set has the same overall utility \(\kappa_q\).

**Definition 7:** A loss (gain, referent) is any \(x \in \Omega_{z^+}\), s.t.; \(u(x) < \kappa_q\); (or \(u(x) > \kappa_q\); or \(u(x) = \kappa_q\), respectively).

For example, a loss in a two-attribute choice is any \(x\) that satisfies the following inequality.

\[
u(x) \equiv u_i(x_1) \oplus u_2(x_2) = \frac{u_i(x_1) \oplus u_2(x_2)}{1 + \frac{u_i(x_1)u_2(x_2)}{c^2}} < \frac{u_i(z_1) \oplus u_2(z_2)}{1 + \frac{u_i(z_1)u_2(z_2)}{c^2}} = u_i(z_1) \oplus u_2(z_2) \forall z \in [q] \quad \text{(12)}
\]

**Proposition 3:** Loss Aversion: Let \(z_L, z_R, z_o\) be three points on any ray from the origin of the \(m\)-dimensional utility space such that the (Euclidean) distances satisfy \(d(z_L, z_R) = d(z_G, z_R)\); i.e., point \(z_r\) is the referent and lies “mid-distance between the other two points on the ray. Then \(G = d(z_G, z_R) = d(z_R, z_L)\), but \(u(z_L) - \kappa_r > u(z_G) - \kappa_r\) where \(\kappa_r = u(z_r)\).

The proof of Proposition 3 capitalizes on the fact that iso-value contours under \(\oplus\) increase in convexity on a given ray from the origin as utility moves further from the origin along the ray. This leads to the following corollary.

**Corollary 3.1:** As \(\kappa \to c^+\), a decision-maker’s marginal rate of substitution between attributes – willingness to make trade-offs – diminishes.

For example, if the attribute space is two-dimensional, then corollary 3.1 follows form the fact that along any ray, slopes of iso-value contours are decreasing in the region above the 45° ray where partworth values are greater for attribute 2 and increasing in the region below the 45° ray where partworth utilities are greater for attribute 1. These separate phenomena combine so that, except at points precisely on the 45° ray where the slope is always -1, trade-offs always favor the more valued level. Proposition 3 also means that loss aversion is subtle if the referent is near the origin and more pronounced as it increases in total utility. An immediate behavioral implication is that an individual’s wealth increases, s/he will become increasingly reluctant to sacrifice financially.

**Monotonicity**

Proposition 2 shows that \(\rho\)-addition obeys monotonicity when bundling options; i.e., \(x > y \Leftrightarrow (x \oplus z) > (y \oplus z)\). Computing the total utility of bundles requires vector addition, which is defined for \(\oplus\) component-wise in the usual way. (We overload the symbol \(\oplus\) to mean both physical concatenation and to compute the total value of the bundle.) Corollaries 2.3 and 2.4 are stated for completeness.

**Corollary 2.3:** Attribute-wise monotonicity. For partworth values on the \(i^{th}\) attribute; \(u_i(x_i) - u_i(y_i) \Leftrightarrow [u_i(x_i) \oplus k] \geq [u_i(y_i) \oplus k]\) for any constant \(0 \leq k\).

Corollary 2.3 follows immediately from Proposition 2; i.e., \(\frac{\partial u_i(z)}{\partial u_i(z)} > 0\) implies that \(u_i(z_i) \oplus (\Delta u_i(z_i) \equiv k) > u_i(z_i)\). (See also Aczél 1987, p. 108.)
Corollary 2.4: Given options from a given MNL experiment; i.e., a set \( \mathcal{X} = \{x, y, z, \ldots\} \subseteq \mathcal{P} \), we have
\[
P_{\oplus}(x | \mathcal{X}) \geq P_{\oplus}(y | \mathcal{X}) \iff P_{\oplus}(x \oplus z | \mathcal{X}) \geq P_{\oplus}(y \oplus z | \mathcal{X}).
\]
In words, MNL\(_{\oplus}\) probabilities obey monotonicity. Corollary 2.4 follows from the monotonicity of systematic utility and probability in the MNL formulation.

In summary, \( \rho \)-addition implies that the topology of representative utility in in the MNL\(_{\rho}\) model naturally supports loss aversion relative to status quo reference points. These reference points move as per Hastie and Dawes 2001 (see also Schmidt et al 2008) and each “point” comprises an equivalence class of elements. Given that the domain of our operator is non-negative, the theory states that it is possible to return a human decision-maker to his or her status quo after a loss, but not after a gain; at least not in the strict sense of a formal gain inverse. The behavioral implication is that people psychologically resist “returning to less after having more”, but are able to “return to more, after having less”.

**CONCLUSION**

**Findings**

We offer three specific solutions to Aczél’s (1966) linear functional equation (p. 256) and propose these as generalized, non-additive representations of systematic utility in the multinomial logit model. Two of these solutions were explored by Ng, et al 2009, but without reference to their more abstract foundations. We focus on the third solution, relativistic addition, and show that restricting utility to non-negative values is a sufficient condition for the model to support loss aversion. The model also yields other important properties prominent in cognitive psychology and behavioral economics; properties that cannot be represented by the standard additive MNL. These include: decreasing marginal utility, non-complementarity attribute weights in preferences, and a blending of all four combinations of iso-utility contours achieved by crossing {linear, radial} with {parallel (Fechnerian) and non-parallel (non-Fechnerian)} in the same parametric model. These combinations lead to value moderated compensation among attributes, as well as value moderated value, and value moderated variation in value (Curry, Wang, Marley 2012). The implied choice behavior mimics a variety of heuristic decision rules and is consistent with certain paradoxical effects from framing decisions differently. When \( \rho \)-addition is used in a multinomial logit model, these properties become inherent in the model’s algebra.

**Future Research**

Whether in principle utility should be handled mathematically as non-negative is an interesting question. Sound arguments one way or the other will have important implications for measurement and scaling of utility, be it in the context of the MNL, random utility theory more generally, or in other formalized contexts. Our efforts with \( \rho \)-addition suggest that the argument for non-negative utility has merit because the resulting mathematical structure implies much about human choice behavior that is supported empirically, but goes unquestioned in algebras lacking this property.

Aczél’s functional equation supplies closed form solutions to abstract sums that would otherwise have to be computed recursively. It is not clear how an analyst would express a likelihood function in such a case. Maximum likelihood estimates of partworth utilities are typically calculated for pooled models that assume a common ‘beta’ (partworth vector) over individuals. However, pooled estimates are also used to initialize important matrices in hierarchical Bayesian models that lead to estimates of parameters at the individual person level, including initializing the prior mean and the Hessian.
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NO GOOD DEED GOES UNPUNISHED: CITING SOURCES IN PRINT ADVERTISING CLAIMS

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ABSTRACT

The research investigates whether source citation of claims in print advertisements can be beneficial to consumers in certain cases by providing information that aids in accurate deception detection. The self-regulating practice of including source citation information for claims in print advertisements is meant to increase consumer trust and reduce perceptions of deception, but it may have the opposite effect or no effect at all. Studies in different risk domains find the type and level of risk leads to differential processing of the presence or absence of advertising claim source information. Processing style can cause the same information (source citation) to increase or decrease the level of deception a consumer perceives from a claim. Individual difference measures of advertising skepticism and numeracy are also considered.

Consumers are frequently exposed to advertisements that make claims about product performance. When an advertisement claims that a product has a “77% improvement over the competition,” for example, does knowing where that number came from help consumers form opinions about the advertiser’s deceptive intent? If an advertiser fails to explicitly state the evidence for a product claim, would you consider the advertisement to be at least somewhat deceptive? Although print advertisement claims are regulated by the Federal Trade Commission and are required to “have evidence to back up their claims,” according to the Bureau of Consumer Protection, this information is not required by federal law to be explicitly stated within the advertisement (www.business.ftc.gov). The “reasonable basis” requirement states that advertisers must have objective evidence in the form of consumer surveys, sales data, clinical testing or scientific evidence using methods deemed acceptable by experts in the field to support the claim. In an effort to increase consumer protections, many print media publishers are proactively and voluntarily going further than the current legal requirements. The publishers’ self-regulation practice now requires advertisers to include supporting information for the claim within the body of the advertisement. It is important to explore whether this well-intentioned action may have undeserved and detrimental effects for marketers.

Source citation is additional text that acts as further explanation of an advertising claim. The absence (or presence) of a source citation may activate consumers’ deception-protection processes. One possibility is that when provided with legitimate support information regarding a claim within an advertisement, consumers will rightfully feel more confidence in the truthfulness of the claim. However, it is also possible that consumers faced with source information may become more sensitized and instead trust the claim less when it is supported within the advertisement. Extra information may act as a flag to consumers, reminding them the advertisement is a persuasive attempt and should be evaluated as such. A final possibility is that the additional information does not affect the way the claim is perceived and interpreted. We argue herein that the relationship between source citation of advertisement claims and consumer deception perceptions is complex. The answer to whether source citation of a claim makes an advertisement more credible is in fact both yes and no and is moderated by the type and level of risk involved. Considering work in marketplace deception, consumer advertising skepticism, persuasion knowledge and protection, risk perceptions and dual processing, we begin to disentangle the effects of source citation of print advertising claims on deceptive perceptions.
LITERATURE REVIEW

Dimensions of Risk

The concept of perceived risk is an important antecedent to many marketing decisions, not only in deception detection, but also in product judgments, new product adoption, brand/store loyalty and purchase choice (for reviews see Mitchell 1999; Ross 1975). Perceived risk was originally proposed to be a two-dimensional construct composed of uncertainty and adverse consequences (Bauer 1960), but that view has evolved over the past fifty years. People determine the level of risk by thinking a priori about the potential outcomes of a decision combined with the probabilities of each outcome’s occurrence (Dowling 1986). Risk in a consumer behavior context can be more narrowly defined as the uncertainty or ignorance surrounding the product, ad or stimuli in question and the related consequences (Campbell and Goodstein 2001). In a consumer context, risk has been described as the importance of the potential loss (Taylor 1974) and later, the instrumental importance of the potential loss (Bloch and Richens 1983).

Risk is now considered a multifaceted construct. General risk can be deconstructed into many distinct domains, such as performance, social, physical, financial, psychological, time, etc. (e.g. Bettman 1973; Kaplan, Szybillo, and Jacoby 1974). In the consumer behavior literature, risk is either construed as a gestalt concept or as several different domains which combine to create overall general risk. Stone and Gronhaug (1993) propose that all dimensions of risk are mediated by an overall “psychological risk” and Mitchell (1999) states that the majority of the literature reports a general construct which is rarely broken into more specific domains (such as financial or social). We propose that consumers may behave differently depending on the specific risk domain. Consumer behavior research uses risk as a defining factor in attitude development and subsequent judgments about the deceptive intent of advertisers, as well as considering the risk directly related to acquisition of a target product. Two risk domains especially important to consumer behavior are financial and physical risk. Many products in the marketplace represent these specific types of risk domains. Products vary in price from very expensive to inexpensive and others can protect from or cause physical harm. Research in consumer behavior and risk tends to assume that high involvement products (expensive or potentially physically harmful) are inherently perceived to contain risk (Dowling 1986), but to our knowledge there is no research investigating the link between risk level, risk domain and deception perceptions.

Financial risk is the most naturally related to marketing contexts, as price is one of the most important dimensions considered by consumers (risk, quality, etc.) (Monroe 1979). A product represents financial risk when the price is (subjectively) high enough to potentially harm the consumer. Because losses loom larger than gains (Kahneman and Tversky 1979), consumers can be highly motivated to make decisions that avoid loss in high priced contexts. A product perceived as inexpensive would therefore represent low financial risk whereas one that is expensive would represent high financial risk. We expect that advertisements representing higher financial risk cause individuals to automatically engage in more involved mental processing and those representing lower financial risk will encourage more superficial processing.

Physical risk is also an important domain for consumer behavior research. Products associated with high physical risk are ones that have the potential to cause physical discomfort or pain. Physical risk in a consumer behavior context is often investigated in relation to prescription drug advertisements (for a recent example, see Cox, Cox and Mantel 2010). Results from other physical risk studies have been decidedly mixed for the effect of risk information on product liking and/or purchase intent, which may partially stem from trust in the advertising claim and perceptions of deceptive intent. Neutral and negative findings related to physically harmful products include that consumers ignore explicit physical risk information, such as warning labels and disclaimers/side effect warnings (for example, Menon, Deshpande, Perri, and Zinkhan 2003), that the information is detrimental to recall of benefits (Morris, Mazis, and Brinberg 1989) and product evaluations (Goetzl 2001). Other research finds that warnings about physical harm can actually increase benefit recall and product evaluations (Goetzl 2000). The
current research considers whether higher physical risk behaves in a similar way to financial risk, in that higher risk engages more effortful processing and results in less perceived deception of an advertising claim that is supported by a source citation.

We do not directly address psychological risk as it contains aspects of the more specific domains (such as financial and physical) and each distinct domain has psychological risk built in. These two domains are explored independently in Studies 1 and 2. People also process advertisements within a continuum of cognitive effort, ranging from minimal to maximum exertion. Study 3 builds on the previous studies and examines the effect of different cognitive loads on deception perceptions in a high financial risk context. We are interested in how these domains might differentially affect processing and subsequent deception protection outcomes.

**Dual Processing**

People are “cognitive misers” (Hastie and Dawes 2010) who exert the minimal amount of effort needed to make a “good” decision, conserving mental energy for more important decisions. Dual processing helps people achieve good decisions with minimal amount of effort. The theory of dual processing states that people naturally use a mental energy conservation process and limit the amount of processing needed for minor decisions. People make decisions about how much cognitive energy to exert in any given situation. The labels System 1 and System 2 refer to the different processing styles. System 1 processing is quick, instinctual, and implicit and System 2 is effortful, cognitive and deliberative and “rule based” (Evans 2003, Evans 2008). System 1 typically guides behavior the majority of the time, with System 2 used only when decisions are more complex, difficult and important to the individual (Bargh and Chartrand 1999).

Researchers in cognitive and social psychology, as well as consumer behavior, often explore the role of a dual processing in judgment and decision making. Numerous empirical studies have investigated the reasons why people make suboptimal decisions (for an overview see Evans 1989). The concept of System 1 vs. 2 processing can be applied to the context of source citation within print advertisements. When using System 1 omission of the citation of the claim is acceptable, as people want to make quick and easy decisions and are not looking to incorporate extra information. However, when System 2 processing is engaged the additional information provided by the source citation is incorporated in reaching a judgment about the acceptability of the claim.

Consumers may make suboptimal decisions stemming from the use of the wrong processing system to guide judgments (Stanovich and West 2000). In other words, System 1 processing may lead to a judgment that is different (and less beneficial) than when System 2 is used. Engaging in System 2 processing is one tactic that consumers can use to protect themselves from deceptive messages (Freistad and Wright 1994). The main variable that determines whether an individual utilizes System 1 or 2 processing is perceived risk level (Baumeister 2008). Advertisements for medications with serious side effects (high risk) are commonly seen next to advertisements for fast food (debatable level of risk), and inexpensive personal hygiene products and fast moving consumer goods assumed to have minimal risk, leading people to shift between using System 1 and 2 processing based on the level of perceived risk. When perceived risk is high, a consumer viewing an advertisement should naturally engage in System 2 processing, with source citations adding credibility to the claim and resulting in lower deception perceptions. However in a low risk context, a consumer often uses System 1 (processing at a more superficial level) and may interpret the same additional information differently. Source citation could be incorrectly interpreted as a “red flag,” alerting of a possible deception attempt or it may have no effect on deception perceptions and may simply go unnoticed, resulting in a suboptimal judgment of deceptive intent.
Dual processing selection happens without the explicit control of the individual, and the level of processing is an automatic choice. Even though it often results in the most accurate judgment, encouraging consumers to always use System 2 is not feasible or desirable due to limited amounts of cognitive energy. Instead, it may be more enlightening to investigate when System 1 guides us to process information in a way that leads to different outcomes than we would if engaged in System 2. Processing styles could have important consequences for consumers’ abilities to perceive deceptive intent within advertisements.

**Deception in the Marketplace**

Protecting consumers from marketplace deception is becoming increasingly important in the marketing field. Various organizations and consumer protection groups such as the Federal Trade Commission (FTC), Advertising Standards, Consumer Reports and the Better Business Bureau and even marketing practitioners and advertisers are creating protection guidelines and programs, enacting laws and self-monitoring to ensure consumer protection at an accelerating rate. One way to protect consumers is to prevent deceptive advertisements. An advertisement should be considered deceptive if it contains inaccurate information or omits relevant information, causing a consumer to make a different decision or judgment than he or she would otherwise (Boush, Friestad and Wright 2009). When advertisers create content, they are subject not only to the consumer protection laws of the government, but also those guidelines set forth by the channel, publisher, etc., where the advertisement will appear. When compared to other advertising mediums, print advertising has remained relatively under-policed until recently. A company must have a “reasonable basis,” such as a survey, test, study or experiment that results in "competent and reliable scientific evidence" before running an advertisement that makes a claim. Although the FTC requires that advertisers must have done the research to back up their claims, it does not require them to actually print or otherwise disclose that data within the advertisement (stricter laws regarding certain products, such as prescription drugs, are exceptions).

There are currently no federal laws regarding citing of sources in print advertisement claims (for example: “Brand X’s skin moisturizer is 50% more effective than the leading competitor”). However, two of the world’s largest publishing companies, Hearst Publications and Time Inc., have enacted standards requiring advertisers to cite the source of such comparative claims within the advertisement in order to assure readers of the accuracy of the claims. One can expect smaller media companies to follow suit and these guidelines could realistically be extended to all verifiable claims (not only comparative) and possibly become federal law. Additionally, many companies concerned with consumers’ perceptions voluntarily include source citation information within the advertisement to verify the legitimacy of claims. Obviously, these rules and actions are established to protect consumers from bogus claims. Although the intention behind the publishing companies’ new requirement is quite honorable, we suggest that the inclusion of source information within print advertisements may have unintended negative effects for both consumers and advertisers.

Research exists regarding the way that consumers process and react to marketing messages and, more specifically, deceptive marketing messages (e.g. Darke and Ritchie 2007). Marketing communications are considered and rightly viewed by consumers as persuasion attempts. Consumers develop and use different tactics in order to understand a persuasion attempt. According to the persuasion knowledge model (PKM), consumers have perceptions of their own self knowledge of the topic (product being marketed), their own knowledge about persuasion in general and their beliefs about the actual agent behind the message (Friestad and Wright 1994). Each individual uses these different types of knowledge to determine the legitimacy of a message. The importance of consumers’ thoughts about their own abilities to detect deceptions may also lead them to form opinions about whether a particular persuasion attempt is acceptable or deceptive (Friestad and Wright 1994).
Consumer skepticism is one of the main tools consumers use to protect themselves from fraud and deceptive advertising (Friedman 1998). Consumers generally have a healthy skepticism of advertising (Calfee and Ringold 1994; Obermiller and Spangenberg 1998; 2000; 2005) that affects the way advertising messages are processed. Overall, there is a high level of advertising skepticism in the American public, leading to less attention paid and less belief in advertising claims.

Interestingly, Obermiller and Spangenberg (1998) find that higher skepticism leads to consumer preference for emotional appeals (that are much more difficult to judge as untruthful) rather than information-based appeals involving ‘factual’ claims that are seriously doubted. Although research on consumer skepticism often motivates marketers to provide source information (e.g. Ford, Smith, and Swasy 1990) it can also have ill effects. A related side-effect of advertising skepticism is the disbelief or undue questioning of truthful advertising claims (Koslow 2000), which is harmful both to honest marketers and to consumers. Consumers will often then avoid products due to hyper-skepticism and sugrophobia, or the fear of being “duped” (see also Vohs, Baumeister, and Chin 2007). We propose that:

H1a: Individuals with high advertising skepticism will perceive greater deception when a source citation is not present.

One tactic frequently used to deceive is exploiting consumers’ innumeracy. Numeracy is an individual’s ability to cope with the mathematical demands of everyday life and is often evaluated by testing one’s ability to correctly answer questions dealing with basic number, money, percentage and statistical problems (Schwartz, Woloshin, Black, and Welch 1997). If a person is innumerate, or statistically illiterate, he or she struggles to understand information regarding risks and uncertainties (Gigerenzer, Gaissmaier, Kurz-Milecke, Schwartz, and Woloshin 2008), simultaneously making advertising claims particularly difficult to understand and more likely to be questioned.

People have reactions to information about scientific procedures and the manner of reporting scientific findings that mirror numeracy findings according to Best’s (2001) research (as cited in Boush et al. 2009, p. 71). Additionally, in a pilot study by Armstrong Soule and Koppenhafer (unpublished), participants demonstrated awareness of their own lack of confidence and ability in research methods and data interpretation, often questioning the accuracy or legitimacy of a claim only when the source information was provided. In the study, respondents rated a print advertisement with a legitimate source of information for a claim as more deceptive (in both frequency and magnitude) than an identical advertisement that simply made the claim without citing a source. Of the 57 respondents who saw the non-deceptive version, nine stated (correctly) that it was not deceptive due to the cited source of the study (e.g. “Because they said there was a study done” and “They gave information as to where they got their statistics from”). However, even some of these respondents expressed concerns about the validity of the source information (e.g. “The longitudinal study and number of participants shows a lot. This could all be lies but we cant (sic) double check every single study”). Even more interesting is that the nineteen respondents who incorrectly identified this example as deceptive often cited the source information as the reason they felt it was deceptive (e.g. “I’m not confident…where was the study from?”)! Participants named various problems with the “weird” research, such as questions regarding appropriate sample size, how well the research was conducted, correlation v. causation issues and simple disbelief about the credibility of the study in general. By comparison, of 56 respondents who correctly identified the deceptive ad as such, only 14 mentioned the lack of source information about the study’s claims or the related complaint that the claim was not factual. Studies such as those by Gigerenzer and Sowey, (as cited in Boush et al. 2009, p.70-71) and our own unpublished study show that people are easily confused and unable to effectively process statistical information. Therefore, we predict:

H1b: Individuals with low numeracy skills will perceive greater deception when a source citation is present.
Advertisements that make claims without providing the source of the information are deceptive, according to many definitions (Boush et al. 2009; Kardes, Posavac, and Cronley 2004; Shimp 1979). They are classified as a case of omission, the act of leaving out information that could be considered crucial to correct deception identification - an attempt to hide the true reality (Boush et al. 2009). In a print advertisement, marketers may legally omit the information a reader would need to evaluate the credibility of a study, such as the context, sample size or where and when data was collected and by whom. On one hand, consumers may interpret claims where no source information is provided as more deceptive, relative to those advertisements explicitly identifying the source (whether fine print or normal text). However, omission can also encourage people to simply accept, albeit with a grain of salt due to natural skepticism towards advertising, the deceptive claims because there is no information provided to make them question the legitimacy of the study or they do not recognize that information important to making an optimal judgment is omitted. Because omission of the source citation encourages consumers to devote less energy to evaluation of the truthfulness of the claim, we expect:

H2: Individuals will perceive higher levels of deception when a source citation is provided.

Consumers who devote more cognitive effort to a marketing message may make a better decision (i.e. more accurately determine whether an ad claim is acceptable or not) (Friestad and Wright 1994). When a decision is of minimal importance, it is likely that a consumer will use System 1 processing, making decisions using a quick, “gut” instinct to judge (Bargh 2002). When a consumer is more involved in an evaluative experience, he or she is likely to use System 2 processing, slowing down and rationally considering all available information with more caution. When exposed to a persuasive attempt, such as a print advertisement with a claim, consumers naturally begin to processes new information using the processing style automatically selected by the level of risk involved.

As previously discussed, many factors play a role in determining how stimuli are processed. However, understanding how deception perceptions are influenced by processing style is crucial to the current research, as different processing styles may lead to different interpretation of the same information. In the following studies, we explore whether the use of different processing styles on the same information (source citation of an advertising claim) causes differential judgments. When the consumer opts to invest minimal effort and make a snap decision, source citation omission may be acceptable and even preferable (prevents the mind from unnecessarily “slowing down”). However, when the mind chooses to devote energy and process all information because it is an important choice, the citation information becomes valuable, helpful and important. Therefore, we hypothesize:

H3: For high risk situations, individuals will perceive print advertisements containing source citations as less deceptive than those without source citations and the effects will be reversed for low risk situations.

In the final study, the proposed dual processing framework is tested to demonstrate that different processing systems are driving the observed differences in use of source citation information, using a cognitive load manipulation (high, low). We expect participants experiencing a high cognitive load to utilize System 1 processing when viewing the print advertisement, causing the source citation to no longer influence deception perceptions. Reaction times will be collected and are predicted to add support for the use of different processing systems in the high vs. low cognitive load conditions. We hypothesize:

H4: Individuals subjected to a high cognitive load will spend less time viewing a print advertisement than individuals experiencing a low cognitive load.
STUDY 1: FINANCIAL RISK

Method

In exchange for partial course credit, 102 undergraduate business students at the University of Oregon (58.4% male) participated in a lab study conducted in fall quarter of 2010 and winter quarter of 2011 in the HEDCO Lab at the Business Research Institute, Lundquist College of Business (\(M_{\text{age}} = 21.27\) years; SD = 1.50). The study used a 2 (financial risk: high, low) by 2 (source citation: present, absent) factor between subjects experimental design with conditions randomly assigned. Prior to exposure to the main stimuli of interest, participants reported information regarding their advertising skepticism levels (Obermiller and Spangenberg 1998, \(\alpha= .848\)) and numeracy skills (Fagerlin, Zikmund-Fisher, Ubel, Jankovic, Derry, and Smith 2007). Participants then completed an unrelated study as a filler task. For the risk manipulation, the participants read one of two possible descriptions of the product, stereo headphones, which were identical except one represented low financial risk (price= $34.99) and one represented greater financial risk (price= $199.99). Next, participants viewed one of two versions of a print advertisement for headphones containing a numeric claim (77% improvement in sound quality over competition). The only difference between the two stimuli was one version contained an asterisk and fine print source citation at the bottom of the advertisement, explaining the basis for the sound improvement claim (Research is based on proven scientific laboratory testing methods conducted by independently certified Listen Inc. and comprised of Sound Check electroacoustic test and system and a Brue & Kjaer head and torso simulator vs. the top 5 national brands), and the other version contained no source citation. For copies of stimuli used in all studies, see appendix. Participants reported attitudes and reactions to the advertisement and perceived deceptive intent measured on 7 point Likert scales, as well as open-ended qualitative responses regarding why they perceived the advertisement to be deceptive or not. Participants who were unable to correctly recall whether a source was present or absent for the advertising claim were removed from further analysis.

Results and Discussion

Analysis using t-tests indicates a significant main effect of price point on perceived financial risk, confirming the manipulation of risk was successful. Participants who viewed the advertisement for the less expensive headphones, \(M_{\text{low risk}} = 3.70(\text{SD}=1.374)\), felt that the product was less financially risky than those who viewed the more expensive version, \(M_{\text{high risk}} = 5.15(\text{SD}=1.549)\), \(t(100)= -5.027, p<0.001\).

An analysis of variance found no support found for Hypothesis 1a, 1b or 2. For H1a and H1b, a median split was used to categorize participants in analysis. For participants higher in skepticism, there was no significant difference in perceived deception based the absence, \(M=3.05(\text{SD}=1.465)\), or presence, \(M= 2.90(\text{SD}=1.242)\), of a source, \(t(49)= -.388, p=.700\). Individuals low in numeracy did not perceive more deception when a source is absent, \(M= 3.22(\text{SD}=1.340)\), than when present, \(M= 3.40(\text{SD}=1.155)\), \(t(50)=.511, p=.612\). Additionally, participants’ perception of deception levels did not differ significantly based on the absence or presence of a source \((F(1, 98)= 0.404, p= 0.527)\). However, a significant interaction \((F(1, 98)= 5.760, p=0.018)\) supports Hypothesis 3, indicating that perceived deception levels did differ significantly depending on the combined effect of source presence and risk level. The means of perceived deception level for each condition are shown in Table 1.

<table>
<thead>
<tr>
<th>Source Absent</th>
<th>Source Present</th>
<th>Change</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk ($34.99)</td>
<td>2.79 (1.503)</td>
<td>3.28 (1.373)</td>
<td>(\Delta= 0.49)</td>
<td>-1.312</td>
</tr>
<tr>
<td>High Risk ($199.99)</td>
<td>3.65 (1.348)</td>
<td>2.81 (1.297)</td>
<td>(\Delta= -0.84)</td>
<td>2.050</td>
</tr>
</tbody>
</table>

There is a significant difference in perceived deception levels for participants in the high risk manipulation conditions, \(t(98)=2.050, p=0.043\). The absence (vs. presence) of a source citation led to higher levels of perceived deception, as shown in Figure 1. Low risk participants viewing an
advertisement containing a source citation perceived more deception than those viewing an advertisement without a source, but further analysis showed the difference was not significant, \( t(98) = -1.312, p = 0.192 \).

Figure 1. Perceived Deception Levels for Financial Risk Study

Individual difference measures of advertising skepticism and numeracy did not appear to influence participants’ perceived deception levels, \( p > 0.05 \). However, the results show consumers use the presence or absence of source citation information differently depending on the perceived level of financial risk. Participants in high risk conditions may be engaging in System 2 processing, expecting and needing more information to make a better judgment. The additional information enables them to correctly evaluate the advertisement as less deceptive when the source citation is present. Analysis of the qualitative responses supports this interpretation. A participant in the high risk, source present condition who found the advertisement not deceptive reported: “They explained how they compiled the data on the bottom of the ad. I have no reason not to believe what they say.” Meanwhile, a participant in the high risk, source absent condition stated: “It gave a percent for how well it works. But we dont (sic) know where that number is coming from or if it is accurate.” However, it appears that in low financial risk situations the additional information provided by a source citation is not used to determine deception perceptions, as no significant difference exists when the source citation is present versus absent. It appears participants are using System 1 processing and did not need or desire extra information to process and judge the advertisement. Therefore, the source citation did not influence deception perceptions in low risk conditions.

**STUDY 2: PHYSICAL RISK**

To ensure the findings were not limited to a financial risk context, Study 2 sought to replicate findings from Study 1 in a different risk domain, physical risk. The methodology and measures were the same as described in Study 1.

**Method**

In exchange for partial course credit, 118 undergraduate business students at the University of Oregon (69.3 percent male) participated in a lab study conducted in spring and summer quarters of 2011 in the HEDCO Lab at the Business Research Institute, Lundquist College of Business (mean age = 21.27 years, SD = 2.83). The study used a 2 (physical risk: high, low) by 2 (source citation: present, absent)
factor between subjects experimental design with randomly assigned conditions. Participants saw one of two print advertisements for a new vaccine strip, both of which contained a numeric claim (77% of people prefer over injections). The only difference between versions was that one contained no source citation for the preference claim and the other version contained an asterisk and fine print source citation at the bottom of the advertisement, explaining the basis for the claim (Based on a survey reporting actual patient levels of pain, anxiety and efficacy when compared to traditional vaccine injections. Research conducted by the Food & Drug Administration in October 2010 with 1,016 respondents). For the risk manipulation, the participants read a brief description of the product, either representing low physical risk (safe alternative to injections) or one representing greater physical risk (number of potential risks when compared to injections).

Results and Discussion

An analysis of perceived physical risk using t-tests confirmed the risk manipulation was successful. Participants who viewed the advertisement for the vaccine with no side effects felt the product was less physically risky, $M_{\text{low risk}}=3.28(\text{SD}=1.394)$, compared to those who viewed the product with adverse side effects, $M_{\text{high risk}}=4.86(\text{SD}=1.271)$, $t(117)=4.524$, $p<0.001$. Hypotheses 1a and 1b were tested using ANOVA and no support was found. There was no difference in perceived deception whether the source was present, $M=3.39(\text{SD}=1.695)$, or absent, $M=3.32(\text{SD}=1.464)$, for participants higher in skepticism, $t(59)=0.165$, $p=0.870$. Also, for participants low in numeracy, there was no significant difference in perceived deception based on whether the source was present, $M=3.47(\text{SD}=1.665)$, versus absent, $M=3.96(\text{SD}=1.428)$, $t(55)=-1.175$, $p=0.245$.

Study 2 results also did not support Hypothesis 2. An ANOVA test showed no significant difference between participants’ perception of deception levels based on the absence or presence of a source ($F(1,114)=0.094$, $p=0.760$). Marginal support was found for Hypothesis 3 (source citation in high risk situations will lead participants to perceive less deception) using an ANOVA test, ($F(1,114)=3.168$, $p=0.078$), replicating findings from Study 1. Table 2 shows the mean perceived deception level for each condition.

<table>
<thead>
<tr>
<th>Source Absent</th>
<th>Source Present</th>
<th>Change</th>
<th>$t$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(No side effects)</td>
<td>3.30 (1.295)</td>
<td>3.75 (1.567)</td>
<td>$\Delta=0.45$</td>
<td>-0.958</td>
</tr>
<tr>
<td><strong>High Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Significant side effects)</td>
<td>4.14 (1.604)</td>
<td>3.51 (1.737)</td>
<td>$\Delta=-0.63$</td>
<td>1.631</td>
</tr>
</tbody>
</table>

As in Study 1, the results seem to be driven by differences in the high risk condition. The absence of a source citation for participants led to higher perceived deception levels compared to source presence (marginally significant, $t(114)=1.631$, $p=0.106$). Low risk participants who viewed an advertisement containing a source citation perceive more deception than those without a source, but the difference was not significant, $t(114)=-0.958$, $p=0.340$. Results are shown in Figure 2.
These results demonstrate that people use presence or absence of source citation information differently depending on the level of physical risk. Overall, source citation information significantly influences the deception perceptions in high physical risk contexts, as expected with System 2 processing. A source citation provides reassurance that the advertisement is not deceptive and its absence indicates some form of deception, as illustrated by participants’ qualitative comments. A participant in the high risk, source absent condition said: “Where are the statistics from? Who are the 77% of people that want these strips. I've never heard of them. It just sounds like b.s. There is no proof or evidence.” A high risk, source citation present participant stated: “There was very little room for deception- the ad stated a fact and followed it up with its source (FDA).” However, low physical risk participants do not seem to use the additional information provided by a source citation in forming deception perceptions. When using System 1 processing, additional information is not expected nor desired.

It appears from analyzing qualitative responses that many participants were unduly concerned with the claim reference to injections, possibly affecting perceived deception levels. In the advertisement, the vaccine strips were not being handled in a sanitary fashion with gloves, a fact noted more frequently in high risk conditions. It is also interesting that again individual difference variables seemed to have little influence on deception perceptions.

**STUDY 3: RISK PROCESSING STYLES**

Study 3 looks specifically at processing styles used in the presence or absence of a source citation. The measures were the same as described in Studies 1 and 2, but the individual difference measures of skepticism and numeracy were not used here due to lack of findings in prior studies.

**Method**

112 undergraduate business students at the University of Oregon (57.1% male) participated in a lab study conducted in spring and summer quarters of 2011 in the HEDCO Lab at the Business Research Institute, Lundquist College of Business (mean age = 21.45 years; SD = 2.36) in exchange for partial course credit. The study used a 2 (cognitive load: high, low) by 2 (source citation: present, absent) between subjects experimental design with conditions randomly assigned. Participants were first presented with a seemingly separate task designed to compare the memory skills of students at the
University of Oregon to other students. Participants were asked to remember a number (39 or 8382154) and told they would report it after completing other tasks but they should do their best to remember the number. Next, participants viewed one of two versions of a print advertisement for headphones containing a numeric claim (77% improvement in sound quality over competition). The two stimuli are the same as used in Study 1. However, in this study a high financial risk level (price= $199.99) is the same across all conditions. Thirteen participants were removed due to missed manipulation checks.

**Results and Discussion**

An analysis of variance found no support Hypothesis 2. There was no significant difference in perceived deception levels based on whether a source citation was present or absent, \(F(1, 96)= 1.508, p=.222\). There was not a significant interaction \(F(1,96)= 1.023, p= 0.314\), indicating no support for Hypothesis 3. The means of perceived deception level for each condition are shown in Table 3.

<table>
<thead>
<tr>
<th>Risk Processing Style</th>
<th>Source Absent</th>
<th>Source Present</th>
<th>Change</th>
<th>(t)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cognitive Load (39)</td>
<td>3.45 (1.298)</td>
<td>2.87 (1.217)</td>
<td>Δ= -.58</td>
<td>2.692</td>
<td>.107</td>
</tr>
<tr>
<td>High Cognitive Load (8382154)</td>
<td>3.19 (1.297)</td>
<td>3.14 (1.320)</td>
<td>Δ= -.05</td>
<td>.022</td>
<td>.883</td>
</tr>
</tbody>
</table>

Further analysis indicates that there is a marginally significant difference in the low cognitive load conditions based on the presence or absence of a source citation, as shown in Figure 3. Participants with a low cognitive load manipulation viewing an advertisement without a source citation found it more deceptive than those viewing an advertisement with a source citation present.

![Figure 3. Perceived Deception Levels for Risk Processing Style](image)

Study 3 also examined the reaction times across conditions to add further support to the idea that participants with a high cognitive load are relying on System 1 processing while those experiencing a low cognitive load are able to use System 2 processing. The mean reaction times for each condition are shown in Table 4.
Table 4. Reaction Times* Means and Standard Deviations, Study 3- Risk Processing Style.

<table>
<thead>
<tr>
<th>Source Absent</th>
<th>Source Present</th>
<th>Change (Δ)</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Absent</td>
<td>Source Present</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Cognitive Load</td>
<td>11.37 (5.905)</td>
<td>16.90 (6.702)</td>
<td>Δ= 5.53</td>
<td>8.839</td>
</tr>
</tbody>
</table>

*(Reaction times are measured in milliseconds)

Although there is not a significant interaction, additional analysis shows a main effect for cognitive load (F(1,95)=4.059, p=0.047), providing support for Hypothesis 4. Participants experiencing a low cognitive load spent more time deciding on their perceived level of deception.

When the reaction time data is viewed in conjunction with the perceived deception level data, an interesting story emerges. Participants experiencing a high cognitive load spend less time deciding how deceptive a print advertisement is, indicating a reliance on System 1 processing. They also appear not to use the presence or absence of a source citation in aiding their determination as shown by the means (M_{present}= 3.19 and M_{absent}= 3.14). Participants in the low cognitive load condition spend more time viewing the advertisement and use the source citation information correctly, indicating the use of System 2 processing. In real contexts, advertisements are often sandwiched between articles and other advertisements and the act of viewing them rarely requires or achieves full attention of the consumer. The level of distraction naturally present in print advertisement exposure suggests that people typically rely on System 1 processing when evaluating the perceived deceptive intent of an advertisement.

**GENERAL DISCUSSION**

The findings from these studies are meaningful for consumers, regulators, practitioners and print media publishers. The research extends theoretical understanding of consumer deception perception by demonstrating the presence or absence of a source citation is a cue consumers use differently depending on perceived level and type of risk. The findings provide optimism regarding consumers’ abilities to protect themselves from deception and also lead to new and interesting future research questions.

As these studies demonstrate, the manner in which consumers process the presence or absence of a source citation in a print advertisement is not straightforward. In financial and physical risk domains, participants’ deception perceptions are moderated by perceived risk. Those who perceive high levels of risk engage in System 2 processing, slowing down to thoroughly process all information presented in order to make an optimal judgment. The presence of the source citation adds credibility to the claim and reduces perceived deceptive intent. It indicates that people make more accurate judgments when they slow down and process all the information presented which is good news for consumers. However, when people perceive low levels of financial and physical risk, they use System 1 processing and make a “gut” inference regarding the deceptive intent of the print advertisement. The presence of a source citation in a low risk context is additional information that does not influence deception perceptions, indicating consumers are not willing to exert the extra mental energy required to make the best possible decisions in low risk situations. This reliance on System 1 processing can also occur in a high risk situation if the mind is cognitively taxed, such as when trying to remember a long number.

The implications of these studies are also important for consumer advocates, magazine publishers and advertisers. All advertising claims require substantiation, but presently advertisers are not legally required to print source citation within the body of the advertisement. However, some publishers are beginning to mandate the practice, which requires extra work, changes to formatting, influences the type of claims advertisers use in print advertisements and may cause inconsistencies across advertising campaigns. These well-intentioned publishing house policies aim to help consumers distinguish between
deceptive and non-deceptive claims. However, it is clear that the information does not always lead to more accurate judgments. Even though all advertisers in these magazines are required to comply with the new regulations, advertisers of high risk products differentially benefit. Consumers only use the additional information to guide deception perceptions when the product is high risk, they are not mentally distracted and System 2 processing is engaged. Publishers should search for alternative methods to aid consumers in better judgments about deceptive intent in print advertisements for all products, not just those perceived as high risk.

The results of individual difference measures are also interesting to consider. Regardless of citation presence or absence, higher skepticism does not appear to automatically increase deception perceptions. Lower numeracy skill also does not seem to have a notable impact on deception perceptions even when the advertisement contains a statistical claim. These findings suggest that deception perceptions do not vary based on individual differences and are more directly related to the advertisement, product context and perceived risk level.

As these studies show, how consumers use source citations to make judgments of a print advertisement claim is not as straightforward as may have been assumed. For consumers, different processing systems lead to differential assessments of deception perceptions. For practitioners, in some cases, such as print advertisements for high risk products, citing the source for a claim is beneficial and aids consumers in making a better judgment. However, for low risk products consumers are not using the information to influence decisions regarding deceptive intent. Magazine publishers should take these findings of differential impacts into account when creating and reviewing internal policies.

LIMITATIONS AND FUTURE DIRECTIONS

There are limitations to these studies, some of which are addressed in planned future studies. One limitation is the use of different products and contexts across two of the studies, making it challenging to directly compare the results of each study. It is necessary to explore each domain separately, as indicated by differential findings but it appears that results of the physical and financial risk studies are similar.

The placement and structure of the source citations could also be viewed as a limitation. Although many advertisements use an asterisk following the claim with the source information in fine print at the bottom, the possibility exists that the fine print itself is what is perceived as deceptive, rather than the actual citation information. Advertisers are able to (and often do) cite source information within the text of the claim. It would be interesting to determine whether the font and placement or the actual information is what is driving perceptions. We intend to conduct future research exploring how different presentation styles and type of information presented affects an individual’s deception perception.

Future studies will also extend beyond deception perceptions to include constructs such as trust, credibility and honesty. It is important to understand how consumers use source citations to assess deception, it is equally important to understand how source citations influence perceptions of trust and credibility. The presence of a source citation should reduce deception perceptions and increase trust in the product or brand but given the complex relationships observed in the studies in this paper, more research is needed to discover if this is in fact true.

Also, these studies only address print advertisements. The context was primarily chosen due to recent policy changes by major magazine publishing houses. However, a different context such as online or television (verbal) could result in different findings. It is important to conduct research across other mediums to determine if presentation medium mediates the use of source information.

Although the research agenda is still in progress, it does extend the current theoretical understanding of consumer deception perception. It is not a simple story where the presence or absence of
a source citation is what consumers use to guide deception perceptions. If it were that simple, magazine publishers would be absolutely correct in requiring advertisers to put the support information behind a claim statistic in an advertisement. However, given that consumers use that information differently based on the perceived risk level indicates the publishers’ requirement could be detrimental to marketers and does not always aid consumers in making an optimal decision. Our studies indicate more research is needed to fully understand the mechanisms consumers use to process and judge product claims in print advertisements and also how those mechanisms differ across different risk domains.
REFERENCES


FACING FORWARD: A CROSS-CULTURAL EXAMINATION OF THE INFLUENCE OF FACE ON DECISION-MAKING

Karthik Easwar & Robert E. Burnkrant, The Ohio State University
Dahai Dong & Xiaobing Song, Dalian University of Technology

Models of consumer decision-making have primarily been developed using western participants, and therefore, have shown relatively poor explanatory power in explaining the consumption behavior of Asian consumers. In this paper, we identify a context specific, forward-looking construct that captures the face related pressures that underlie specific consumer decisions, and examine how it influences behavior in both China and the US. By developing new theory, this research argues for the importance of face as a unique construct, provides new insights into the structure of face related concerns, identifies the role it plays in decision-making across cultures, and provides an explanation for these differences in cross-cultural model fit.

Today, China’s retail sales are over $1.6 trillion and its middle class is over 150 million people and estimated to more than double by 2016 (Cavender and Rein 2009; Cui and Song 2009; Gerth 2010), highlighting the need to understand the Chinese consumer. Perhaps in response to the economic strength and potential of the Chinese economy, a few researchers have examined how well our current decision-making models explain Chinese consumer behavior (Bagozzi et al 2000; Lee and Green 1991). Work examining the Theory of Reasoned Action (TRA), one of the most researched models, has found cultural variation in the influence of this model’s different factors as well as the amount of variance it explains. While there are a few studies addressing this topic, there is a general dearth of studies examining cultural differences in decision-making, a gap in the literature that this paper fills. We also go beyond the traditional focus on collectivism to examine a different cultural construct, as called for by Oyserman (2006).

In this research, we demonstrate that face is a crucial determinant of Chinese consumer behavior that explains behavior over and above the standard components of the TRA model. To do so, we identify a new, context specific construct, face pressure, and examine its behavioral influence in both China and the US. Over four studies, we find that this construct, because of its societal importance in China, is structurally more complex than in the US. In China, it is a unique and independent predictor of behavior intention, over and above the influence of attitudes and norms, perhaps explaining a part of the gap in the explanatory power of the standard TRA model for Asian consumer behavior.

THE THEORY OF REASONED ACTION

The Theory of Reasoned Action (TRA) is one of the more comprehensive and thoroughly researched models employed to explain consumers’ decisions (e.g. condom use [Albarracin et al 2001, blood donation [Burnkrant and Page 1988], hearing aid use [Burnkrant et al 1991]). Over the years, it has also been used to examine consumer behaviors related to automobiles, banking, coupons, and soft drinks (Lutz 1977; Ryan and Bonfield 1980; Shimp and Kavas 1984; Sheppard et al 1988).

This model holds that behavior intention is a function of two, and only two, variables – an attitude toward the behavior and subjective norms (Ajzen and Fishbein 1980). Attitude toward the behavior (Att_b) is defined as the general feeling of favorableness toward performing the considered behavior and is determined by the salient beliefs about the consequences of the behavior and the relative evaluation of these consequences. Subjective norm (SN) is a person’s belief that most of his/her important others think s/he should (or should not) perform the considered behavior. In other words, when considering a behavior, people consider whether important others think they should engage in the behavior, and use this information in their decision-making model.
Ajzen and Fishbein argue that any variable external to their model only influences intention and behavior through its effect on either attitudes or subjective norm (Ajzen and Fishbein 1980). In other words, many variables may influence behavior intentions; however, none of these variables have a direct impact on intention. Rather, their influence is indirect and mediated by either attitudes, subjective norm, or both. Research examining the validity of this claim has been mixed; some research has found possible missing components, while others have supported the TRA model (Bagozzi et al. 1992; Fitzmaurice 2005). On the whole, however, the TRA has proven to be reliable; in fact, a meta-analysis of the research using the TRA model found that, while there were varied and sometimes inappropriate uses of the model, it remained extremely robust in predicting behavior intentions (Sheppard et al. 1988).

Even with the multitude of TRA related papers, an issue that has received minimal attention is the validity of the TRA model in other cultures. As noted by Bagozzi et al. (2000), there is a “conspicuous lack of discussion on cross-cultural applications in basic attitude texts and in cross-cultural psychology books.” Only a few studies have attempted to examine the TRA model across culture (e.g., Bagozzi et al. 2000; Cheng and Ng 2006; Lee and Green 1991). On the whole, the TRA model is extremely robust to cultural variation; however, in Asia unlike most western studies, subjective norm was a strong predictor of intention and behavior, due to the collectivist nature of Asian society. Furthermore, the TRA model explained more variance for US consumers than it did for Chinese consumers (Bagozzi et al. 2000; Lee and Green 1991).

In this research, we build on these findings by examining the decision-making models of Chinese and American participants. We propose that, while the TRA model is well specified for western consumers, because of their collectivist nature, Chinese consumers use a more complicated decision-making model. For these consumers an additional concept, face, is required to account for the influence of others on an individual’s behavior. In the next section, we define face and develop theory that explains the role of face in the decision-making model.

FACE

Face is a literal translation of the Chinese words lien and mien-tzu, giving us no real insight into its idiomatic nuance (Hu 1944). Face, a concept that is woven into the fabric of Chinese society, refers to the confidence that society has in a person’s moral character (lien) and how society perceives a person’s prestige gained through success and ostentation (mien-tzu). It is inherent in the daily lives of Chinese influencing the way they interact with each other and affecting the reactions of others with whom they interact (Chang and Holt 1994; White et al. 2004). It has been described as “abstract and intangible…yet the most delicate standard by which Chinese social intercourse is regulated” (Lin 1935, p. 201 as quoted in Chen 1990, p.131), “the respectability and/or deference which a person can claim for himself from others” (Ho 1976, p. 883) and as a self image that is maintained, enhanced, or lost as a result of interpersonal interactions or actions (Brown and Levinson 1987; Goffman 1967). In essence, face is a consensus judgment of others regarding one’s character and position in society based on the person’s accomplishments and manifest actions as well as the actions, position and accomplishments of others close to the individual (e.g., parents, associates, Ho 1976). Rather than being an individual characteristic, it is the consensus judgment of others, and it resides in the individual as that person’s perception of what others think of him or her.

One important aspect of face can be traced to the collectivistic nature of Chinese society. Much has been done to understand the general concept of collectivism and how it relates to the self-concept (Schwarz 2006). For example, Brockner and Chen (1996) found that those with more communal self-construals behaved very differently than those with individualistic self-construals when faced with threats to the self. It has also been shown that emotional appeals that were either ego or other focused were evaluated very differently for individualistic cultures and collectivist cultures (Aaker and Williams 1998).
In Confucian cultures, an individual is not a solitary entity, but is rather defined by his relations: son, brother, father, coworker (Ting-Toomey 1988; Ting-Toomey and Kurogi 1998; Gao 1998).

The collectivist mentality also extends to the concept of face as self-face in China can stand for face of a large group (Hwang 2006). Not only does one’s action affect one’s own face, it also reflects on closely related others, such as parents, family or friends (Bao, Zhu and Su 2003; Li and Su 2007). A lack of deference to a person can be taken as a deprivation of not just that person’s face, but also the face of their relatives or superiors (Ho 1976). Therefore, when deciding how to act, one must not only consider the repercussions of these actions on their own face but also on the face of others in their social circles (Gao 1998; Joy 2001).

While both subjective norms and face are social phenomena, they capture very different social influences. SN accounts for the normative pressure to conform to the expectations of others. These norms affect behavior by inducing a public conformity but need not lead to an internalization of these norms that alters self-perception or esteem. Face, though it is granted by others, is held by the individual; therefore, a person’s face will affect self-esteem, self-perception, pride and dignity (Ho 1976). For example, A person who wears shabby clothes will lose face, which in turn, will lower self-esteem and pride.

Ho notes that “the opposite of gaining face…is distinguishable from what is called a ‘loss’ of face” (Ho 1976, p.871). Park and Guan (2009) also differentiate positive and negative face threats and show that the different threats lead to different behaviors. In other words, the Chinese differentiate between gaining and avoiding the loss of face and can behave differently depending on which dimension of face is currently salient. As Ho eloquently puts it, “Thus, face is not lost merely on account of a failure to gain it, but face must be protected from being lost precisely because of the demoralizing repercussions which otherwise follow” (p. 871).

Face may be lost by behavioral performance in important social situations that does not meet expectations of acceptability and it may be gained through accomplishments or superior performance. However, judgments can only be made about behaviors when there are expectations for behavior and when that behavior currently is or will become public knowledge. In order to compare actions to expectations, it is crucial that the behaviors being evaluated are of a social and involving nature (Ting-Toomey 1988; Gao 1998). The purchase of a pillow for a private bedroom is not likely to be evaluated, while the purchase of a throw pillow in the living room very likely will. Since Chinese consumers are attuned to when their actions will be evaluated, face exerts an influence on conspicuous consumption by creating an expectation of what one should consume based on the social situation or the social standing of the individual. This influence is what we call face pressure.

**FACE PRESSURE**

We define face pressure as the forward-looking influence of the repercussions of our actions on our face and the face of others important to us. We believe that people have beliefs about the impact of various actions on their face, and these beliefs apply a pressure on the decision-making process. Face pressure is an expectation of the positive or negative social evaluation that comes from engaging in a specific behavior, and it provides a pressure to act in a manner that will increase or avoid losing face. Therefore, like the attitudinal component of the TRA model, it forecasts the face-related consequences of an action. This definition differs from previous face related measures because we are not attempting to measure face sensitivity or concerns in general but rather its influence on specific intentions and behavior.

Since the measure employed in this research is different from the general measures that have been previously studied, development of this construct was conducted in a manner more akin to an attitude than an individual difference variable, and the scale development procedure that was employed was also consistent with scale development procedures in the attitude domain (e.g., Ajzen and Fishbein 1977). We
began by conducting exploratory research to verify that the prospect of both gaining and losing face would be salient, which individuals or groups (e.g., friends, parents, etc.) would be salient, and what consumption decisions would be likely be influenced by face pressure.

Results from focus groups and exploratory surveys led to conceptualizing face pressure in a manner that expands the scope of face-related measurement in three critical ways. First, previous conceptualizations only focus on one’s personal face. Face pressure accounts for this personal effect while also capturing the collectivist nature of face discussed above. Second, until now, face has been treated as a uni-dimensional construct. Face pressure allows for differential behavioral effects of gaining and avoiding the loss of face, a distinction that is crucial to understanding face.

Third, previous attempts to measure the impact of face in consumer research literature have all treated face-related constructs as general variables not specific to any particular context or behavior (e.g., Leung and Chan 2003, Bao et al. 2003, Li and Su 2007, Chan et al. 2009). However, it has been argued (e.g. Fishbein and Ajzen 1975, Ajzen and Fishbein 1977) that if our objective is to predict behavior with psychological variables there is a need for high correspondence in terms of specificity between predictor and criterion variables. Face pressure differs from previous measures because it is context specific and not an individual difference measure, opening up two avenues of research; first, it enables us to more accurately capture the pressure that face exerts on behavior and also enables the examination the conditions under which face pressure correlates with behavior intention (face pressure measures: My wearing a new suit / dress to the party will cause me to gain face, My wearing a new suit / dress to the party will cause my parents to gain face, My wearing a new suit / dress to the party will cause those who are important to me to gain face, My wearing a new suit / dress to the party will keep me from losing face, My wearing a new suit / dress to the party will keep my parents from losing face, My wearing a new suit / dress to the party will keep those who are important to me from losing face; as items are measured using seven point agree disagree scales).

Based on the literature and exploratory research, it is clear that face is most relevant to public and involving situations – situations in which it is reasonable to believe that people will be judged. Therefore, to study its influence on decision-making and any cross-cultural differences in this influence, we focus on scenarios that are public and involving.

In studies 1 and 2, we demonstrate the construct, convergent, discriminant and predictive validity of the face pressure construct, using different contexts and related influence measures. Study 3 expands the scope of face pressure’s predictive power, finding that, for Chinese consumers, face pressure highly correlates with behavior intention, even when controlling for the two primary components in the TRA model. Finally, study 4 finds that, for American consumers, the correlation of face pressure with intention can be mediated by subjective norm. These results identify a missing variable in the TRA model in eastern cultures and suggest that the Chinese decision-making model needs to be updated to include face. The results from this research aim to bolster and link two areas of research that suffer from minimal exploration. Specifically, we empirically study the concept of face and, using the literature on cross-cultural decision-making models, provide evidence of its importance in eastern consumer decision-making.

**STUDY 1**

As discussed earlier, gaining face is not the opposite of losing face. These two aspects of face can lead to very different behavior intentions depending on whether the focus is on gaining or avoiding the loss of face, as found by Park and Guan (2009). Therefore, we hypothesize that the face pressure construct will display a two-dimensional structure that distinguishes between pressure to gain face and pressure to avoid losing face (see figure 1).
These distinctions between the prospect of gaining face on the one hand and the threat of losing face on the other suggest that a structural model of Chinese consumers’ face related pressures may be represented most accurately with two dimensions. There is considerable support in the attitude and cognitive psychology literature for models that separate positive and negative pressures to act. For example, Bagozzi (1996) and Burnkrant and Page (1988) showed that the cognitive dimensions underlying attitude to donate blood are represented as two separate dimensions – one comprised of positive beliefs and the other negative beliefs. The bivariate model of evaluative space (Cacioppo and Berntson 1994; Cacioppo, Gardner and Berntson 1999) is based on a review of evidence of the separation of positive and negative dimensions on a variety of issues as well as physiological evidence that supports the separability and uniqueness of positive and negative reactions to stimuli. It provides consistent support for our prediction that gaining face and the avoidance of the loss of face will be better represented as a two dimensional structure than as a single evaluative dimension as has been the case in prior face related research.

We provide support for our two-dimensional hypothesis as well as the convergent and discriminant validity of the face pressure construct by including in our model a previously described face measure (i.e., Li and Su’s face consumption scale, 2007) and a measure of a different but related construct, status (i.e., Eastman et al.’s status scale 1997). Finally, we support the predictive validity of our two factor scale and show that, as proposed, our two factor face pressure scale is a stronger correlate of behavioral intention than the more traditional, broader measures of face sensitivity.

Method

A survey, in English, was distributed to a sample of English speaking undergraduate Chinese students from a Chinese university (n = 362). In this survey, the key items being measured were face pressure and behavior intention. Participants were also asked to complete the Li and Su (2007) face consumption scale which consisted of nine statements and Eastman et al.’s (1997) status scale that consisted of five statements. Subjects were given a questionnaire in a classroom setting in which they were exposed to the wedding scenario (Your cousin’s wedding is coming up very soon. To celebrate, it
was decided that there would be a large wedding party to which your parents would be invited, as well as yourself and other close family members and friends. This party is fast approaching and you are considering what you will wear to this occasion. It is a formal affair and therefore, you decide on a suit / dress.) and then asked to respond to three behavioral intention questions regarding subjects’ intention to wear and buy a new suit / dress for the occasion (e.g. “I will wear a new suit / dress to the party” and “How likely are you to buy a new suit / dress specifically with this party in mind?”). These items were followed by items measuring face pressure, status and face consumption. The presentation order of these constructs was randomized and all items measuring each construct were randomized as well. All questions were measured using seven-point agree-disagree or likely-unlikely scales.

Results and Discussion

Cognitive Structure. The first objective of our research was to support the hypothesis of a two dimensional face pressure construct. A baseline, one-dimensional model, where all six items loaded onto one construct, was tested and found to provide a relatively weak fit (Chi Sq = 340.88, df = 9, RMSEA = .32, NFI = .76, NNFI = .60, CFI = .76, GFI = .76). The results of a CFA found that a two-dimensional model that separates gaining face from avoiding loss of face improves fit (Chi Sq = 144.60, df = 8, RMSEA = .217, NFI = .90, NNFI = .82, CFI = .90, GFI = .88). Though the RMSEA value of even this improved model is not great, this is to be expected in models which so few degrees of freedom (Kenny et al.; Little). One suggestion to solve this is to expand the model to include other parameters, which is done below. A Chi square goodness-of-fit test was used to determine whether the improvement in fit provided by the two dimensional model is significant, and as expected the two dimensional model is found to provide a better fit (Chi sq = 196.28, df = 1, p < .001) to the data than the baseline model. These results, show that for Chinese consumers, face pressure has a two-dimensional structure in which gaining face and avoid loss of face are distinct but correlated constructs (r = .65).

Convergent and Discriminant Validity. To provide evidence of convergent and discriminant validity, consistent with Anderson and Gerbing (1988), we examined a structural model (see figure 2) that included a two-dimensional face pressure construct, Li and Su’s (2007) face consumption scale and Eastman et al’s (1997) status scale in addition to behavior intention (Chi Sq=713.66, df=220, RMSEA=.079, NFI=.88, NNFI=.90, CFI=.92, GFI=.85). Both dimensions of face pressure correlate significantly with Li and Su’s measure of face consumption (r_FPGain = .32, r_FPAvoidLoss = .19). This, in conjunction with the previously noted stronger correlation between face pressure’s dimensions, provides support for convergent validity. Furthermore, the correlations between face pressure and face consumption are higher than correlations with a related but different measure (i.e., Eastman et al’s status scale, r_FPGain = .19, r_FPAvoidLoss = .01) and this provides support for the scale’s discriminant validity.
Behavior Intention. Our final goal was to provide empirical support for our claim that face pressure will exhibit higher correlation with behavioral intentions than previous face related measures. As expected, both gaining face and avoiding loss of face are significant predictors of behavioral intention. (gaining face = .48, avoiding loss = .23). In the case of this behavior, the prospect of gaining face is a stronger predictor than losing face, p < .05, and the fact that the correlations differ in magnitude provides further support for the difference between the two dimensions. Our model also shows that both face pressure dimensions are stronger predictors of intention than either face consumption or status (Face consumption = .13, Status = .07), which are not statistically different from zero, p > .2. The fact that our dimensions are stronger predictors of intention than face consumption provides support for the belief that a specific measure of face pressure that captures the collectivistic and multi-dimensional nature of face would be a stronger predictor of behavioral intentions than the more traditional trait based measures of face.
STUDY 2

In study 2, we follow the same procedure used in study 1 except that we use a different vignette. The new scenario describes a much less formal situation than the wedding scenario – a shopping trip with a group of close friends in which the friends buy a new pair of jeans. The social nature of the situation and the friends’ behavior will make face pressure relevant. Again, we measure two face sensitivity constructs (Li and Su’s face consumption (2007) and Chan et al.’s (2009) concern for face, CFF) in addition to face pressure. We also measure a related, but non-face measure, susceptibility to interpersonal influence (SUCSEP) (Bearden et al 1989). We also expect to replicate our previous results on predictive validity; namely, that our two factor face pressure scale is a stronger predictor of behavior intention than the other measures of face sensitivity.

Method

We distributed our survey to a sample of Chinese students (n = 277) that spoke English as a second language. The questionnaire began with the scenario similar to earlier studies. In this case, the scenario was “you are going shopping with your friends at the mall. All of you are a close group of friends and enjoy spending time together. As you are shopping, everyone notices that there is a new trend in jeans that seems to be this year’s fashion. All your friends decide to get a pair of these new, trendy jeans.” Following exposure to the scenario, participants were asked for their intention to buy the jeans. We then measured face pressure, face consumption, concern for face, and SUCSEP. The order of all constructs and all items within a construct were randomized, similar to study 1. The face pressure measure was altered to match the context (e.g. My buying the new, trendy jeans will cause me to gain face).

Results and Discussion

Cognitive Structure. The results of a CFA found that a two-dimensional model that separates gaining face from avoiding loss of face fits well (Chi Sq = 87.84, df = 8, RMSEA = .190, NFI = .92, NNFI = .86, CFI = .92, GFI = .90), providing support for our hypothesis that a two-factor model provides better fit than a uni-dimensional model tested (Chi Sq = 120.01, df = 9, RMSEA = .21, NFI = .88, NNFI = .82, CFI = .89, GFI = .87). A Chi square goodness-of-fit test was shows that the two dimensional model provides a better fit (Chi sq=32.17, df=1, p<.001) than the single factor baseline model, replicating the results of study 1.

Validity. To examine convergent and discriminant validity, consistent with Anderson and Gerbing (1988), we examined a structural model (see figure 2) that included face pressure, face consumption, CFF and SUSCEP as predictors of behavioral intention (Chi Sq = 1337.50, df = 579, RMSEA = .069, NFI = .86, NNFI = .91, CFI = .92, GFI = .86). The face pressure construct (both dimensions) correlates significantly with face consumption (r_FPGain = .54, r_FPAvoidLoss = .45) and the moderate levels of the correlations between face consumption and each of the face pressure dimensions also support the discriminant validity of face pressure. With CFF, we find lower levels of correlation (r_FPGain = .20, r_FPAvoidLoss = .12). Given that CFF assesses individual differences in concern for face rather than the face related pressure facing the consumer in a specific consumption situation, it is not surprising to see these lower correlations. We also see only moderate correlation with SUSCEP (r_FPGain = .42, r_FPAvoidLoss = .35), which lends more support to the belief that face pressure is different from interpersonal influence but still a social phenomenon.

Behavior Intentions. Again, as in study 1, we see that face pressure predicts behavioral intention, (FPGain = .52, FPAvoidloss=.33) and gaining face exerts more pressure on behavior intentions than avoiding the loss of face. The results also show, as in the prior study, that the positive dimension of the face pressure construct is a stronger predictor of behavioral intention than either of the previously
published face related scales employed in this research (Face Consumption = .37, CFF = .20, SUCSEP = .25).

**STUDY 3**

In study 3, having already established the validity of the face pressure construct, we expand the scope of the problem to examine the role of face pressure in the TRA model for Chinese consumers, one that has not yet been clearly studied. As discussed earlier, face is a different social phenomenon than SN. While SN is largely external to the self, face is very personal and intertwined with the individual. Because of its role in the fabric of society, Chinese will also be extremely familiar with and sensitive of face and face-related appraisals and rely on these appraisals for their own view of themselves. Because of these ideas, we expect their decision-making models to differentiate between subjective norm and face pressure.

Because of their collectivist nature, Asians are more likely to consider the influence of their actions on others and others’ face. They are also more attuned to social appraisal making it easier for them to make predictions of the appraisals they will experience after engaging in any behavior (Chang and Holt 1994). Asians are also more likely to internalize group beliefs into their own attitude (Smith and Mackie 2007). In fact, face has been shown to correlate with personal attitude in the TRA model supporting this tendency to internalize (Jin and Kang 2010; Lee 1990). Because of the importance of face and the propensity to internalize the face related assessments of others, we expect that face pressure will be a significant predictor of behavior intention. Results from study 3, support both our expectations. Specifically, we find that face pressure is a distinct construct and that it exerts an influence on decision-making over and above subjective norm.

**Method**

For this study, we developed a third, and new consumption scenario, while still ensuring that it would lead to a decision that was both public and involving, allowing for face related concerns (The holiday season, including Christmas and Chinese New Year, is rapidly approaching. You have decided to host a party for your manager and a few co-workers to celebrate the holidays. You value and enjoy your job, and enjoy the people with whom you work, especially your manager. With the dinner fast approaching, you must decide at which restaurant to make the reservation. You are considering a normal family friendly restaurant or a more upscale and elegant restaurant). We distributed our survey to a sample of Chinese students (n=245) that spoke English as a second language. The questionnaire began with the scenario as in the earlier studies. Following exposure to the scenario, participants were asked for their intention to plan the party at the elegant restaurant. After this, face pressure, SN, and Att_b were all measured. The face pressure measure was altered to match the context (e.g. My making the reservation at the upscale and elegant restaurant will cause me to gain face). The presentation of each construct was randomized and the items comprising each component were also randomized. All questions were measured using seven-point agree/disagree or likely/unlikely items.

**Results and Discussion**

**Behavior Intentions.** Having previously examined the structure of face pressure, we focus on reporting the TRA model results. The standard TRA model only provides a marginal fit (Chi Sq = 399.68, df = 131, RMSEA = .092, NFI = .74, NNFI = .74, CFI = .77, GFI = .85), especially when compared to a model that includes face pressure as a third component (Chi Sq = 354.25, df = 129, RMSEA = .058, NFI = .91, NNFI = .92, CFI = .95, GFI = .86; see figure 3), providing strong evidence that face pressure should be measured when examining consumption decisions in China. Results from this model lead to three interesting conclusions. First, we see that, in this case, the main reason people select the elegant restaurant is not because of their personal attitude toward the restaurant but because of the social pressure (r_attitude = -.67). Even more interesting, the negative correlation between gaining face and intention
indicates that the decision to select the upscale restaurant was to avoid the loss of face not to gain it ($r_{\text{avoid loss}} = .35, r_{\text{gain}} = -.47$). In studies 1 and 2, we saw that wearing a new suit and buying the trendy jeans were driven by the opportunity to gain face. In this case, making the right holiday party plans were driven by avoiding the loss of face. Finally, we see that both dimensions of face pressure correlate significantly with attitude, lending evidence to our belief that Chinese consumers are internalizing expected face reactions and that face pressure is a construct that has both norm and attitudinal aspects.

**Figure 3 – TRA Models**

Study 3 – TRA Model in China

Study 4 – TRA Model in America

**STUDY 4**

The previous studies examined face pressure, its structure, and behavioral importance for Chinese consumers. We found that face pressure is a critical explanatory variable in consumption decisions, highlighting the importance of this concept and need for its inclusion in marketing decision-making models and literature. So far, we have demonstrated that face pressure adds unique variance to the prediction of behavior intention. To further our understanding of face pressure’s influence, study 4 explores the role of face in western consumer decision-making.
The face consumption literature positions face as a uniquely eastern concept and has solely focused on its role in Asian consumer decision-making. Americans, however, are familiar and cognizant of ideas like saving and losing face. All consumers take into account appraisals of others in order to evaluate how their consumption conveys their identity and determine the appropriateness of the consumption behavior (Bearden 1989; Miniard and Cohen 1983). However, these appraisals do not receive the same importance in American culture as in Asia. Asian consumers are highly attuned to social cues and have been brought up with the concept of face, making them experts of face-related concerns. Comparatively, Americans are novices and should be less capable of making differentiations in this area (Alba and Hutchinson 1987). Face is also not as ubiquitous in American society, making it less important to be highly skilled in understanding face-related concerns. Therefore, we do not expect them to differentiate between gaining and avoiding the loss of face.

Similarly Americans should also be less capable of differentiating between face pressure and subjective norm. Over and above this, Americans are less likely to internalize group beliefs (Chang and Holt 1994). Therefore, they should view face pressure as an external influence; one that will influence behavior, but in a manner identical to norms. Therefore, we expect that face pressure will be a significant predictor of intention by itself, but will have no value over and above the influence of subjective norm. We also expect that, because of the lack of internalization of face-related concerns, face pressure will show little correlation with attitude for American consumers.

Method

For study 4, the survey was identical to the one given to Chinese consumers in study 3. However, this time it was given to a group of American participants (n = 234).

Results and Discussion

Cognitive Structure. Unlike in China, the two-dimensional model that separates gaining face from avoiding loss of face (r = .95, se = .06, indistinguishable from 1) shows no better fit (Chi Sq = 39.66, df = 8, RMSEA = .130, NFI = .97, NNFI = .95, CFI = .97, GFI = .95) than a uni-dimensional model (Chi Sq = 41.86, df = 9, RMSEA = .125, NFI = .96, NNFI = .95, CFI = .97, GFI = .94). A Chi square goodness-of-fit test confirms that the two dimensional model does not provide a better fit (Chi sq = 2.20, df = 1, p > .10). Therefore, consistent with our expectation, American participants did not differentiate between gaining and avoiding the loss of face, and therefore, consider face pressure a uni-dimensional construct.

Behavior Intention. Consistent with previous research, a standard TRA model provides a good fit (Chi Sq = 262.84, df = 132, RMSEA = .065, NFI = .96, NNFI = .97, CFI = .98, GFI = .89; see Figure 2) in America (better than in China). Adding face pressure as a predictor of intention provides no explanatory power (Chi Sq = 262.68, df = 131, RMSEA = .066, NFI = .96, NNFI = .97, CFI = .98, GFI = .89) with a path coefficient of -.01, that is statistically indistinguishable from 0. However, face pressure does improve fit when correlated with SN (see figure 3; Chi Sq = 240.69, df = 130, RMSEA = .066, NFI = .96, NNFI = .98, CFI = .98, GFI = .90). A Chi square goodness-of-fit test was shows that the this model provides improved fit over the standard TRA model (Chi sq = 21.99, df = 1, p < .001).

In this model, we see that unlike in China, where face pressure was significantly correlated with attitudes, in America this is not the case. This result is consistent with Fishbein and Ajzen’s position that any other variable proposed to have an effect on behavior will have that effect through one of the variables comprising the model. In this case, face pressure had an effect only through its effect on subjective norm. In fact, as expected, there was no correlation between face pressure and attitude (r = -.04, se = .07). In sum, these results indicate that, unlike China, where face pressure is a distinct construct that correlates with attitudes, norms and behavior, in America, face pressure is merely an indicator of SN and does nothing to explain behavior on its own.
GENERAL DISCUSSION

This research advances the literature on face by providing empirical insight into the importance of face. We developed a context specific, forward-looking construct, face pressure, which can be used to explain behavioral intentions while accounting for context effects, a critical aspect of face that has been ignored by previous face-related measures. Across four studies and two cultures, we discover that the role of face pressure in consumer decision-making is very different for Chinese and Americans. In China, face pressure has a two-dimensional structure (pressure to gain face and pressure to avoid losing face) and is a significantly better predictor of behavioral intentions than other, more general measures. Over and above this, we see that face pressure is a third component in the TRA model, and therefore, must be considered when using this model to study Chinese consumers. In America, because of the decreased societal focus on face, the influence of face pressure is mediated by subjective norm, which may explain why it has not been studied by a predominantly western research community (Shavitt et al 2006).

Interestingly, in study 3, we found negative correlations between attitudes and intention and positive face pressure and intention. It is important to note that this negative correlation does not indicate that gaining face is causing people to select a less elegant restaurant. The wording of the measures focuses on the impact that these measures will have on intention; therefore, a negative correlation indicates a low level of influence. Therefore, as stated earlier, the elegant restaurant was chosen, primarily because of the influence exerted on intention by norms and avoiding the loss of face.

Another interesting result stems from the differential influence of the positive and negative dimensions of face pressure. Specifically, in the wedding and shopping scenarios used in studies 1 and 2, we saw that gaining face was more highly correlated with behavior intention; however, in study 3, when choosing a restaurant for a holiday party, avoiding the loss of face dominated. This may be because, in the earlier studies, presumably, people have socially acceptable suits and jeans, so there was no risk of being socially unacceptable. However, picking the wrong restaurant is a blatant mistake and, therefore, more likely to risk face loss. Perhaps, if people were told that their old suit was ill-fitting, damaged or horribly out of style, it might cause the avoidance of face loss to be more highly correlated with intention. Identifying the when and why of these differential effects would shed even more light on the influence of face on behavior.

The scenarios that were selected for examination in this research were also public and involving. These attributes of the scenarios were intentionally selected to ensure that face would play a crucial role in the decision-making process. However, if and how face might affect private and less involving decisions is still a question open for exploration. For example, one might be very careful to buy name brands when giving a gift, in part due to the face pressure of the situation. It certainly seems possible that, if buying this same product for personal use, brand name might be less critical, and this is being driven by the reduced face pressure of the consumption context. Understanding the boundaries of face pressure on consumption decisions is worthy of further exploration.

Understanding the role of face in China has the potential impact marketing strategy for companies that are expanding into Asia. First, product managers must be aware of how face pressure influences decisions in their product category. If it is influential, as done with collectivism and race (Lau-Gesk 2003; Whittler and Spira 2002), promotional strategies can be devised to address face and ads can highlight the face-related value of a product. These results on the influence of face may also explain the extreme success of luxury products in Asia (KPMG 2007). The growing middle class in China has more dispensible income and the flood of luxury products may be allowing people to gain face through the ostentation of owning a Louis Vuitton hand bag or Ermenegildo Zegna suit.

To summarize, the current work has established that face is an influential construct in Asian decision-making. This work is the first to conceptualize face as a forward-looking, collectivistic and
multi-dimensional, context specific construct. We also provide some of the first rigorous evidence of the role of face pressure as a missing component in the TRA model. Over and above this, we explore differences in the influence of face pressure across cultures, expanding the work on the cross-cultural robustness of the TRA model and providing the first examination of the role of face in western culture. We extend theory on face, identify the need its influence in China, and conceptualize a construct that can address this need.
REFERENCES


TEMPORAL DISTANCE AND THE ENDOWMENT EFFECT

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ABSTRACT

The endowment effect occurs when owners assign more value to the products they own than do non-owners to the same products. Research on the endowment effect has identified factors that enhance or mitigate the effect. Interestingly these, endowment studies have primarily involved immediate transactions between sellers and buyers. However, despite various future consumption situations in our real lives, such as window shopping or buying a future house, limited endowment studies have considered the temporal effect on willingness to pay and willingness to accept. Specifically temporal distance may affect the endowment effect in important way. Studies 1 and 2 found that the endowment effect disappears as temporal distance from the transaction increases. As the cause of these findings, study 2 demonstrates that when the transaction is expected to occur in the near future, sellers focus on their products, while buyers focus on their money, which are consistent results with previous literature streams. These different cognitive perspectives induce price gaps between sellers and buyers and increase loss aversion. Also, study 2 extends the findings by considering future transactions and the underlying mechanism of the price shift: when events are in the distant future, sellers’ and buyers’ cognitive perspectives change, and the endowment effect is eliminated.

INTRODUCTION

“Parting with [cash] is just a more vivid sensation than abstract act of signing a pledge to pay sometime later in the future.” (Robert Frank, 2008)

This was Frank’s answer to the question, “Why do people spend more when using credit card instead of cash?” in the NPR’s morning edition talk. In fact, there have been many empirical findings which suggest the increased willingness to pay when using credit cards. Those findings include the consumer’s tendency to spend more money with credit cards when visiting department stores (Hirschman, 1979) or when paying tips at a restaurant (Feinberg, 1986). Frank’s answer implies two possible causes to this phenomenon: salience, and temporal delay between consumption and payment date. In other words, when consumers feel more distant to the transaction, the loss of money becomes less salient to the buyers. As an extension to Frank’s explanation about this phenomenon, this research will investigate how a psychological distance influences consumers’ willingness to pay and sellers’ willingness to accept.

The endowment effect is interpreted as resulting from loss aversion, meaning that owners give more value to their owned products than those who do not own them. For example, from the perspective of someone who possesses a product, the idea of losing it is perceived as a loss; however, if that individual does not possess the product, the idea of acquiring it is perceived as a gain.

Prior research on the endowment effect has identified factors, which enhance or mitigate the effect. Strahilevitz and Loewenstein (1998), for example, found a positive relationship between the duration of ownership and valuation; that is, the endowment effect is greater when people have owned the good for a long period of time because owners demand a higher price. Nayakankuppam and Misha (2005) find that differences between buyers and sellers in information processing may explain the endowment effect. The research shows that sellers attend more to the positive or value-increasing information of products, whereas buyers attend more to the negative or value-decreasing aspects of products. This discrepancy in information processing implies the underlying mechanism as to why sellers want a higher price and buyers want to buy a product at a lower price.
Interestingly, these various endowment effect studies have emphasized immediate transactions. They have asked why do owners irrationally consider an endowed object more positively or favorably even though they do not have specific product experience. In other words, even though people do not have enough time to obtain information about the endowed product, the fact of endowment leads owners to adopt a positive attitude or valuation toward such products (Huang, Wang, & Shi, 2009).

For this reason, the endowment effect has been mostly studied based on the design of immediate transactions between sellers and buyers. However, empirically speaking, customers face more complex decision-making situations than experimental markets, where researchers frequently consider immediate transactions. For instance, people go window-shopping for their future consumption, customers make travel plans for their upcoming summer or winter vacation, or look around at open houses for their future homes. Those situations are different from immediate transactions.

One question emerges as to whether these expected transactions influence buyers’ willingness to pay or sellers’ willingness to accept because customers’ behaviors are influenced by psychological distance from the event (Liberman & Trope, 1998). Physically speaking, people can only experience the present. Even though people cannot experience what is in the future, they can make a decision about a future event, such as transactions based on the past, images, memories, and their expectations. Thus, the underlying mechanism of expected transactions could be differentiated from immediate transactions because they are not judged based on their current experiences but rather on their memories, predictions, or images. In order to explain the influence of psychological distance on customers’ behavior, researchers draw on construal level theory (Liberman & Trope, 1998, Trope, Liberman, & Wakslak, 2007). According to construal level theory, individuals use concrete, low-level construals to represent “near” events, whereas they use abstract, high-level construal to represent “distant” events. (Liberman & Trope, 1998). The main purpose of this research is to examine how the temporal psychological distance of transactions influences customers’ evaluations of products by considering buyers’ willingness to pay and sellers’ willingness to accept.

This research will contribute to the literature and will provide managerial implications 1) by demonstrating how temporal psychological distance influences the perceived value of products; and 2) by exploring the underlying mechanism: changing cognitive perspective associated with increased psychological distance.

**LITERATURE REVIEW**

**The Endowment Effect**

Research on subjective valuation and choice has suggested that people tend to set a higher selling price for their owned products than what they would be willing to pay in order to obtain the same product as a buyer (e.g., Kahneman, Knetsch, & Thaler, 1990; Knetsch, 1989; Knetsch & Sinden, 1984; Thaler, 1980; Van Boven, Duning, & Loewenstein, 2000) This price discrepancy between buyers and sellers for the same product has been defined as the endowment effect (Thaler, 1980). According to prospect theory, the endowment effect occurs because of reference dependence and loss aversion (Kahneman & Tversky, 1979; Tversky & Kahneman, 1991).

Reference dependence refers to the notion that perceived value is different, based on people’s reference points. According to prospect theory, states below the reference point are negatively coded as losses, while states above the reference point are positively coded as gains. The reluctance to trade found in the endowment effect can be explained in terms of differential responses to these losses and gains predicted by loss aversion. (Kahneman & Tversky, 1979)

Loss aversion refers to the notion that losses have larger consequences than corresponding gains. Accordingly, the pain of giving up an endowed commodity will exceed the pleasure of gaining it. Thus,
this should be observed as a disparity between selling and buying prices for the same good (Bar-Hillel & Neter, 1996).

In support of the loss aversion explanation, Ariely et al. (2005) suggest two potential moderators of loss aversion: consumers’ emotional attachment to a product and different consumers’ cognitive perspectives. For example, a study of ownership history from Strahilevitz and Loewenstein (1998) suggest the important role of emotional attachment on the endowment effect. Their research demonstrates that when people have longer experience with an object, it increases the endowment effect by increasing the price that the sellers demand. In a recent experiment, which manipulated the duration of the time an object was possessed, had the selling price increased as a function of how long an object had been owned. Also, the study found that once owned, an item might increase in the value attached to attaining it; in other words, even when people physically lose an object, a psychological sense of ownership influences the value of the object. In terms of the influence of different cognitive perspectives, Van Boven, Duning, and Loewenstein (2000) indicate the importance of egocentric empathy gaps between owners and non-owners in the estimation of the value of products. Their experiments manipulated egocentric empathy gaps by asking about the other actor’s valuation of a commodity. The results show that owners overestimate the buyers’ valuations, and buyers underestimate the owners’ valuations. The research suggest how psychological cognitive perspective is important in the value perception.

As discussed previously, since Thaler (1980) extended loss aversion as an explanation of the endowment effect, various studies have suggested factors decreasing or increasing gaps between willingness to pay and willingness to accept. In order to demonstrate perceived value differences, endowment research has always been designed to study immediate transactions between sellers and buyers because of this interesting phenomenon. The act of endowment causes differential information processing and differential valuation for products between owners and non-owners, without enough time to experience the product. Only a limited number of studies have considered time-related issues on the endowment effect, such as the history of product possession (Strahilevitz, & Loewenstein 1998); however, that study was also conducted based on immediate transactions. The effect of the future on the endowment effect has not yet been answered. This research will extend the endowment study by manipulating different transaction times and will propose how temporal effects influence the endowment effect. The following question, then, is whether temporal distance will influence sellers’ willingness to accept and buyers’ willingness to pay. Ariely et al. (2005) note that a difference in cognitive perspective is the main reason as to why intentions behind exchanges would, indeed, moderate the endowment effect. I expect that the different transaction time will influence cognitive focus changes in that temporal distance affects people’s information processing (e.g., Benzion, Rappoport, & Yagil, 1989; Loewenstein, 1987), gain and loss frames (Soman, 1998, 2004), and different aspects of information (Liberman & Trope, 1998).

Study of Temporal Distance

In everyday life, people make purchasing decisions not only for events that will take place in the immediate future, but also in the distant future. The study of intertemporal discounting and temporal psychological distance shows how time significantly influences people’s perceived values, decisions, and behaviors. However, endowment research has not considered how price gaps are changed by psychological distance in expected transactions between sellers and buyers.

The research, intertemporal discounting and psychological distance, suggest how temporal distance significantly influences customers’ decision-making. For example, intertemporal discounting demonstrates that when there is an immediate and a delayed choice, people are willing to give less value to time-delayed choices because of the perception of time (Homic, 1984) and psychological distance to the outcome (Soman, 2005).
Among the various temporal distance studies, construal level theory suggests a concrete underlying mechanism of an information processing, supporting different customers’ decisions and behaviors; in particular, people use different construal levels of information based on psychological distance (Liberman & Trope, 1998).

Construal level theory (CLT) suggests that people construe information in different ways, based on psychological distance (Liberman & Trope, 1998). According to construal level theory (Trope, Liberman, & Wakslak, 2007), individuals use concrete, low-level construals to represent near events, whereas they use abstract, high-level construals to represent distant events. Low-level construals are relatively unstructured, contextualized representations that include subordinate and incidental features of events. Thus, low-level construals are rich in detail and consider the secondary features of events, such as peripheral or incidental aspects of events. High-level construals, on the contrary, represent the schematic and decontextualized features extracted from available information (Liberman & Trope, 1998). Thus, far distance events are more likely related to the abstract and primary features of events.

Another proposed feature of construal-level differences on consumers’ evaluations is that the temporal distance from the future leads to differences in the salience of pros and cons (Eyal, Liberman, Trope, & Walther, 2004). They demonstrate that the importance of cons depends on whether we acknowledge pros in the consideration; however, the importance of pros is not significantly influenced by the existence of cons. For example, if there are no pros to consider, the cons do not become important in our decision-making. Nevertheless, the pro aspect of events is still a significant factor in our decisions, even when there are some cons. This asymmetry in decision-making implies that pro considerations are superordinate to con considerations.

Liberman and Trope (1998) demonstrate how temporal construal theory is associated with the role of feasibility and desirability considerations in the choice of temporally near and far alternatives; feasibility refers to the ease or difficulty in reaching end states (Gollwitzer & Moskowitz, 1996), whereas desirability refers to action end states. The study shows that feasibility is weighted more than desirability when the event is expected in the near future because feasibility concerns the way in which to reach the end state (a low-level construal feature). On the contrary, as temporal distance increases, desirability concerns are weighted over the feasibility because desirability concerns provide the value of the action’s end state (a high-level construal feature). For example, Liberman and Trope (1998) assigned respondents into two different temporal conditions deciding their course assignments and asked them to choose one out of two types of class assignments: interesting/uninteresting (representing desirability), and difficult/easy (representing feasibility). In choosing a distant future course assignment, respondents were more likely to put weight on the desirable than the feasible options, while students weighted the interesting topic more than the desirable option in choosing a near future course assignment.

Construal Level Theory and Product Evaluation

Because construal levels are associated with the superordinate or subordinate aspects of objects or events, considerable product evaluation research has paid attention to the effect of construal levels in evaluation. Thomas, Chandran, and Trope (2006) applied the effect of desirability-feasibility in consumer choice and demonstrated that feasibility-related information is related to purchase intentions for proximal temporal distance, while desirability information increases the willingness to pay for future consumption. Also, Castano et al. (2008) show that the different levels of mental construal give different weight to cost- and benefit-related aspects in product evaluation. Specifically, they show that from a temporally distant perspective, consumers are more likely to consider product performance, whereas individuals are more concerned about learning costs associated with products than the performance of a product from a temporally proximal perspective.
Construal Level Theory and Perceived Value

The previous CLT literature has demonstrated that when consumers have higher mental construals, their willingness to pay increases, in that pros constitute a higher level of construal than cons, and higher-level construals pertain to the core benefits of a product rather than the costs associated with purchasing (Trope et al., 2007).

Pham, Hung, and Gorn (2011) employed mental construals in order to demonstrate the effect of relaxation on consumers’ decision-making. They proposed that relaxed and non-relaxed people mentally construe products in different ways; when relaxed people evaluate products, they assess them at a higher construal level compared to non-relaxed people, leading relaxed people to perceive objects at a higher value. They found the underlying mechanism from two streams of research: a broader and more contemplative form of thinking and construal level theory. Relaxation encourages people to use a higher level of mental construal, which leads people to evaluate objects in terms of their potential advantages, in that pros constitute a higher level of construal than cons (Eyal, Liberman, Trope, & Walther, 2004).

Bornemann and Homburg (2011) used CLT in order to demonstrate how product evaluation varies along with high and low price, under different psychological distances. They propose that psychological distance alters the weight consumers attach to the different roles of price: information as an indicator of quality or as an indicator of monetary sacrifice. The results show that when people have a future perspective, the quality perception is positive and significant, while there is no significant effect with the proximal perspective. In a similar vein, when participants have a proximal perspective, the sacrifice perceptions was negatively significant, while there is no significant effect with the future perspective. In other words, the perception of monetary sacrifice for a relatively high-priced product will be higher when the psychological distance is nearer than the far condition.

Temporal Effect on the Endowment Effect

As discussed beforehand, a broad range of behavior research has suggested how temporal distance from events influences cognitive processes, evaluation, and willingness to pay. When we take a look at the experimental process in temporal studies, we can find one interesting common finding. When a transaction is expected in the immediate future, consumers are more likely to think about loss, whereas gain becomes salient as temporal distance increases (e.g. Castano, 2008; Thomas, Chandran, and Trope 2006 ; or Bornemann and Homburg (2011) ). In particular, previous studies on the CLT stream of research have mainly focused, for instance, on how mental representation is related to feasibility versus desirability. However, interestingly the attributes of feasibility and desirability are related to different aspects of product evaluation or choice. For example, even in product evaluation or choice conditions, feasibility is more related to the cost of one’s behavior, and desirability is more associated with the product itself. These findings support the idea that temporal effect will change people’s cognitive focus; under the near future condition, money is salient to buyers, but it will shift to the product as time increases, whereas sellers’ willingness to accept will change from the product to money as time changes.

THEORETICAL FRAMEWORK

In this research, I will extend previous research of the endowment effect; in particular, the temporal construal level effect on the endowment effect will be discussed. Despite the unsolved empirical question of the price gap between sellers and buyer for future consumption, limited research has examined the effect of time on consumers’ willingness to pay and sellers’ willingness to accept. Because the temporal effect influences consumers’ information processing and different cognitive foci, we expect that the temporal effect will influence selling and buying prices. The goal of this research is to investigate the effect of time on the price gap between buyers and sellers by suggesting the underlying mechanism of the effect.
**Temporal Effect on Buyers’ Willingness to Pay**

Psychological distance encourages more abstract representations or construals of goal-relevant objects (desirability). When people perceive products at higher levels of abstraction, they perceive products as more valuable (Pham, Hung, & Gorn, 2011). Additionally, at higher levels of construal, potential courses of action tend to be evaluated in terms of potential advantages, whereas under lower levels of construal, potential disadvantages carry more weight (Eyal, Liberman, Trope, & Walther, 2004). According to Eyal et al. (2004), pros constitute a higher construal level than cons. They argue that this occurs because cons are subordinate to pros.

Thus, buyers in the near condition, who employ a low-level of construals to represent an exchange, would focus on disadvantages and the feasibility of a transaction (e.g., “Maybe this is the money I have to pay”); but in the far condition, they would employ a higher and more abstract construal level, focusing on the desirability and advantages of the transaction (e.g., “Maybe this is acquisition of the product”). In fact, Carmon and Ariely (2000) and Dhar and Wertenbroch (2000) show that in the immediate case, buyers and sellers focus on different aspects of the exchange because they both think about what they are foregoing. In the case of buyers, they focus on expenditures in the near condition.

Thus, the buyer’s price goes up when they start thinking about what they will gain and when they want to increase the probability that the transaction will occur; the reason the seller’s price goes down, when they think about a transaction abstractly, is that they want to increase the probability that the transaction will occur.

**Temporal Effect on Sellers’ Willingness to Accept**

Unfortunately, CLT research has been conducted based on the consumers’ perspective (e.g. Pham, Hung, & Gorn, 2011); Eyal, Liberman, Trope, & Walther, (2004); or Bornemann and Homburg (2011)). However, when we consider the sellers’ role and CLT, we can expect that sellers will think more about efforts to sell their products under the near future condition, while they will think more about the transaction gains in the far future. Thus, consistent with the buyers’ case, psychological distance encourages more abstract representations or construals of goal-relevant objects. At higher construal levels, potential courses of action tend to be evaluated in terms of potential advantages and desirable goals, whereas under lower construal levels, feasibility and potential disadvantages carry more weight because pros constitute a higher construal level than cons (Eyal, Liberman, Trope, & Walther, 2004).

Thus, sellers in the near condition who employ low construal levels to represent exchanges would focus on the disadvantages of a transaction, namely, giving up a product they own (Eyal et al., 2004; Carmon & Ariely, 2000); However, in the far condition, they will deploy abstract construals and will focus on the desirability and advantages of the transaction, such as the money that they will gain from the sale. The seller may assign a lower selling price to the product they own in the future because they are thinking about the benefits of the transaction, such as gaining money to use in other exchanges, and they want to make sure that the sale occurs. It is also possible that when people perceive expenditures at higher levels of abstraction, they should perceive money as more valuable (Pham, Hung, & Gorn, 2011). If they perceive money as more valuable, then they should sell an item for less.

In sum, psychological distance affects the level of abstraction or construal. Near distance leads to concrete construals, while far distance leads to abstract construals. The different construal levels will let sellers and buyers perceive a distinct value of the product. This happens because loss will be more salient when people have low construals, while gain is more salient under a high level of mental construal (see figure 1). For sellers, therefore, an owned product will be more salient, whereas expenditures will become salient when they have low-level mental identification. These differences in perspective induce a price disparity. However, the willingness to accept will decrease because the sellers’ cognitive perspective will move from the product to money; in contrast, willingness to pay will increase because buyers will give
more weight to the products when their thoughts about the transaction are expected to be in reference to the far future. Thus, our specific hypotheses are as follows;

H1: As temporal psychological distance increases, the price difference between sellers and buyers will decrease.

H1a: When a transaction is temporally distant, buyers will be willing to pay a higher price than when a transaction is temporally close.

H1b: When a transaction is temporally distant, sellers will be willing to accept a lower price than when a transaction is temporally close.

As discussed, loss and gain frames will make sellers attend to the product in the near transaction condition so that they will think more about the product-related attributes than money-related information, while sellers will think more about the money in the future transaction condition. On the other hand, for buyers, money will be more salient under the near transaction condition so that they will think more about the money-related information, while product-related thoughts will increase under the far transaction condition. Also the different cognitive focus will mediate the temporal effect on price changes.

H2: Temporal distance will affect the salience of thoughts about product or money.

H2a: When a transaction is temporally distant, cash will be more salient in sellers’ thoughts than the product. On the other hand, when a transaction is temporally close, thoughts about the product will be more salient than thoughts about cash to sellers.

H2b: When a transaction is temporally distant, thoughts about the product will be more salient than thoughts about cash to buyers. On the other hand, when a transaction is temporally close, thoughts about cash will be more salient than thoughts about the product to buyers.

H2c: Changes in salience will mediate the effect of transaction time on price.

**EMPIRICAL FINDINGS - STUDY 1**

**Materials and Procedure**

We test H1 about the effects of temporal distance on buyers’ and sellers’ willingness to pay and accept in study 1. We conducted a survey with customers in an online panel. We randomly assigned participants into the seller or buyer roles by indicating that we were interested in investigating customers’ and sellers’ evaluations of new products: a pen and a mug-cup set.

We also randomly assigned participants to temporally near and far conditions (a month later), resulting in a 2 (sellers vs. buyers) x 2 (near vs. far) x product mixed factorial design, with the last factor within-participants. After respondents agreed to participate in this research, they were asked to describe the role of a seller and a buyer in order to remind them of their roles. After they described their roles, the respondents found brief information about a pen with a picture and features of the pen. Every participant suggested either a selling or buying price for the pen. After they answered questions about the pen, they found a description about a mug-cup set with a picture of the set. Questions similar to the pen followed, asking about the price and their attitudes. After the evaluation, we collected data about basic demographic information, such as age and gender of the participants. For the analysis, we subjected the buying and selling prices to a repeated-measure ANOVA.
Results/Discussion

We first examined how the temporal distance affected participants’ responses. Among 128 completed responses, 18 participants were excluded. Six respondents could not correctly answer whether their role was a seller or a buyer, and 12 respondents were excluded because their suggested prices were 3 SDs or more away from the mean (Ruan, Chen, Kerre, & Wets, 2005). Finally, we used the remaining 110 responses for the analysis (M_age = 36.16 years, 41.8% male).

Consistent with H1, we obtained significant main and interaction effects for both the pen and the mugs. To examine these issues, we subjected price for the pen and the mug-cup pair to a repeated-measure ANOVA. In the price analysis, the distribution of prices was skewed (non-linear), which deviated from the ANOVA assumption. Thus, we log-transformed price. The 2 (role) X 2 (time) subjects ANOVA on price revealed a significant main effect for role (Price : F(1, 106)= 8.963, p=.003, and a significant two-way interaction effect between role and temporal distance (Price : F(1, 106) = 12.211, p=.001). As temporal distance increased, buyers’ willingness to pay increased (Price : t = 2.85 p=.007) and sellers’ willingness to accept decreased (Price : t=.264 p=.011). A simple effect analysis showed that there was a significant price difference between sellers and buyers under the near transaction condition (M_penseller = 6.17 vs M_penbuyer = 3.49), F(1, 44 ) =11.201, p=.002, M_mugseller 10.95 vs M_mugbuyer = 7.29), F(1,44 )=8.839, p=.005, whereas when the transaction was expected to happen in the future, there was no price difference between sellers and buyers (M_penseller = 4.74 vs M_penbuyers 5.08, F(1, 62) = .437, P=.511, M_mugseller=8.37 vs M_mugbuyers =8.87, F(1, 62) = .001, P=.991). These results are consistent with H1. There was no order effect between the two groups who evaluated the pen and mugs in that order and the group who evaluated the mugs and pen in that order (pen : t>.272 and mugs t>.26).

Figure 1. Price difference between buyers and sellers for mugs

![Graph showing price difference between buyers and sellers for mugs](image)

DV: Price of mugs
Study 1 provides support for our consistency hypotheses, H1, H1a, and H1b. Specifically, the results of the online survey show that when the transaction is expected in the future, customers’ willingness to pay increases, whereas sellers’ willingness to accept decreases resulting in the price disparity disappeared as the temporal distance to the transaction increased. These phenomena were found in both the evaluation of the pen and in the mugs set. Changes in buyers’ willingness to pay and sellers’ willingness to accept were influenced by the transaction time.

As construal level theory suggests, the cons and feasibility of a transaction will be salient when the transaction is expected in the near future, while the pros and desirability will be more salient when the transaction is expected in the far future. Thus, I expect that different transaction times make money salient in the near transaction condition and products salient in the far transaction condition to buyers, while for sellers, money becomes salient as time increases. The following laboratory experiments manipulated the temporal differences and roles, and investigated consumers’ thoughts about transactions so that I could delve deeper into the underlying phenomenon of the findings in study 1.

**STUDY 2**

Our second study was designed to replicate study 1, in which the endowment effect decreased by increasing temporal distance in transactions. I also study the underlying mechanism and predicted that as temporal distance increases, buyers’ willingness to pay will increase because they focus more on thoughts about the gain (product) than thoughts about the loss (money) they experience (H2a), whereas buyers’ willingness to accept will decrease because the salience of thoughts about loss (money) will increase rather than the gain (products) (H2b). Finally, I investigate whether these changes in salience mediate the effect of transaction time on price (H2c).

**Procedure**

A total of 122 undergraduate marketing students at a university in the Midwest participated in this study outside of class time. They earned partial fulfillment of course credit for an introductory marketing class. In the experiment, subjects were randomly assigned to the seller or buyer role and to two different situations involving near and distant transactions, resulting in a 2 (buyers vs. sellers) x 2 (near distance vs. far distance) between-subjects design.
The experiments were conducted via a paper-and-pencil survey. As the participants sat down, they found a pen that they used throughout the study. Participants were told that the research was part of a new product development study. At the beginning of the study, respondents were told that they were going to participate in role playing game because I was interested in how sellers and buyers have different perspectives in selling and buying situations. The administrator paired participants in order to assign a seller and a buyer role. After giving respondents the instructions, they were randomly assigned to the buyer or seller roles by a coin toss. One student in the pair tossed a coin and if tails came up, the individual who tossed the coin was assigned to be a buyer, whereas if heads came up, he/she was assigned to be a seller. Temporal distance was manipulated by describing two different transaction situations: whether the transaction would be conducted today or in a month from today. Respondents were asked what price they would pay or what price they would accept (depending on their role). In order to present a newly developed product, I used a pen produced by an Asian manufacturer. After they suggested their selling and buying price, they were also asked to list their thoughts about the transaction. Following the thought listing, participants were asked to go back to their thoughts and to indicate whether each thought was related to the product or money. After I asked about their attitudes toward the pen and demographic information, they were debriefed.

Results/Discussion

Of the 122 participants, eight respondents could not correctly identify when the transaction was going to occur (3) or what their role was (5). Moreover, two of the respondents were excluded because their suggested prices were 3 times or more SDs away from the mean, such as $20,000 or $700. Thus, I eliminated 10 participants and had 112 useable questionnaires.

For the analysis, an ANOVA was used to identify the difference in willingness to pay and accept among the different groups and conditions. The 2 (role) X 2 (time) between-subjects ANOVA on price revealed a significant main effect for role (F(1, 108)= 14.517, p=.001) and a significant two-way interaction effect between role and temporal distance (F(1, 108) =6.682, p=.011). The price gap was significant in the present condition and was not significant in the future condition. (M_{seller} = 1.63 vs M_{buyers} = .901), F( 1 ,54 ) 21.564, p = .001) (M_{seller} = 1.3196 vs M_{buyers} = 1.3536, F(1,53)=.713  p=.402). As temporal distance increased, buyers’ willingness to pay increased (t=-3.001, <.004) and sellers’ willingness to accept decreased (t=1.872, <.067). These results are consistent with H1, H1a, and H1b.

Figure 3. Price differences between sellers and buyers

Dependent Variable: price (dollar)
I analyzed the participants’ thought listings to see how temporal distance (near or far) and role (buyer or seller) affected salience of product and money related thoughts. For the analysis, I have considered types and order of thoughts. The query theory suggests that preferences are influenced by memory encoding, thus, the first query receives more processing and is more influential for individuals’ decisions (Johnson, Häubl, & Keinan, 2006). Thus, salience differences were analyzed using the Standardized Median Rank Difference (SMRD) between money and the pen. The SMRD is defined as 2(MRP-MRM)/n, where MRP = the median rank of the product thought type in a participant’s sequence of thoughts, MRM = the median rank of the money thought type in a participant’s sequence of thoughts, and n= the total number of thoughts in the respondent’s sequence (Johnson et al., 2006). The SMRD results will show the median of their thoughts between product and money. This SMRD analysis is based on the order of thoughts, and I put the weights in order to reflect the preferences between the pen and money. An analysis yielded the variable, “thought type,” which approached 1 if the products were more salient than money, whereas if the value approached -1, money was more salient than the product.

Figure 4. The salience differences between sellers and buyers under near and far transaction situations

A 2 (role) X 2 (time) between-subjects ANOVA on thought type revealed two significant effects: a main effect of role (F1, 108) = 4.073, p = .046) and a two-way interaction between role and time (F (1, 108) = 35.467, p =.001). In other words, the main effect shows that when sellers and buyers make price decisions, the salience of the product or money is different, based on the role in the transaction. The two-way interaction occurred because as temporal distance from the transaction increased, money became salient to the sellers, while the product became salient to the buyers. Also in the temporally near condition, the product was more salient to sellers, while money was more salient to buyers (M sellerpen=0.5310 vs M buyermoney = -0.5874, F91,42.013), p=.001 ). On the other hand, under the distant transaction condition, money was more salient to sellers, but the product was more salient to buyers (M sellermoney -0.2395 vs M buyerproduct = .3335, F(1,53)=6.626, p =.013). These results are consistent with H2, H2a, and H2b.
Mediator

To test whether the SMRD mediated the effect of time on price, I separated the analysis based on different roles: sellers and buyers. In both analyses, I used the bootstrapping method. The bootstrapping analysis was conducted based on 5,000 bootstrap samples. In terms of the buyers’ side, the bootstrap estimates indicated that the total effect of time on price was significant (B = 0.4525, t = 3.0110, p < .0039) when the SMRD was included in the model. Furthermore, the indirect effect through the SMRD was significant, with a point estimate of .2421 and a 95% confidence interval of .0470 to .5243. This pattern of results indicates complementary mediation (Zhao, Lynch, & Chen, 2010). Regarding the sellers’ case, I found that the mean indirect effect from the bootstrap analysis was negative and significant (a x b = -.15, z = -1.9797, p < .0477), with a 95% confidence interval, excluding zero (-.3560 to -.0150). In the indirect path, a unit increase in temporal distance increased the SMRD by a = .7705 units; b = .2034, so by holding constant time distance, a unit increase in the SMRD increased liking by .2034 units on a -1 to 1 scale. The direct effect c (.2615) was marginally significant (B = -.2615, t = -1.8722, p = .0667). This pattern of results indicates competitive mediation (Zhao, Lynch, & Chen, 2010). In sum, these findings suggest that the SMRD mediated the effect of time on price.

Table 1 Proposed mediation model for the influence of time on price through salience of product and money.

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Note. bootstrapping based on 5000

Discussion

These results both replicate and extend the findings of study 1. Like study 1, study 2 demonstrated that the endowment effect disappeared when the transaction was expected in the future. Further, Study 2 provides evidence for the underlying mechanism of this effect. We found the loss (money) was more salient than the gain (pen) to buyers under the near transaction condition, while the gain (pen) was more salient than the loss (money) in the future transaction condition. Consistent with buyers, loss (product) was more salient than gain (money) to sellers under the near transaction condition, while the gain (money) was more salient than the loss (product) in the future transaction condition. The shift of the gain and loss perspectives influences buyers’ willingness to pay and sellers’ willingness to accept.

FUTURE DIRECTION/CONCLUSION

The research will contribute to the endowment literature. All endowment studies have focused on immediate transactions. However, empirically there are many types of situations; we go window-shopping to make future purchases, or we make plans to buy a future house. Also, people have different psychological distances with respect to products, even in immediate transactions. For example, people buy products for themselves, but for others, too. These psychological distances may influence customers’ willingness to pay. However, there is no study suggesting how psychological distance influences people's
willingness to pay and accept. This study will suggest clues to demonstrate the underlying mechanism between the endowment effect and psychological distance by examining the effects of temporal distance and the effect of salience to the endowment effect.

As the managerial implication, changes in the cognitive perspectives of buyers under different temporal distances suggest ways to decrease price gaps to marketing managers. For example, managers will reap benefits by emphasizing the abstract and main features of products to their window-shoppers. Also, this research can be applied in online marketing, which has temporal distance until customers obtain their ordered products, or pre-released products, such as CDs or movies.

For the future research, this research could expand on these findings by directly manipulating construal level. I expected the construal level difference by manipulating the time; however, studies 1 and 2 did not actually measure the construal level differences. Thus, there can be the temporal effect on our results. For example, the temporal effect could increase the uncertainty of the transaction, or it could influence the involvement of the experiments. Thus, the future could show the effect by directly manipulating the construal level to investigate the pure effect of construal level on cognitive focus changes and willingness to accept and pay.
REFERENCES


A NEUROBIOLOGICAL INVESTIGATION OF VISUAL AND VERBAL PROCESSING

Meng-Hsien (Jenny) Lin & Kelly Moore, Iowa State University

ABSTRACT

This study is an extension of previous studies on individual differences in style of processing (SOP) to examine the different emotional responses elicited between these individuals using the neuroscience method, event-related potential (ERP). The authors find larger Lateral Positive Potential (LPP) response in affective picture stimuli versus neutral picture stimuli. They also showed that this effect can be manipulated when individuals were asked to make an affective judgment (pleasant vs. unpleasant) versus a non-affective judgment (“how many people in the picture?”), and found that LPP was larger in the former condition. The authors further show that visual-oriented individuals elicit larger LPP response in all conditions compared to verbal-oriented individuals. In conclusion, this study provides neuroscience evidence showing that people process pictures differently depending on 1) the task (affective vs. non-affective judgment); and 2) the individual differences in SOP. Finally, this study opens the door to a new methodological approach, ERP, to validate the SOP scale.

INTRODUCTION

Advances in neuroscience methods offer a tremendous opportunity for marketing researchers to end our over-reliance on self-report measures, thereby improving the validity of our measures. Further, these neuroscientific tools allow us to study phenomenon that may be difficult to examine through traditional methods. Automatic processing is an example of a concept that can be better explored through EEG since individuals are not aware of it, and would not be able to self-report their level of automatic processing.

In this study, we will utilize EEG for both of these purposes: 1) to examine affective picture processing (and whether controlled or automatic processing is utilized), and 2) to assess the construct validity of the Style of Processing (SOP) scale. The study seeks to understand what brain wave components are associated with differences that vary in terms of their valence and arousal potential. These brain wave components will be compared to the SOP self-report scale (Childers, Houston, & Heckler, 1985). The SOP scale assesses whether individuals differ in terms of their preference for information provided in a verbal versus visual form. We will also examine the construct validity of the SOP scale.

There are numerous potential benefits of this study. First and foremost, we hope to strengthen our understanding of what degree advertisements containing pictures will be processed for their affective content. Further, we wish to understand the manner in which individuals process affective pictures, which will provide guidance on how to construct marketing messages to best meet the needs of a firm’s target market.

LITERATURE REVIEW

Style of Processing

Childers et al. (1985, p. 130) defined Style of Processing as “a preference and propensity to engage in a verbal and/or visual modality of processing.” The original scale contained 22 self-report items, half of which pertained to verbal processing and half visual processing. Subsequently, Heckler, Childers, & Houston (1993) revised the scale down to 20 items (still half visual and half verbal) and changed the response format from true/false to a 5-point agree/disagree likert scale. See Appendix 1 for a complete list of the items in the scale. These studies also evaluated the reliability, discriminant and criterion validity of the SOP measure.
The SOP scale has enjoyed widespread interdisciplinary use. A search of the Web of Science© database identified 129 articles that cited recent use of the scale. Fields utilizing the scale include marketing, information systems, management, psychology, cognitive neuroscience, psychiatry, educational psychology, sports psychology, mass communications and statistics.

Ong & Milech (2004) provided additional evidence of the scale’s reliability and validity. They compared the SOP scale to another visual-verbal cognitive style measure known as the Cognitive Styles Analysis scale (Riding & Calvey, 1981). They indicated concerns about the low reliability of the Cognitive Styles Analysis measure. On the other hand, they re-affirmed the reliability (internal consistency and test-retest) of the SOP scale. Still, Ong & Milech (2004) noted there is limited support for the validity of the SOP scale and future research is needed.

We predict that individuals who differ in their style of processing (visual/verbal) are more likely to have their preferred modality of information accessible (chronic accessibility; Higgins, 1996), pay more attention to this information, and to weigh it more heavily when it comes from their preferred modality as they form judgments and decisions. Chronic accessibility of information closely maps to the concept of automatic vs. reflective processing. Automatic processing occurs when a person who prefers the visual/verbal modality chronically processes information in that modality. Fazio (2001) defines automatic processing as a less effortful process that is not consciously controlled but rather reactive to the presence of a triggering stimulus.

**ERP/EEG & Late Positive Potential (LPP)**

Electronencephalogram (EEG) is a biometric measure where electrodes are placed on the scalp to measure brain wave activity. Event Related Potentials (ERP’s) are averaged EEG voltage changes elicited by brain activities in response to a specific perception or cognitive event (Luck, 2005). EEG provides a neurobiological measure that can indicate changes in brain activity with great temporal sensitivity. This methodology is especially useful in that it does not interrupt cognitive processes as a person views a picture, and can therefore assess the degree of automatic versus reflective processing instead of treating it as a dichotomy (Lieberman, 2000).

ERP research frequently distinguishes between “early” and “late” processing (Cacioppo, Tassinary, & Berntson, 2007). Early processes occur in the first 100-200 ms, whereas late processing occurs between 300-1000 ms after presentation. The effect termed “late positive potential” (LPP; Cacioppo, Crites, Gardner, & Berntson, 1994) is an ERP component that reflects information processing operations. Hence, variations in the amplitude of the LPP reflect variations in the engagement of these information processing operations (Cacioppo, Crites, Gardner, & Berntson, 1994).

Cunningham, Espinet, DeYoung, & Zelazo (2005) found earlier processes are more likely to be activated automatically, whereas later processes are more likely to be controlled processes. In Cunningham et al. (2005), participants made good vs. bad (evaluative) and abstract vs. concrete (non-evaluative) judgments and then rated socially relevant concepts (such as “murder” and “welfare”) for goodness and badness. Results found a lateralized\(^2\) LPP effect, indicating both verbal and visual stimuli evoke a “later” process that can interact with emotion.

The current study will focus on later processing effects. Studies have found the LPP is elicited when there is evaluative inconsistency between attitudes and target valence (Childers & Jiang, 2008). In other words, LPP’s occur when a participant views a negative stimulus in the context of positive stimuli or vice versa. A LPP will be larger when a stronger negative stimulus is presented as opposed to a mildly negative stimulus (Cacioppo et al., 1994). LPPs are typically larger for negative stimuli in a positive

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\(^2\) Lateralized means the LPP has higher amplitude and shorter latency.
context than positive stimuli in a negative context, indicating a possible negativity bias (Ito, Cacioppo, & Lang, 1998a; Ito, Larsen, Smith, & Cacioppo, 1998b). Behaviorally this equates to an individual’s reduced ability to engage in elaborative processes when shown inconsistent ads with lower recall (Houston, Childers, & Heckler, 1987).

The enhanced LPP effect for arousing pictures was investigated in Hajcak, Moser, & Simons (2006). These studies noted many studies have consistently found that both pleasant and unpleasant pictures elicit a larger LPP than neutral pictures (Cuthbert, Schupp, Bradley, Birbaumer, & Lang, 2000; Hajcak et al., 2006; Schupp, Markus, Weike, & Hamm, 2003), and their study was no exception. Hajcak et al. (2006) found the LPP was enhanced after presentation of both pleasant and unpleasant pictures, compared with neutral pictures. However, they did not find a difference in the magnitude of the LPP between pleasant and unpleasant pictures.

In our study, emotional evaluations of pictures (pleasant and unpleasant pictures) are made based on affective or non-affective dimensions. Affective judgments included pleasant or unpleasant, whereas non-affective judgments were how many individuals were in the picture (one or two or more). In summary, we expect a shorter reaction time for visual individuals making category judgments than verbal individuals. Verbal individuals have more resources involved in making evaluative judgments for pictures. We also expect a larger LPP in visual individuals compared to verbal individuals.

**METHOD**

**Participants**

A total of 49 undergraduates enrolled in courses in the college of business participated in this study for extra credit. Individuals were randomly selected from the screened pool of approximately 1,000 undergraduates using the individual differences scale for SOP. The 20-item scale was summed and the top quartile was considered the visual-oriented sample population and the bottom quartile was categorized as the verbal-oriented sample population. Twenty-two students were recruited for the visual-oriented individuals and 27 students recruited for the verbal-oriented individuals.

**Stimulus Materials**

We followed the stimulus materials reported in Hajcak et al. (2006). In brief, 120 pictures were selected from the International Affective Pictures System (IAPS; Lang, Bradley, & Cuthbert, 1999). Among these pictures, 40 depicted neutral scenes (e.g. household objects, leaves, trees), 40 represented pleasant scenes (e.g. smiling families, sporting events, nudes) and 40 depicted unpleasant scenes (e.g. threat, mutilation scenes). According to Hajcak et al. (2006), the categories were significantly different on valence ratings and emotional pictures (pleasant and unpleasant) were reliably higher on arousing ratings. The pleasant and unpleasant pictures were chosen so that each category had equal number of 2 or more persons. Pictures were displayed on 23 inch computer monitors in color.

**Procedure**

The pictures were arranged into 3 blocks of stimuli. The first block contained all 120 pictures and were shown on the screen for 1000ms with a 1500ms intertrial interval (ITI). The participants were instructed to view the pictures naturally. In the second and third blocks, only the arousing (pleasant and unpleasant) pictures were shown. The pictures were presented for 1000 ms and a 1000 ms response time was allowed for participant to make judgments based on the instructions. The affective block instructed the participants to categorize the picture as pleasant or non-pleasant as quickly and accurately as they could. The non-affective block instructed the participants to categorize the pictures in terms of the number of persons in the picture; to press one key if there were one person or less, and to press the other key if there were two persons or more. The keys were counterbalanced across participants, and the two
judgments blocks were counterbalanced across participants as well. These stimuli were programmed with E-Prime software.

**Physiological Recordings**

We recorded electroencephalograph (EEG) using Sensorium electronics. We followed the standard EEG procedures and collected from 33 electrodes including the four along the midline reported in Hacjak et al., (2006): frontal (Fz), frontocentral (FCz), central (Cz) and parietal (Pz). We used the nose as our reference sight, as designed by Sensorium. The EEG was sampled at 2048 Hz and data collection began 500 ms before picture onset and continued for 1500 ms. Data was later corrected for blinks and artifacts using EMSE. ERPs were constructed by averaging across each condition using EMSE. Topography was plotted using EMSE software, and ERP waveforms presented here are plotted in MATLAB.

**PRELIMINARY RESULTS**

The results are organized in this section so the overall findings across all participants are reported first followed by the separate groups, taking into consideration the categorical factor, either verbal-oriented individuals or visual-oriented individuals. The results under the passive viewing condition will be discussed first. The two judgment tasks based on affective vs. non-affective categorical decision will be discussed next.

**Passive Viewing**

In the passive viewing block, we showed mean brainwave patterns across all participants that closely represent what was reported in Hajcak et al. (2006). The arousing pictures (pleasant or unpleasant) elicited a larger LPP than the neutral pictures. In addition, we also show a differentiation between the two arousal conditions, separating pleasant from unpleasant (Fig. 1). The unpleasant pictures elicited a larger LPP than the pleasant pictures. However, it is important to point out that this comparison was reported as non-significant in Hajcak et al.’s (2006) paper. The LPP peak amplitude occurs between 550-1500 ms and the mean amplitude difference between unpleasant and neutral condition is 2µV, which is larger compared to the mean difference between pleasant and neutral condition (1µV). The LPP effect in the passive viewing condition is most evident at posteriorly on the scalp (Pz) and less prevalent at Cz and even less so at the other midline sites.

![Figure 1. The stimulus locked event-related potential (ERP) at parietal (Pz) and central (Cz) where the late positive potential (LPP) was maximal during the passive viewing condition.](image)
When the categorical factor was introduced, the separated groups, verbal-oriented individuals and visual-oriented individuals, there was a clear division of the LPP amplitude. The picture-oriented group significantly and consistently showed larger LPP for all three conditions, including neutral, pleasant and unpleasant pictures compared to the LPP of word-oriented individuals (Fig. 2). Among the three conditions, the arousal conditions elicit larger LPP amplitude compared to the neutral condition. In particular, the unpleasant pictures showed slightly larger LPP than pleasant pictures, consistent with the results discussed in the collapsed groups above.

Figure 2. The stimulus locked event-related potential (ERP) taking into consideration the individual differences in style of processing (SOP), picture (pic) vs. word, at parietal (Pz) where the late positive potential (LPP) was maximal during the passive viewing condition.

Affective vs. Non-affective Decision
Participants categorized arousing pictures, either pleasant or unpleasant, in the affective decision block and the LPP was compared to the LPP generated in the non-affective decision block. Confirming the results from Hajcak et al. (2006), our results across all participants revealed larger LPP in the former task in both arousing conditions (Fig. 3a). Consistent with the results in the passive viewing experiment block, our results seem to imply that the unpleasant pictures triggered a slightly larger LPP than the pleasant pictures did (Fig. 3b). When examining the difference between the two arousing stimuli (pleasant and unpleasant pictures), the mean amplitude difference (2µV) is slightly larger in the affective decision block compared to the mean difference in the non-affective decision block (~1µV).
Figure 3. (a) The stimulus locked event-related potential (ERP) at parietal (Pz) and central (Cz) where the late positive potential (LPP) was maximal during the affective (AFFECT) and non-affective (NONAFFECTION) decision conditions. (b) The stimulus locked event-related potential (ERP) at parietal (Pz), including the subcategories of pleasant and unpleasant conditions under each affective and non-affective decision condition where LPP was maximal.

After introducing the categorical factor, results seem to imply the SOP scale differentiates the two groups of individuals based on their fundamentally different processing mechanisms. The picture-oriented individuals consistently produced significantly larger LPP under both affective and non-affective decision tasks compared to the word-oriented individuals (Fig. 4a). Picture-oriented individuals appear to produce larger LPP, at 800-1250 ms, in the non-affective decision task than the affective decision task (Fig. 4b). This effect is reversed in the word-oriented category, where the LPP is larger, at 800-1250 ms, in the non-affective decision task compared to the affective decision task (Fig. 4c).
Figure 4. (a) The stimulus locked event-related potential (ERP) taking into consideration the individual differences in style of processing (SOP), picture (pic) vs. word, at parietal (Pz) where the late positive potential (LPP) was maximal during the affective and non-affective decision conditions. Picture-oriented individuals (b) and word-oriented individuals (c) are shown separately, comparing the subcategories of pleasant and unpleasant conditions.

Similarly, depending on the type, affective decision or non-affective decision, the same arousing stimuli (pleasant or unpleasant) are processed differently by each of the SOP-oriented groups. In other words, when the task is to make an affective categorical decision, both picture- and word-oriented individuals produce slightly larger LPP when exposed to unpleasant pictures compared to pleasant stimuli.
(Fig. 5a). This effect seems to be attenuated in picture-oriented individuals when asked to make non-affective decisions, while the effect is still evident in the word-oriented individuals (Fig. 5b).

Figure 5. The stimulus locked event-related potential (ERP) taking into consideration the individual differences in style of processing (SOP), picture (pic) vs. word, at parietal (Pz) where the late positive potential (LPP) was maximal during the affective (a) and non-affective (b) decision conditions.

DISCUSSION

As in previous studies, the LPP was enhanced after the presentation of arousing stimuli (both unpleasant and pleasant pictures) compared with neutral pictures (Hajcak et al., 2006; Schupp et al., 2003). Further, as Ito and colleagues (1998a; 1998b) indicated, the LPP was larger for the negative stimuli (unpleasant pictures). Therefore, the possibility of a negativity bias has not been ruled out and should be examined in future research.

These results, in conjunction with prior research, indicate the LPP may be useful for studying the regulation of emotional processing. Our study and Hajcak et al. (2006) found the LPP is modulated by appraisal strategy. Therefore, our study is an important extension because we consider whether the LPP is sensitive to self-reported individual differences, such as an individual’s style of processing orientation.

The construct validity of the SOP scale received substantial support through the use of an alternate method (EEG) in this study. Individuals who were found to be “picture” people through the scale clearly had increased LPP in all three stimulus categories. This lends evidence to our hypothesis that individuals who prefer visual processing pay more attention to their preferred modality as they make judgments.
APPENDIX

Appendix 1. SOP Scale
1. I enjoy doing work that requires the use of words.
2. I like to envision future events or situations in my mind.
3. I can never seem to find the right word when I need it.
4. I do a lot of reading.
5. There are some special times in my life that I like to relive by mentally picturing just how everything looked.
6. I think I often use words in the wrong way.
7. Before I perform an activity, I often close my eyes and picture doing it.
8. I enjoy learning new words.
9. When listening to someone describing their experiences, I try to mentally picture what was happening.
10. When I think of someone I know, I often “picture” in my mind what they look like.
11. I find it helps to think in terms of mental pictures when doing many things.
12. I prefer to read about how to do something before I try it myself.
13. I often think of synonyms for words.
14. When I have forgotten something, I frequently try to form a mental picture to remember it.
15. I have difficulty learning new words.
16. I enjoy using mental pictures to help me solve problems.
17. I prefer activities that don’t require a lot of reading.
18. I spend very little time trying to increase my vocabulary.
19. I seldom picture past events in my mind.
20. My thinking often consists of mental pictures or “images.”
REFERENCES


CONFLICT RESOLUTION THROUGH THE PRINCIPAL’S EYES: A PRELIMINARY PROPOSITIONAL MODEL

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SHORT ABSTRACT

Within the asymmetrical power setting, (e.g., a franchisor-franchisee context) research on the principal-agent dyad in terms of conflict resolution often takes the perspective of the weaker party (agent). This preliminary, conceptual paper addresses a call from other authors to investigate the ramifications of conflict resolution processes through the principal’s eyes. We outline relevant theory, develop a propositional model, and explain the state of this project’s empirical component, currently underway.

INTRODUCTION

Conflict resolution had a commendable run in the late eighties and early nineties (e.g. Hunger & Stern 1976; Eisenhardt 1989b; Dant & Schul 1992), but garnered an alarmingly little amount of attention from marketing research in the 2000’s, with a few exceptions (e.g. Stringfellow & Weitz 2004; Koza & Dant 2007). Had we at long last learned all there is to know about conflict resolution in marketing? Surely not. A much more likely explanation is that we became bored of the topic as new fields began emerging as the topics du jour. However, after a review of the literature, we believe that a resurrection is due as long as the context is compelling. Accordingly we have tackled the conflict resolution agenda with a new angle of interest, namely with an emphasis on the principal’s roles and decisions.

Much of the previous research in the realm of conflict resolution has focused on parties with either assumed comparable relationship power (e.g. Ruekert & Walker 1987), or from the perspective of the weaker party (Dant & Schul 1992). These research vantage points were logical given the nature of conflict. Conflict, henceforth conflict specifically in business-to-business (B2B) relationships, has been addressed by numerous scholars and can be succinctly understood as the “divergence of goals and role preferences” (Dwyer, Schurr & Oh 1987 p. 24). In such cases the intuition for studying conflict in a highly interdependent relationship, or in the case of asymmetric dependence, studying conflict from the weaker party’s position, is obvious. It would be illogical to devote resources to capturing the manifest or latent motivations or feelings of the stronger party. The stronger party would simply pressure the weaker party to bend to its will. Thus, conflict resolution research from the perspective of the principal in a principal-agent relationship is scarce.

However, as the knowledge of both marketing scholars and managers has grown, it has become something near to gospel that long-term relationships with increasing interdependence provide maximum benefit for both parties (Palmatier, Dant, Grewal & Evans 2006). As B2B exchanges evolve from one-time transactions to extended relationships, the principal becomes ever more reliant and dependent on its agent(s). So it seems that neglecting to look at conflict and conflict resolution through the eyes of a principal is an egregious error worthy of rectification. This paper sets out to do so by first addressing some of the relevant literature on conflict and conflict resolution to set the stage. It will then deliver a model of conflict resolution and develop research propositions. The paper concludes with a discussion of the research methodology and agenda currently underway, and some suggestions regarding where we will go from here.
THEORY

Conflict

Conflict comes in many definitional forms. Organizational conflict, for instance, can be described using three broad classification models. In his conceptual article on conflict, Pondy (1967) elaborates on these three models, identified as the bargaining, the bureaucratic and the systems models. The bargaining model looks at the competition for scarce resources among different interest groups of an organization. The bureaucratic model deals with the conflict arising from differences in the power hierarchy and finally the systems model examines the lateral conflict “among the parties to a functional relationship” (p. 298). While these models helped create parsimony among the various theories of conflict at the time, they spoke mainly to conflict within an organization. Yet though the essential aspects within this conflict schema were developed in an intra-organizational framework, they may be adequately transposable onto inter-organizational contexts. Research in channel member conflict has indeed used similar classifications and theoretical underpinnings. Work by Gaski (1984) and Brown & Day (1981), among many others, draws on such literature, expanding conflict into a multifaceted construct, with both manifest and latent dimensions. Brown & Day (1981) particularly emphasize the ongoing and residual quality of conflict in channel relationship. Channel conflict is not comprised of single, episodic conflict events, but a “dynamic process composed of a series” of conflicts (p. 263). Though heavily investigated, the previous notions of conflict still come up short, as they do not wholly exhaust the dynamics of a B2B exchange. In particular, past work on conflict has described conflict as a concept unto itself, while overlooking its ramifications for particular parties, most notably, the principal. This paper makes its significant departure from previous literature by adopting many of these definitional considerations of conflict and imposing them in a principal-focused model for understanding conflict resolution behavior.

But before an inclusive and valuable conflict resolution discussion can take place, it must be acknowledged that conflict is not generally regarded as a singularly malevolent phenomenon in B2B relationships. Quite on the contrary, conflict is all but ubiquitously accepted as inevitable in marketing channels (Stern & El-Ansary 1977; Gaski 1984). Central to the argument of choosing a conflict resolution strategy is the premise of functional conflict. Conflict often serves as the impetus for positive innovation and change in a relationship, and healthy B2B relationships are quite often characterized as those which can deal with conflict in a constructive manner (Dant and Gleiberman 2011). If we can assume the beneficial aspects of conflicts as true, then we can devote more thought to effectively utilizing “inherent” conflict and less time fruitlessly attempting to circumvent or prevent it. An underlying assumption of the model provided herein is that conflict will arise and different resolution mechanisms will have significant impact on performance outcomes.

Conflict Resolution in Business-to-Business Relationships

A thorough account of conflict resolution has been espoused time and again in marketing, sociology, and psychology and this paper does not seek to replicate that work. Nevertheless a brief overview is warranted for clarity’s sake. Due to space considerations for the purposes of these conference proceedings, we have omitted our summary table which includes a thorough review of conflict resolution (CR) as a dependent variable, a moderator and mediator in extant literature. In sum, these papers from management and marketing show interesting relationships between the types of conflict resolution methods employed, albeit not from the same perspectives and outcome measures we are concerned with. For example, Eisenhardt (1989b) shows that strategy is not associated with decision speed. Song, Xie & Dyer (2000) look at the relationship between CR strategy and goal congruity and problem avoidance, finding clear results suggesting that avoidance is not a good strategy. Additionally, CR in B2B relationships can be prudently described as belonging to two related but distinct methods (Dant and Schul 1992). The first method consists of “mechanisms that can be viewed as "institutionalized" in that they represent policies implemented by the channel leaders to address conflict in a systematic, ongoing manner. Examples of such institutional mechanisms include joint memberships in trade organizations,
executive exchanges, distributor councils, arbitration and mediation boards, and various programs such as co-optation - all aimed at increasing the interaction and communication among channel members” (Dant and Schul 1992, p. 39). The second set of mechanisms aimed at addressing conflicts forms from those activities which “underlie and make possible the enactment of” the above more institutionalized strategies (Stern 1971a, p. 113). In other words, these are the particular actions that managers or channel leaders perform in order to tackle conflict issues. Following Dant & Schul (1992) and Koza & Dant (2007), our investigation focuses on the latter set of strategies. We have concluded that by formulating our exploration around the behavioral rather than the institutional methods of conflict resolution, we would be able to tap into a more dynamic and behaviorally richer set of propositions. We will expound upon these behavioral strategies further in our model development section.

The Principal Problem

Agency theory has guided a wide-spanning set of authors in their treatment of intra- and inter-firm relationships. Agency theory comes into play whenever there is a delegation of power from one party (the principal) to another (the agent) (Eisenhardt 1989a). Such a delegation of power occurs quite often in business relationships and comes with a humbling array of considerations for the principal. With roots in basic economic theory, agency theory holds that potential problems will arise for the principal if there is a divergence of goals between the principal and the agent (Fama 1980). More specifically, the agency problem arises if it is in the agent’s best interest to act in a manner inconsistent with the principal’s best interest. For example, if a company (principal) wants its sales people to promote a new product, but the salesperson (agent) knows more about the old product, and therefore can boost his/her own profits by selling the old product, an agency problem exists. If applied to managerial thought, then agency theory would suggest an increased need for monitoring costs by the principal. These measures are of a substantial preemptive normative nature, such as the use of contracts, and an exercise of power a priori to conflict arousal (Eisenhardt 1989a; Lafontaine 1992). As agency theory provides a helpful tool for understanding and ultimately accepting the intrinsic human nature to act opportunistically, so too may it be useful in informing a model of effective management of those intrinsic, unavoidable conflicts bound to arise in a principal-agent relationship (Bradford, Stringfellow & Weitz 2003).

Accordingly, it has fallen on marketing researchers to develop models for conflict management and resolution. As mentioned earlier, a great concentration of the B2B conflict resolution literature focuses its attention on the perspectives of either weaker parties (e.g., franchisees or sales representatives), or equally interdependent parties. We, however, would like to depart from this common context and produce an inspection of conflict resolution from the more powerful party’s (e.g., franchisors or manufacturers) perspective. This answers the very clear call from other researchers (cf. Koza & Dant 2007) to investigate and map the process of conflict resolution centered on the principal’s perspective. After all, when confronted by a conflict episode, it will likely be the more powerful principal that invokes a particular conflict resolution approach. However, the extant literature is woefully silent about what considerations might propel the principal to choose specific conflict resolution strategies and with what consequences.

RESEARCH CONTEXT

Following a good deal of other research in both conflict resolution and agency theory (e.g. Lafontaine 1992; Spinelli & Birley 1996; Koza & Dant 2007), we have elected to investigate the conflict resolution process in the context of franchising. This context is appropriate and appealing for a number of compelling reasons. First, the franchising industry itself is a critical and increasingly important generator of revenue across the globe. Though often overlooked, the franchise business format accounts for an enormous percentage of retailing sales and persons employed. There are over 3,000 franchise systems in the U.S. and represents over 900,000 franchisees and accounting for 18 million total employees. Overall, this amounts to an economic impact for of over $2.1 trillion and more than 40% of the retailing sector of the U.S. (Dant, Grunhagen & Windsperger 2011). For those interested in trends which impact the national
economy, franchising supplies “one of the fastest growing U.S. exports to the world” (Dant et al. 2012 p. 1). Additionally, from a public policy and social welfare perspective, franchising spurs entrepreneurship and inclusion of under-represented groups such as women and minorities (Hunt 1972).

Finally, the franchise system experiences a natural and logical division of power and allotment of responsibilities. The principal in this system, the franchisor, doles out responsibilities and roles to the agent, the franchisee. While many relationship control mechanisms are specifically delineated in the franchise contract when the franchisee buys into the system, clearly not all contingencies can be foreseen. Conflicts in franchise systems can arise from both contingencies unspecified in the contract as well as abrogation of specified duties and responsibilities. Up until this point in the literature, few papers have thoughtfully examined the full gamut of conflict resolution components in terms of actors involved. As previously noted, most have looked strictly at the perceptions of the processes from the agents’ perspectives, as the agents are perceived to be the most strongly impacted.

However, as franchise systems grow in scope, number of outlets and importance to national economies, new opportunities for conflict will emerge. For instance, as single-unit franchisees begin to realize the benefits (psychological and economical) of owning a franchise outlet, many become entranced by the allure of becoming a multiple-unit franchisee (MUF) (Dant et al. 2012). This phenomenon in and of itself is worthy of investigation, and may be the root of numerous principal/agent conflicts as power and interdependence shifts from the franchisor to the franchisee, especially in an MUF-franchisor relationship. While at present this paper does not aim to provide an exhaustive list of all potential conflicts in the franchise context, the clear and natural emergence of a variety of potential conflicts makes it a prime sample in which to conduct research of this kind.

THE MODEL AND PROPOSITIONS

To merely say that a conflict resolution strategy does or does not work would be drastically undercutting the rich dynamics of conflict and its mediation mechanisms. Likewise, to tersely state that a principal can and does routinely choose between various categories of conflict resolution behaviors would be too simplistic and trite. We therefore develop a model which attempts to capture the entire conflict resolution process, including antecedents and outcomes as well as some key moderators. The following section addresses these concerns in a systematic format, incorporating propositions for future research.
Antecedents

Though it has been mentioned earlier in this paper that we are keenly interested in the behavioral processes that affect conflict resolution, it would be remiss to ignore such economic factors as financial stake. Economic stake, while always of interest to researchers in any facet of business, be it marketing, management, strategy, et cetera, is especially salient in the franchising domain. In the franchise system, there are two different bottom lines in every transaction or dispute, i.e. the principal’s and the agent’s. In order to address both of these issues, we anchor our research agenda to a specific conflict experienced in the principal-agent relationship. Furthermore, we have developed an inventory which addresses both the nature of the conflict in question and the dollar value at stake in the dispute.

Performance Outcomes

In parallel with our choice of antecedents (both economic and behavioral), we have selected performance outcomes on a similar basis. In terms of financial outcomes, objective measures are presumed to offer the most robust measures of financial performance. Subjective measures of financial performance would likely come with a high degree of internal bias, as a rational franchisor would believe that the conflict resolution behavior employed would lead to the highest amount of financial performance return. Since we are interested in assessing the actual performance of particular strategies, we will acquire information on return-on-investment (ROI) and return-on-assets (ROA) from secondary data sources.

Despite our reluctance to trust subjective measures of financial performance, the performance outcome of relational strength is quite another matter. The principal’s perceptual evaluation of relational strength can have profound impacts on future relationships, both with this agent, other current agents, and future agents. Taking a cue for the literature on relationship marketing, we target the three standard, key variables; trust, commitment and satisfaction (Palmatier et al. 2006). Despite ongoing debate over which particular variables of relational strength are of the most critical importance, this paper draws from literature in related streams that suggests our 3 chosen variables are the most salient to the issue at hand (Palmatier et al. 2006; Dant et al. 2012). By isolating these elements from the total selection of variable, we add a sense of efficiency to our research propositions. Across marketing literature, the definitions for trust, commitment and satisfaction have arguably reached a consensus. Trust, defined by Morgan and Hunt (1994) is viewed as the confidence in a partner’s integrity and reliability. From the point of view of the principal, commitment is simply a measure of the principal’s continuing desire to maintain the
relationship (Moorman, Zaltman & Deshpande 1992). Finally, satisfaction is the “overall positive affective appraisal of one’s exchange partner” (Dant et al. 2012 p. 7).

**Mediator – Conflict Resolution Behavior**

In our model, certain precursors (antecedents) give way to eventual measurable performance outcomes. Of course, this study is interested singularly in those antecedents which, through a conflict resolution behavior or process, impact performance outcomes. Precluding conflicts which are immediately settled via contractual stipulations, these financial and relational performance outcomes that occur after a conflict resolution strategy has been attempted that are the ultimate endogenous variables or the final focal points of our model. Quite obviously then, conflict resolution behavior is the key mediator in our model. As discussed earlier, conflict resolution techniques have been conceptualized and operationalized in many ways, but can be condensed parsimoniously (Koza & Dant 2007). We posit four orthogonal behaviors of conflict resolution: problem solving, compromise, passive-aggressive and active-aggressive as the critical constituent components of our mediator.

The first of these, problem solving, focuses on the extent to which the principal uses open communication with their agent in an attempt to logically and clearly discuss the problem and the principal’s own position. Compromise suggests a more give-and-take mentality, in which the principal guides the discussion into a middle-ground of a fair combination of gains and losses for both parties. The final two conflict resolution behaviors, passive- and active-aggressive consist of a much more “we are correct” sentiment. However, in the passive-aggressive form, the principal is committed to its own position and seeks to make convincing arguments for the agent to acquiesce to. Contrastingly, the active-aggressive stance makes use of threats and overt actions to compel the agent to behave in accordance with the principal’s wishes (for an extended discussion of these conflict resolution behaviors, see Koza & Dant 2007).

P1a: The financial stake associated with the idiosyncratic incident will have a direct effect on the type of conflict resolution behavior chosen.

P1b: The financial stake associated with the idiosyncratic incident will have a direct effect on the performance outcomes (both financial and relational).

The second, and perhaps more intellectually stimulating antecedent we explore is personality. Personality is a highly under-researched antecedent to conflict resolution behavior. We find this omission highly curious due to personality’s potential for impacting conflict resolution behavior choice. Following literature in sociology and marketing, we define personality using five distinct classifications, better known as the Big Five Factors (Barrick & Mount 1991). An adapted version of this framework includes as its five dimensions: imagination, conscientiousness, extraversion, agreeableness and emotional stability (Dant, Weaven & Baker 2012). Dant, Weaven & Baker (2012) used these measures in order to tease out what influence personality traits had on perceived relationship quality in a similar context. Using these five personality dimensions seems appropriate since one of our eventual outcome measures of the conflict resolution is relational strength. Furthermore, a particular CR strategy will have a differential effect on our outcome measures. Quite simply, if a strategy of problem solving is employed, we might expect the perceptions of relationship strength to be increased more than an active-aggressive tactic. However, if an active-aggressive tactic is elected, we may very well expect a higher performance outcome in terms of financial metrics, as an active-aggressive strategy is likely more efficient to resolve a conflict.

P2a: The type of personality of the principal will have a direct effect on the type of conflict resolution behavior chosen.
P2b: The type of personality of the principal will have a direct effect on the perception of performance outcomes (both financial and relational).

P3: The type of conflict resolution behavior chosen will have a direct effect on the performance outcomes (both financial and relational).

**Moderators**

While we anticipate observing direct effects of choice of conflict resolution behavior on performance outcomes, we believe that these relationships will be moderated by certain factors. Among these factors we list commitment to conflict resolution strategy. Commitment by the principal to a particular conflict resolution behavior sends influential signals to the agent. At times, a strong resilience to persisting with one chosen strategy might make the principal believe they are sending a strong signal to the agent that the principal is of thoughtful resolve and has the strength to carry through with their decisions. Conversely, if say, a franchisor decided to switch CR behavior mid-event, they may feel they are more attuned to promoting the best interest of the relationship rather than merely having their own strategies forced upon the franchisee. Thus, the franchisors perception, one of the key outcome variables of interest, is likely influenced regarding relational strength depending on if the conflict resolution behavior was switched mid-resolution. The second moderator shown in the model is the presence (absence) of a third party conflict mediator. This conflict mediator can take the form of legal counsel or, in this particular research context, a franchise association council. In a similar vein to staying (switching) the course with CR behavior, adding a third party, the franchisor may perceive their own amiability to resolving the conflict by admitting they need a presumably objective third party for CR help. Finally, any results – especially perceptions of relationship strength – would almost certainly be influenced by the previous relationship quality between the principal and the agent. If, for example, the previous relationship quality was perceived as weak, and then a CR event went extremely well, perhaps a synergistic advance in relationship strength above an “average” previous perception of relationship quality may manifest, due largely in part to exceeding expectations.

P4a: The principal’s commitment to one particular conflict resolution behavior will moderate the effect between the conflict resolution behavior chosen and the performance outcomes (both financial and relational).

P4b: The presence of a conflict mediator (e.g., lawyer, franchise association council) will moderate the effect between the conflict resolution behavior chosen and the performance outcomes (both financial and relational).

P4c: The previous relationship quality between the principal and the agent will moderate the effect between the conflict resolution behavior chosen and the performance outcomes (both financial and relational).

**FUTURE RESEARCH AND CONCLUSIONS**

Such a research effort requires a unique survey instrument and implementation. Using scales from aforementioned literature, and a development of a battery of single-item, open answer questions to tap constructs such as financial stake and a description of the conflict, we plan on surveying franchisors. To survey franchisors in America is a very daunting task. Efforts in such a means to and are often met with response rates in the single digits, yielding unusable results. In order to address this concern, we have partnered with an Australian research team in order to collect data from the principal side of the principal-agent dyad.

Our Australian research counterparts have efficient and effective access to a pool of franchisors through the *Australian Franchisor Survey*, an annual survey sent out to franchisors in a nation-wide
network of franchise systems. Employing such a method is completely reasonable given the strong cultural similarities between the U.S. and Australia. Similar industry characteristics exist as well between Australia and the U.S., especially when discussing franchise systems. The percentage of franchise contribution to the Australian economy is nearly identical to that of the U.S. This similarity extends into the industry structure and dynamics of the franchise system. Findings garnered from an Australian context should be generalizable to American systems, a pattern already shown in much extant research in the franchising context (e.g. Dant et al. 2012).

The managerial implications of this study would reach into an area of agency theory hitherto unexplored. Focusing our investigation on the principal, or franchisor, allows us to seek out qualities and consequences of conflict resolution behaviors that have been thus far ignored. For instance, by evaluating and analyzing the relationships between financial and behavioral antecedent to conflict resolution behaviors, we can help predict which conflict resolution behavior a franchisor is likely to utilize before others. This is important for two main reasons. First, we can extrapolate from the empirics which conflict resolution behaviors “go well” with certain personality types and financial indicators. Following this, if we can inform managers which conflict resolution strategy is the most likely contender based on these antecedent conditions, we may be able to add a dimension of efficiency to conflict resolution behavior and therefore expedite the entire process. On the other hand, if we better understand what type of conflict resolution behavior a franchisor is most likely to employ, we are then able to suggest other strategies that may be more prudent and otherwise not considered.

Other propositions of our model inform the principal-agency problem equally well. Determining which conflict resolution strategies lead to what performance outcomes ought to allow for managers, in our case franchisors, to harness only those which lead to the highest levels of the desired performance outcomes. While the general link between conflict resolution strategies and performance outcomes has been investigated in the literature from the agents’ perspective (Koza and Dant 2007), this would be the first investigation of this relationship from the perspective of the principal (i.e., the franchisor). Concurrently, our study goes further than previous studies by addressing various moderators assumed to be influential in the relationship between conflict resolution behavior and performance outcome. If say, we were to determine that a strategy of switching conflict resolution behaviors mid-event actually enhances relational strength by showing a sense of flexibility and dedication to the relationship rather than to a strategy, such a finding would go far in helping managers cope with conflict in their systems.
REFERENCES


FRONTLINE DISPLAYED WORK AND ITS CUSTOMER SATISFACTION CONSEQUENCES

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ABSTRACT

This pilot study examines patterns of frontline work performed during customer problem solving that are associated with elevated customer satisfaction by using service interaction as the unit of analysis. Frontline work is conceptualized as a behavioral response that reflects a combination of cognitive (e.g., task/relational) and emotional work components (e.g., positive/negative). Customer satisfaction is conceptualized as an online assessment that customers experience as they interact with the service provider concerning a problem, request, or situation. We propose that distinct patterns of frontline work will be associated with changes in customer satisfaction during extended service experiences. To explore our propositions, a naturalistic/observation research methodology is used to analyze 49 distinct service experiences from the television series “Airline” recorded during 2004. The study reports findings on the feasibility of: (a) operational procedures and measures for capturing theoretical constructs (e.g., satisfaction, emotional/cognitive work) from behavioral data (i.e., Airline TV show), (b) tracking changes within an episode in theoretical constructs over time with sufficient sensitivity for quantifiable differences, and (c) insights into effective (satisfying) service interactions that are distinctive in nature and likely to be missed in contemporary approaches. Results show that positive changes in customer satisfaction are associated with displayed performance indicative of both (a) high level cognitive and emotional work in the concluding episode of the service experience, as well as (b) positively changing the level of cognitive and emotional work across episodes of the service experience.

INTRODUCTION

With marketing discipline’s paradigmatic shift toward service dominant logic, long-term relationships, and individualized satisfaction of customer needs (1-to-1 marketing) (Vargo & Lusch, 2004), firms are increasingly focusing on understanding the what, how and why of service experience between firms and its customers—what work is needed for effective service experience, how can this work be organizationally managed, and why are some service experiences more effective than others (Köhler, Rohm, de Ruyter, & Wetzels, 2011; Ramani & Kumar, 2008; Srinivasan, Anderson, & Ponnabolu, 2002). Effective and efficient management of these service experience requires careful management of service interactions, which are also regarded as the next frontier of competitive advantage for the firms (Rayport & Jaworski, 2004). To manage service experiences, frontline employees (FLEs) play a crucial role as boundary spanners (Singh, 2000) as through their displayed work FLEs can influence customer’s satisfaction with the experience.

Studies of frontline performance have a long tradition in the marketing literature (Di Mascio, 2010; Hennig-Thurau, Groth, Paul, & Gremler, 2006; Ma & Dubé, 2011; Singh, 2000; Solomon, Surprenant, Czepiel, & Gutman, 1985). In general, past studies have examined different determinants of frontline effectiveness, including role characteristics (Brown & Peterson, 1993), personality traits (Brown, Mowen, Donavan, & Licata, 2002; Franke & Park, 2006), work team influencers (Workman, Homburg, & Jensen, 2003), supervisory factors (Jaworski & Kohli, 1991; Marinova, Ye, & Singh, 2008), and organizational milieu (Marinova et al., 2008). Much of the past studies have examined frontline effectiveness with customer satisfaction (CSAT), which dominantly has been assessed as a static post consumption measure. Rarely have studies operationalized CSAT as an evolving concept within a service experience i.e. observing perceptible change in the level of CSAT within an experience. Since, frontline performance can vary across service experiences, studies that rely on CSAT measured as a post consumption measure risk ignoring the variability induced by employees displayed work and situations.
within a service experience. More significantly, using a context of within service experience as the focus of attention is likely to reveal insights into the dynamics of frontline-customer interactions that are more useful managerially to address the what, how and why questions of service experience effectiveness.

Frontline displayed work in prior literature has been operationalized to consist of either cognitive or emotional dimension (Mattila & Enz, 2002; Menon & Dubé, 2000; Van Dolen, Lemmink, Mattsson, & Rhoen, 2001), but rarely have both work components (Homburg, Koschaté, & Hoyer, 2006) been considered in a single study. Such partial conceptualization has resulted in incomplete understanding of how these work components may have complementary (or conflicting) patterns. Also, prior conceptualizations have focused on assessing frontline displayed work via either verbal or nonverbal behavioral cues in isolation (Mattila & Enz, 2002) and missed the opportunity to utilize both verbal and non-verbal modes of communication to assess displayed work. Such inconsistency in operationalizing frontline displayed work has resulted in disparate findings regarding frontline work and its impact on service experience effectiveness, for e.g. see (Pugh, 2001; Varca, 2009). Thus to test the dynamics of the frontline displayed work on evolution of CSAT within a service experience, we propose a comprehensive framework of cognitive-emotional work that uses verbal and non-verbal cues to capture distinct patterns in frontline displayed work.

To operationalize and assess our framework we seek a naturalistic site which provides us the access to observe frontline-customer interactions uninhibited and record the frontline displayed work over an extended period of time. Longitudinal observation coupled with selected sites and FLEs will help us to record variability in displayed work not only across FLEs but also within experiences managed by same FLE. Such observation can help us draw causal inference about displayed behaviors that can predict change in the level of customer’s satisfaction within experiences. To pilot test the framework, we plan to employ a “fly-on-the-wall” reality television series called “Airline US” which is based on Southwest Airlines and was recorded in US during 2004 (http://en.wikipedia.org/wiki/Airline_U.S._TV_series). The “Airline US” series recorded customer-FLE interactions for selected sites (ticket and reservation desks for an airline) and FLEs over a period of 1 year. The naturalistic observations of “Airline US” series provides us the opportunity to analyze FLE-customer interactions-as-it-happens in practice and evaluate how such interactions evolve over time thus addressing two limitations of past research in the area – self reports that could be biased by memory effects resulting in common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), and the Hawthorne effect (Adair, 1984). Video recordings also provide us the flexibility to analyze each complete service experience by breaking them into multiple service episodes (Ma & Dubé, 2011) of 1-2 minutes of FLE-customer interactions. Doing so will help us to evaluate CSAT ratings at the end of each service episode, and thus allow us to track how level of CSAT changes within an experience. The findings from our study can thus provide support for the interactional effects of emotional and cognitive work in creation of CSAT and complement extant literature on displayed work by establishing comprehensive measures of cognitive work, emotional work and CSAT by incorporating verbal and non-verbal aspects.

Thus to meet our objectives, in our present pilot study we intend to do the following (a) develop operational procedures and measures for capturing theoretical constructs (e.g., satisfaction, emotional/cognitive work) (b) track changes within an experience in theoretical constructs over time with sufficient sensitivity for quantifiable differences, and (c) draw inference about effective service interactions that are distinctive in nature and likely to be missed in contemporary and traditional approaches. In the following sections we first provide an overview of the conceptual framework guiding our study followed by propositions for exploration. Subsequently, we outline the research settings, methodology and analytical approach that we adopted. We close with preliminary findings in support of our propositions and discussion on implications of our research and future research agenda.
CONCEPTUAL FRAMEWORK FOR MEASURING CHANGE IN CSAT WITHIN SERVICE EXPERIENCES

Figure 1 displays our guiding thought. Prior literature, though highlights the importance of customer-FLE interaction in formation of CSAT with the experience, but it often operates CSAT as a post experience measure (Anderson, Fornell, & Lehmann, 1994; Fornell, 1992; Johnson & Fornell, 1991). Prior measures of CSAT has been hypothesized to integrate across the search, purchase, consumption and after-sales phases of the experience (Neslin et al., 2006), although some limited work has been done with disaggregated conceptualizations (Danaher & Mattsson, 1994; Spreng, Harrell, & Mackoy, 1995). We build on disaggregated conceptualization of CSAT to examine how CSAT levels change within a service experience with the aim of predicting these changes on the basis of frontline displayed work. By basing our framework on observing change in CSAT within a service experience, we are not proposing a reconceptualization of the CSAT construct; rather, a reconsideration of the units of CSAT assessments especially for service experiences (Arnould & Price, 1993; Dubé & Morgan, 1998; Verhoef, Antonides, & de Hoog, 2004).

Although prior literature has established frontline displayed work to consist of cognitive (Bearden & Teel, 1983; LaBarbera & Mazursky, 1983; Oliver & DeSarbo, 1988) and emotional dimensions (Oliver & Westbrook, 1993; Westbrook, 1987) but rarely have studies focused on both the dimensions in one study. Homburg, Koschate, & Hoyer (2006) did considered both the dimensions (cognitive and emotional) but limited their observation to only customer side of the dyad thereby ignoring the complimentary effects of displayed behavior of either side of the dyad on the other. Each dimension of the displayed work consists of verbal and non-verbal aspects. Studies in marketing though have made a reference to both verbal and non-verbal aspects (Ma & Dubé, 2011; Sundaram & Webster, 2000) but have often only considered verbal aspect while measuring frontline displayed work. We thus extend prior studies by providing a more holistic conceptualization of cognitive and emotional work that includes verbal and nonverbal behaviors displayed by FLE’s and customers during the service encounter.

Figure 1: Conceptual framework for frontline displayed work
Another debate that has remained unresolved in the literature is clarity on the interaction effect of cognitive and emotional work on evolution of CSAT. For example, in studying affects that are provoked by service failures, Smith and Bolton (2002) find that feelings (emotional work) predict satisfaction levels, but only after accounting for cognitive factors. Weiner (1980) found that emotional work provides the motor and direction for cognitive work, and Casasanto and Dijkstra (2010) indicated that individual agency for action (cognitive work) may prompt corresponding emotional work. Thus drawing from extant research we believe that there exists a dynamic interplay between cognitive and emotional work displayed by the FLEs that can impact levels of CSAT, however how these two components (emotional and cognitive) interact is yet to be explored. Thus, we aim to identify patterns of cognitive and emotional work performed by FLEs that distinguish between effective service experiences (positive change in CSAT levels within a service experiences) and ineffective service experiences (negative or no change in CSAT levels within service experiences).

CSAT in Service Experiences
For marketing researchers and practitioners alike, CSAT is a construct that is central to the realization of the marketing concept and, with mounting empirical studies, a robust leading indicator of firm profitability and long term performance (Keiningham, Perkins-Munn, & Evans, 2003). With growth in services industries that deliver service experiences, such as health care, airline, amusement parks, and education, tapping into customer’s satisfaction judgments can prove to be a highly effective strategy for a firm. Much of the service experiences are naturally delivered through number of sites and over a substantial period of time that may last from several hours to multiple days. For such service experiences, we posit that a meaningful and useful unit of CSAT assessment will be a disaggregated period—which we refer to as an service episode—that has a discernible start and transition/end point within a service experience (Danaher & Mattsson, 1994). For instance, during an airline travel experience, a customer may go through three episodes: (a) check-in, (b) in-flight and (c) landing and baggage retrieval. When experiences do not go smoothly, additional episodes may emerge. Continuing with the airline experience, if ticketing problems arise during check-in, episodes may emerge around (a) interactions with frontline agent, (b) escalating to manager, (c) gathering additional data, and (d) working toward or contesting problem resolution.

We also contend that CSAT assessments do not remain constant as customers pass through multiple episodes of a service experiences. Rather, variations in CSAT from one episode to the next may be substantial. Prior literature has echoed similar sentiments where customer’s satisfaction with a consumption experience is hypothesized to contain assessment of satisfaction with discrete events during the consumption process (waiting time, comfort, concessions, etc.) and consumption results (efficiency, lower risks, status, success, self-esteem) (Danaher & Mattsson, 1994; Oliver, 2009). Thus, analyzing discrete episodes over the course of service experience can provide a fine-grain approach to study changes in the level of CSAT. Hence, we propose the following.

P1: CSAT will demonstrate discernible change across discrete episodes within a service experience (e.g., high to neutral, high to low, low to high etc.).

Situational Flow and CSAT
Analyzing discrete episodes can also offer meaningful theoretical and managerial insights that are missed when only post-experience overall satisfaction judgments are analyzed. For instance, in a recent study Ma and Dube (2011) showed that frontline employees and customers are bound by process and outcome interdependencies during a service experience and, as a result, it is managerially useful to continuously monitor the ebbs and flows of service experiences. Similarly, the emotional contagion literature has suggested the existence of a feedback mechanism that plays out across episodes as frontline employees and customers interact, negotiate and resolve problems (Pugh, 2001). Also, similar concepts are already being tested in the practice. For instance, Apple, known for its innovative products, trains its
retail employees to exactly say what to the customer to either reduce backlash or enhance satisfaction during the process of interaction (SHERR, 2011). As per an Apple employee, if a customer mispronounces an item name, FLEs do not correct them to avoid making the customer feel uncomfortable. Bendapudi and Bendapudi (2005) also concluded that the act of enhancing service experience by focusing on its disaggregated episodes is not only limited to luxury brands like Nordstrom but also been adopted by convenience stores such as QuikTrip and Wawa.

A focus on change in level of CSAT with service episode as the unit of analysis can also enhance the understanding of the role of situational factors in formation of satisfaction judgments. Belk (1974) had concluded that consumer’s response towards service experiences can get impacted due to the situation-specific factors. And later literature in customer relationship management has highlighted the impact of situational variability on the outcome. Hence, as outlined in the Apple’s example the “doing and the saying” of the FLE can change the course of the service interaction and can also influence the final outcome. Similarly, a display of emotions (positive/negative) during the service encounter can change the direction of CSAT for the overall service experience (Pugh, 2001). This situational variability, for instance, in the choice of verbal and non-verbal cues used to demonstrate cognitive and emotional work of an FLE, can help to focus on the appropriate factors responsible for the formation of CSAT over the length of the service experience. Thus we propose the following.

P2: Changes in CSAT within service experiences are influenced by situational flow of service interactions involving frontline employees.

Frontline Work and CSAT

Cognitive Work

Cognitive work stems from the task and relational orientation of the frontline displayed work. In marketing literature, task and relational oriented work are grounded in service quality (Parasuraman, Zeithaml, & Berry, 1988) and relationship management (Morgan & Hunt, 1994) literature. Task oriented work pertains to demonstrated capability of an FLE to perform a promised service job (e.g., understand and address customer request) dependably and accurately and is commonly defined in literature as competence (Ridgeway, 1987; Selnes & Gonhaug, 2000; Sirdeshmukh, Singh, & Sabol, 2002). Relational oriented work pertains to the demonstrated capability of an FLE to provide caring and individualized service in a way that builds trust and is defined in the literature as benevolence (Atuahene-Gima & Li, 2002).

Prior literature in marketing have established that based on the goal of the service experience, a FLE uses task/relational oriented behaviors or employs both simultaneously (Hartline & Ferrell, 1996; Price, Arnould, & Tierney, 1995; Spiro & Weitz, 1990). Further, Taylor et al. (2002) through their work on call centers in UK also concluded that cognitive work, which is one of the drivers of CSAT, is considered to have aspects of both task and relational oriented work with varying degrees, but more polarized with either task or relational oriented work that is required for the task at hand. In practice as well, we observe that based on the context of the interaction, protagonists use verbal and nonverbal cues to demonstrate varying degree of task and relational oriented behaviors. For example, in a service encounter where an elderly gentleman with limited knowledge of electronic products is trying to buy a new television set, a FLE can’t treat the situation as any other task-related work. In order to make a sale and also attain higher CSAT, s/he has to use task related behaviors when explaining how to hook the TV, connect HDMI cable etc., but deploy a relational behaviors when explaining which TV set would ideally fit the consumer’s budget and requirement. Thus, over the course of the service experience as the FLE learns more about the inherent need of the customer, s/he resorts to display variable patterns of cognitive work. Hence we propose the following.
P3: Cognitive work of the FLE will involve task and relational oriented work as distinct components such that FLEs show variability in patterns of cognitive work over time that is related to change in CSAT (i.e., degree of task versus relational oriented work).

Emotional Work

Emotional work (affective experience) has been long studied by psychologists, for e.g., see (Reizenzein, 1994) in the context of inter-personal interactions. Of the various models that have emerged over the years, one of the most widely studied has been circumplex model of affect (Larsen & Diener, 1992; Plutchik, 1997). The circumplex model of affect was originally proposed by Schlosberg (1952) but was later elaborated by Russell (1980). The model postulates that affect has two orthogonal dimensions - evaluation (positive emotion/negative emotion) and arousal (high/low). Positive emotions are represented by states such as joy, contentment and happy and negative emotions are represented by states such as anger, sadness and frustration (Russell, 1980).

Extant literature in marketing (Mattila & Enz, 2002; Stewart, Hecker, & Graham, 1987; Sundaram & Webster, 2000)) and psychology (Pugh, 2001) has made use of the emotional work in the FLE-customer interactions, and have proved its linkage with CSAT. Bradburn (1969) proved that positive and negative emotions are not necessarily inversely correlated, thus concluding that positive and negative emotions make independent contributions to satisfaction (Oliver & Westbrook, 1993) and can co-exist. However, based on extant conceptualization of CSAT as a post consumption evaluation, emotional work is also plagued by static observation, and lacks the dynamic interplay of positive and negative emotions over the length of the service encounter. For instance, a FLE addressing a non-cooperating customer who refuses to pay his credit card bill could initially display negative emotion to reinforce the seriousness of the matter followed by less negative emotion if he learns of mitigating circumstances and, eventually, positive emotions if the customer complies with a negotiated payment plan within the same service experience. Thus, analyzing service experiences based on the evolving use of positive and negative emotions by FLEs can provide insight into the emotional work of FLEs and into “how” and “why” service experience outcomes emerge. Hence, we propose the following

P4: Emotional work of FLEs will involve the display of positive- and negative emotion such that FLEs show variability in patterns of emotional work over time that is related to change in CSAT (i.e., degree of positive and negative emotion displayed).

Interaction of Cognitive and Emotional Work

Based on our conceptualization of emotional and cognitive work, we anticipate that there exists a particular pattern of interaction even among cognitive and emotional work that leads to the evolution of customer’s satisfaction within the service experience. Folk man, Schaefer, & Lazarus (1979) stated that cognitive and emotional works are usually fused in nature, suggesting a dynamic interplay of both the work types in a service experience. In a longitudinal study, Homburg et al. (2006) also echoed similar sentiments and demonstrated that emotional and cognitive work interact to form satisfaction. Thus we believe that isolating the pattern and nature of the antecedents of changes in level of CSAT across episodes is instrumental for theory development and can provide managerial insights for the relationship management literature.

Much of the extant research on frontline mechanisms has used FLEs as the unit of analysis, thereby referring to cognitive and emotional work done by the FLE, during a service encounter, to be correlated with the personal dispositions of the FLE (Sirdeshmukh et al., 2002). But in practice, it has been observed that, a FLE’s choice of cognitive (task and/or relational) work and emotional (positive and/or negative emotions) work to achieve higher CSAT within the service experience is often guided by the type of situation (Belk, 1974). For instance, in a restaurant setting, if a FLE notices that a customer is unclear what to order, then the FLE can adopt a more relational approach by offering help to understand
customer’s palate and make the right selection for the customer. This transition of work from task to relational on part of the FLE can enhance customer’s satisfaction from low/neutral to high. On the other hand, if the customer is in a hurry and knows what to order, then FLE has limited opportunity to showcase any change in cognitive work but can use emotional work to influence customer’s satisfaction with the service experience. Thus, analyzing service experiences which showcase positive/negative change in CSAT across service episodes, will present distinct patterns of cognitive and emotional work associated with the change. Hence we propose the following

P5: Distinct patterns of cognitive and emotional work will be associated with positive/negative changes in CSAT (i.e., low to neutral/high, neutral to high, high to neutral/low, neutral to low).

RESEARCH SETTING, MEASURES AND ANALYSIS

Research Setting

To test our framework we propose a setting that should allow observation and analysis of FLE displayed work and change in the level of CSAT as it unfolds over an extended service experience. Typically, a naturalistic setting such as observational studies appear to be well suited for this purpose and have been used in communication literature (Bonomia & Felder, 1977; Stewart et al., 1987), relationship marketing (Mattila & Enz, 2002), and social psychology (Gottman & Krokoff, 1989). While naturalistic studies have obvious advantages for in-situ study of frontline interactions, they pose problems of observant induced bias (i.e., the presence of an observer may change behaviors of customers and frontline employees) and capacity limitations (i.e., the observer may not be able to observe all aspects of frontline interactions if they extend over time and space such as in airline travel). An alternative is to use videotaped material that captures naturalistic frontline interactions for subsequent analysis. Although there were some reservations about using videotaped material for research, Imada and Hakel (1977) demonstrated that there is not much difference in inferences and patterns uncovered from either (naturalistic or video tapped) materials involving live interviews.

Compared with retrospective reports used in prior research, the observational methodology has several advantages for collecting data. First, observational methodology reduces common method bias. Prior research has shown that people’s perceptions could be biased by their satisfaction or dissatisfaction with the service experience (Dryer and Horowitz 1997). Thus, data at the interaction level for the FLE-customer interactions could be confounded with outcome data for the same interaction, if both sets of data are obtained from the dyad’s subjective reports. Second, while retrospective reports often reflect recollections of the dyad parties’ overall interaction style, observation facilitates the situated examination of displayed verbal and non-verbal behaviors. Third, unobtrusive observation for a sufficient number of service episodes also help limit Hawthorne effect. Finally observational methodology allows tracing of changes in displayed behaviors across time. In retrospective studies, such tracing is likely to be contaminated by perceptual and retrieval problems. Since, capturing time variations is critical in our conceptual development; we believe an observational methodology will be well suited for our research.

Airline, hotels, restaurants and banks are often chosen as the study site for observation research in service marketing because of the high level of customer-employee interactions (Hochschild, 2003; McColl-Kennedy & White, 1997). In line with the extant thinking, we test our framework by using a “fly on the wall” television series “Airline-US” which was recorded in US during 2004 and was based on Southwest’s daily service operations. The series followed a “fly on the wall” approach while recording the service experiences, and limited the coverage to only two airports in USA – Los Angles and Chicago and 8-10 front line employees over the course of entire series. The context of the series lend itself well to our requirement of a field setting, and also the ability to control factors such as number of locations, and FLEs whose displayed work (cognitive and emotional) could be tracked over time. Also, the series provides a set of diverse service experiences that occurs under different situations over an extended period of time.
The Airline television series purposefully picks critical service experiences to enhance its appeal among its viewers, but it also serves our goal well. The selection of critical service experiences (Bitner, Booms, & Tetreault, 1990) helps us in three ways. First, it allows us to establish temporal precedence between the cognitive and emotional work of the FLE and its outcome, thereby strengthening causal inferences. Second, it allows studying service interactions that have happened in similar kind of situations. Third, it conveniently samples the most critical service experiences that have transpired over a specific period of time, thus providing the opportunity to gather richer insights. The proposed approach allows us to provide an in-depth portrait of a service interaction and test the proposed framework. We aim to identify the underlying insights regarding what, how and why some service interactions are more effective as compared to others.

**Measures**

For observation, we ground our cue measures in extant literature. Literature on relationship marketing (Kumar, Scheer, & Steenkamp, 1995; Mattila & Enz, 2002; Selnes & Gonhaug, 2000; Sirdeshmukh et al., 2002), marketing communications (Bonoma & Felder, 1977; Sundaram & Webster, 2000), social psychology (Byron, Terranova, & Nowicki Jr, 2007; Fredrickson, 2001; Sandberg, 2000), clinical psychology (Meretoja, Isoaho, & Leino‐Kilpi, 2004), and emotions (Pugh, 2001; Rafaeli & Sutton, 1987) is used as a guide to develop the cues. Prior research has argued that observational strategies (Knudson & Morrison, 1999) fall on a continuum between gestalts (overall impression), to a more structured plan of observational focus. Although structured plans of observation has its own advantages, but it is of limited use in the context of FLE-customer interactions due to its inherent inflexibility to generate insights in absence of step-by-step pieces of information. Thus to generate specific insights from general observations we use the gestalt approach to observe service experiences. By focusing on general impressions of the interactions (presumed to generate information greater than the sum of individual parts), we attempt to draw causal inferences about specific behavioral cues.

Task oriented work has been noted as an attribute of the FLE and is known to influence the customer (Taylor & Woodside, 1981). Thus a customer's perception of a FLE’s task oriented cues during the service interaction reflects the identification of relevant competencies associated with the service interaction (e.g., ability to analyze and interpret knowledge of the process, ability to self-teach and cooperate). Such cues are often displayed verbally/nonverbally (e.g., through usage of phrases such as “I understand”, “following are the options you can choose from”, or through speech rate and eye contact). To capture all such task oriented cues, we develop 3 verbal and 4 non-verbal gestalt states. Similarly, relational orientation is also noted as an attribute of the FLE and is displayed as behavioral cues that place consumer's interest ahead of FLE's self-interest provide caring and individualized services. The verbal and non-verbal cues for relational oriented work capture empathy, flexibility and helping cues of the FLE (e.g., through usage of phrases such as “what would you prefer, let me get that for you or display cues such as nodding in agreement). To capture all relational work cues, we develop 3 verbal and 2 non-verbal gestalt states.

Emotional displayed work (positive/negative) is assessed by adapting Russell’s circumplex model of affect. Based on the prior literature we measure emotional work on two dimensions - intensity and frequency (Schimmack & Diener, 1997). Verbal cues for positive emotions (e.g., joy, contentment happiness) are measured via 3 states (high arousal, moderate arousal and low arousal) and non-verbal positive emotion cues are based on physical cues (e.g., smile, open posture and eye contact). Similarly, verbal cues for negative emotions (e.g., sadness, anger, disgust, and frustration) are measured via 3 three states (high arousal, moderate arousal and low arousal) and non-verbal negative emotion cues are based on physical cues (e.g., tightening of lips, looking away and gesturing). Thus to capture emotional work, we develop 3 verbal and 3 non-verbal gestalt states for positive and negative emotions each. Satisfaction however is measured by only display of emotional work.
Analytical Approach

Each sampled service experience in the series is sub-divided in several 1-2 minute service episodes. We treated each 1-2 minute service episode in the series as an independent unit for coding. This method of slicing a service experience into multiple parts and treating them as independent units is well established in prior research (Ma & Dubé, 2011). For each service experience, we assessed and coded an average of 2 independent units of service episodes. We used the gestalt scale to code multiple service episodes within a service experience for cognitive work, emotional work and the resulting CSAT. Two coders (one of the authors and another independent coder) - conducted the coding. A coder first transcribed the episodes in a textual format and the other coder then tested the textual content with the audio-visual to check for consistency. In total, we coded verbal and non-verbal cues for 49 service experiences. Each of the elements of the displayed work (cognitive work-task/reational, emotional work-positive/negative and CSAT) were measured on a continuous Likert scale of 1-5 with 1 representing the least intensity of the displayed work and 5 representing the maximum intensity of the displayed work. The frequency of occurrence of verbal and non-verbal cues for each dimension of the displayed work was also recorded. Before coding the service experiences, coders were pre-tested for their comprehension of the coding scheme, and how to conduct the coding. Differences (if any) were resolved by mutual agreement. For computation purposes, data was pooled across types of situation and different service experiences. Inter coder reliabilities (average proportion of agreement between pairs of coders) for the diagnostic cues are as follows: competence (0.90), benevolence (0.95), positive emotion (0.84), negative emotion (0.87); and for CSAT (0.93). These reliabilities are consistent with reliabilities reported in other similar studies.

RESULTS

Changes in CSAT during an Extended Service Experience

We examined the patterns of CSAT across multiple episodes within the same service experience (see Table 1 for a sample of 6 service episodes). A visual inspection of the CSAT scores shows that CSAT changes perceptibly from the first to second episode (low satisfaction to high satisfaction i.e. LtH and low satisfaction to low satisfaction LtL). For example, we observe that for few episodes, the first episode is associated with low levels of CSAT. However, as the service experience unfolds, the CSAT levels in the concluding episode either remain at the same level or changes to a higher level and thus also provide support for P1.

Table 1: Cognitive and Emotional Work during Discrete Episodes of an Extended Service Experiences: Sample Analysis of 6 Experiences

<table>
<thead>
<tr>
<th>Change in CSAT</th>
<th>Service exp.</th>
<th>Task-oriented</th>
<th>Relation-oriented</th>
<th>Positive</th>
<th>Negative</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-to-Low</td>
<td>1</td>
<td>2.5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>(LtL)</td>
<td>2</td>
<td>3.5</td>
<td>1.5</td>
<td>2.5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>2.5</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Avg.</td>
<td>2.6</td>
<td>2.3</td>
<td>1.8</td>
<td>2.3</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Low-to-High</td>
<td>1</td>
<td>1.5</td>
<td>3.5</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>(LtH)</td>
<td>2</td>
<td>3.5</td>
<td>4</td>
<td>1.5</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Avg.</td>
<td>2.6</td>
<td>3.8</td>
<td>1.8</td>
<td>3.6</td>
<td>1.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>
We also conducted paired sample t-tests for service experiences where the CSAT was found to be low in the beginning and remained low even at the end of the service experience (i.e., low-to-low or LtL) vs. service experiences that followed a low-to-high path (LtH). Service experiences exhibiting LtL CSAT pattern across service episodes show no significant mean difference across any of the variables. In contrast, for service experiences witnessing an LtH pattern of CSAT, the mean difference in scores for all the variables is significant. This result indicates that our operational measures are effective in capturing CSAT variations across service episodes and that these variations can be substantial there by providing support for P2.

<table>
<thead>
<tr>
<th></th>
<th>LtL service experiences</th>
<th>LtH service experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction</td>
<td>2.68</td>
<td>2.62**</td>
</tr>
<tr>
<td>Competence</td>
<td>.55</td>
<td>1.38**</td>
</tr>
<tr>
<td>Benevolence</td>
<td>.55</td>
<td>1.83**</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>.57</td>
<td>1.04**</td>
</tr>
<tr>
<td>Negative emotion</td>
<td>.50</td>
<td>-.55</td>
</tr>
</tbody>
</table>

**p<0.05, N = 49

Patterns of Cognitive and Emotional displayed Work Associated with Effective Service Experience

We expected that cognitive (task/relational) and emotional displayed work (positive/negative) might change during the service experience and would evidence variability across service episodes. We quantitatively and qualitatively analyzed the service experiences to understand cognitive and emotional work variability. For the quantitative analysis, we used the NLOGIT software to run linear regressions, and for the qualitative analysis, we present two illustrative cases (missed flight, confrontation regarding age of the baby) of FLE-customer interactions from the dataset – Airline to demonstrate the suggested variability (The transcript of the two service interactions are provided in the appendix).

Table 3 lists the results of the regression analysis. The significant results for change in task and relational work impacting changing in customer satisfaction provides support for P3 and mixed results for emotional work provides partial support for P4. The interaction effects of cognitive and emotional work on change in CSAT however didn’t come out as significant, however the direction of the coefficient is in the proposed direction. The insignificant result can also be attributed to low number of interactions analyzed at the moment. Though the quantitative findings are inconclusive, but it provides us some directions to further explore the topic. To do so, we qualitatively analyzed the different service exchanges but for illustration purpose we present two such cases. In the missed flight case, FLE demonstrates low task related work in the 1st service episode and displays it via verbal cues (choosing ineffective words) - (“You should be here 2 hrs. before departure but you came only 20 minutes before here”). But on observing low CSAT conveyed by the customer (“this is ridiculous, this in insane”) the FLE adopted relational work in the second service episode and demonstrated empathy towards the customer’s plight and made effort to offer flexible options for travel – (“Let me see. I want to make sure that I have a better way to get you to San Diego”). The FLE even made effort to expedite the service process thereby generating higher satisfaction from the customer - (“Oh God. I am very happy, appreciate your help”). In the same service experience, in the 1st episode, when the customer arrived late, the FLE demonstrated negative emotions by using pessimistic words – (“Everything is sold out”) and a confronting demeanor – (“The security line takes about 40 minutes to 50 minutes not 1 hour 30 minutes”). But on observing low CSAT, FLE moved to demonstrate positive emotions (enthusiasm) via non-verbal cues – (smiling and maintaining constant eye contact while interacting). Thus the FLE moved from task to relational and negative to positive work during the course of the service experience and was able to convert low CSAT to high CSAT.
Table 3: Regression Analysis for Frontline Employee Displayed Work and CSAT

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.01</td>
<td>.13</td>
</tr>
<tr>
<td>Task-oriented</td>
<td>.86***</td>
<td>.19</td>
</tr>
<tr>
<td>Relational oriented</td>
<td>.72***</td>
<td>.15</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>.56*</td>
<td>.32</td>
</tr>
<tr>
<td>Negative emotion</td>
<td>-.21</td>
<td>.23</td>
</tr>
<tr>
<td>Task oriented*positive emotion</td>
<td>-.14</td>
<td>.46</td>
</tr>
<tr>
<td>Task oriented*negative emotion</td>
<td>-.50</td>
<td>.45</td>
</tr>
<tr>
<td>Relational oriented*positive emotion</td>
<td>-.03</td>
<td>.23</td>
</tr>
<tr>
<td>Relational oriented*negative emotion</td>
<td>.13</td>
<td>.21</td>
</tr>
</tbody>
</table>

***p<0.001, **p<0.05, *p<0.01, N = 49

To partial out distinct patterns of cognitive and emotional work during service experiences having LtH CSAT vs. LtL CSAT, I qualitatively analyze the second case ‘confrontation regarding age of the baby’. On observing low satisfaction in the 1st episode of the service experience—the FLE tries to move from negative emotion—(“Sir I am not double speaking..”) towards positive emotions by using confirming words— (“Let us get you guys to the gate”) and tries to enhance its task/relational work by expediting the process of boarding the aircraft. But the dynamic change in the FLE work did not created the desired effect of high CSAT in the second episode. This dichotomy in results can be attributed to process and outcome interdependency (Ma and Dubé 2011). For the CSAT to increase, customer should be able to distinguish the positive change in FLE work. Thus, the level of FLE effort and ability to notice the effort on part of the customer can outline distinct patterns in LtL and LtH service experiences.

**DISCUSSION AND FUTURE RESEARCH AGENDA**

This study uses both cognitive (task/relational) and emotional (positive/negative) displayed work, by the FLE as the key source of CSAT. The findings from the study indicate that both cognitive work (task/relational) and emotional work (positive/negative) (a) vary across episodes of an extended service experience, (b) show interpretable patterns of association with changes in CSAT (LtL versus LtH), (c) involve deliberate FLE effort in changing displayed verbal and nonverbal cues, and (d) this effortful change in frontline work appears critical to effective service experiences (positive change in CSAT—LtH).

**Theoretical Contributions**

The current research enriches the understanding of CSAT in service experiences in several important ways. First, where prior research has treated CSAT as a post experience evaluation, we have conceptualized it as a continuous process that develops during the service experience and is influenced by the situational flow (saying and doing) of the service interactions. The findings from the analysis do lend support towards the stated conceptualization. However, there is opportunity to develop a theory of continuous evaluations to better comprehend “why” should there be change in customer evaluation over the course of the service experience. Second, we have defined cognitive and emotional displayed work in terms of both verbal and non-verbal cues to provide a holistic conceptualization of both the work types in the frontline service experience. Doing so have resulted in a fine-grain approach towards measurement of these work types. By exploring the interacting role of both the work types (cognitive and emotional) in the formation of CSAT at the service episodic level, we have opened up the debate about “how frontline displayed work can be made more effective”? Third, we have conceptualized service episodes as a unit of analysis. Doing so helps us to move away from the individual dispositions debate and towards the
dynamics of the situation and its flow during the course of the service experience. However, changing the unit of analysis from prior research also raises questions about concepts that are sensitive to the new paradigm. Fourth, we contribute to existing body of knowledge that has outlined the importance of observing both sides of the dyad (Ma & Dubé, 2011) in interpersonal interactions to make meaningful inferences. Though we limit our observation to just CSAT for the customer side of the dyad, but the current operationalization of the CSAT construct (verbal/non-verbal) does advances the debate about temporal sensitivity of the cues i.e. what cues are demonstrated first – verbal/non-verbal.

Managerial Implications

The development of CSAT as a continuous process offers important managerial implications. First, it provides the opportunity to develop a powerful diagnostic capability that can enable managers to understand the shortcomings of “doing and saying” happening in the front line interactions. For instance, Apple understood that customers who are ignorant about Apple products might feel embarrassed to talk about it in the stores. Hence it trained its employees to control their responses to avoid making the customer feel embarrassed and thus ensured that CSAT is high. Second, the continuous aspect of CSAT formation invokes the principle of continuous improvement. In practice, it means the manager needs to develop ways to consistently measure and monitor CSAT. Over time, managers can learn to intervene at the opportune time and take corrective step to minimize or eliminate unfavorable service experiences and retain or reinforce favorable patterns. Third, the manager can focus on the level and change in level of FLE displayed work (cognitive and emotional) to understand the distinctive patterns that enhance the formation of high CSAT. Fourth, managers can train FLE’s to use the verbal (vocal rules) and non-verbal (display rules) cues demonstrated by the customer to comprehend inherent customer needs and translate it to practice via service or product innovation.

Future Research Agenda

Our aim through the study was to examine patterns of frontline work associated with CSAT, understand dynamics of frontline displayed work, conceptualize service episode as the unit of analysis, and observe the impact of situational variability in formation of CSAT. Although we do found some evidence for the propositions thereby paving the path for future empirical generalizations, however while doing so we also found exciting opportunities for future research. First, conceptualization of formation of CSAT as a multi-step process raises questions about understanding the differences between models that predict satisfaction and models that predict change in satisfaction. Second, we used the extended service experiences as a paradigm to build up our research. Then the question of managerial relevance is what kind of services would our model fit the best. Under what conditions would our model be generalizable? Third, we have only looked at CSAT as a dependent variable. There are possibilities to use other outcome measures such as firm performance, customer’s intention to purchase, and learning generated in the frontlines. All these research areas are challenging and tackling them coherently promises an avenue to enhance understanding of the marketing frontlines.
## APPENDIX

Verbatim Reports from FLE-customer Interactions Indicative of Distinct Patterns of Cognitive and Emotional work

<table>
<thead>
<tr>
<th>Missed flight</th>
<th>Excerpts from the FLE-customer interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Episode 1</strong></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>I want to be out of this place. Can you check if you or any other airlines have any tickets for the day, I just want to get out of this place</td>
</tr>
<tr>
<td>FLE</td>
<td>Mam, the tickets advise you to be here 2 hours before departure but you came only 20 minutes before departure</td>
</tr>
<tr>
<td>Customer</td>
<td>Because I was stuck in the security line</td>
</tr>
<tr>
<td>FLE</td>
<td>The security line generally takes about 40 minutes to 50 minutes and not 1 hour 30 minutes</td>
</tr>
<tr>
<td>Customer</td>
<td>I didn't know about that. Can you check for any tickets availability</td>
</tr>
<tr>
<td>FLE</td>
<td>Everything is sold out. It is Monday and a busy day</td>
</tr>
<tr>
<td>Customer</td>
<td>That is ridiculous. This is insane</td>
</tr>
<tr>
<td><strong>Episode 2</strong></td>
<td></td>
</tr>
<tr>
<td>FLE</td>
<td>Let me see. I want to make sure that I have a better way to get you to San Diego</td>
</tr>
<tr>
<td>Customer</td>
<td>I had issues with the credit card…….</td>
</tr>
<tr>
<td>FLE</td>
<td>Okay so how does this sound, you can take a double connection, first going to Kansas City, change planes and then to Albuquerque and finally San Diego</td>
</tr>
<tr>
<td>Customer</td>
<td>If we have to do it, then we have to do it</td>
</tr>
<tr>
<td>FLE</td>
<td>Okay then, I guess you made it.</td>
</tr>
<tr>
<td>Customer</td>
<td>Oh God. I am very happy, appreciate your help</td>
</tr>
</tbody>
</table>
## Service encounter: 2, Customer satisfaction: Episode 1 – Low, Episode 2 - Low

<table>
<thead>
<tr>
<th>Age of the baby</th>
<th>Excerpts from the FLE-customer interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Episode 1</strong></td>
<td></td>
</tr>
<tr>
<td>FLE</td>
<td>Sir, you would have to buy a new ticket for the child as you don’t have ID for the baby</td>
</tr>
<tr>
<td>Customer</td>
<td>I am not paying 270 dollars for a ticket for him when I know he is only 18 months old</td>
</tr>
<tr>
<td>FLE</td>
<td>Sir, you need to have a proof of age when the baby is below 2 years</td>
</tr>
<tr>
<td>Customer</td>
<td>You are representing your company then why does your company not say this when you are buying/flying</td>
</tr>
<tr>
<td>FLE</td>
<td>Sir Sir…</td>
</tr>
<tr>
<td>Customer</td>
<td>…I am asking you a question</td>
</tr>
<tr>
<td>FLE</td>
<td>Sir it says that you need to and I can't say what they can do for you someplace else. It is documented here that you need a proof of age for the baby. This is my third time I am trying to say this</td>
</tr>
<tr>
<td>Customer</td>
<td>You could have just spoken it once</td>
</tr>
<tr>
<td>FLE</td>
<td>Sir I am not double speaking….</td>
</tr>
<tr>
<td>Customer</td>
<td>This is just poor customer service</td>
</tr>
<tr>
<td><strong>Episode 2</strong></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>Mam, our flight leaves at 4:50 so I would like you to tell them to wait</td>
</tr>
<tr>
<td>FLE</td>
<td>We are not going to hold the aircraft</td>
</tr>
<tr>
<td>Customer</td>
<td>Then you need to give us 3 tickets for the next flight</td>
</tr>
<tr>
<td>FLE</td>
<td>We checked on your behalf at the hospital regarding the baby, they don't have the information. So what you can also do is show the birth certificate to the customer services and they will refund you the money for the ticket</td>
</tr>
<tr>
<td>Customer</td>
<td>So would it be credited back once we showed the birth certificate</td>
</tr>
<tr>
<td>FLE</td>
<td>Yes</td>
</tr>
<tr>
<td>Customer</td>
<td>If you would have told me that to begin with we could have done that</td>
</tr>
<tr>
<td>FLE</td>
<td>I tried to tell it earlier….</td>
</tr>
<tr>
<td>Customer</td>
<td>Well…Impossible</td>
</tr>
</tbody>
</table>
REFERENCES


