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How Consumers React to the Negative Emotions of Loss, Embarrassment, and Stress

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Management

by

Li Jiang

2016

ABSTRACT OF THE DISSERTATION

How Consumers React to the Negative Emotions of Loss, Embarrassment, and Stress

by

Li Jiang

Doctor of Philosophy in Management

University of California, Los Angeles, 2016

Professor Aimee Drolet Rossi, Chair

Abstract

I present three essays that show how consumers react to the negative emotions of loss, embarrassment, and stress. For individual consumers, loss, embarrassment, and stress can decrease consumer well-being. For firms, these negative emotions can decrease consumer satisfaction which then results in decreased loyalty. Therefore, an examination of how consumers react to loss, embarrassment, and stress is of interest to both individual consumers and firms. The first essay examines how experiential vs. material products (and experiential vs. material framing) induce different levels of feeling of loss. I use the endowment effect paradigm, the gap between willingness to accept (WTA) and willingness to pay (WTP), to capture loss-induced overvaluation. The second essay examines how consumers regulate embarrassment-avoidant behavior by taking the perspective of an observer. The third essay examines how consumers regulate stress in social contexts. I distinguish between explicit versus implicit social support and study how older adults versus young adults use these two kinds of social support differently to reduce stress. These three essays provide insights into consumers' reactions to negative emotional experiences and suggest potential ways to cope with them.

The dissertation of Li Jiang is approved.

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University of California, Los Angeles

2016

To my parents and my advisor

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CHAPTER 1. INTRODUCTION AND OVERVIEW

The negative emotions of loss, embarrassment, and stress are commonly experienced in consumer settings (e.g., encountering a service failure or visiting the dental office). Yet, relatively few studies in marketing focus on consumer reactions to negative emotions and experiences (e.g. Luce 1998; Duhachek 2005; Miller et al. 2008). For individual consumers, loss, embarrassment, and stress are negatively-associated with consumer satisfaction and well-being. For firms, these negative emotions can reduce customer satisfaction and retention. With rising customer-acquisition costs, firms place an increased emphasis on retaining clients. Because customer retention is often negatively correlated with customers' negative emotions, examining how consumers react to the specific negative emotions of loss, embarrassment, and stress and finding ways to help consumers regulate these emotions is important for both consumer and firm welfare.

The first essay examines how consumers react to loss. In particular, I examine how experiential (vs. material framing) influences the feeling of loss. I use the endowment effect paradigm, the gap between willingness to accept (WTA) and willingness to pay (WTP), to capture loss-induced over-valuation.

The second and third essays examine how consumers regulate embarrassment and loss, respectively. Consumers do not merely experience emotions passively; they also actively regulate their emotions. Emotion regulation is defined as “the processes by which we influence which emotions we have, when we have them, and how we experience and express them” (p.2, Gross 2002). Depending on whether one's emotion response tendencies have been fully activated, emotion regulation strategies can be broadly categorized as antecedent-focused emotion regulation and response-focused emotion regulation. Antecedent-focused emotion regulation refers to regulatory activities that occur before the emotion response is

fully activated and executed. It includes: situation selection/modification, attention deployment, and cognitive change (reappraisal). Response-focused emotion regulation refers to regulatory activities after the emotion response is fully activated, including emotion suppression (Gross 2002).

Past research on emotion regulation mainly considers emotion regulation to be an individual process (Gross 2002). However, in consumer settings, emotion regulation usually happens in an interactive way: Consumers interact with advertising, other consumers, and service providers to regulate negative emotions. My second essay seeks to answer how consumers regulate embarrassment by taking an observer's perspective. The extant marketing literature has long focused on how contextual factors shape consumption but has rarely studied how consumption settings help consumers regulate emotions. My dissertation attempts to fill this gap.

My third essay examines how consumers regulate stress in social interactions. Contemporary emotion regulation research considers emotion regulation as an individual process (Gross 1998; 2002). Yet, in order to regulate their emotions, people often engage in social sharing, seek social support, and try to elicit empathy from others. To that end, Zaki and Williams (2013) proposed the idea of interpersonal emotion regulation. Interpersonal emotion regulation refers to emotion regulation that is in the context of a live social interaction. Interpersonal emotion regulation can be classified into response-dependent and response-independent processes. Response dependent processes rely on another person's particular feedback. For example, Person A may feel better seeking explicit social support from Person B, but that depends on whether Person B responds in a supportive way. Response-independent processes, however, require social interactions but do not require a particular response from one's interaction partner (Zaki and Williams 2013).

In essay 3, I examine how, when stressed, young adults and older adults use social support differently. I rely on the distinction between explicit social support which is response-dependent and implicit social support which is response-independent. I investigate age-related differences in preferences for these two kinds of social support.

This dissertation is organized as follows:

In three essays, I examine how consumers react to loss, embarrassment, and stress. In essay 1 (Chapter 2), I study how consumers react to loss. Using the endowment effect paradigm, I examine how experiential (vs. material framing) influences the feeling of loss. In essay 2 (Chapter 3), I focus on how consumers regulate embarrassment-avoidant behavior by taking an observer's perspective. In consumption settings, an observer's perspective can be elicited by advertising messages. I demonstrate how consumers can reduce feelings of embarrassment through this kind of perspective-taking. In essay 3 (Chapter 4), I adopt an interpersonal emotion regulation perspective and examine how young adults and older adults use social support differently when they feel stressed. I rely on the distinction between explicit social support, which is response-dependent, and implicit social support, which is response-independent, and demonstrate how young adults and older adults differ in their preferences for these two kinds of social support. Finally (Chapter 5), I conclude with a discussion of the current results and intended contributions.

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CHAPTER 2. HOW CONSUMERS REACT TO LOSS: THE ENDOWMENT EFFECT OF EXPERIENCES (VS. MATERIAL POSSESSIONS) AND THE ROLE OF NARRATIVE PROCESSING

This essay examines how consumers react to the loss of future experiential (vs. material) consumptions. Consumer behavior research has increasingly turned attention towards the consumption of experiences versus material products. Experience purchases are intangible, made with the primary intention of acquiring “a life event” or “a series of events that one lives through.” Experiential purchases are consumed once and exist in memory thereafter. By contrast, material products are “tangible objects, kept in one’s possession” (Van Boven and Gilovich 2003). Because experiences are intangible and exist in memory, they are not only quantitatively but also qualitatively different from material products. Previous research has shown that the evaluation of experiences is less comparative than material products (Carter and Gilovich 2010) and that experiential purchases are more satisfying than material purchases (Van Boven and Gilovich 2003).

In this chapter I examine how consumers react to the loss of a future experiential (vs. material) consumption. I use the endowment effect paradigm and focus on how the difference between experiences and material goods influences the endowment effect. Research on the endowment effect has focused on the different perspectives of buyers versus sellers but not focused much attention on the type of object being considered. At first glance one might think that the type of object should not matter, after all, the traditional endowment effect explanation is based on the insight that the act of giving up any object is psychologically more painful than the pleasure felt by getting that same object (e.g., Kahneman, Knetsch and Thaler 1990). I propose that experiences magnify the endowment effect relative to material products because the pain felt by sellers dramatically increases with

experiences. Imagine having tickets to a concert with your favorite band. Once the tickets are purchased, you may start to anticipate the excitement of the event and imagine what songs they might play, who you will go with, etc. In essence, it is natural to start telling yourself and others a story about the concert even before you go. I suggest that this type of narrative processing transports sellers into the event (Escalas 2004; Green and Brock 2000; West, Huber, and Min 2004) and increases the amount they demand for someone to purchase the ticket. In contrast, sellers do not naturally engage in narrative processing with material products and therefore the endowment effect is less pronounced.

The current research is distinct from previous research that examines consumer choice between hedonic and utilitarian products (Dhar and Wertenbroch 2000). Dhar and Wertenbroch (2000) found the proportion of the hedonic option was greater when consumers decided which item to give up than when they decided which item to acquire. One may argue that experiences are more hedonic and material products are more utilitarian, and the greater endowment effect of experiences (vs. material products) is due to the hedonic nature of experiences. However, I note that the experience-material distinction is different from the hedonic-utilitarian distinction. An experience such as a trip is utilitarian when it is a business trip, but hedonic when it is a vacation. By the same token, a material product such as a computer is utilitarian when it is intended for work, but hedonic when it is intended for entertainment. Nevertheless, in the current research I tried to keep the hedonic-utilitarian dimension constant and only varied the experiential-material dimension.

The paper is organized as follows. I present a brief review of prior research on the endowment effect as well as narrative processing. Next, I test our prediction in five experiments that vary the objects under consideration, examine boundary conditions, and isolate narrative processing as the psychological mechanism. I conclude with a discussion of theoretical and managerial implications.

THE ENDOWMENT EFFECT OF EXPERIENCES VS. MATERIAL PRODUCTS

The endowment effect is the classical finding that a seller's minimum price to give up a product (WTA) is greater than a buyer's maximum price to pay (WTP) for the product (Thaler 1980). Most past research on the endowment effect focused on material products—typical categories were mugs, pens, and candies (for a review, see Horowitz and McConnell 2002). Traditionally, loss aversion accounts for the endowment effect (Kahneman and Tversky 1979; Thaler 1980). Over time, other contributing factors, such as egocentric empathy gaps (e.g., Van Boven, Dunning, and Loewenstein 2000), construal level (Irmak et al., 2013), and differences in affect disparity (e.g., Peters, Slovic, and Gregory 2003) have been proposed to explain the effect.

Prior research suggests that the difference in valuation between experiences and material products may depend upon the type of estimates (sellers vs. buyers). First, research suggests sellers and buyers have different focuses (Carmon and Ariely 2000; Van Boven, Dunning, and Loewenstein 2000): buyers tend to focus on money, and thus reference prices heavily influence buying prices; sellers, however, tend to focus on the product, and product-related factors, such as product type, influence selling prices. Second, different types of estimates induce different pre-factual thinking (Sanna 1996), the pre-decision mental simulation. Whereas buyers are involved in the pre-factuals about other usages for their money (e.g., “if I buy the ticket today, I cannot buy other things”), sellers are involved in the pre-factuals about product-related features (e.g. “if I sell the ticket today, what I am going to miss?”). Therefore, sellers will be more influenced by product type—in this case, the experiential-material distinction—than buyers.

I propose that, for sellers, pre-factuals of experiences are richer in narrative processing than pre-factuals of material products, which leads to higher valuation for experiences. Escalas (2004) suggests people tend to impose a narrative structure on events such as

experiences. Research has shown that one reason people engage in experiential purchases is so that they can talk about their experiences later on (Kumar and Gilovich 2014). Similarly, consumers seek to obtain specific memory pointers (e.g., souvenir) to encode special experiences and avoid interference with other experiences that happen at the same place (Zauberman, Ratner, and Kim 2009). Given that the story utility of experiences is higher than that of material products (Kumar and Gilovich 2014), the WTA for experiences could be significantly higher than that for products.

More formally, I predict narrative processing drives sellers' valuation (but not buyers' valuation) to be greater for experiences than possessions. Specifically,

H1: The endowment effect will be greater for experiences than for material products.

H2: Highlighting experiential aspects of a product leads to a greater endowment effect than highlighting material aspects of the same product.

Our framework suggests that narrative processing underlies the differences in the endowment effect between experiences and products. A consumer experience has elements of a narrative: a temporal organization (Bruner 1986, 1990)—a beginning, middle, and end—and a relational organization (Stein and Albro 1997)—where and with whom to consume this experience. Experiences are less comparable in nature as well (Carter and Gilovich 2010). What are the consequences of more narrative processing for experiences? Research has shown more narrative processing leads to narrative transportation, defined as immersion into a story (Gerrig 1994; Green and Brock 2000, 702). Different from traditional elaboration-based cognitive response models (e.g., ELM; Petty, Cacioppo, and Schumann 1983), narrative transportation affects attitudes through mental imagery, reduced critical thoughts, and strong affective responses (Green and Brock 2000). Two main components are needed for narrative transportation: (1) story plot (Green and Brock 2002) and (2) empathy for the story character (Slater and Rouner 2002) and focused attention to the story due to motivation

or requirement (Nielsen and Escalas 2010; Polichak and Gerrig 2002). In our case, story plot is determined by product type. Experiences, as life events, are richer in narrative than material products. Our mental representation of experiences is like a movie with story-like thinking, compared to a static picture when I imagine a possession. The second factor, empathy for the story character, is determined by type of estimates (selling vs. buying). Sellers possess the products/experiences and thus they consider themselves to be the story characters when they must process a story. They pay attention to product-related features and engage in pre-factual thinking (Sanna 1996) if the purchases are rich in narrative (e.g., “if I do not sell the ticket, what will happen?”). Pre-factual thinking in turn elicits narrative processing (Kahneman and Tversky 1982). By contrast, buyers have empathy gaps with sellers (Van Boven, Dunning, and Loewenstein 2000); buyers tend to focus more on expenditures (Carmon and Ariely 2000), and even when experiences purchases are rich in narratives, buyers have an empathy gap with the story characters. Thus, only when participants are assigned as sellers (vs. buyers) for experiences (vs. material products) do they satisfy the two factors, and they elicit more narrative processing, which leads to more narrative transportation.

Narrative transportation has been shown to distract people from analytical thinking about the message strength and lead to a favorite-product attitude (Escalas 2007). If selling an unconsumed experience (e.g., a concert ticket) leads to greater pre-factual narrative processing (“if I sell the ticket, what will I miss?”) and further results in more narrative transportation into the event, I would expect sellers to be less willing to sell an unconsumed experience than an unconsumed material product; therefore, WTA would be higher for experiences than for material products. Buyers, on the other hand, tend to focus on expenditure (Carmon and Ariely 2000). Therefore, buying an experience will not lead to greater pre-factual narrative processing on product features and greater narrative

transportation than buying a product. As a result, buyers' WTP for experiences should be similar to their willingness to pay for material counterparts.

H3: Narrative processing mediates the effect of product type on willingness to accept (WTA) but not on willingness to pay (WTP).

I also want to distinguish narrative processing with mere elaboration. As Escalas (2004) noted, narrative processing does not necessitate more elaboration in consumers' mind. Narrative processing is "a different mode of thought". When engaging in narrative processing, consumers "impose narrative structures, including temporal structure and causal structure, to organize information" (Escalas 2004, p.1). They consider incoming information in a temporal and relational format "as if they were trying to create a story" (Escalas 2004, p.1), rather than piecemeal.

The next question is: how to make sellers value material products more? If the greater endowment effect of experiences (vs. material products) is due to the difference in narrative processing, adding narratives into a material product may increase its valuation. One way to add narratives into a material product is to encourage mental simulation of using the product. Mental simulation is defined as "the cognitive construction of hypothetical scenarios" (Escalas 2004, p1) and it is usually in the form of stories or narratives (Fiske 1993). Taylor and Schneider's (1989) definition of mental simulation includes autobiographical memories, and Escalas (2004) states that mental simulation creates "behavioral episodes (i.e., stories) in which we are the main character." In this sense, mental simulation of using a product is different from picturing or imaging a product. Mental simulation encourages people to generate stories about using the product, and shifts processing mode from analytical to narrative processing (Escalas 2004), whereas picturing or imaging a product merely increase the vividness of the mental image of the product but not necessarily in narrative format. According to Green and Brock (2000), imagery is part of narrative processing, but not

sufficient to construct a story. Furthermore, when people cognitively construct hypothetical scenarios, they could construct different possibilities (e.g., different counterfactuals). These different counterfactuals cannot be manifested in picturing or imaging a product as well.

Another way to manipulate narrative processing is through varying narrative causality structure within a story. Research suggests narrative processing relied heavily on the structure of narratives (Dahlstrom 2012; Stein and Albro 1997). Escalas (2004) noted that narrative structure is a different mode of thought and “when engaging in narrative processing, consumers impose a narrative structure—a beginning, middle, and end—and attribute causality”. Therefore, by imposing or disrupting narrative causality structure, I could make a paragraph more or less like a story and make people engage in more or less narrative processing. Compared to the mental simulation manipulation, manipulating narrative processing through narrative causality has a big advantage because it allows us to only vary the narrative structure of a story, while keeping all information the same. One may argue that when narrative processing is manipulated through mental simulation, participants may elaborate more in mental simulation condition (vs. no mental simulation condition). However, when narrative processing is manipulated through varying narrative structure, there is no reason to assume mental elaboration is more in high (vs. low) narrative causality condition because the information is essentially the same. Indeed, research has shown that people spend less time elaborating information when narrative causality structure is high (vs. low), because when information is organized in causal structure, people do not have to spend additional time to fill in mental causal gaps (Magliano 1999). Therefore, by manipulating narrative causality, I am able to tease apart narrative processing account from “mere elaboration” account.

Altogether, I predict that adding a product-related story can increase sellers’ valuation of material products to the same level as experiences by increasing narrative processing.

However, adding a product-related story will have less, if any, effect on WTA for experiences, because experiences are already processed in a narrative way. I further predict, there is less, if any, effect on WTP, because buyers tend to focus on expenditures and have empathy gaps with sellers (the story characters). Adding a product-related story can be achieved by encouraging people to mentally simulate using the product, or more strictly, by manipulating the narrative causality structure within a story. These leads to the following two hypotheses:

H4: Encouraging participants to mentally simulate using material products enhances the endowment effect of material products. However, encouraging participants to mentally simulate experiences does not further enhance the endowment effect for experiences.

H5: Adding a product-related story with high (vs. low) narrative causality leads to greater WTA for material products. However, adding a product-related story with high (vs. low) narrative causality does not lead to further increases in WTA for experiences.

I tested these hypotheses in five studies. Study 1 shows the endowment effect is greater for experiences than for material products. Study 2 shows highlighting the experiential aspects of a product leads to a greater endowment effect than highlighting the material aspects of a product. Study 3, 4 and 5 demonstrate narrative processing as the mechanism. Study 3 examines the role of narrative processing as a moderated mediator. In Study 4 and Study 5, I manipulate narrative processing by encouraging mental simulation of using material products (study 4), or by varying narrative causality structure (study 5).

STUDY 1: THE ENDOWMENT EFFECT OF EXPERIENCES (VS. MATERIAL PRODUCTS)

I tested H1 in Study 1.

Design and Method

Study 1 used a 2 x 2 design with product type (experience vs. material) and type of estimate (selling prices vs. buying prices) as between-subjects factors. I recruited 255 participants (53% females, average age = 34) from Amazon Mechanical Turk and randomly assigned them to one of four conditions on the basis of product type and type of estimate (selling prices or buying prices). I included three product categories as repeated measures and randomized the order. In the experience (material) product condition, the three product categories were a ticket to one's favorite author's talk (one's favorite author's new book), a ticket to one's favorite band's performance (one's favorite band's DVD collection), and a movie ticket to a special one-time screening of *Lord of the Rings* in 3-D (a reprint of a signed movie poster of *Lord of the Rings*). A pretest showed the three categories of experience and material products did not differ in the hedonic-utilitarian dimension ($t(1,131) = 0.66, p = .51$). Prices for all products were presented and were kept the same for the experience and material product in the corresponding category (e.g., DVD collection vs. concert). I tried to keep scarcity the same by framing all products as limited edition. Participants in the seller condition imagined they possessed the products, and indicated the minimum prices at which they were willing to sell the products; participants in the buyer condition indicated the maximum amount they were willing to pay for the products. Finally, they indicated the extent to which they liked each of the products on a 7-point scale (1 = *not at all*; 7 = *very much*).

Results and Discussion

In this design, I provided market prices for the products; because the market prices for the three categories are different, I standardized the prices according to the market prices (dividing participants' valuation by market price), and used the standardized prices as the dependent variable. The standardized prices indicate the multiple of the market price that participants are willing to pay (willing to accept). I analyzed the data using an ANOVA with

standardized prices as the dependent variable and product type, type of estimates (selling prices vs. buying prices), and their interactions as independent variables. The data pattern for the three categories was the same, so I took an average across categories. An ANOVA revealed a significant main effect of product type ($F(1,254) = 20.30, p < .0001$), a significant main effect of type of estimates ($F(1, 254) = 60.83, p < .0001$), and a significant interaction between product type and type of estimates ($F(1, 254) = 4.23, p < .04$).

In the material-product condition, the endowment effect was present, with sellers stating higher prices than buyers ($M_{\text{sell}} = 1.57$ vs. $M_{\text{buy}} = 1.03; t(254) = 4.11, p < .0001$). The endowment effect was present in the experience condition ($M_{\text{sell}} = 2.18$ vs. $M_{\text{buy}} = 1.26; t(254) = 6.87, p < .0001$), and the effect was greater than in the material-product condition, indicated by the significant product type x type of estimates (selling prices vs. buying prices) interaction (Figure 1).

One explanation for why participants valued the product more in the experience-sell condition could be that they liked the product more in that condition. An ANOVA with product liking as the dependent variable and with sell-buy and product type as independent variables revealed no significant main effects or interactions. Participants did not like the products differently (Means: experience-sell: 5.26; experience-buy: 5.35; material-sell: 5.31; material-buy: 5.30; Figure 1: bottom). Therefore, product liking did not drive the difference in product valuation in different conditions. Controlling for product liking in the regression model also did not change our results.

These results support our hypothesis that product type (experience vs. material) moderates the endowment effect. However, people may argue this effect was a result of the specific sets of experiences and material products I chose, and that different sets may have produced different results. Study 2 addresses this question by (1) using a different product (an HDTV) and (2) framing the same product as more experiential or more material.

Additionally, holding the product constant allows us to control other differences between experiences and material products, such as price, scarcity, and the social aspect of experience (vs. product), thus providing a more conservative and controlled test of our hypotheses.

STUDY 2: CAN HIGHLIGHTING EXPERIENTIAL ASPECTS OF A PRODUCT INCREASE THE ENDOWMENT EFFECT?

In Study 2, I frame the same product, an HDTV, as more experiential or more material. I use an HDTV because it is a material object that is kept in one's possession for years yet provides the experience of watching TV in a new way. The purpose of Study 2 is two-fold. First, by framing the same product different ways, I rule out the explanation that the effect of Study 1 resulted from the specific sets I chose. Second, this study will help us rule out alternative explanations due to general differences between experiences and material products, such as price, scarcity, difficulty to evaluate, and shareability. In Study 1, to control for market prices, I picked experiences and material products of similar market prices and explicitly stated the same prices for the experiential and the material counterparts. In this study, I further control for market prices in a stronger way by using only one product and framing it differently. I have no reason to assume the market prices of an HDTV are different across conditions. By the same token, an HDTV simply framed in an experiential way should not be considered scarcer or more difficult to evaluate, nor have more social components than an HDTV framed in a material way. This study thus provides a controlled test for the effect of product type on the endowment effect, by holding the product constant and by framing the product as more experiential or material.

Study 2 followed a 2 (Framing: material framing vs. experiential framing) \times 2 (type of estimate: seller vs. buyer) between-subjects design. I randomly assigned participants to think about either material or experiential aspects of an HDTV and write down their thoughts. In each condition, I then randomly assigned half the participants as sellers and half as buyers. I

asked the sellers their lowest WTA to forgo the HDTV, and asked the buyers their highest WTP for the HDTV. I predicted that for sellers, compared to recipients who focused solely on the material aspects of the product, thinking about the experience the product could provide would lead them to value the product more. However, I predicted no difference between experiential and material framing for buyers.

Method

I recruited 320 participants through Amazon Mechanical Turk to participate in this study in exchange for \$0.50. Participants who did not complete the survey ($n = 11$) were eliminated from the analysis. Four participants indicated they would not want to sell the HDTV at any price. Interestingly, all four participants were in the experience framing–seller condition. I excluded them from the analysis. Our final data set thus contained left 305 participants (56% female; ages 18-64, $M = 34.5$).

Product-framing manipulations. I randomly assigned participants to one of four conditions in the 2 (framing: material framing vs. experiential framing) \times 2 (type of estimate: selling prices vs. buying prices) design. All participants were shown a picture of an HDTV. Participants in the selling-prices conditions were told they would have the opportunity to sell their HDTV at a later time in the study. Participants in the buying-prices conditions were told to examine the information of the HDTV.

In the selling-prices condition, participants in the material (experiential) framing conditions were instructed, “Think about the material [experiential] aspects of *your* HDTV. How is *your* HDTV [HDTV experience] like? What it would be like to have [watch] this HDTV? Please describe *your* HDTV [HDTV watching experience] below.” Then participants were asked “**what is the lowest price you are willing to accept to forgo your HDTV?**”

In the buying-prices condition, I used text similar to the above except I changed “your HDTV [HDTV experience]” to “the HDTV [HDTV experience]” to indicate they did not

own the HDTV. The instructions read, “Think about the material [experiential] aspects of the HDTV. How is *the* HDTV [HDTV experience] like? What would it be like to have [watch] this HDTV? Please describe *the* HDTV [HDTV watching experience] below.” Then participants were asked, “**What is the highest price you are willing to pay for the HDTV?**”

After participants finished indicating their prices, they rated two manipulation-check questions: (1) participants read, “Possessions are something one purchases to have; experiences are something one purchases to do. You consider an HDTV to be_____” (on a 7-point scale: 1 = definitely something one purchases to have, 7 = definitely something one purchases to do); (2) participants read, “Now think of material purchases as purchases made with the primary intention of acquiring a material good: a tangible object that is kept in one’s possession; think of experiential purchases as purchases made with the primary intention of acquiring a life experience: an event or series of events that one lives through.” They then rated the HDTV on a 7-point scale (1 = definitely a possession, 7 = definitely an experience).

Results

Manipulation check. The two manipulation-check questions were highly correlated ($r = .60$), so I averaged them to generate an experiential score. An ANOVA with product framing as the independent variable showed the HDTV was considered more experiential in the experiential-framing condition than in the material-product-framing condition ($M_{exp} = 3.20$ vs. $M_{mat} = 2.65$; $F(1, 301) = 4.07, p < .05$). I found no difference between the experiential-framing condition and material-framing condition in the time participants spent on elaboration (time spent: $M_{exp} = 58$ seconds vs. $M_{mat} = 56$ seconds; $F(1, 301) = .07, p = .78$). In other words, participants did not elaborate more when they framed the HDTV in an experiential way than when they framed it in a material way.

Endowment effect. An ANOVA with prices (in dollars) as the dependent variable, and product framing, type of estimates (selling vs. buying prices), and product framing x type of

estimates interaction as independent variables, reveals a significant main effect of product framing ($F(1, 301) = 7.10, p = .008$), a significant main effect of type of estimates ($F(1, 301) = 23.08, p < .0001$), and a significant interaction between product framing and type of estimates ($F(1, 301) = 3.91, p < .049$). In the material framing condition, the endowment effect was present, with sellers stating higher prices than buyers ($M_{sell} = \$512$ vs. $M_{buy} = \$365; t(301) = 2.01, p < .045$). The endowment effect was present in the experiential framing condition ($M_{sell} = \$755$ vs. $M_{buy} = \$401; t(301) = 4.77, p < .0001$), and the effect was greater in the experiential framing condition than in the material framing condition, indicated by a significant product framing x type of estimates (selling vs. buying prices) interaction (Figure 2).

Discussion

Study 2 provides a conservative and controlled test for the effect of product type on the endowment effect, by holding the product constant across conditions and manipulating its experiential (vs. material) framing. Results showed sellers valued an HDTV more when they were reminded about the experiential aspect of watching HDTV rather than its material attributes. This study showed the effect of Study 1 was not simply due to the specific sets of experiences and material products I chose. This study also helps us rule out several alternative explanations, including scarcity, prices and shareability. In Study 3 to Study 5, I test the underlying mechanism. In Study 3, I measure narrative transportation directly after WTA or WTP questions. I also examine another competing mechanism: closeness to the self. I show that although participants do feel closer to experiences than material products, they feel so in both selling- and buying-prices condition. Closeness to the self does not mediate the effect of product type on WTA/WTP and thus it is not the mechanism.

STUDY 3: WHY THE ENDOWMENT EFFECT IS GREATER FOR EXPERIENCES: NARRATIVE PROCESSING AS MEDIATOR

The purpose of Study 3 is two-fold. First, I measure narrative transportation directly and provide a mechanism for the greater endowment effect of experiences. Second, I rule out another potential mechanism: closeness to the self—the fact that experiences are closer to the self than material products (shown in Carter and Gilovich 2012).

Method

Study 3 followed the same 2 product type (experiences vs. material products) x 2 type of estimate (selling vs. buying prices) between-subjects design as in Study 1, with the following modification. After participants indicated their WTP/WTA, they were then asked to answer three 7-point items (1 = *not likely*, 7 = *extremely likely*) that capture narrative transportation (“I could easily picture the experience [product],” “I could picture myself in the scene [with the product],” and “I was mentally involved in the experience [product],” $\alpha = 0.85$) (adapted from Escalas 2004). Then all participants rated how close they felt the purchase to the self on a 7-point scale (1 = *not at all*, 7 = *very much*): “consider that some of our possessions can feel rather close to our sense of self. That is, some possessions form a larger part of our self-definitions, of who we are, than others. How much would having the ticket of the concert [the DVD collection] feel like it is part of your true, essential self?” (Adapted from Carter & Gilovich 2012). I recruited 389 participants (51.2% female, mean age = 33) from Amazon Mechanical Turk in Study 3.

Results

The endowment effect. Overall, I found a significant main effect of product type ($F(1,388) = 14.05, p = .0002$), a significant main effect of type of estimates ($F(1,388) = 50.29, p < .0001$), and a significant two-way interaction ($F(1,388) = 4.52, p = .034$). In the material-product condition, the endowment effect was present, with sellers stating higher prices than

buyers ($M_{\text{sell}} = 1.60$ vs. $M_{\text{buy}} = 1.03$; $t(388) = 3.92, p < .0001$). The endowment effect was present in the experiences condition ($M_{\text{sell}} = 2.28$ vs. $M_{\text{buy}} = 1.22$; $t(388) = 5.34, p < .0001$) and was greater than in the material-product condition, indicated by the significant product type x type of estimates interaction.

Narrative transportation. A significant two-way interaction between product type and type of estimates also emerged when I used narrative transportation as the dependent variable ($F(1,388) = 6.92, p = .0009$). In the material-product condition, participants reported the same level of narrative transportation regardless of whether they were assigned as sellers or buyers ($M_{\text{sell}} = 4.99$ vs. $M_{\text{buy}} = 5.29$; $t(388) = 1.45, p = .15$). In the experiences condition, participants reported higher levels of narrative transportation when they were assigned as sellers versus buyers ($M_{\text{sell}} = 5.68$ vs. $M_{\text{buy}} = 5.21$; $t(388) = 2.27, p = .02$). I found no difference between buyers in the experiences and material-products condition ($M_{\text{exp, buy}} = 5.21$ vs. $M_{\text{mat, buy}} = 5.29, p = \text{n.s.}$).

Moderated mediation. When I added narrative transportation to the model as a mediator, a different pattern of effects emerged. The two-way interaction between product type and type of estimates became insignificant ($F(1,388) = 1.60, p = .11$). To test the underlying mechanism, I conducted a moderated mediation analysis (Muller, Judd, and Yzerbyt 2005; Preacher, Rucker, and Hayes 2007). I proposed and tested for Hayes model 8 (Figure 3), in which the seller/buyer type of estimates moderated both the relationship between product type and narrative transportation (indirect path) and the relationship between product type and price (direct path). I administered a bootstrap with 5,000 draws to examine the conditional indirect effects (Hayes 2012, model 8). As expected, narrative transportation mediated the relationship between price and product type for sellers (95% CI: 0.05, 0.20) but not for buyers (95% CI: -.08, .05).

One alternative explanation could be that experiences are closer to the self than material products. Carter and Gilovich (2012) show people tend to think of their experiential purchases as more connected to the self and as reflecting their self-identity more than their possessions. Because the more we feel connected to one product the more we value it, closeness to the self might lead to the differential endowment effect between experiences and material products. I found a significant main effect of product type ($F(1,388) = 21.15, p < .0001$): participants felt experiences were closer to the self than material products ($M_{exp} = 4.73$ vs. $M_{mat} = 3.84; t(388) = 4.60, p < .0001$), consistent with Carver and Gilovich (2012). However, I found no significant main effect of type of estimates ($F(1,388) = .04, p = .83$) or interaction between product type and type of estimates ($F(1,388) = 1.61, p = .21$). Regardless of whether participants were assigned as sellers or as buyers, they felt material products were equally far from the self ($M_{buy} = 3.73$ vs. $M_{sell} = 3.94; t(388) = 0.75, p = .46$), and they felt experience products were equally close to the self ($M_{buy} = 4.88$ vs. $M_{sell} = 4.59; t(388) = 1.05, p = .30$). A moderated mediation (model 8) also showed “closeness to the self” did not mediate the relationship between price and product type (indirect effect of high-order interaction: $-0.18, 0.03$). Therefore, it is unlikely that closeness-to-the-self serve as the underlying mechanism.

STUDY 4: MENTAL SIMULATION ENHANCES THE ENDOWMENT EFFECT MORE FOR MATERIAL PRODUCTS THAN FOR EXPERIENCES

If the greater endowment effect of experiences (vs. material products) is due to the fact that experiences elicit more pre-factual story-like thinking for sellers (vs. buyers), then encouraging sellers to mentally simulate using a material product will make sellers generate more story-like thinking and increase their WTA. Because experiences have already elicited more pre-factual story-like thinking for sellers, mentally simulating an experience will have less of an increasing effect on WTA. I examine H4 in Study 4. I predict mentally simulating

the use of material products increases the selling prices for material products, but less so for experiences. I also predict the effect of mental simulation will be less, if any, on buyers, because buyers tend to focus more on expenditures. I further explore narrative transportation as a mechanism.

Study 4 was a 2 product type (experience vs. material) x 2 type of estimates (selling prices vs. buying prices) x 2 mental simulation instruction (presence vs. absence) between-subjects design. I recruited 759 participants (51.2% females, mean age: 32) from Amazon Mechanical Turk and randomly assigned them to one of eight conditions based on product type, type of estimates, and mental-simulation instruction. The product type manipulation and type of estimates were the same as Study 1. The mental simulation manipulation went as follows: after participants saw the products (experiences), half of them indicated their WTP/WTA directly (no mental simulation). The other half were first asked to mentally simulate what the experience (using the material product) would be like, and rated their anticipated satisfaction of the experience (using the material product) on three 7-point scales anchored at dissatisfied/satisfied, unhappy/happy, and feel bad/feel good (adapted from Shiv and Huber 2000). Next, respondents indicated their WTA or WTP, followed by two manipulation-check questions (“To what extent did you imagine yourself in the experience [with the product]?” “To what extent did you try to form a picture of the experience [product]?” 1 = *Not very much*, 7 = *a great deal*; $r = .83$) and six questions that assessed narrative transportation (Green and Brock 2000; five questions were the same as in Study 3; the other two questions capture the narrative nature: “It told a story,” “It had a beginning, middle and end;” $\alpha = .84$). I used two categories as repeated measures in Study 4: ticket to a talk by one’s favorite author (a new book by one’s favorite author) and a movie ticket to a special one-time screening of *Lord of the Rings* in 3-D (reprint of a signed movie poster of the *Lord of the Rings*) in the experience (material-product) condition.

Results and Discussion

The data pattern for the two categories was the same, so I took an average between the two categories. I also analyzed the data by stacking them and treating the two categories as repeated measures. These two analyses led to the same results. The following was based on the first analysis.

Manipulation check. The results on the manipulation-check measures revealed the successful manipulation of mental simulation. An ANOVA with the extent to which respondents engaged in mental imagery as the dependent variable, and product type, type of estimates, mental simulation, and their interactions as independent variables, revealed a significant main effect of mental simulation ($F(1, 752) = 33.88, p < .0001$). Participants tried to form mental images of the products more when I did versus did not given them mental-simulation instructions ($M_{no MS} = 5.54$ vs. $M_{MS} = 5.00; t(752) = 5.82, p < .0001$). Furthermore, the model also revealed a main effect of product type ($F(1, 752) = 40.21, p < .0001$). Participants simulated experiences more than material products ($M_{exp} = 5.57$ vs. $M_{mat} = 4.98; t(752) = 6.34, p < .0001$), consistent with our hypothesis that experiences are richer in narrative than material products.

Endowment effect. Similar to Study 1, I standardized prices to pool data across the categories. Standardized prices were ratios between participants' valuation and market prices. An ANOVA with standardized prices as the dependent measure, and product type, type of estimates, mental simulation, and their interactions as independent variables, revealed a main effect of product type ($F(1, 752) = 9.22, p = .003$) and a main effect of type of estimates ($F(1, 752) = 84.42, p < .0001$). I found no product type x type of estimates interaction ($F(1, 752) = 1.78, p < .18$), consistent with our hypothesis that mental simulation reduced the differences between experiences and material products. Specifically, when mental simulation was absent, the endowment effect was present for both material products ($M_{sell} = 2.06$ vs. $M_{buy} = 1.20$;

$t(752) = 3.33, p < .0009$) and experiences ($M_{\text{sell}} = 3.08$ vs. $M_{\text{buy}} = 1.50$; $t(752) = 5.13, p < .0001$), and the product type x type of estimates was significant ($F(1,752) = 4.26, p < .04$), indicating a greater endowment effect for experiences than for material products. When mental simulation was present, the product type x type of estimates interaction became insignificant ($F(1,752) = .06, p = .80$), indicating the greater endowment effect for experiences (vs. material products) disappeared when mental simulation was encouraged. The endowment effect was present for both material products ($M_{\text{sell}} = 2.77$ vs. $M_{\text{buy}} = 1.15$; $t(752) = 4.35, p < .0001$) and experiences ($M_{\text{sell}} = 3.12$ vs. $M_{\text{buy}} = 1.39$; $t(752) = 5.39, p < .0001$). No other main effects or interactions were significant.

For material products, the interaction between mental simulation (MS) and type of estimates was marginally significant ($F(1,752) = 3.08, p = .08$). Mental simulation increased selling prices but not buying prices for material products (for sellers, $M_{\text{no MS}} = 2.06$ vs. $M_{\text{MS}} = 2.77$; $F(1, 752) = 2.20, p < .03$; for buyers, $M_{\text{no MS}} = 1.20$ vs. $M_{\text{MS}} = 1.15$; $F(1, 752) = .16, p = .87$). In fact, sellers in the mental-simulation condition ($M_{\text{mat, MS}} = 2.77$) regarded their material products as being as valuable as their experiences ($M_{\text{exp, MS}} = 3.12$; $F(1, 752) = 1.11, p = .27$). However, for experiences, the interaction between mental simulation and type of estimates became insignificant ($F(1, 752) = .07, p = .78$). Mental simulation did not further increase selling prices ($M_{\text{no MS}} = 3.08$ vs. $M_{\text{MS}} = 3.12$; $F(1, 752) = .13, p = .89$) or buying prices ($M_{\text{no MS}} = 1.50$ vs. $M_{\text{MS}} = 1.39$; $F(1, 752) = .37, p = .71$) for experiences.

Narrative transportation. Narrative transportation provided additional insights into the proposed mechanism. I examined narrative transportation as a function of product type, type of estimates, mental simulation, and their interactions. An ANOVA revealed a main effect of product type ($F(1,752) = 14.27, p = .0002$), a main effect of type of estimate ($F(1, 752) = 6.97, p < .009$), and a main effect of mental simulation ($F(1, 752) = 17.65, p < .0001$),

accompanied by a marginally significant product type x mental simulation two-way interaction ($F(1,752) = 3.59, p < .06$). Experiences elicited more narrative transportation than material products ($M_{mat} = 4.61$ vs. $M_{exp} = 4.92, t(752) = 3.75, p < .0002$). Sellers transported into the narratives more than buyers ($M_{buy} = 4.67$ vs. $M_{sell} = 4.86, t(752) = 2.38, p < .02$). Participants who received (vs. did not) mental-simulation instructions transported into the narratives more ($M_{no MS} = 4.59$ vs. $M_{MS} = 4.94, t(752) = 4.09, p < .0001$). More pertinent to our hypothesis are the differential effects of mental simulation on transportation between participants who forgo an experience and those who forgo a material product. For material products, sellers who mentally simulated using the products transported more than those who did not receive mental-simulation instruction ($M_{no MS} = 4.46$ vs. $M_{MS} = 5.08; F(1, 752) = 3.69, p = .0002$). However, sellers who mentally simulated experiences did not transport significantly more into the narratives ($M_{no MS} = 4.83$ vs. $M_{MS} = 5.09; F(1, 752) = 1.52, p = .13$). In fact, sellers who mentally simulated their material products ($M_{mat}, MS = 5.08$) engaged in the same level of narrative transportation as those who mentally simulated their experiences ($M_{exp}, MS = 5.09; F(1, 752) = .04, p = .97$), and as those who did not receive mental-simulation instructions for experiences ($M_{exp, no MS} = 4.83; F(1, 752) = 1.52, p = .13$).

The results from Study 4 demonstrate that encouraging sellers to mentally simulate using their material products can increase the endowment effect for the products, but mental simulation has less of an increasing effect on experiences. In this study, I manipulated narrative thinking through mentally simulating using material products. WTA prices for material products increased to the same level as for experiences when mental simulation was encouraged. An explanation for this finding is that mentally simulating using a material product adds narrative to initially story-poor material product. By mentally simulating using a material product, participants generate pre-factual narratives related to the product and are

less willing to part with the product. In support of this theory, narrative transportation for material products increased to the same level as experiences when mental simulation was encouraged, paralleling the results for prices. By manipulating narrative thinking and, in doing so, increasing the endowment effect of material products to the same level as experiences, this experiment provides further support that narrative processing serves as the mechanism for the greater endowment effect for experiences.

**STUDY 5: ADDING A PRODUCT STORY WITH HIGH (VS. LOW)
NARRATIVE CAUSALITY INCREASES WILLINGNESS TO ACCEPT FOR
MATERIAL PRODUCTS**

If the greater WTA for experiences (vs. material products) is due to the fact that experiences are processed in a more narrative way than material products, then adding stories to material products would increase WTA for material products to the same level as experiences. In study 4, I manipulated narrative processing by encouraging people to engage in mental simulation of using the products [mental simulation of experiences]. In study 5, I used a different manipulation of narrative processing: I manipulated narrative structure within a story by varying narrative causality. Research suggests narrative processing relied heavily on the structure of narratives (Dahlstrom 2012; Stein and Albro 1997). Information presented at the causal locations of a narrative was accepted more than information presented at the non-causal locations of a story (Dahlstrom 2010). By only varying the causal structure of a story, I was able to make a paragraph more or less like a story, while keeping all information the same. In study 5, I examine how narrative causality interacts with product framing (experience vs. material product) to influence product valuation. Because our theory focuses on WTA and I predict no difference in WTP, in this study I only examine WTA. I predict that when a product is framed in a material way, adding a product-related story with high narrative causality (vs. a scrambled “story” with low narrative causality) will increase WTA

for the product. However, when a product is framed in an experiential way, because narrative processing is already high, adding a product-related story with high narrative causality will lead to no additional increase in WTA over a scrambled “story” with low narrative causality. This study thus provides a controlled manipulation of narrative processing, by holding all the information constant while only varying narrative causality structure through sentence order.

Method

Study 5 followed a 2 (Framing: material framing vs. experiential framing) × 2 narrative (normal story with high narrative causality vs. scrambled “story” with low narrative causality) between-subjects design. 245 participants who had an HDTV were recruited from Amazon Mechanical Turk for this study.

Manipulations. I randomly assigned participants to one of four conditions in the 2 (Framing: material framing vs. experiential framing) × 2 narrative of the product (high vs. low narrative causality) between-subjects design.

Participants received a product framing manipulation followed by a narrative manipulation. The product framing manipulation was similar to Study 2. In material framing condition, participants read: “take a minute to think about the features of your HDTV. How well does your HDTV work? How is your HDTV like?” In the experiential framing condition, participants read: “take a minute to think about the watching experience of your HDTV? How is your TV watching experience like? ” Participants were free to move to the next page when they thought they finished the task.

On the following page, participants received a narrative manipulation. In high narrative causality condition, participants read:

Imagine the following related to your HDTV: “I remember the first time I turned on my HDTV. I waited until there was a football game on that was in HD. I absolutely couldn't

believe the clarity when the game started. I could read the players' moods. The brilliant colors were amazing and I was able to make out all the details. It is a great TV.”

In low narrative causality condition, participants read essentially the same information, but the sentence order was scrambled and the information was presented in a list to reduce narrative causality structure. More specifically, participants read:

Imagine the following related to your HDTV.

- "1. I could read the players mood.
2. The brilliant colors were amazing.
3. The HDTV is a great TV.
4. I was able to make out all the details.
5. I absolutely couldn't believe the clarity.
6. I waited until there was a football game on that was in HD.
7. I remember the first time I turned on my HDTV. "

Next, all participants indicated their WTA for the HDTV by making a series of choices between “keep the HDTV” and “sell the HDTV” for a list of prices ranging from \$100 to \$2000 in \$50 increments. If participants’ selling prices were greater than \$2000, they were asked to write down their selling prices. Finally, participants rated two manipulation-check questions assessing the extent to which they perceived the events to be a story (“When you read the events related to your HDTV, to what extent did the events feel like a story?”; “When you read the events related to your HDTV, to what extent did you imagine a story?”; 1 = not at all, 7 = very much), and two manipulation check questions assessing the extent to which they considered the product to be experiential or material (questions were the same as Study 2).

Results

Manipulation check of narrative. The two manipulation-check questions for story were highly correlated ($r = .82$), so I averaged them. An ANOVA with product framing condition and narrative condition as independent variables revealed a highly significant effect of narrative condition ($F(1, 241) = 5.65, p = .02$): the events related to HDTV were considered to be more like a story in the high narrative causality condition than low narrative causality condition ($M_{high\ narrative} = 4.53$ vs. $M_{low\ narrative} = 4.02; t(241) = 2.29, p < .02$).

Manipulation check of product framing. An ANOVA with product framing condition and narrative condition as independent variables revealed only a main effect of product framing condition ($F(1, 241) = 3.87, p = .05$): participants considered the HDTV to be more experiential in experiential framing condition than in material framing condition ($M_{exp} = 3.30$ vs. $M_{mat} = 2.85; t(241) = 1.97, p < .05$). No other main effect or 2-way interaction was significant.

WTA. An ANOVA with prices (in dollars) as the dependent variable, product framing, narrative manipulation (high vs. low narrative causality), and their interactions as independent variables, revealed a significant interaction between product framing and narrative manipulation ($F(1, 241) = 4.09, p = .04$). No other main effects were significant. A further examination of the means revealed that, when participants read a product-related story with low narrative causality, they indicated greater WTA when the HDTV was framed in an experiential way than when it was framed in a material way ($M_{exp} = \$722$ vs. $M_{mat} = \$516; t(241) = 2.08, p < .04$), replicating the results of study 1-4. However, when participants read a product-related story with high narrative causality, they indicated the same WTA in material framing condition as in experiential framing condition ($M_{mat, high\ narrative} = \725 vs. $M_{exp, high\ narrative} = \$650; t(241) = .77, p = .44$). Indeed, there was no difference in WTA between material framing-high narrative causality condition and experiential framing-low narrative

causality condition ($M_{mat, high\ narrative} = \725 ; $M_{exp, low\ narrative} = \722 vs.; $t(241) = .03, p = .98$) as well.

More relevant to our hypotheses, when the HDTV was framed in a material way, participants indicated greater WTA when they read a product-related story with high narrative causality than when they read the same information with low narrative causality ($M_{mat, high\ narrative} = \725 vs. $M_{mat, low\ narrative} = \516 ; $t(241) = 2.13, p < .04$). However, when the HDTV was framed in an experiential way, adding a product-related story with high (vs. low) narrative causality did not lead to more WTA ($M_{exp, high\ narrative} = \650 vs. $M_{exp, low\ narrative} = \722 ; $t(241) = -.73, p = .46$) (Figure 5).

GENERAL DISCUSSION

Previous research has shown many differences exist between experiences and material products (e.g., Van Boven and Gilovich 2003, Carter and Gilovich, 2010, Carter and Gilovich 2012). In this research, I demonstrate a fundamental asymmetry in how sellers and buyers value experiences and material products. Our data consistently show the type of estimate interacts with product type to influence valuation, leading to a greater endowment effect for experiences than for material products. In studies 1, 3, and 4, I provided the same market prices in experience and material conditions to control for a reference-price response to the endowment effect (Weaver and Frederick 2012). To demonstrate the effect in a more controlled setting and to rule out other potential explanations, in Study 2, I framed the same HDTV as more experiential or more material, and showed the endowment effect was greater when I framed the HDTV in an experiential than in a material way. Study 3 provided a mechanism for the effect: narrative transportation mediated the relationship between price and product type for sellers but not for buyers. Only when participants forgo (vs. acquire) experiences (vs. material products) do they transport more into the narratives, which leads to greater valuation. Study 4 and Study 5 provided further evidence for the mechanism by

manipulating narrative thinking through mental simulation (Study 4), or through varying narrative causality structure (Study 5), and showed that adding narrative thinking can increase sellers' valuation of material products.

Many differences exist between experiences and material products. The set of studies help us rule out several alternative explanations. First, the greater endowment effect for experiences cannot be due to the fact that the experiences used in this paper have higher prices than material products. I provided the same prices for experiences and material counterparts in study 1, 3, and 4 to keep prices constant. Furthermore, in Study 2 and Study 5, I framed the same HDTV as more experiential or more material, without providing market price. I have no reason to assume prices are different in experience versus material-products conditions. Second, the greater endowment effect for experiences cannot be due to experiences being scarcer than material products: in studies 1, 3, and 4, I limited both experiences and material products (limited edition for material products); in Study 2 and Study 5, highlighting an HDTV's experiential aspects did not make the product scarcer than highlighting its material aspects.

Another alternative account for why consumers may be more reluctant to part with experiences than with material products is closeness to the self. Belk (1988) suggests consumers incorporate their self-identities into their possessions. Indeed, Carter and Gilovich (2012) have shown experiences tend to be more closely associated with the self than possessions. Because experiences reflect self-identity more than material possessions, consumers might value experiences more, in which case, I would expect consumers to feel experiences to be more closely associated with the self than material products when they forgo a product, but not when they acquire a product. However, an additional measure of closeness to the self in Study 3 showed that in both forfeit and acquisition conditions, participants felt experiences to be closer to the self than material products, and "closeness to

the self” did not mediate the relationship between product type and valuation. Therefore, closeness to the self is unlikely to be the underlying mechanism.

Directions for Future Research

The studies in this article reveal narrative processing is one of the key differences between experiences and material products. Pre-factual narrative processing leads to narrative transportation and further increases WTA for experiences. Because narrative transportation persuades through mental imagery, reduced critical thoughts, and strong affective responses (Green and Brock 2000), consumers might have more or stronger affective responses when they sell (vs. buy) an experience (vs. a material product), thus leading to a greater endowment effect for experiences. Chan and Mogilner (2013) showed experiential gifts were more connecting than material gifts, because experiential gifts elicit more affective responses. The proposition that affective responses could serve as the mechanism does not contradict our story, because affective responses are one of the downstream consequences of narrative transportation (Green and Brock 2000).

Unfortunately, I did not measure affective responses in this paper, so I cannot determine whether this claim is legitimate. Future research could measure affective responses directly and examine whether they mediate the effect of product type on valuation. Further research could also examine think-aloud protocols to provide additional evidence for narrative processing and preclude other accounts.

Our results show that it is hard to increase buyers’ WTP for both material products and experiences due to an egocentric empathy gap between sellers and buyers: buyers tend to focus on the expenditure (Van Boven, Dunning, and Loewenstein, 2000; Carmon and Ariely 2000). I believe I did not increase WTP, because I did not try to increase perceived ownership in these studies. Perceived ownership puts buyers in the role of sellers and may make WTP more similar to WTA. Research has shown enhancing perceived ownership by

encouraging participants to touch a product can increase WTP for the product (Peck and Shu 2009). Furthermore, having a chance to interact with the material product through modern virtual technology enhances purchase intentions (Schlosser 2003). Mentally simulating using a product increases brand evaluation and purchase intentions of the product (Escalas 2007). I believe purchase intention is different from WTP because WTP focuses people's attention on the specific monetary amount they would lose and thus distracts them from product-related figures. However, I believe a strong manipulation of perceived ownership may increase WTP as well. Future research could test this possibility.

Theoretical Implications

This research contributes to two bodies of work in the literature, one related to experiential versus material purchases and the other related to the endowment effect. Previous research has shown experience purchases are more satisfying (Van Boven and Gilovich 2003). Our findings identify market reaction to experience and material purchases, namely, WTA and WTP. Further, I contribute to the work on how experience differs from material possessions, by proposing one more feature of experience products: narrative processing. I identify forfeit condition (vs. acquisition condition) as a necessary condition in which experiences elicit narrative processing, and show narrative processing mediates the difference in the endowment effect between experience and material products for sellers.

Our results also provide insight into the processes of the endowment effect. Although the endowment effect is well established, we do not have a complete understanding of its processes. The endowment effect is a multi-determined phenomenon. Previous research has shown at least two aspects that account for the endowment effect: emotional attachment and perspective change (see Ariely, Huber, and Wertenbroch 2005). In this research, I show the magnitude of loss aversion depends on the processing mode that products elicit: more narrative processing leads to greater loss aversion. I identify the necessary conditions to

elicit narrative processing: (1) pre-factual thinking triggered by loss and (2) richness in narratives for the product.

The narrative account of the endowment effect is not mutually exclusive to the perspective-change account and the emotional-attachment account. The perspective-change account is the antecedent of our narrative account: whether people engage in narrative processing depends on both the perspective and the product type. The emotional-attachment account could be considered the downstream effect of our narrative account: once participants engage in narrative processing of the product, they may develop greater emotional attachment to the product.

The current research also provides insight into how to turn the endowment effect on and off. The current research suggests mental simulation of using material products is a good strategy to enhance the endowment effect for product type that is poor in narrative.

Managerial Implications

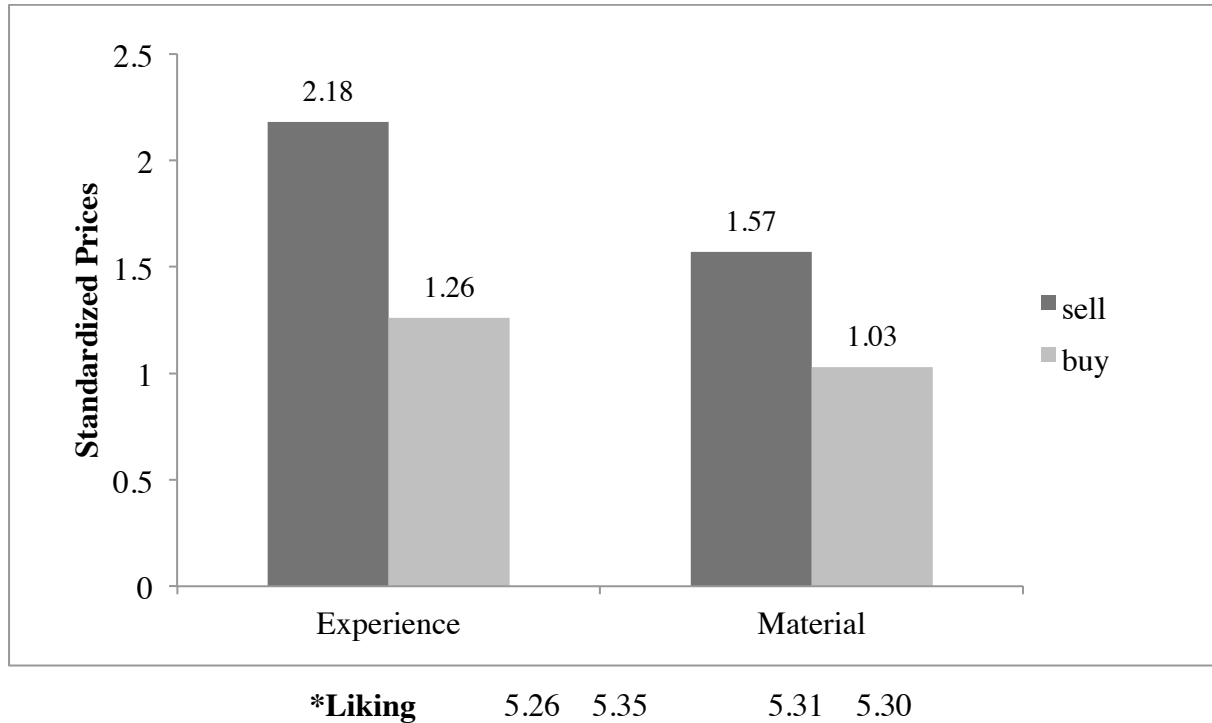
Our results suggest implications for pricing and promotion strategies. The current finding does not necessarily indicate one can charge a higher premium for experience products than for material products, because buyers do not value experiences more than material products. However, when consumers already own the product and face a decision to discontinue consumption, consumers are more reluctant to part with experience products than material products. For example, all else being equal, consumers may be less willing to discontinue an experience purchase (e.g., Netflix) than a material purchase (e.g., toilet paper on Amazon's subscribe-and-save program). Marketers may be able to charge a price premium for experiences for the next period. Our results can even be extended to reservations, product trials, and samples. For example, all else being equal, consumers may be less willing to cancel a vacation-package reservation than a computer they reserve in store. On the other hand, the second-hand market for experiences may be harder to sell than that

for material products. The greater endowment effect for experiences indicates a ticket-exchange (experiences) online store may have a lower transaction rate than a product-exchange online store.

Our results also indicate adding stories to otherwise story-poor products can enhance consumers' valuation for material products once they develop perceived ownership of the product. Adding stories to otherwise story-poor products can be achieved through encouraging consumers to engage in mental simulation, or through imposing high narrative causality structure on the information presented. Marketers may consider adding scripts and narratives when advertising material products. When doing so, marketers need to make sure product-related stories are high in narrative causality. A good example is Nike's advertising of running shoes. Instead of stating the benefits of running shoes in an analytical way (e.g., light weight, cushioning system, durability, etc.), Nike's advertisement portrays a man who overcame his own limitations and self-doubt through exercise, and transformed into someone better. Nike products helped the man make his journey from average to superstar. This story builds clear causal links that organize information in a whole. A good story that connects the material products will make consumers value the material products more.

FIGURE 1

STUDY 1: THE ENDOWMENT EFFECT IS GREATER FOR EXPERIENCES THAN FOR MATERIAL PRODUCTS



*Liking did not differ across conditions.

FIGURE 2

STUDY 2: HIGHLIGHTING EXPERIENTIAL (VS. MATERIAL) ASPECT OF THE SAME PRODUCT INCREASES THE ENDOWMENT EFFECT

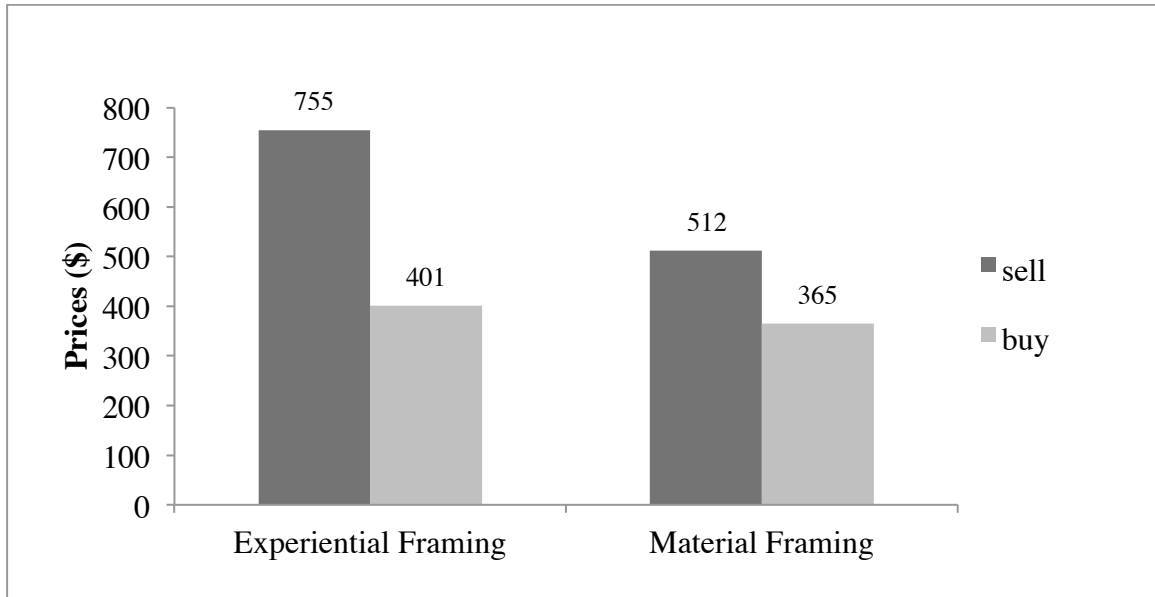
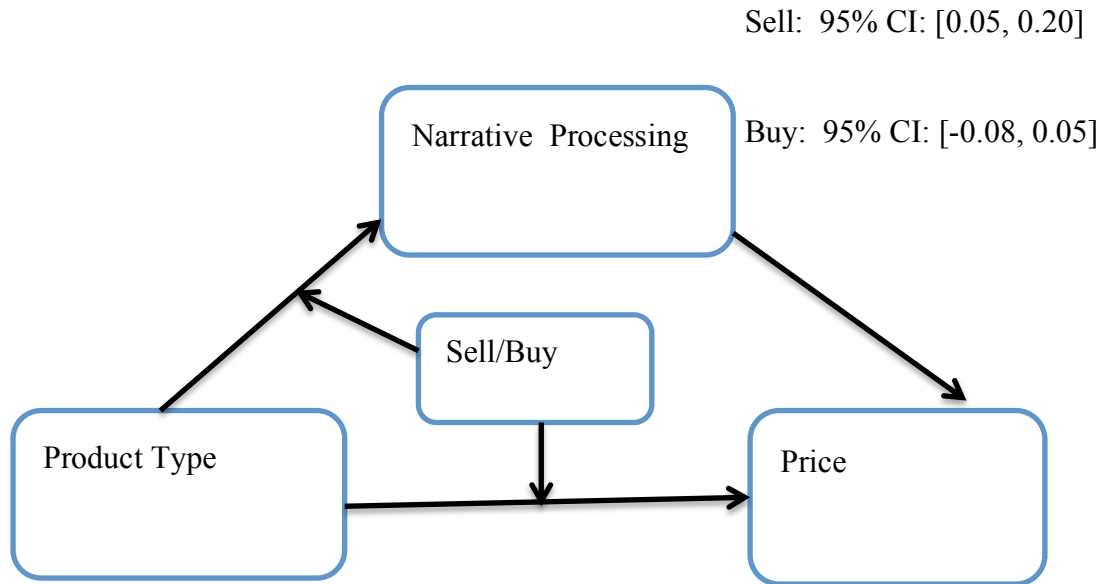


FIGURE 3

STUDY 3: NARRATIVE PROCESSING MODERATED THE EFFECT OF PRODUCT TYPE ON PRICE FOR SELLERS BUT NOT FOR BUYERS

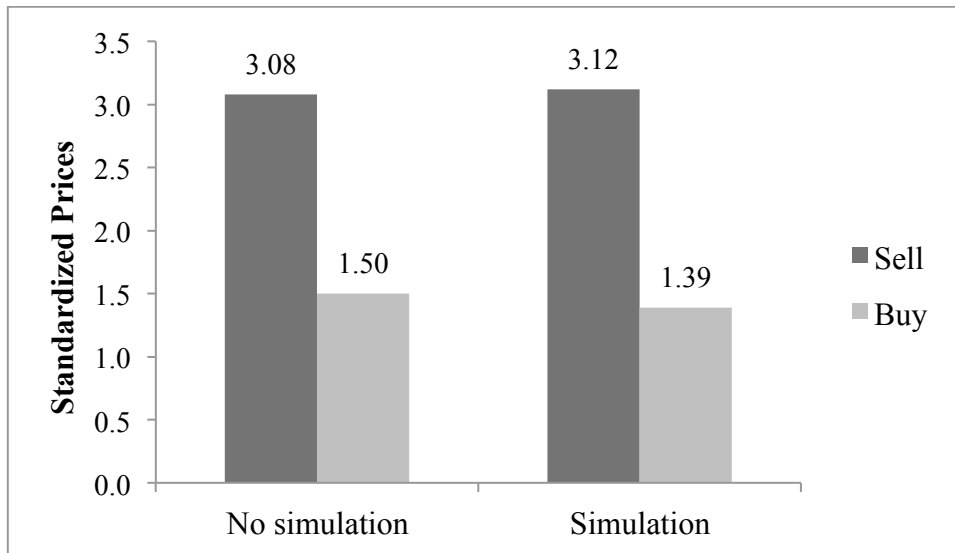


Hayes 2012, model 8

FIGURE 4

STUDY 4: MENTAL SIMULATION OF USING MATERIAL PRODUCTS ENHANCES THE ENDOWMENT EFFECT OF MATERIAL PRODUCTS (VS. EXPERIENCES)

EXPERIENCES



MATERIAL PRODUCTS

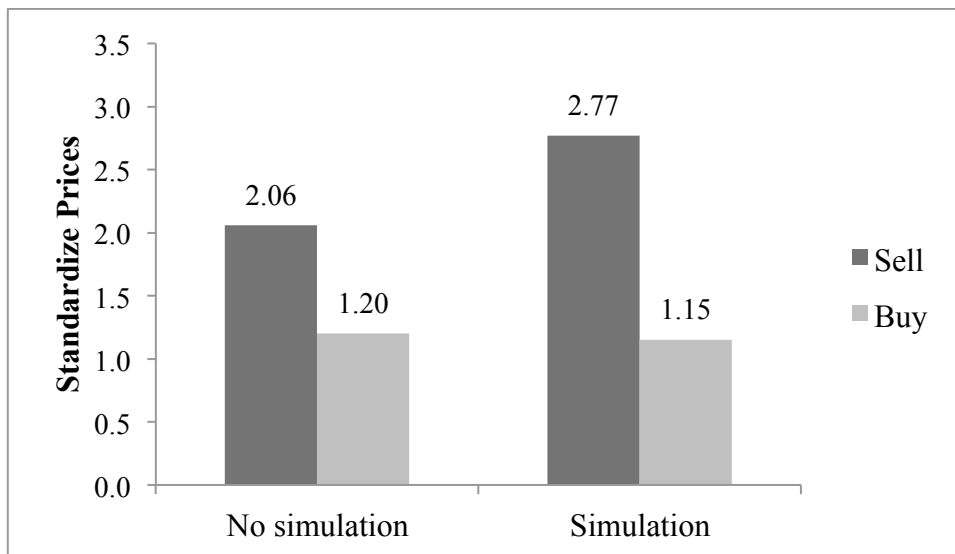
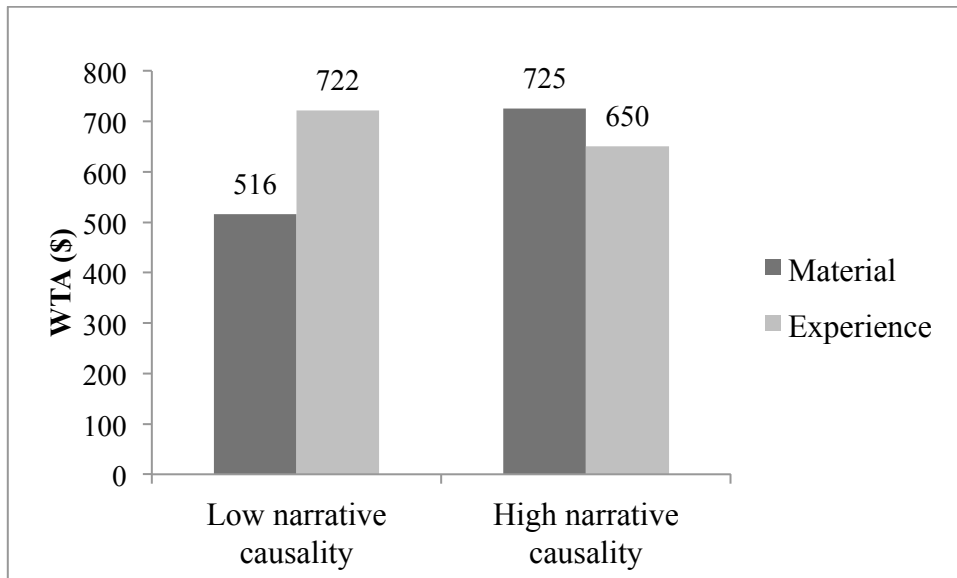


FIGURE 5

STUDY 5: ADDING PRODUCT-RELATED STORY WITH HIGH (VS. LOW) NARRATIVE CAUSALITY ENHANCES WILLINGNESS TO ACCEPT FOR MATERIAL PRODUCTS (VS. EXPERIENCES)



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CHAPTER 3: HOW CONSUMERS REACT TO EMBARRASSMENT: COUNTERING EMBARRASSMENT BY TAKING AN OBSERVER'S PERSPECTIVE

This chapter examines how consumers react to and cope with embarrassment. In particular, three experiments examine how adopting the perspective of an observer interacts with trait public self-consciousness (PUBSC) to either decrease or increase embarrassment-avoidant behavior. Study 6 demonstrates that consumers high (vs. low) in PUBSC are more likely to take the perspective of an actor versus observer when viewing an ad using an embarrassment appeal, resulting in greater personal distress. Study 7 and Study 8 show that seeing oneself as an observer is a helpful (hurtful) strategy for combatting empathy-neglect among consumers high (vs. low) in PUBSC. The greater (lesser) empathy for others felt by high (low) PUBSC consumers, when transferred to themselves, results in less (more) embarrassment-avoidant behavior in response to ads that prompt taking an observer's perspective. This "empathy-transfer" process is effortful. Together, all three experiments demonstrate the power of our theory to explain, predict, and modify embarrassment-avoidant consumer behavior.

As consumers we often forgo opportunities to help ourselves, and others, in order to avoid embarrassment (e.g. Helwig-Larsen and Collins 1994). Our fear of embarrassment prevents us from admitting we do not know how a product, such as a mortgage or birth control, works. It prevents us from asking advice about what we should do, for example, about our mounting mortgage bills and unplanned pregnancies. In many cases, if we are to help ourselves, and others, we must overcome our fear of embarrassment in social situations (Foss and Crenshaw 1978).

Research by Epley, Gilovich, and Savitsky should bring comfort to those of us who worry about others witnessing our embarrassing blunders. They find that if others notice our embarrassing blunders, they tend to make kinder judgments than we tend to expect (Savitsky, Epley, and Gilovich 2001; Epley 2014). Still, we fail to take others' empathy into account, a tendency termed empathy-neglect (Epley, Savitsky, and Gilovich 2002). The main goal of our research is to investigate a potential strategy for reducing embarrassment-avoidant behavior. We focus on empathy-neglect and a means for countering it.

I propose that the key to reducing embarrassment avoidance is for actors – or those who imagine themselves to be actors in a situation – to be induced to see the situation from the perspective of someone observing rather than experiencing the embarrassing situation. Increasing the salience of one's own evaluation of others in an embarrassing situation as an observer may make the situation less distressing since observers are often more forgiving. Of course, this strategy will be effective only if one incorporates his/her kinder "observer" evaluation into his/her own self-evaluation as an actor, i.e. 'transfer' the kinder evaluations of others they observe to oneself. We test this notion by examining the strategy's differential response among consumers high versus low in PUBSC since this characteristic has been shown to be positively correlated with greater expectations of being embarrassed and also is likely to be correlated with empathy for others and thus kinder evaluations. Results of three experiments demonstrate an important coping strategy for embarrassment avoidance, and extend the literature on the effects of taking an observer's perspective and on the basis for and effects of the trait public self-consciousness (PUBSC).

Study 6 establishes the psychological foundation of the process. Study 7 and Study 8 examine whether taking the perspective of an observer is a helpful (hurtful) tool to counter empathy-neglect among high (low) PUBSC consumers. More (less) empathetic high (low) PUBSC consumers who see things from an observer's (not actor's) perspective transfer more

(less) empathy to themselves, resulting in less (more) embarrassment-avoidant behavior. Study 7 and Study 8 also investigate the effortful nature of the empathy-transfer process by demonstrating the attenuating effect of cognitive load. Study 7 used a health communication context, whereas Study 8 used an advertising and purchasing context. Study 8 included thought protocols in order to examine the proposed empathy-transfer process in more detail. Together, all three experiments demonstrate the power of our theory to explain, predict, and modify behavior, even when the consequences are financially and socially significant.

THEORETICAL FOUNDATIONS

Embarrassment-Avoidance

Researchers define embarrassment as a commonly-occurring, short-lived negative emotional response that arises from a threat to the public self in the presence of an audience, real or imagined (Miller and Leary 1992). Most prior research has focused on the triggers of embarrassment (Keltner and Buswell 1997), how it relates to other self-conscious emotions such as shame (Miller and Tangney 1994), and how it correlates with various individual difference variables (Singelis and Sharkey 1995).

More pertinent to our work on embarrassment avoidance is the psychological research on empathy-neglect.¹ Although actors feel embarrassed, people who observe others' embarrassing pratfalls are generally forgiving, as mentioned above. Research has shown that people asked to imagine publicly tripping a security alarm, failing a test, arriving without a gift to a party, or being introduced as someone who bed-wets believe observers will judge them more harshly than they actually do (Savitsky et al. 2001). Actors appear not to take into account observers' empathy, i.e. they exhibit empathy-neglect (Epley et al. 2002). If

¹ A reduction in embarrassment avoidance might also be achieved by reducing the degree to which individuals feel that others will notice their behavior, i.e., that they are in the 'spotlight' (Gilovich, Medvec, and Savitsky 2000). In this paper, however, we focus only on empathy-neglect.

observers empathize with the person who is embarrassed, then they, in fact, tend to be kinder in their judgments (Regan and Totten 1975).

Several processes have been proposed to explain why actors overestimate others' harshness even though they themselves would empathize with others. Perhaps the most common explanation is that empathy-neglect is due to the failure to process information from the perspective of others (Epley et al. 2002). Egocentric, people focus on their blunder and do not consider other factors that influence others' judgments (Savitski et al. 2001). Efforts to help actors better understand others' points of view, however, have not been successful partly because we tend to always see the world through the lens of our own worldview (Epley 2014, p. 111-115). If our beliefs about others are mistaken, i.e., that others are focused on us and are disapproving, then carefully considering how others must be viewing us is likely only to magnify the mistaken expectations. For example, if employees have pre-conceived notions that management is only interested in profit, then trying to understand or take management's point of view in negotiations may only strengthen one's distrust of any proposal they advance.

A better strategy is suggested by Epley (2014) when he states:

“You don't overcome the lens problem by trying harder to imagine another person's perspective. You overcome it by actually being in that perspective...” (p. 115).

Rather than considering how another person (observer) will react to your behavior, you must become the observer yourself. Kinder evaluations may then come into sight. If actors, when taking the perspective of observers, have empathy for others and evaluate those who commit social blunders more kindly, they may rely on these kinder evaluations as a basis for how they would be judged should they be actors in an embarrassing situation. It is this process that we term “empathy-transfer,” as it suggests transferring the implications of one's empathy for others to oneself.

However, not all actors may be equal in the amount of empathy they generally have for others. Thus, in our research, we consider the person's tendency toward public self-consciousness (PUBSC) because it appears to be positively correlated with expectations of being embarrassed and embarrassment-avoidant behavior, and thus possibly greater empathy towards others committing social blunders.

Moderating Role of Public Self-Consciousness

PUBSC is defined as the tendency to be aware of oneself as a social object (Fenigstein, Scheier, and Buss 1975). High public self-consciousness (HPUBSC) corresponds to heightened feelings of being the focus of attention (Fenigstein 1984) and paranoia (von Gemmingen, Sullivan, and Pomerantz 2003). People high versus low in public self-consciousness (LPUBSC) are more concerned about how they are regarded by others, for example paying more attention to their physical appearance (Miller and Cox 1982). This implies that HPUBSC consumers are more willing and likely to alter their behavior in order to avoid social censure (Raichle et al. 2001). To the extent that embarrassment stems from the belief that observers will judge people who commit blunders negatively, PUBSC may be positively associated with the desire to avoid embarrassment.

Past research has confirmed that individuals high in PUBSC are less likely to engage in embarrassing behavior even though doing so would benefit them, i.e., they are more likely to exhibit embarrassment avoidance. For example, Lau-Gesk and Drolet (2008) found ads for a product designed to prevent incidents of accidentally passing gas in public were more effective as PUBSC levels increased unless the ad suggested the certainty of a social spotlight by highlighting the embarrassment they would experience without the product's use. These authors conclude that increasing levels of PUBSC are associated with more automatic and chronically-experienced expectations of being embarrassed. Further, a study by Froming, Corley, and Rinker (1990) demonstrated that HPUBSC consumers exhibit embarrassment

avoidance in part because of their greater sensitivity to negative evaluations by others. In this study, participants were paid to sing “The Star-Spangled Banner” in front of 1) a friend, 2) a stranger with whom they did not expect to interact with in the future, or 3) a stranger with whom they did expect to interact with in the future. The longer participants sang, the more money they earned. Regardless of audience type, HPUBSC participants sang for a shorter time compared to LPUBSC participants. LPUBSC participants curtailed their singing only when the audience was composed of strangers with whom they expected to interact with again.

Given that HPUBSC consumers expect to be embarrassed more often than others (Lau-Gesk and Drolet 2008), one would assume that HPUBSC consumers would be more empathetic and thus less critical of others in embarrassing predicaments. As such, if HPUBSC consumers can assess their own embarrassing predicaments from the perspective of an observer, they may use the empathetic reactions they would have on behalf of others as information about how others may react toward them. Put more plainly, making one’s status as an observer salient may cause HPUBSC consumers, who are high in empathy as well, to realize that observers are empathetic and generally more forgiving of others’ embarrassing blunders than they assumed initially.

Some prior research is consistent with the view that HPUBSC (LPUBSC) people may have more (less) empathy for others to transfer. For example, studies show that HPUBSC people are more likely than LPUBSC people to self-handicap in social situations, for example making excuses for failure prior to a situation’s outcome or withdrawing effort (Shepperd and Arkin 1989; Froming, Corley, and Rinker 1990). Nevertheless, we sought direct empirical evidence as to the relationship between PUBSC and the tendency to be empathic in a pilot study of our own.

Pilot Study

In particular, we examined the correlation between PUBSC and trait 'empathy.' We used the interpersonal reactivity index (IRI) to measure dispositional empathy (Davis 1980; 1983). The IRI contains 28 questions that tap into different aspects of empathy (e.g., "When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me", "Being in a tense emotional situation scares me", "I sometimes try to understand my friends better by imagining how things look from their perspective," and "I often have tender, concerned feelings for people less fortunate than me"; 1=does not describe me well; 7=describe me very well). The PUBSC scale consists of seven items that measure the extent to which participants consider themselves as social objects (Fenigstein, Scheier and Buss 1975). Example items for the PUBSC scale include "I usually worry about making a good impression" and "I am concerned about what other people think about me." One hundred-three participants were recruited from Amazon's Mechanical Turk ($M_{age} = 35$; 53% female). Participants completed an "Opinion" survey. To ensure that participants were unaware of the survey's purpose, several filler tasks were placed between the PUBSC and IRI scales. In support of the above theorizing, we found a significant positive correlation between PUBSC and empathy (as measured by the IRI) ($r = 0.31, p < .002$).

Combining the view on becoming an observer oneself and the greater empathetic tendencies of HPUBSC consumers, we propose that in order to counteract empathy-neglect, one must not only feel someone else's pain from a public debacle, one must also generalize, or transfer, his or her own tendencies, as an observer, to evaluate others in such situations less harshly. In brief, one must engage in empathy-transfer.

Taking the Perspective of an Observer

In this research, we examine how people rely on their reactions to others when they are an observer (rather than an embarrassed actor) to gauge how other people will react to them. This is not to be confused with or equated with the broader and more traditional

concept of perspective-taking, a term that usually any attempt to overcome one's own perspective by considering another's potentially-different perspective (Davis et al. 1996; Gilovich et al. 2000; Nickerson 1999). Traditionally, perspective-taking describes the active attempt to understand another's thoughts with respect to a third object, whereas we attempt to make salient how the person him/herself would react to others as an input. This involves considering how the person would react as an observer, and then engaging in empathy-transfer, i.e. using one's own empathy for others to approximate how others would react to him/her as an actor.

In general, perspective-taking requires cognitive resources. Indeed, cognitive load can diminish people's ability to imagine how others' see the situation (Davis et al. 1996). Similarly, we propose that taking the perspective of an observer and empathy-transfer are effortful processes. People do not automatically step out of themselves (i.e., take the observer's role) nor use their own empathy as information about the observers will react (i.e. transfer empathy to themselves).

HYPOTHESES

In Study 6, we provide an empirical foundation for the differences in how HPUBSC and LPUBSC consumers react when thinking about how they would react to others if they were the observer. We hypothesize that:

H6a: With no intervention, PUBSC is associated with an increased tendency to take the actor's perspective in an embarrassing situation; PUBSC is associated with a decreased tendency to take an observer's perspective in an embarrassing situation.

H6b: PUBSC is associated with increased embarrassment, personal distress, and empathy concerns.

In Study 7 and Study 8, we test the effect of taking an observer's perspective on behavioral changes in a health and an advertising context respectively, and report various

measures to illuminate the mechanism presumed to underlie these effects. Specifically, we hypothesize that:

H7a: With no intervention, PUBSC is associated with increased embarrassment-avoidant behavior (Control condition).

H7b: Taking the perspective of the observer causes HPUBSC consumers but not LPUBSC consumers to engage in empathy-transfer and exhibit less embarrassment-avoidance (Perspective-Taking condition).

Empathy-transfer as an Effortful Process

The process of empathy-transfer presumably requires attentional resources and effort to redirect one's perspective. Consumers can use the empathy they would feel for embarrassed others as information about how they themselves would be judged only if sufficient cognitive resources are available to them. Thus, another objective of Studies 7 and 8 is to tease apart less effortful processing presumably associated with empathy-neglect (e.g., for HPUBSC consumers, envisioning negative social situations and then engaging in embarrassment-avoidant ways) versus more effortful controlled processing presumably associated with countering it through taking the perspective of an observer and empathy-transfer (e.g., using the empathy one would feel for embarrassed others as information as how they themselves would be judged).

Cognitive load has been shown to disrupt more consciously-controlled processes, causing people to rely on more automatic processes and a narrowed focus of attention on immediate, local information (e.g., Drolet, Luce, and Simonson 2009; Ward and Mann 2000).² When cognitive resources are constrained, cues to perspective-take should not help HPUBSC consumers' ability to counter empathy-neglect, and HPUBSC consumers will seek

² Unawareness, unintentionality, uncontrollability, and high efficiency are four underlying qualities of automaticity (see Bargh 1994). Evidence of one of these qualities is said to indicate automaticity.

to avoid embarrassment more. In short, load blocks the transfer of empathy for others to oneself. Based on this reasoning, we hypothesize:

H8a: Load moderates the effects of perspective-taking. Under load (vs. no load), HPUBSC consumers who take the role of an observer will be unable to transfer their (higher) empathy, and thus will exhibit greater embarrassment-avoidance.

H8b: Under load (vs. no load), LPUBSC consumers who take the perspective of an observer will be unable to transfer their (lower) empathy, and will exhibit less embarrassment-avoidance.

Essentially, under load, all consumers (HPUBSC and LPUBSC) will revert to their chronic response patterns. These last two hypotheses are tested in Studies 7 and 8.

In summary, we conducted three experiments in order to better understand how to reduce undue embarrassment-avoidance among HPUBSC consumers since they are most likely to be negatively affected by the prospect of embarrassment. However, in the general discussion, we offer several observations about the less researched process underlying the behavior of LPUBSC consumers (or consumers who are not-HPUBSC) and suggestions for future research with respect to this group.

STUDY 6

Method and Stimuli

Seventy people from an online panel of students, staff, and local residents of a large public West Coast university participated in Study 6 ($M_{age} = 31.0$, $SD = 9.1$; 44.3% female; approximately 7.1% Asian or Asian American, 70.0% Caucasian, 22.9% Hispanic, African American, Pacific Islander, and mixed/other race). Three people failed to answer all questions, leaving a final study sample of 67 participants.

Participants examined an ad for Beano, a gas-prevention product. The ad portrayed a situation in which a person accidentally farts in a yoga class while doing the downward facing dog position (see Appendix). The ad read:

“Rip. Accidentally passing gas in front of classmates is one of the most embarrassing experiences. Guaranteed to linger forever. Try Beano to avoid future embarrassment.”

After reading the ad, participants answered several questions regarding the perspective they took when they read the ad. Two questions assessed the extent to which participants took the actor’s perspective (“When you read the ad, to what extent did you imagine yourself being the actor who farted in the scene?” “When you read the ad, to what extent did you put yourself in the scene and imagine this happening to you?” 1 = A little, 7 = A lot). The two questions were highly significantly correlated ($r = .86, p < .0001$) and were averaged to create an *actor’s perspective* index. Another question captured the extent to which participants took an *observer’s perspective* index (“When you read the ad, to what extent did you imagine yourself outside of the picture”; 1 = A little; 7 = A lot). Next, participants completed two items that assessed their personal distress when they read the ad (“When you read the ad, to what extent did you feel personal uneasiness?” “When you read the ad, to what extent did you feel personal discomfort?” 1 = A little; 7 = A lot). The two questions ($r = .91, p < .0001$) were averaged to create a *personal distress* index. Two items assessed participants’ empathy concerns for the person who farted (“When you read the ad, to what extent did you feel concern for the person who farted?” “When you read the ad, to what extent did you feel sorry for the person who farted?”; $r = .86, p < .0001$) and were averaged to create an *empathy concern* index. Then, participants answered one question about their embarrassment (“When I read the ad, I felt embarrassed”) using a 7-point scale (1 = Not at all agree; 7 = Agree). Finally, participants rated their tendencies to pass gas in public (1-7 scale; 1 = Never, 7 = Very often). Responses to this question served as a potential covariate.

At the end of the survey session, participants completed Fenigstein, Scheier, and Buss' (1975) 7-item public self-consciousness (PUBSC) scale. Last, participants provided demographic information.

Results

We followed Aiken and West's (1991) method and mean-centered the level of PUBSC scores ($M = 4.43, SD = 1.33$). We then conducted a regression analysis (SAS PROC SURVEYREG) in order to examine participants' responses to the embarrassing situation with respect to the centered level of PUBSC. We included the tendency to pass gas in public as a covariate. Although we have made directional predictions, we report the (more conservative) two-tail t-tests.

H6a. Our first hypothesis suggests that PUBSC is positively related to the tendency to take the actor's perspective, and negatively related to the tendency to see oneself as an observer in embarrassing situations. We ran a regression with the *actor's perspective* as the dependent variable, *PUBSC* as an independent variable, and the *tendency to pass gas in public* as a covariate. The analysis revealed a main effect of the tendency to pass gas in public ($F(1, 66) = 3.85, p = .05$) and an interaction between PUBSC and the tendency to pass gas in public ($F(1, 66) = 3.97, p = .05$) on taking the actor's perspective. A simple slope analysis revealed that, among people who had a relatively higher tendency to pass gas in public (+1 SD), PUBSC predicted an increase in the tendency to take an actor's perspective although this effect was marginal ($\beta = .38, t(66) = 1.81, p = .08$). Among people who had a relatively lower tendency to pass gas in public (-1 SD), PUBSC did not predict taking an actor's perspective ($\beta = -.12, t(66) = -.55, p = .59$). With respect to the tendency to take an observer's perspective, there was a main effect of PUBSC ($F(1, 66) = 5.76, p < .02$). LPUBSC consumers were more likely to take an observer's perspective than were HPUBSC consumers ($\beta = -.39, t(66) = -2.40, p < .02$).

In summary, Study 6's results are supportive of H6a. PUBSC moderates the perspective participants take when they view an embarrassing situation. HPUBSC (vs. LPUBSC) consumers are more likely to consider themselves as actors when the situation concerns a familiar or relevant event and are generally less likely to consider themselves to be observers.

H6b. Consistent with H6b, HPUBSC consumers felt more embarrassed when reading the ad than did LPUBSC consumers ($\beta = .35, t(66) = 1.96, p = .05$). We also found a main effect of PUBSC ($F(1, 66) = 5.34, p < .03$) on personal distress such that HPUBSC consumers felt more personal distress when they read the ad than did LPUBSC consumers ($\beta = .40, t(66) = 2.31, p < .03$). And finally, we found a main effect of PUBSC ($F(1, 66) = 3.85, p = .05$) on empathy concern, with HPUBSC consumers reporting more empathy concern towards the person who farted compared to LPUBSC consumers ($\beta = .35, t(66) = 1.96, p = .05$).

Discussion

The results are consistent with H6a and H6b. Indeed, they confirm that HPUBSC are more likely to imagine themselves to be in an embarrassing situation, and perhaps as a result, experience greater personal distress. Consistent with our pilot study results, HPUBSC participants expressed a higher level of empathetic concern for the actor than did LPUBSC participants.

Building on these results, Study 7 and Study 8 investigate the effects of PUBSC on behavior. They test whether a cue to take the perspective of an observer decreases embarrassment-avoidance among HPUBSC consumers. These experiments also provide insights as to the effortful nature of processing information from this perspective. They do so by constraining cognitive resources in some conditions so as to block the ability to engage in empathy-transfer.

STUDY 7

In Study 7, we predict that a cue to take the perspective of an observer will have a helpful effect on HPUBSC consumers. Alternatively, it may have a hurtful effect on LPUBSC consumers. Again, taking the perspective of an observer should make one's own perspective as an observer salient. By transferring the higher empathy they tend to feel towards others in embarrassing situations to themselves, HPUBSC consumers should realize that others will not judge them as harshly. Thus, empathy-neglect, or discounting the empathy of others, should be countered where HPUBSC participants are encouraged to focus on their role as observers rather than actors (H7). However, LPUBSC consumers' lower empathy will be salient and transferred to themselves, thereby reinforcing the view that others will be relatively harsh.

Further, we predict that load will moderate the effects of taking the perspective of the observer, such that HPUBSC consumers who take the role of an observer will exhibit more embarrassment-avoidant behavior under load than under no load (H7) because load interferes with the ability to process information deliberately from a less familiar perspective. LPUBSC consumers should exhibit less embarrassment-avoidance because their own relative lack of empathy for others will not be transferred to themselves.

Method and Stimuli

One hundred and forty-two students at a large West Coast university participated in Study 7 for a \$20 payment ($M_{age} = 19.9$, $SD = 1.5$; 74.0% female; approximately 69.3% Asian or Asian American, 7.3% Caucasian, 23.3% Hispanic, African American, Pacific Islander, and mixed race/ethnicity). The ad read:

“We are looking for volunteers to talk to researchers about how to improve communication lines between doctors and their patients about sensitive healthcare issues.

For example, people who should get tested for HIV or need treatment for genital herpes frequently opt not to seek help from doctors, family members and friends. You will be asked several personal questions during the interview. The goal of this research is to identify ways to make it easier for people to talk more openly about such sensitive topics and thereby feel more comfortable seeking treatment. You will be paid \$50 in exchange for your time and insights (approximately 1 hour).”

After participants examined the volunteer ad, they answered one of two versions of the survey corresponding to the ad. The two different versions of the survey asked the same set of questions but in a different order. Past research has shown that different ordering of the same set of questions can differentially affect responses (Sudman, Bradburn, and Schwarz 1996).

One version of the survey served as a Control condition. Participants in the Control condition were first asked about their intentions to volunteer (1-7, not at all/definitely volunteer). Here, per H7a, we expected to find that higher levels of PUBSC correlate with a lower intention to volunteer, a reflection of embarrassment-avoidance. Participants then indicated how they expected to feel during the interview (1 = Not at all, 7 = Very comfortable, nervous, embarrassed, confident, calm), how they expected the researchers to react towards them as volunteers (1 = Not at all, 7 = Very positive, favorable, good; $\alpha = .97$), and how they would react towards other volunteers in the study (1 = Not at all, 7 = Very positive, favorable, good; $\alpha = .98$).

The second version represented the observer perspective condition. Participants in this condition first indicated how they would react towards the volunteers if they were the researchers. They then indicated (in order) their intentions to volunteer, how they expected to feel during the interview, and how they expected the researchers to react towards them as volunteers. Given our proposed theory, in this condition, higher levels of PUBSC should

correspond to higher volunteer intentions, whereas lower levels of PUBSC should correspond to lower volunteer intentions. More empathetic, HPUBSC people will transfer their (own) empathy to others' judgment of themselves. Less empathetic, LPUBSC people will transfer their lack of empathy.³

Additionally, approximately half of participants received a cognitive load manipulation (Load condition) whereas the other half did not (No Load condition). Following Drolet and Luce (2004), participants in the Load condition were given two minutes to memorize a list of 20 words to be recalled later during the experimental session. After the memorization task, Load participants were presented with the ad. After responding to the ad, they were asked to recall as many of the words as they could. As discussed above, cognitive load inhibits more effortful processes, here empathy-transfer, and eases more automatic processes, here consumers' chronic PUBSC tendencies.

At the end of the survey session, participants completed Fenigstein, Scheier, and Buss' (1975) public self-consciousness scale. Participants then answered demographic questions. We suspected that low-income individuals might volunteer for the interview for \$50 even if they would feel embarrassed, so we included income as a covariate in the analyses reported for this study.⁴

Results

We conducted a regression analysis (SAS PROC SURVEYREG), exploring participants' responses to the embarrassing volunteer opportunity from the mean-centered level of PUBSC ($M = 3.76$, $SD = .54$), question-order condition (Control vs. Perspective-

³ Participants in both conditions were asked three last questions, specifically whether they had ever tested positive for an STD, whether they had been tested for HIV, and whether they had genital herpes. Among participants, 5.26% reported having tested positive for an STD in the past, 10.74% reported having been tested for HIV, and 0.0% reported having contracted genital herpes. We tested the STD and HIV variables as possible covariates in the below analysis. In brief, as one might expect, the overall results are slightly statistically stronger when the analysis takes these variables into account. For simplicity of exposition, however, the below analyses do not include the HIV or STD variables.

⁴ The effect of including Income as a covariate had a slight effect on only one comparison which is noted where appropriate in the analysis.

Taking), and load (No Load vs. Load). Although we have made directional predictions, we report the (more conservative) two-tail t-tests. Analysis revealed a significant main effect of question-order condition ($F(1, 131) = 3.43, p < .03$). This effect was qualified by a highly significant two-way interaction effect of PUBSC and load ($F(1, 131) = 5.43, p < .02$), and a three-way interaction effect of PUBSC, question-order condition, and load on volunteer intentions ($F(1, 131) = 15.96, p < .0001$). Estimated means for volunteer intentions are provided below using +1SD and -1SD to depict the nature of any interactions that emerged. Figure 6 depicts these results using this criterion.

Insert Figure 6 about here

The results of Study 7 support all but one of our hypotheses. First, in the No load-Control condition, volunteer intentions were significantly lower among HPUBSC participants (+1 SD) than LPUBSC participants (-1 SD) ($M_{LPUBSC} = 6.33$ vs. $M_{HPUBSC} = 3.37$; $t(131) = -3.63, p < .0008$), supporting H7a.

Hypothesis 7b predicted differential effects of a perspective-taking prime for HPUBSC versus LPUBSC consumers. Consistent with this hypothesis, an analysis across question-order conditions showed that, under no load, observer perspective-taking prime was effective at increasing HPUBSC participants' volunteer intentions ($M_{HPUBSC, Perspective-taking, No Load} = 5.47$ vs. $M_{HPUBSC, Control, No Load} = 3.37$; $t(131) = 2.16, p = .02$). Also, observer perspective-taking lowered LPUBSC participants' volunteer intentions ($M_{LPUBSC, Perspective-taking, No Load} = 4.91$ vs. $M_{LPUBSC, Control, No Load} = 6.33$; $t(131) = 2.07, p = .04$).⁵

Hypotheses 8a and 8b concern the degree to which limiting cognitive resources blocks the effects of perspective-taking. Consistent with H8b, load did reverse the harmful effects of

⁵ These results change slightly if Income is not included as a covariate (intentions ($M_{LPUBSC, Perspective-taking, No Load} = 4.82$ vs. $M_{LPUBSC, Control, No Load} = 6.10$; $t(145) = 1.89, p = .06$).

observer perspective prime among LPUBSC participants. Among these participants, intentions were marginally higher in the Load-Perspective-taking condition than in the No Load-Perspective-taking condition ($M_{LPUBSC, Perspective-taking, Load} = 6.31$ vs. $M_{LPUBSC, Perspective-taking, No Load} = 4.91$, $t(131) = 1.72$, $p = .08$). In fact, intentions were no different in the Load-Perspective-taking condition than in the No Load- Control (no intervention) condition ($M_{LPUBSC, Perspective-taking, Load} = 6.31$ vs. $M_{LPUBSC, Control, No Load} = 6.33$, $t(131) = .03$, $p = .98$).

However, regarding H8a and the effects of load in the Perspective-taking condition among HPUBSC consumers, we found an unexpected result. In particular, load did not erase the positive effects of observer perspective-taking among HPUBSC consumers. There was no difference between volunteer intentions in the No Load versus Load conditions ($M_{HPUBSC, No Load} = 5.47$ vs. $M_{HPUBSC, Load} = 5.19$, $t(131) = .27$, $p < .78$). Some insight regarding a possible reason for this finding is provided by an examination of the effects of load in the Control condition where originally we had not made any predictions. In the Control condition, higher volunteer intentions were found among HPUBSC participants in the Load condition versus in the No Load condition ($M_{HPUBSC, Control, No Load} = 3.37$ vs. $M_{HPUBSC, Control, Load} = 6.44$; $t(131) = 4.64$, $p < .0001$). Consistent with Ward and Mann's (2000) interpretation, load's salutary effects on HPUBSC participants implies that load reduces the amount of attention one can direct to oneself and disrupts one's ability to monitor one's own behavior relative to social standards. Hence, load may have blocked all cognitively-demanding processes, namely the heightened self-monitoring that HPUBSC people usually engage in as well as the process of taking an alternative perspective and empathy-transfer. As a result, HPUBSC people then focus on peripheral information about the task, i.e., a graduate student researcher is asking for help. Given the prosocial nature of the task and HPUBSC consumers' desire to be favorably regarded by others, HPUBSC consumers exhibited higher intentions to volunteer in order to

help the researcher. We further examine this possibility in Study 8 where the peripheral information does not reference a socially desirable helping behavior.⁶

Discussion

Findings from Study 7 support our theory of embarrassment-avoidance, empathy-neglect, and empathy-transfer. Taking the perspective of an observer appears to be a helpful strategy to combat empathy-neglect for HPUBSC consumers but a hurtful strategy for LPUBSC consumers. Perspective-taking prompts the transfer of higher empathy in the case of HPUBSC consumers but lower empathy in the case of LPUBSC consumers. We also provided initial evidence that this process is effortful.

Study 8 builds on Study 6 and Study 7 in two important ways. First, Study 8 tests our theorizing in another important consumer context, i.e., advertising, which generally follows different social rules compared to volunteering. This context does not involve prosocial nature, and provides a cleaner test of our theorizing. Second, we collected process measures, such as participants' perceived empathy from others, and participants' open-ended responses, in order to examine the proposed empathy-transfer process in more detail.

STUDY 8

Participants and Procedure

Participants were 220 undergraduate students at a large public West Coast university ($M_{age} = 20.0$; 75.7% female). All participants received a survey packet with a cover page instructing them to provide feedback on an ad for a real product targeted towards college-aged people like themselves. We created two ads for a real-world flatulence prevention brand (i.e., Beano), with a photo used by Lau-Gesk and Drolet (2008, Experiment 2) that

⁶ Also contrary to expectations, load in the control conditions resulted in greater embarrassment among those low in PUBSC ($M_{LPUBSC, Control, No Load} = 6.33$ vs. $M_{LPUBSC, Control, Load} = 3.20$; $t(131) = 4.29$, $p < .0001$). We discuss the possibility that the load instructions had the effect of causing them to perceive a potential 'spotlight' when they otherwise would not do so.

depicted four college-age individuals at a party sharing a couch. A male is sitting alone, slouching at one end of a sofa. The side of his head is resting on his hand. His head is turned slightly down. At the other end of the sofa, three females are sitting together. One of the females is looking nervously sidelong at the male. The other two females are in animated conversation. The consumers in this photo displayed nonverbal behaviors that signaled embarrassment (Keltner and Buswell, 1997). Participants in the Control condition read the following ad copy:

“Rip. Accidentally passing gas in front of a crush is one of the most embarrassing experiences. Guaranteed to linger forever.”

Participants in the perspective-taking condition read the same ad copy along with an additional sentence:

“Others will know what it’s like. Put yourself in their shoes...would you giggle? Would you be horrified? Would you stare?”

To ensure that this ad could successfully elicit empathy-transfer, we conducted a pretest with 164 undergraduate students ($M_{age} = 24.0$; 52% female). Half of participants received the control ad copy and the other half of participants received the perspective-taking ad copy. All participants were asked to read the ad copy and answer two questions about the empathy they expected from others if they were to pass gas in public (1-7 scale, 1 = Not agree at all; 7 = Agree): “If I pass gas aloud, people would put themselves in my shoes”; “If I passed gas aloud, people would empathize with me.” Embedded at the end of the survey was the PUBSC scale.

A significant two-way interaction between ad condition and PUBSC emerged ($F(1,160) = 3.98, p < .05$). Specifically, in the Control condition, as PUBSC increases, expected empathy from others decreases ($\beta = -.46, t(160) = -2.30, p < .02$), supporting past research that HPUBSC people expect less empathy from others. This effect of PUBSC on

perceived empathy from others was in the reverse direction, but not significantly so, in the Perspective-taking condition ($\beta = .27, F(1,160) = .87, p < .39$). HPUBSC participants (+1 SD) expected more empathy from others in the Perspective-taking condition than in the Control condition ($M_{\text{Perspective-taking}} = 3.79$ vs. $M_{\text{Control}} = 3.14, t(160) = -2.51, p = .01$), confirming that taking the perspective of the observer can induce HPUBSC consumers to come to expect more empathy from others. No significant difference was found in the amount of expected empathy among LPUBSC people ($M_{\text{Perspective-taking}} = 3.59$ vs. $M_{\text{Control}} = 3.48, t(160) = -.41, p = .48$).

In the main experiment, approximately half of the participants in each ad condition received a cognitive load manipulation before being asked to provide feedback for the print ad they were shown. As in Study 7, they were asked to study 20 words for 2 minutes and keep them in mind when they answered questions regarding the ad. At the end of the study, they were asked to write down as many of the 20 words they could remember. All participants were exposed to one of the two ads described above and then answered two questions that assessed purchase intentions. Participants then provided open-ended responses; they were instructed to write down any thoughts or feelings that occurred to them while reading the ad. This task was followed by a manipulation check question assessing whether participants viewed the ad as relatively self-related versus other-related, the emotions they felt while viewing the ad (PANAS scale; Watson et al. 1988), and potential covariates including their own tendency to pass gas in public and the feelings that arise from such situations. Finally, participants completed the PUBSC scale and provided demographic information.

Results and Discussion

Manipulation Checks. The manipulation check analysis yielded a marginally-significant main effect of ad type on the actor index (disagree = 1, agree = 7; “When I read

the ad, I imagined that I was the person who accidentally passed gas”). Participants exposed to the ad encouraging them to become an observer scored (marginally) lower on this index than those exposed to the control ad ($M_{Perspective-taking} = 3.83$ vs. $M_{Control} = 4.34$, $t(212) = 1.91$, $p = .057$). Analysis also showed that the ads elicited feelings of embarrassment (grand $M = 3.26$) more so than any other emotion (all other M s < 2.07 , including shame and sadness; all t s $< .05$).

Two independent coders assessed the elaborateness of participants’ thoughts that served as a manipulation check for the influence of load on thinking processes. Decision makers who are under load rely relatively more on automatic processes and locally-provided information rather than stored information (e.g. Drolet and Luce 2004; Ward and Mann 2000). Coders were instructed to rate the thoughts along two items from a 1-7 scale (Not at all/Very) that measured: 1) the degree to which participants provided thoughts elaborating beyond simply describing the ad based on its picture or copy used; 2) the degree to which participants provided thoughts indicative of gut reactions to the ad. The latter item was reverse-scored to create an elaboration index ($r = .86$). Initial inter-rater reliability was high ($r = .85$). Inconsistencies between the coders were discussed until agreement was reached. Analysis found only a main effect of load such that Load participants tended to elaborate less ($M_{Load} = 2.35$ vs. $M_{No Load} = 3.42$, $t(212) = 4.47$, $p < .0001$).

Purchase Intentions. We first mean-centered the level of PUBSC scores ($M = 3.80$, $SD = .58$). We then conducted a regression analysis, exploring participants’ purchase intentions as a function of the mean-centered level of PUBSC, ad condition, and load. Analysis found the predicted three-way interaction among PUBSC, ad type, and load on the purchase intention index ($r = .75$, $F(1, 212) = 11.11$, $p = .001$), and a marginally significant two-way interaction between PUBSC and ad type ($F(1, 212) = 3.62$, $p < .06$). The two-way

interaction emerged between PUBSC and load for the Control ($F(1,212) = -2.67, p < .008$) and the perspective-taking conditions ($F(1,212) = 2.19, p < .03$).

Our major hypotheses were again confirmed. In the No Load Control condition, purchase intentions for the gas prevention product were significantly higher among HPUBSC (+1 SD) participants than LPUBSC (-1 SD) participants ($M_{LPUBSC} = 2.56$ vs. $M_{HPUBSC} = 4.45$; $t(212) = 2.40, p < .015$), supporting H7a and replicating findings in Study 7.

The No Load-Perspective-taking condition resulted in findings consistent with H7b. Under no load, taking the perspective of an observer was effective at reducing HPUBSC participants' purchase intentions ($M_{HPUBSC, Perspective-taking, No Load} = 2.01$ vs. $M_{HPUBSC, Control, No Load} = 4.45$; $t(212) = 1.08, p < .006$). Also, perspective-taking increased LPUBSC participants' purchase intentions ($M_{LPUBSC, Perspective-taking No Load} = 4.36$ vs. $M_{LPUBSC, Control, No Load} = 2.56$; $t(212) = -2.44, p < .002$). When participants had ample cognitive resources to perspective-take and to think, "if they were the observers, how would they react to the actors," HPUBSC participants, who have high empathy, displayed less embarrassment avoidance behavior. See Figure 7.

Insert Figure 7 about here

H8a and H8b regarding the attenuating effect of load on perspective-taking were also supported. Consistent with H8a, load reversed the helpful effects of perspective-taking among HPUBSC participants. Among HPUBSC consumers, purchase intentions were marginally higher in the Load-Perspective-taking condition than in the No Load- Perspective-taking condition ($M_{HPUBSC, Perspective-taking, Load} = 3.50$ vs. $M_{HPUBSC, Perspective-taking, No Load} = 2.01$ $t(212) = -1.89, p < .06$). Unlike in Study 7, a focus on the immediate situation provided no social desirability cues to encourage potentially embarrassing behavior.

Consistent with H8b, load also reversed the harmful effects of observer perspective-taking among LPUBSC participants. Among these consumers, purchase intentions were lower in the Load—Perspective-taking condition than in the No Load- Perspective-taking condition ($M_{LPUBSC, Perspective-taking, Load} = 2.96$ vs. $M_{LPUBSC, Perspective-taking, No Load} = 4.36$, $t(212) = 2.04$, $p < .04$). In fact, intentions for both HPUBSC and LPUBSC participants in the Load-Perspective-taking condition were not different from their intentions in the No Load Control (non-intervention) condition ($M_{LPUBSC, Perspective-taking, Load} = 2.96$ vs. $M_{LPUBSC, Control, No Load} = 2.56$; $t(212) = .64$, $p < .52$, and $M_{HPUBSC, Perspective-taking, Load} = 3.50$ vs. $M_{HPUBSC, Control, No Load} = 4.45$; $t(212) = -1.30$, $p < .19$). These results for HPUBSC and LPUBSC participants under load are consistent with our hypotheses.

Under the control condition, we found the same effects of Load as seen in Study 7. Specifically, in the Control condition, lower purchase intentions were found for HPUBSC participants in the Load versus the No Load condition ($M_{HPUBSC, Control, No Load} = 4.95$ vs. $M_{HPUBSC, Control, Load} = 2.93$; $t(212) = 2.32$, $p < .02$). Load appears to have blocked all cognitively-demanding processes, namely the self-monitoring HPUBSC people usually engage in to compare their behavior with social standards. As a result, HPUBSC participants exhibited less embarrassment avoidance behavior under load. Also consistent with Study 7, LPUBSC consumers unexpectedly exhibited greater embarrassment avoidance in the Load-Control condition.

Cognitions. To illuminate the process of empathy-transfer, two independent coders classified participants' open-ended thoughts into three categories (inter-rater reliability = .85): 1) a “self-related” thinking score, i.e. the extent to which participants related the embarrassing situation to self (vs. others), given the embarrassing situation depicted in the ad (1 = other-related/not related to self; 7 = highly related to self); 2) other ad-related thoughts; 3)

irrelevant thoughts. No significant differences emerged for the latter two categories of thoughts.

More pertinent to our theorizing are the results for the first category that provide additional insight into the proposed empathy-transfer process. Specifically, we examined participants' self-related thoughts as a function of PUBSC, ad condition, and load, finding a significant three-way interaction among these three independent variables ($F(1,212) = 6.89, p < .01$). There was also a significant main effect of ad condition ($F(1,212) = 7.79, p < .006$).

The two-way interaction emerged between PUBSC and load for the Control condition ($F(1,212) = -2.90, p = .004$) but not for the Perspective-taking condition ($F(1,212) = 1.11, p = .27$). In the No Load-Control condition, self-related thoughts were significantly higher among HPUBSC (+1 SD) participants than LPUBSC (-1 SD) participants ($M_{HPUBSC, No Load} = 4.01$ vs. $M_{LPUBSC, No Load} = 1.31; t(212) = 2.09, p < .041$). This finding supports the notion that HPUBSC participants are more likely to envision oneself in the situation. See Figure 8.

Insert Figure 8 Here

Consistent with our theorizing about the process underlying empathy-transfer, when HPUBSC participants adopted the observer's perspective with ample cognitive resources, perspective-taking reduced self-related thinking ($M_{Perspective-taking, No Load} = 1.44$ vs. $M_{Control, No Load} = 4.01; t(212) = 3.15, p < .002$). In contrast, the instructions for perspective-taking (no load) resulted in LPUBSC participants engaging in more directionally, albeit not statistically significantly, self-related thoughts than in the Control condition ($M_{Perspective-taking No load} = 2.84$ vs. $M_{Control, No Load} = 1.31, t(212) = -1.59, p = .11$). This finding is consistent with the view that LPUBSC consumers typically do not put themselves in the picture, and thus typically would generate fewer self-related thoughts.

Across the perspective-taking conditions, there were no effects of load or PUBSC on self-related thoughts. This is consistent with the instructions to view the ad as an observer. These findings, compared to findings with respect to purchase intentions suggest that, while the content of thoughts can be changed by priming instructions, differences in purchase intentions arise only when there are sufficient cognitive resources to transfer the empathy felt toward others generated by these thoughts (high empathy for HPUBSC participants and low empathy for LPUBSC participants) to oneself. The ability to engage in empathy-transfer (no load) is key. Under load, fewer self-related thoughts and the empathy felt toward others is not transferred, and embarrassment avoidance behavior is not affected by that emotion-as-information.

Consistent with the view that load disrupts cognitive processes associated with HPUBSC, we found that load decreased self-thoughts relative to no load in the Control condition for HPUBSC participants ($M_{Control, No Load} = 4.01$ vs. $M_{Control, Load} = 2.15$; $t(212) = 2.44$, $p < .02$). In line with the unexpected findings of greater embarrassment avoidance for LPUBSC consumers in the Load-Control condition, LPUBSC consumers exhibited more self-related thoughts.

In total, findings from Study 8 support our theorizing about perspective-taking effectively deflating or inflating empathy-neglect depending on the level of PUBSC and load moderating these effects. Through the process of empathy (or lack thereof) transfer, taking the perspective of others helps HPUBSC consumers counteract empathy-neglect yet exacerbates empathy-neglect among LPUBSC consumers. Study 8 provides evidence for the proposed process as well as its consequences. It also provides evidence consistent with that in Study 7 that load suppresses the effortful self-monitoring that is necessary for the increasing effect of PUBSC on embarrassment-avoidance as well as, to some degree, the effortful cognitive processing of empathy-transfer.

GENERAL DISCUSSION

This research adds to an emerging body of work on embarrassment and embarrassment-avoidance behavior. Taking previous work revealing that consumers associated with higher (vs. lower) levels of PUBSC expect to experience more embarrassment and thereby exhibit more embarrassment-avoidant behavior as a point of departure (Lau-Gesk and Drolet 2008), the present research offers the first comprehensive examination of the relationships among PUBSC and empathy. As Study 6 demonstrated, HPUBSC (vs. LPUBSC) consumers tend to imagine themselves as actors in an embarrassment situation and experienced more personal distress as well as empathic concerns for others. As shown in Study 7 and Study 8, HPUBSC (vs. LPUBSC) consumers are more likely to exhibit embarrassment avoidance behavior.

The present research also introduces the concept of empathy-transfer, the process from empathy-felt-towards-others to empathy-others-must-feel-towards-self prompted by perspective-taking cues. Study 7 and Study 8 demonstrate the power of taking the perspective of an observer to fewer self-related thoughts and to counteract empathy-neglect among HPUBSC consumers. Contrarily, the lack-of-empathy-transferred among LPUBSC consumers, exacerbates empathy-neglect and embarrassment-avoidant behavior.

Future research may suggest other ways in which consumer thoughts can be redirected in order to help HPUBSC consumers' expectations of overly-harsh observer evaluations. For example, the Load-Control (or no intervention) condition suggests that Load interrupts HPUBSC consumers' abilities to engage in their usual self-monitoring (i.e., fewer self-related thoughts as shown in Study 8) which leads to empathy-neglect and embarrassment avoidance. However, for LPUBSC consumers, however, Load under the Control conditions appears to stimulate self-related thoughts and embarrassment avoidant behavior as compared to No Load. Although a firmer explanation for this unexpected finding awaits further empirical

study, LPUBSC consumers respond as if the Load instructions caused them to focus more on social actions than they would have otherwise. Alternatively, it may be that LPUBSC consumers typically engage in self-protective thoughts that are interrupted by working memory load. The underlying cognitive processes for LPUBSC individuals have not previously been studied. Rather, researchers have focus on HPUBSC consumers and not-HPUBSC (vs. LPUBSC) consumers.

Importantly, the load effects found in Study 8 for purchase intentions and self-related thoughts demonstrate that empathy-transfer is an effortful endeavor and adds to the growing body of research indicating that cognitive load exacerbates the focus on stored information and people's chronic tendencies. Under load, taking the perspective of the observer lead to fewer thoughts among HPUBSC consumers of relating the embarrassing situation to themselves, although perspective-taking did not counter empathy-neglect or decrease embarrassment-avoidance (via No Load). Alternatively, LPUBSC consumers, on the other hand, did not use their own harsh views of actors as cues, and exhibited less embarrassment avoidance vis-à-vis no Load. Future research might benefit from explicitly adopting a dual processing view and exploring the automatic versus effortful tendencies associated with PUBSC levels in detail (e.g., Evans 2008). This is particularly true for LPUBSC consumers for whom less is known about their typical cognitive processes.

The different results in Study 7 and Study 8 for HPUBSC participants instructed to perspective-take under load point to yet another factor involved in the responses of HPUBSC individuals, whether the situation is prosocial or not. In the advertising context in Study 8, load (vs. no load) resulted in higher embarrassment-avoidance when HPUBSC participants take the perspective of the observer. In contrast, the effect of Load was not significant in Study 7. In both Study 7 and Study 8, we proposed that cognitive load blocks empathy-transfer, leaving peripheral information more salient. The different findings in Study 7 and

Study 8 can be reconciled by the nature of the peripheral information. In Study 7, peripheral information is about “the researcher,” which makes participants aware of the objectivity and prosocial nature of the interview; therefore, under load when self-monitoring and perspective-taking processes were both blocked, HPUBSC participants, who pay attention to their ‘social self,’ were still willing to volunteer because they wanted to project a pro-social image. In contrast, in Study 7, there was no such peripheral information indicating an objective and prosocial nature in the Beano ad. Under load, participants cannot transfer empathy and can only think about a general audience’s reaction towards them. Load reversed the effect of perspective-taking and resulted in higher embarrassment-avoidance than under no load. In other words, whether embarrassment-avoidant behavior reverts to the same level as in the No Load Control condition depends on whether the situation is prosocial or not. More research is needed to provide greater understanding of these various processes.

Our research implies that empathy-as-information may be the mechanism underlying the effects of the transfer of empathy felt towards others. If this is true, then its experience should no longer be informative if its informational value is discredited (Schwarz and Clore 1983; Pham 1998). Indeed, a corollary to affect-as-information is the notion that people need to perceive their feelings as a relevant basis for judgment in order to rely on them for future decisions (Pham 1998). Considerable research on incidental affective states (i.e., mood) supports such an interpretation, finding that their influence on judgments and decisions tend to decrease as the source of mood becomes salient thereby heightening perceptions of its irrelevance (Gorn, Goldberg, and Basu 1993; Raghunathan, Pham, and Corfman 2006; Schwarz and Clore 1983; Siemer and Reisenzein 1998). Accordingly, future research might investigate the information value of empathy and whether empathy-transfer is mitigated as a result.

Our results have significant implications for marketers given the frequency with which embarrassment-avoidance forms the basis for attempts to motivate consumers to buy a wide variety of products from laundry detergents ("ring around the collar), to dishwashing liquid (unsightly spots on dishes), and even to cars (avoiding the embarrassment of an unfavorable evaluation by the neighbors).

Beyond this, however, our research is relevant to those situations which marketers may want to inoculate consumers against the fear of embarrassment and encourage them to take actions which they might otherwise avoid. Although these situations may not come to mind as readily, they occur fairly frequently. Getting an embarrassing, but potentially life-saving medical test, asking a technician a "dummies" question that will increase one's satisfaction with a purchase, or adopting an innovative and socially visible but potentially risky product that might open one up to public ridicule are all examples. Our research shows that devising strategies that will be successful universally in reducing embarrassment-avoidant behavior is more complicated than devising strategies to increase embarrassment-avoidance since HPUBSC and LPUBSC people may react in opposite ways to such persuasion tactics.

FIGURE 6
QUESTION-ORDER BY COGNITIVE LOAD BY PUBLIC SELF CONSCIOUSNESS IN
STUDY 7: MEANS

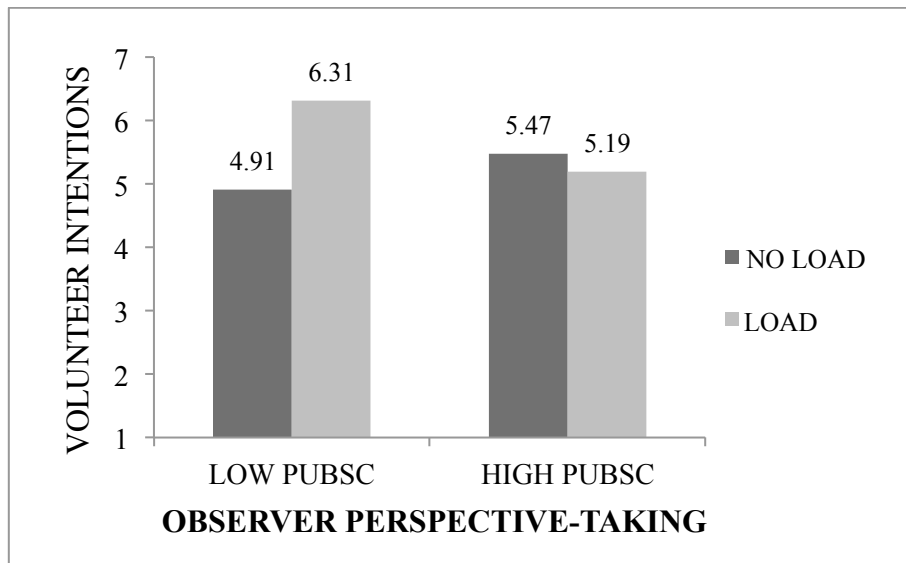
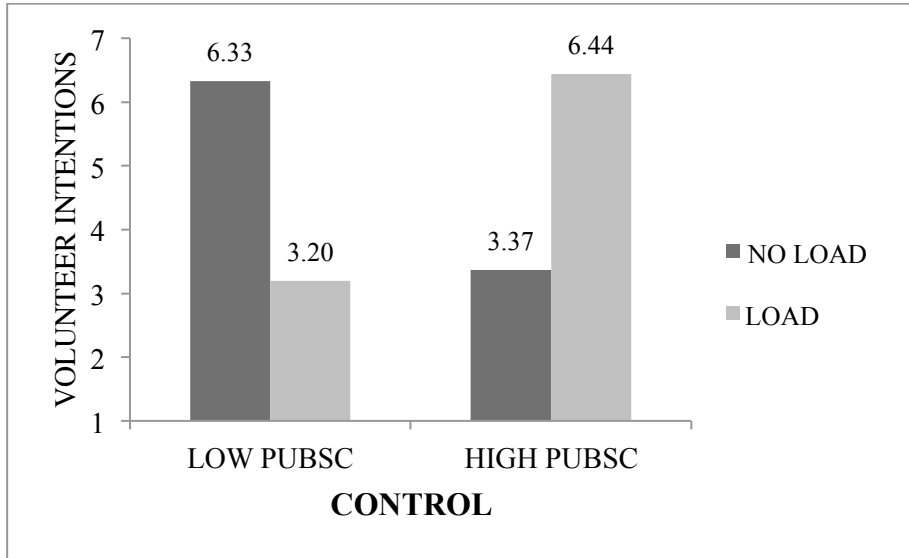


FIGURE 7

AD TYPE BY COGNITIVE LOAD BY PUBLIC SELF CONSCIOUSNESS IN STUDY 8:

MEANS

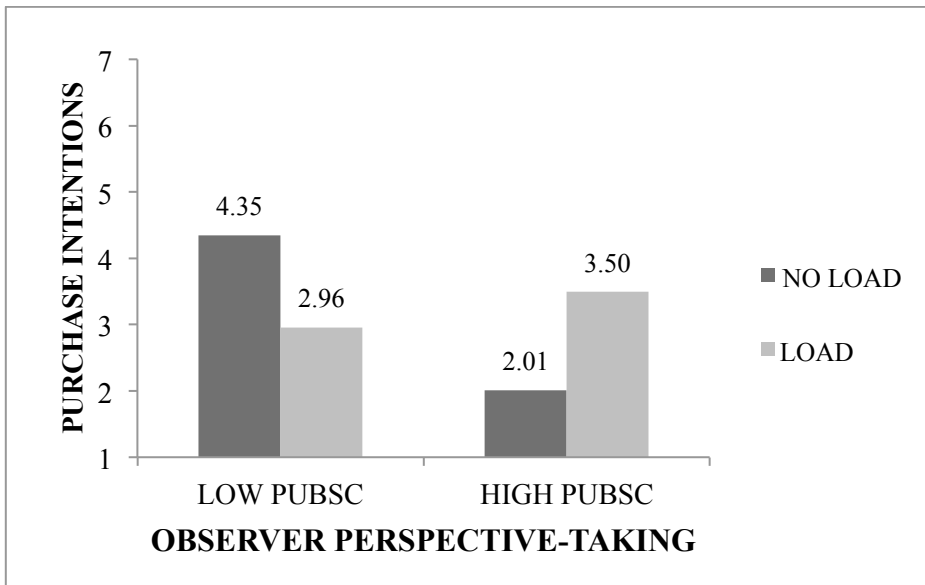
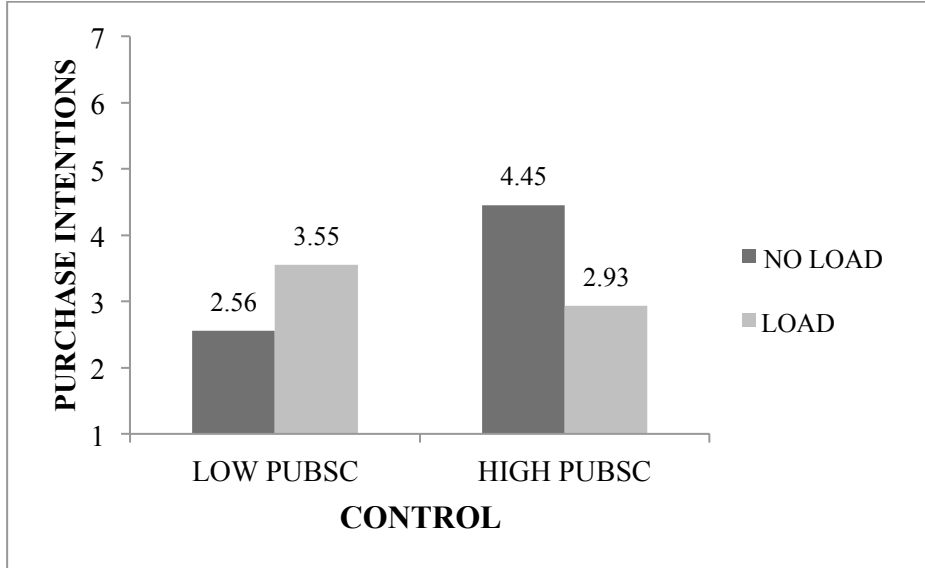
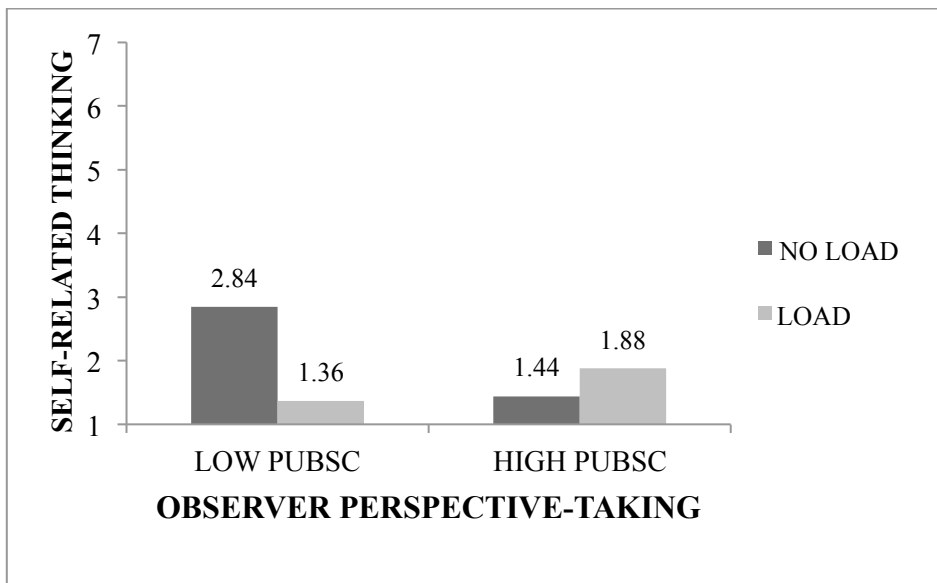
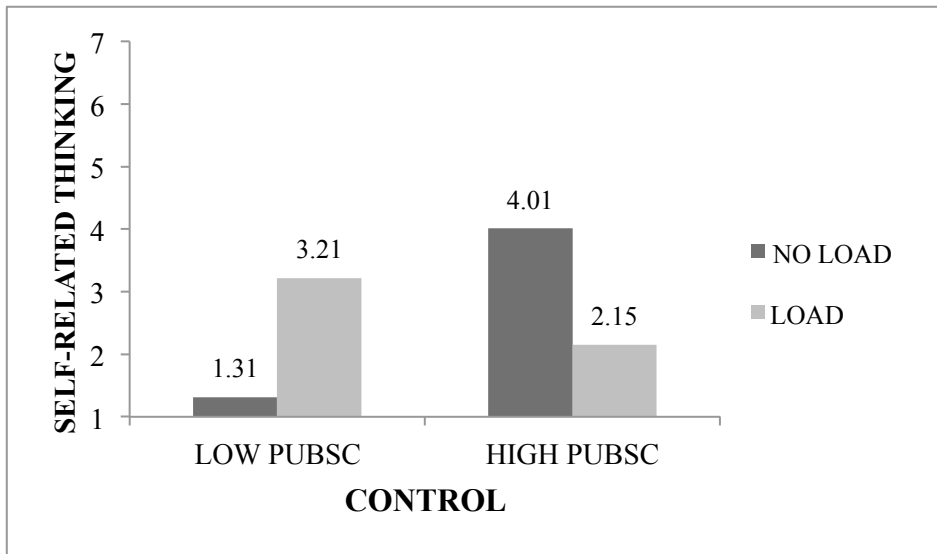


FIGURE 8

SELF-RELATED THINKING IN STUDY 8: MEANS



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CHAPTER 4: HOW CONSUMERS REACT TO STRESS: THE MODERATING ROLE OF AGE ON SOCIAL SUPPORT SEEKING

This chapter investigates differences due to age in social support seeking at combating stress. Results suggest that older adults seek explicit social support less compared to young adults but are equally as likely to seek implicit social support. Concerns for disrupting others mediates the effect of age on preference for explicit social support seeking. Young adults' preference of social support is mis-aligned with the effect of social support function. Whereas young adults prefer seeking explicit social support than older adults, they experience higher stress after they seek social support explicitly than the control condition. In contrast, older adults' preference is well aligned with the effect of social support function. This chapter reveals the importance of age in understanding social support transactions and suggests that how to properly seek what types of social support might be a process that needs experience.

One of the most effective coping strategies by which a person can alleviate the negative impact of stress is social support (Thoits, 1995). Social support is defined as information from others that one is loved and cared for, esteemed and valued, and part of a network of communication and mutual obligations and may come from a spouse, relatives, friends, and community ties, such as belonging to a church or a club in a form of emotional support and/or instrumental support (e.g., tangible assistance or informational support) (Seeman, 1996; Taylor, 2007). Research shows that social support reduces psychological distress, prevents pathogenic sickness, staves off cognitive decline among older adults, and enhances survival rates among those suffering from disease (Berkman, 1995; Cohen & Wills, 1985; Seeman, Lusignolo, Albert, & Berkman, 2001). Accordingly, seeking social support when stressed is considered one of the most effective coping strategies (Taylor, 2007).

While much research has focused on the health benefits due to social support, less research has examined how people can seek different types of social support to maximize its effect on reducing stress. Different types of social support may have different effects on different people. For example, studies show that culture and gender are factors that moderate the effects of different types of support use. Specifically, people from collectivistic culture benefit more from unsolicited social support than solicited social support; whereas people from individualistic culture show little difference between social support types (Mojaverian and Kim, 2002). In terms of gender, males are significantly less likely to seek emotional than instrumental social support, whereas females are equally likely to seek emotional and instrumental social support (Ashton and Fuehrer, 1993). The present research focuses on another factor, age. Our research examined whether there were age differences in preference for kinds of social support seeking and the effectiveness at resolving stress.

Given the large size of the aging population and the perceived health benefits of social support, understanding what kind of social support is effective for older versus young people is important. The present research considers whether young versus older adults differ in *explicit social support seeking*, the act of explicitly soliciting support from others, which includes both instrumental and emotional social support, and *implicit social support seeking*, the act of gaining emotional comfort from social ties without disclosing or discussing one's problems vis-à-vis specific stressful events (Taylor, Welch, Kim, & Sherman, 2007). Like people from a collectivist cultural background, older adults might be less willing to seek explicit social support in dealing with their stressful events due to their greater concern about disrupting others (Carstensen, 1992). Because people do not need to bother their social networks with their stressors when seeking implicit social support, older adults might be equally willing to seek implicit social support than young adults. We further examine why this may happen by examining the perceived benefits and costs of social support, and by

examining actual effectiveness of explicit vs. implicit social support for young and older adults.

Background and Hypotheses

Despite the manifest benefits of having social support, enacted social support is not beneficial to everyone. There can be costs involved in utilizing social support (Bolger, Zuckerman, & Kessler, 2000), and the costs may differ for different people and different types of social support. This is because drawing on another person for social support taxes the seeker's resources (time, attention) (Seidman, Shrout, & Bolger, 2006). This suggests the costs for seeking explicit social support may be especially high for people who are more concerned with relationships. A good example is cultural differences. Research on culture and social support suggested, Asians, who were more concerned about relational consequences of social support seeking, were less likely to seek explicit social support than Europeans (Taylor et al., 2004). Asians felt more stressed when they sought explicit social support than when they sought implicit social support instead (Taylor et al., 2007). In summary, whereas the benefits of social support might be obvious, the process of social support use could also incur costs. Thus, for social support to be effective in coping with stress, understanding how different people views the potential benefits and costs and subsequently, utilize and benefit from different types of social support is very important.

We test age as a moderator of the potential effectiveness of social support as a resource in general and explicit vs. implicit in particular. We focus on the distinction of explicit and implicit social support and examine which is more effective for older vs. young adults. Young adults and older adults differ in the primary goal of their lives, and expectations and norms about how a person is related to others. As socio-emotional selectivity theory suggests, as people get older, their time horizon shrinks; people become increasingly selective, investing greater resources in emotionally meaningful goals and

activities, and less resources in information-focused goals and activities (Carstensen, 1992). Therefore, older adults may be more concerned with disrupting others and are likely to be more cautious in support seeking. In contrast, young adults are more information-focused and they have larger loosely bonded social networks wherein social context is construed to be more voluntary. They may be less aware of or less cautious about the negative relational implications of asking for social support. Therefore, we predict:

H9A: Older people would seek less explicit social support than young adults.

Explicit social support seeking includes instrumental social support seeking, the act of seeking help and advice, and emotional social support seeking, the act of seeking emotional comfort. As older adults are less information-focused and more emotional-focused (Carstensen, 1992), we predict the age effect on explicit social support seeking is mainly due to instrumental social support seeking.

H9B: Within explicit social support, older adults would seek less instrumental social support than young adults.

In contrast to explicit social support, implicit social support takes the form of emotional comfort derived from perception of availability of social support without having to disclose or discuss the stressor (Taylor et al., 2007; Kim et al., 2008). Implicit support is a type of enacted support— it differs from explicit social support in that, people actively and intentionally think of close others in response to stressors, without disrupting others with their stressors. Implicit social support has been shown to buffer physiological and psychological distress (Master et al., 2009; Taylor et al., 2007; Kim et al., 2008; for a meta-analysis, see Finch, Okun, Pool, & Ruehlman, 1999).

Although older adults may not want to seek explicit social support, there is no reason to assume they would seek implicit social support less. Same as young adults, older adults

could actively think of close others to buffer their stress. Implicit social support does not have the drawback to disturb their social networks. Therefore, we predict:

H10: When stressed, older adults would seek no less implicit social support than young adults.

We will also explore the potential mechanisms for the effect of age on social support seeking. Whereas the benefits of asking for social support are obvious, the costs of asking for social support may not. As social emotional selectivity theory suggests, older adults pay more attention to emotion-focused and relational-focused goals, whereas young adults pay more attention to information-focused goals (Carstensen, 1992). Therefore, older adults may be more concerned with disrupting others and are likely to be more cautious in support seeking. We are going to explore the potential mechanism and test for mediations in the present research. We predict:

H11: Concerns for disrupting others mediate the relationship between age group and explicit social support seeking.

Another goal of the present research is to examine the perceived cost-benefit balance of social support seeking among young and older adults. The benefits of seeking social support can be either informational (for instrumental support) or relational (for emotional support), but the long-term costs of seeking support are mostly relational. Because young adults tend to focus on information-focused (vs. emotional-focused) goal (Carstensen, 1992), they may not be fully aware of the relational costs of explicit social support seeking. We suppose young and older adults may perceive the cost-benefit of social support differently.

H12: Young adults have a biased view of social support: they are more aware of the benefits of than the costs of social support, compared to older adults.

Finally, we examine the costs of social support directly by assessing the effectiveness of explicit and implicit social support for young and older adults. Sarason et al. (1990)

pointed out, explicitly seeking social support “may also be sources of negative feelings, conflict, and other types of stress” (p.12). If young adults are mainly aware of the benefits of social support but less aware of the costs of social support, the costs may have a negative effect on young adults when they actually seek social support explicitly, namely young adults may feel more stressed when explicitly seeking social support.

The paper is organized as follows. Study 9 and Study 10 examine the use of explicit versus implicit social support among older and young adults. In Study 9, we assess explicit versus implicit social support in a natural setting in which participants write their stressors and types of social support they rely on. In Study 10, we examine the problem in a more controlled setting by keeping the stressor category the same for older and young adults. We hypothesize that older adults are less likely to seek explicit social support than young adults, but are equally likely to seek implicit social support. In Study 11, we explore a potential reason for this difference in social support seeking by examining the perceived costs and benefits of explicit social support seeking for young and older adults. In Study 12, we examine the effect of explicit versus implicit social support on stress reduction for young and older adults. We demonstrate that whereas older adults’ preference of social support and effect of social support on them are well aligned, young adults’ preference of social support and effect of social support on them are mis-aligned. We discuss potential mechanisms at the end of the paper.

STUDY 9

Study 9 investigated types of social support seeking among older versus young adults in dealing with a concrete social stressor.

The study featured a questionnaire in which people were asked to describe a social stressor and report how they had coped with it and how successful the coping outcomes were. The goal of the study was to examine if there were age differences in preference of and

perceived effectiveness of different coping strategies. We hypothesized that, relative to young adults, older adults would report seeking less explicit social support, but no less implicit social support.

Method

One hundred and fifty-six participants answered a paperback survey. Seventy-five young adults (68.1% women, $M_{\text{age}} = 20$ years, age range: 18–25 years) were recruited with flyers posted on the UCLA campus. Ninety-one older adults (74.7% women, $M_{\text{age}} = 70$ years, age range: 60–86 years) were recruited from a public library. Participants were paid \$15 for their participation. Only Caucasians were included in the study, as past research has shown cultural differences have an effect on social support (Kim, Sherman, Ko, & Taylor, 2006; Taylor et al., 2007).

Participants completed a questionnaire utilized in Taylor et al. (2004), which assesses social support seeking in response to stress. Using an open-ended format, participants first described a specific social stressor that they faced within the past three months: “Most people encounter social stressors on a fairly regular basis. You might have roommate problems, difficulties with a boyfriend or girlfriend, conflicts with your parents, a falling out with a friend, or just plain be lonely. What is the greatest social stressor you are currently facing? Describe it briefly in the space below.” Participants wrote about their greatest social stressor. Participants were then asked to rate the event in terms of how stressful and negative it was and how responsible they felt for the event on a scale of 0-6 (0 = not at all; 6 = very much).

Participants’ coping strategies were assessed via the Brief COPE (Carver, 1997), which measures the use of different coping strategies in response to stress, including emotional support-seeking (e.g., “I received emotional support from others”) and instrumental support-seeking (e.g., “I tried to get advice or help from other people about what to do”). Other strategies assessed by the COPE include: planning, active coping, positive

reframing, denial, self-blame, behavioral disengagement, substance use, self-distraction, religion, acceptance, and humor (Carver, 1997). Because our interest was primarily in social support, we supplemented the Brief COPE social support items with additional items from the long form of the COPE (Carver, Scheier, & Weintraub, 1989). Among these items, implicit social support items include “I hung out with friends who did not know about the stressor”, “I spent time with people who are close to me without talking about the stressful event”, and “I tried to relax with people who are close to me without bringing up the stressful event”. Participants rated each coping statement in terms of how much they had used it to cope with the stressor, 1 (not at all) and 5 (very much).

Participants next completed a questionnaire designed to assess factors that might act to discourage social support seeking (Kim, Sherman, Ko, & Taylor, 2006). Participants rated how important each of the listed concerns would be for them in deciding whether or not to seek or use social support. Next, participants rated thirteen items that map onto two categories of explanations: relational concerns (e.g. “I’m concerned that if I tell the people I am close to about my problems, they would be hurt or worried for me”) and expectation of unsolicited social support (e.g. “I would not need to ask for help because others will probably offer help without me asking”). The relational concerns factor included questions about not seeking social support that stem from their potentially negative relationship implications, belief that telling others would make the problem worse, concern that sharing problems would result in criticism or poor evaluations by others, and desire to save face and avoid embarrassment.

Finally, participants reported how successful the stressor was resolved on a 7-point scale (1= not at all successful to 7=very successful). They also reported how helpful their family was, and how helpful their friends were (1=not at all helpful to 7=very helpful). At

the conclusion of the study, participants completed a demographic questionnaire, were thanked, and debriefed.

Results

Gender was previously shown to affect stress level (Taylor et al., 2000), so in all analysis we tested for gender effects and we included gender as a covariate. We used an alpha level of .05 for all statistical tests.

Age and Stress. Two independent coders ($M_{\text{age}} = 42$) rated how stressful the stressors were (e.g. “stressful”, “negative”, “interfere with their goal”, $\alpha = .90$) on scales anchored at 0 (not at all) and 6 (very much). Older adults experienced more stress (older: $M=4.04$, $SD=1.14$; young: $M=1.83$, $SD=1.25$, $t(163)=13.49$, $p<.0001$). However, older adults ($M=3.76$, $SD=1.49$) felt less stressful than young adults ($M=4.33$, $SD=1.31$, $t(163)=-2.86$, $p=.005$). This adds to the positivity bias in the aging literature which shows older adults display more positive emotions and less negative emotions (Gross et al., 1997).

Age and Social Support Seeking. A regression with explicit support seeking as dependent variable, age group as independent variable, and the perceived extent of the stressor and gender as covariates revealed that older adults ($M=3.03$, $SD=1.13$) reported seeking explicit support less than young adults ($M=3.39$, $SD=1.25$; $t(162)=-1.96$, $p<.05$, $\beta = -.36$, 95% CI = [-.718, -.002]). This effect was driven by instrumental support but not by emotional social support: older adults reported seeking instrumental support ($M=2.72$, $SD=1.18$) significantly less than young adults ($M=3.41$, $SD=1.30$; $t(162)=-3.32$, $p<.001$, $\beta = -.69$, 95% CI = [-1.11, -.21]), but reported no difference in seeking emotional support from young adults (Old: $M=3.35$, $SD=1.28$, Young: $M=3.37$, $SD=1.36$; $t(162)=-.08$, $p=.94$, $\beta = .02$, 95% CI = [-.48, .52]). In contrast to explicit support, a regression with implicit support as dependent variable, age group as independent variable, and the perceived extent of the stressor and gender as covariates revealed that older adults ($M=2.90$, $SD=1.21$) reported using

the same level of implicit support as young adults ($M=3.11$, $SD=1.08$; $t(162)=1.09$, $p=.27$, $\beta =-.21$, 95% CI = $[-.60, .18]$). Older adults were less willing to seek explicit support, especially instrumental social support, but they were as willing to seek implicit social support as young adults.

We analyzed factors that might discourage the use of social support for coping: unsolicited support, concern for disrupting others ($\alpha=.82$), and concern in criticism ($\alpha=.83$). We ran regressions with age group as independent variable, and the extent of the stressor and gender as covariates. Results showed that older adults worried more about disrupting others (Older: $M=2.77$; $SD=.96$; Young: $M=2.34$; $SD=.93$; $t(162)=2.05$, $p<.05$, $\beta =.43$, 95% CI = $[.01, .85]$). Moreover, older adults ($M=2.40$; $SD=1.08$) were more likely to think others who were close to them would take care of their needs without them having to ask ($M=2.19$; $SD=.74$; $t(162)=2.42$, $p<.02$, $\beta =.21$, 95% CI = $[.04, .34]$). Older and young adults were equally concerned in criticism (Older: $M=2.06$; $SD=1.01$; Young: $M=2.19$; $SD=.94$; $t(162)=-.43$, $p=.78$, $\beta =.13$, 95% CI = $[-.47, .73]$).

We tested whether the three process variables mediated the effect of age group on social support preference using Hayes' mediation model (2013, Model 4), with the extent of stressor and gender as covariates. Concerns in disrupting others fully mediated the effect of age group on explicit support seeking. Preacher and Hayes's (2008) SAS macro with 5,000 bootstrapped samples revealed indirect-only mediation (Zhao, Lynch, and Chen, 2010): controlling for age group, concerns in disrupting others was negatively associated with explicit support seeking ($\beta =-.32$; $t(161)=-3.28$, $p=.001$, 95% CI = $[-.52, -.12]$). Controlling for concerns in disrupting others, the direct effect of age group on explicit support seeking was not significant ($\beta =-.13$; $t(161)=-1.36$, $p=.18$, 95% CI = $[-.31, .06]$). The indirect path ($\beta = -.05$, 95% CI = $[-.128, -.002]$) had a 95% confidence interval that did not include 0.

Unsolicited support and concerns in criticism did not mediate the effect of age group on explicit support seeking.

STUDY 10

In study 9, we asked participants to write their current social stressors. Since older and young adults may have different stressors, it is possible that older adults seek explicit social support less because of the specific stressors they have. To solve this problem, in Study 10 we kept the stressor the same for young and older adults.

Study 10 was a 2 (older vs. young) between-subject design. In Study 10, we found relationship stressors and financial stressors were frequently experienced in both young and adults, therefore, in Study 10 we included a relationship stressor and a financial stressor as replications and counterbalanced the order of the two stressors. We did not expect a difference between the two types of stressors. In Study 10, instead of writing their own stressor, participants imagined stressful scenarios in relationship or financial domain and indicated what types of social support they would use for the stressor. By keeping the stressor the same for young and older adults, we tried to rule out the explanation that older adults seek explicit social support less because of the types of stressors they have.

Method

One hundred and eighty eight participants (eighty five young adults: 45.9% women, $M_{\text{age}} = 25$ years, age range: 18–30 years; seventy three older adults: 50.1% women, $M_{\text{age}} = 64$ years, age range: 60–77 years) were recruited from an online panel. Only Caucasians were included in the study, as past research has shown cultural differences have an effect on social support (Kim, Sherman, Ko, & Taylor, 2006; Taylor et al., 2007).

For the relationship stressor, participants were asked to imagine they had a fight with one of their family members and write about what the stressor was like. They then rate the

event in terms of how stressful and negative it was and how responsible they felt for the event on a scale of 1-7 (1 = not at all; 7 = very much).

For the financial stressor, participants read a scenario in which they found they had an unexpected high credit card bill (see Appendix). Participants followed the same procedure to indicate how stressful and negative it was and how responsible they felt for the financial stressor.

After each stressor, participants' coping strategies were assessed via the Brief COPE (Carver, 1997), including emotional support seeking (e.g., "I received emotional support from others") and instrumental support seeking (e.g., "I tried to get advice or help from other people about what to do"). We also supplemented the Brief COPE social support items with additional items from the long form of the COPE (Carver, Scheier, & Weintraub, 1989). Participants rated each coping statement in terms of how much they had used it to cope with the stressor on a scale of 1-7 (1 = not at all; 7 = very much).

Results

Gender was previously shown to affect stress level (Taylor et al., 2000), so in all analysis we tested for gender effects and we included gender as a covariate. We used an alpha level of .05 for all statistical tests.

Age and Social Support Seeking. We examined explicit social support as a function of age group (as between-subject factor), types of stressor (within-subject factor), the interaction between them and gender as a covariate. An ANOVA revealed a significant main effect of age group ($F(1,186)=6.52, p<.02$) and a significant main effect of types of stressors ($F(1,186)=4.53, p<.04$). The interaction between age group and types of stressor was not significant ($F(1,186)=1.25, p=.27$), indicating that there was no difference between the relationship scenario and the financial scenario in terms of the effect of age on explicit social support seeking. Therefore, we pooled the data across both scenarios and treated the two

scenarios as repeated measures. Central to our hypotheses, older adults reported seeking explicit support less than young adults (Old: $M=4.09$, $SD=1.83$; Young: $M=4.66$, $SD=1.69$; $t(186) = -2.55$, $p=.01$, $\beta = -.57$, 95% CI = [-1.00, -.13]). This effect was mainly driven by instrumental support: older adults reported seeking instrumental support ($M=4.07$, $SD=1.84$) significantly less than young adults ($M=4.71$, $SD=1.73$); $t(186) = -2.95$, $p<.004$, $\beta = -.63$, 95% CI = [-1.05, -.21]), but seeking emotional support no less than young adults (Old: $M=4.11$, $SD=2.06$, Young: $M=4.60$, $SD=1.89$, $t(186) = -1.94$, $p <.06$, $\beta = -.49$, 95% CI = [-1.00, .02]). Study 10 provided evidence that older adults' seeking less social support was not merely due to the specific types of stressors they experienced. For the same types of stressors, older adults sought less explicit social support than young adults as well.

STUDY 11

In the first two studies, we showed that older adults were less likely to seek explicit social support; concerns of disrupting others mediated this difference. We hypothesized this happened because young adults and older adults are differentially aware of the costs of explicit social support seeking. To gather more evidence for this intuition, in Study 11 we assess the benefits and costs of explicit social support seeking in young and older adults.

Method

Participants. 149 Caucasians (ninety six young adults: 38.5% women, $M_{age} = 26$ years, age range: 18–30 years; fifty three older adults: 47.1% women, $M_{age} = 64$ years, age range: 60–75 years) were recruited from an online panel. Participants imagined they had a fight with a family member. Then participants were randomly assigned to two conditions to deal with their stressor, following the method utilized by Taylor et al. (2007). In explicit social support seeking condition, participants were asked to write a letter to a person or a group of people that were close to them to seek social support. They could ask them for help, advice, or emotional support. In implicit social support condition, participants were asked to

think about a group to which they were a part of – it could be their family, a team, a club or a romantic relationship – and write about aspects of the group and members that were important to them. Then participants were asked to list the benefits and costs of this practice (writing a letter for explicit support, or writing about the aspects of the group or members that are important to them) and rate the consequences of this practice on a 1-5 scale from “1 = all benefits; no costs” to “5 = all costs; no benefits”.

Results

An ANOVA with rating as dependent variable, age group, condition and their interaction as independent variables, and gender as a covariate, revealed a significant main effect of condition ($F(1,144)=20.46, p<.0001$) and a significant interaction between age group and condition ($F(1,144)=5.11, p<.03$). On a scale of 1 (“all benefits”) to 5 (“all cost”), the middle point 3 indicates this practice is balanced on costs and benefits. Higher number indicates higher costs and lower benefits. Analysis revealed that older adults ($M=2.79, SD=.96$) anticipated more costs and less benefits with explicit social support seeking than young adults ($M=2.37, SD=.80, t(144) = 2.10, p<.04$). However, there was no difference between young and older adults in assessing the benefits and costs of implicit social support (Older: $M=1.82, SD=.83$, Young: $M=2.04, SD=.77; t(144) = -1.09, p=.28, \beta = -.22, 95\% CI = [-.62, .18]$). Older adults believed that seeking explicit social support had equal benefits and costs (Older: $M=2.79, SD=.96$, Mid-point = 3; $t(144) = -1.04, p=.31$). However, young adults believed that seeking explicit social support had more benefits than costs (Young: $M=2.37, SD=.80$, Mid-point = 3; $t(144) = -5.58, p<.001$). These results suggested that young adults had more positive views of explicit social support seeking than older adults. We also analyzed the benefits and costs participants listed. Young and older adults listed similar benefits of explicit social support seeking: (1) getting ideas for solution and an outside perspective; (2) feeling they have emotional support; (3) venting makes them feel better. However, older

adults mentioned more about costs on: (1) disrupting social network and creating stress in others, (2) potential judgment, gossip and unresponsiveness, (3) that reliving the event when seeking explicit social support makes them stressful. These suggested older adults may have more knowledge of the potential costs of explicit social support seeking than young adults.

STUDY 12

In Study 11, we found older adults are aware of both the costs and benefits of explicit social support seeking, whereas young adults are less aware of the potential costs of explicit social support seeking. This suggests young adults may hold a biased view of social support seeking. That is, though young adults prefer to seek explicit social support, after they have done so, it is possible that they feel more stressed after explicit social support seeking. In Study 12, we examine how participants' stress level changes after seeking either explicit or implicit social support among young and older adults, using an experimental priming. We hypothesize the effect of explicit and implicit social support is well aligned with older adults' preference: implicit social support makes older adults less stressful than explicit social support. However, the effect of explicit and implicit social support may not be well aligned with young adults' preference: though young adults prefer explicit social support, young adults may feel more stressed after explicit social support seeking.

Method

Participants. Two hundred and eighty-three participants (68% females; 165 young adults, and 118 older adults) from a large city participated in the study. Because previous research has shown culture difference has an effect in social support (Taylor et al 2007), we only included Caucasian participants.

Materials and Procedures. Study 12 uses a 2 (age group: older vs. young) x 3 (explicit support vs. implicit support vs. control) between-subject design. Unlike Study 9 which focused on reports of past stressors, in Study 12 we asked participants to think about

current stressors and their future plan for action because we were interested in how priming of explicit and implicit social support influences coping outcomes. Participants completed a questionnaire utilized in Taylor et al. (2004), which assesses social support seeking in response to stress. Participants were asked: “Most people encounter stressful events on a fairly regular basis. You might have roommate problems, difficulties with a boyfriend or girlfriend, conflicts with your parents, a falling out with a friend, or just plain be lonely. What is the greatest stressor you are currently facing? Describe it briefly in the space below.” Participants were given a page to write about their greatest life stressor.

Participants were then asked to rate the event in terms of how stressful and negative it was and how responsible they felt for the event on a scale of 0-6 (0 = not at all; 6 = very much).

After that, we primed coping strategies. Participants were randomly assigned to one of the following three conditions. Participants in the explicit social support priming condition read: “please take a few minutes to think about those who care about you and to whom you are close. Then write a letter seeking support and advice from one of these people or group of people and ask for support. You might ask them to help you with a stressor, to root for you while you are going through it, or to give you advice on how to get through it.” Participants in the implicit social support priming condition read: “please take a few minutes to think about a group to which you are a part of, with people whom you are close. It could be your family, a team, a club, or a romantic relationship. Take several minutes to write about the aspects of this group and its members that are important to you, such as the things you enjoy doing with them, how long you have known them, and why you are close to them.” In the control condition, participants wrote down how they felt about this stressful situation and how they might cope with it.

Finally, participants completed a questionnaire designed to measure their emotional responses. This questionnaire was modified from the Mano Mood Scale (Mano 1990). Participants rated 30 emotions on scales anchored at 1 (not at all) and 7 (very much), right after they finished the coping strategy priming writing task. At the conclusion of the study, participants completed a demographic questionnaire, were thanked, and debriefed.

Results

Effectiveness of social support. Participants' coping outcomes were measured by their emotional responses. We computed several emotion index based on the Mano Mood Scale (Mano 1990): stressed ($\alpha = .86$), positive emotion ($\alpha = .93$) and negative emotion ($\alpha = .90$). Overall, age was positively related to positive emotions ($t(281) = 4.07$, $p < .0001$), and negatively related to negative emotions ($t(281) = -4.00$, $p < .0001$) and stress level ($t(281) = -8.46$, $p < .0001$).

Next, we did a regression with after-priming stress level as dependent variable, age group, condition and age group x condition interaction as independent variables, while controlling for participants' initial stress level. The regression revealed a significant effect of age group ($F(1, 276) = 31.30$, $p < .0001$), a significant effect of condition ($F(2, 276) = 3.21$, $p = .02$), qualified by an age x condition interaction ($F(2, 276) = 3.67$, $p < .02$). Compared to participants in the control condition, older participants in the implicit social support condition felt less stressed after the writing task (Implicit support: $M = 1.93$, Control: $M = 2.83$, $t(1, 276) = -3.03$, $p < .003$). Older participants in explicit social support condition felt equally stressed as in the control condition (Explicit support: $M = 2.50$, Feeling control: $M = 2.81$, $t(1, 276) = -1.03$, $p = .30$). In contrast, young adults felt equally stressed in implicit social support condition as control condition (Implicit support: $M = 2.87$, Control: $M = 2.90$, $t(1, 276) = -.13$, $p < .90$), but more stressed in explicit social support condition than those in control condition (Explicit support: $M = 3.41$, Control: $M = 2.90$, $t(1, 276) = 1.75$, $p = .08$).

We did similar regressions with negative and positive emotions. A regression with positive emotions as dependent variable, age group, support condition and age group x support condition interaction as independent variables, and the extent of stressors as covariate, revealed a significant effect of support condition ($F(2, 276) = 4.25, p = .02$), and a significant effect of age ($F(1, 276) = 12.29, p = .006$), qualified by a marginally significant age x support condition interaction ($F(2, 276) = 2.57, p = .08$). Overall, older adults felt happier than young adults regardless of support conditions (old: $M = 4.96, M = 4.30, t(1, 276) = 3.51, p = .0006$). Older participants in implicit social support condition felt happier ($M = 5.42$) than those in explicit support condition ($M = 4.65, t(1, 276) = 2.24, p < .03$) and those in control condition ($M = 4.83, t(1, 276) = 1.66, p < .10$). The latter two conditions did not differ ($t(1, 276) = .55, p = .58$). In contrast, young participants in explicit social support condition felt happier than in the control condition (Explicit support: $M = 4.56$, Control: $M = 3.82, t(1, 276) = 2.32, p = .02$), and felt happier in implicit social support condition ($M = 4.53$) than in control condition ($M = 3.82, t(1, 276) = 2.51, p = .013$). There was no difference between explicit and implicit social support condition (Implicit support: $M = 4.53$, Explicit support: $M = 4.56, t(1, 276) = .10, p = .92$).

A regression with negative emotions as dependent variable, age, support condition and age x support interaction as independent variables, and the extent of stressors as covariate, revealed a significant effect of support condition ($F(2, 276) = 3.83, p = 0.02$), and a significant effect of age group ($F(1, 276) = 15.07, p < .0001$). Age group x support condition interaction was not significant though ($F(2, 276) = 1.28, p = 0.28$). Overall, older adults felt less negative emotions than young adults regardless of support conditions (old: $M = 1.97$, young: $M = 2.74, t(1, 276) = 3.93, p < .0001$). Older participants in implicit social support condition felt less negative emotions ($M = 1.46$) than in control condition ($M = 2.41, t(1, 276) = -2.89, p = .004$) and they felt directionally less negative emotions than those in explicit

support condition ($M= 2.02, t(1, 276) = - 1.60, p < .11$). The latter two conditions did not differ ($t(1, 276) = .98, p = .33$). In contrast, young adults felt equal level of negative emotions in implicit social support condition as in explicit support condition (Implicit support: $M= 2.60$, Explicit support: $M= 2.77, t(1, 276) = - .70, p = .49$), and as in control condition ($M= 2.84, t(1, 276) = - .78, p = .44$). The latter two conditions did not differ ($t(1, 276) = - .22, p = .84$).

Discussion

Our contention is that older adults are more cautious about explicitly seeking social support because they are more aware of the cost of explicitly seeking social support than young adults. In this study, we primed explicit vs. implicit coping strategies. We found whereas young adults preferred seeking explicit social support than older adults, they experienced higher stress after they sought social support explicitly than the control condition. In contrast, older adults preferred implicit social support and experienced less stress after it. Older adults' preference was well aligned with the effect of social support function, whereas young adults' preference of social support was mis-aligned with the effect of social support function.

We also found that though young adults experienced more stress when they sought explicit social support, they found themselves to be happier than the control condition as well. This finding may be explained by socio-emotional selectivity theory (Castensen 1992): because the life goal of young adults are more information-focused than emotional focused, they may sacrifice their emotion goal to acquire information. Even when young adults feel more stressed, they may feel happier at the same time because they acquire information by seeking explicit social support. Young adults' happiness may be defined by their information-focused goal whereas older adults' happiness may be defined by their emotion-focused goal.

GENERAL DISCUSSION

This research uncovered several interesting findings. First, we found that although older adults objectively experienced more stressful events than young adults (as indicated by the ratings of the independent coders), they felt less stressful than young adults. The result is consistent with past research on aging and positivity bias (e.g. Lockenhoff & Carstensen, 2004).

We also found that older (vs. young) adults reported seeking less explicit social support, especially instrumental social support, but no less implicit social support, to cope with their stressors, lending to support to *H9A*, *H9B*, and *H10*.

Through mediation analysis, we showed that the age effect on social support seeking was due to concerns in disrupting others. Older adults were more concerned about disrupting others and that led them to seek less explicit social support.

What is more interesting is that young adults' preference of social support is misaligned with the effect of social support function. Whereas young adults prefer seeking explicit social support than older adults, they experience higher stress after they seek social support explicitly than the control condition. In contrast, older adults' preference is well-aligned with the effect of social support function. Older adults prefer implicit social support and experience less stress after it.

One possible explanation is that the costs of explicit social support seeking may need to be learned through experiences. Whereas the benefits of explicit social support seeking are obvious, the costs may not be. Research has shown that as people age, though their crystallized intelligence goes down, their fluid intelligence goes up (Horn, 1982). With experiences, older adults get wise in aligning their preference of social support with the effect of social support seeking. Life experience may make older adults more accurate in predicting their stress reaction.

This result may also be explained in terms of how individuals of different ages value the goals of the self in relation to the goals of relationships and the resulting changes in social network compositions. For young adults, relationships may be seen as means for promoting informational goals and as such, one may seek help from those in one's social networks to achieve one's informational goals, whereas for older adults, emotion-focused goals dominate (Carstensen, 1992). This shift in primary goals causes older adults to have smaller social networks with close-bonds rather than larger social networks with loose-bonds. Social contexts in closely-bonded relationships are construed to be less voluntary and associated with obligations. That explains why older adults hesitate calling on their social support network for explicit social support for fear that they will disrupt others. We also show that older adults perceive their family to be more helpful than friends when they cope with their stressors. This is due to the fact that 1) older adults are more closely-bonded with their family, and 2) people who have relationship concern may be more comfortable with their family when seeking social support. Socio-emotional selectivity theory may also explain why young adults prefer explicit social support seeking even when it makes them more stressful. Because for young adults information-focused goal dominates emotion-focused goal, young adults may choose to seek explicit social support to reach their information-focused goal even it may make them feel more stressed emotionally.

The fact that older adults are less likely to seek explicit social support fits broadly with the notion that older adults tend to use avoidance coping (vs. confrontative coping) than young adults (Moschis, 2007). Researchers expect confrontative coping strategies to decline as people age (Heckhausen, 2002) due to cognitive decline (Heckhausen and Schulz, 1995) and goal changes (Carstensen, 1992). With cognitive decline, it is risky to use confrontative coping strategy, because the probability of failure becomes increasingly high. With

increasing focus on emotional goals, emotion-coping or avoidance coping seem to be the natural choice.

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CHAPTER 5. CONCLUSION

In three essays, I examine how consumers react to the negative emotions of loss, embarrassment and stress. The first essay studies how experiential vs. material products (and experiential vs. material framing) induce different levels of feeling of loss. I use the endowment effect paradigm, the gap between willingness to accept (WTA) and willingness to pay (WTP), to capture loss-induced overvaluation. I found when people forgo experiences (vs. material possessions), they demand higher prices to part with the items and this is because consumers engage in narrative processing and narrative transportation for experiences (vs. material possessions).

The second and third essays examine how consumers regulate embarrassment and stress. These two essays take an interactive emotion regulation perspective. In essay 2, I focus on how to help consumers counter embarrassment avoidance behavior by taking an observer's perspective. In essay 3, I show when regulating stress in social contexts, older and young consumers use social support differently (explicit vs. implicit social support), based on the two types of interpersonal emotion regulation (response-dependent vs. response-independent).

In sum, past research has largely focused on how to make consumers happy (e.g. Dunn and Norton 2011); however, research on negative emotions and negative experiences is scarce. For individual consumers, stress and loss lead to low consumer wellbeing. For companies, consumers' negative emotions and stress lead to low consumer satisfaction, which further results in low customer retention rate. It is in both consumers' and companies' interest to reduce consumer negative emotions and negative experiences. Future research should focus more on how to help consumers to better cope with negative emotions.

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APPENDIXES

Appendix A. Ad used in Chapter 3, Study 6.

Rrrrrrip



Accidentally passing gas in front of
classmates

is one of the

most embarrassing

experiences.

Guaranteed to linger forever...



Try **Beano** to avoid future embarrassing moments.

- Settles the digestive track.
- Gel tablets make swallowing less difficult.
- Made with no artificial ingredients.

Appendix B. Ad used in Chapter 3, Study 8.

Control Condition:

Rrrrrrip



Accidentally passing gas in front of a crush

is one of the

most embarrassing

experiences.

Guaranteed to linger forever...



Try **Beano** to avoid future embarrassing moments.

- Settles the digestive track.
- Gel tablets make swallowing less difficult.
- Made with no artificial ingredients.

Observer's condition:

Rrrrrrip



Accidentally passing gas in front of a crush

is one of the **most embarrassing** experiences.

Guaranteed to linger forever... but

Others will know what it's like.

Put yourself in their shoes.

would **you** giGGle?

would **you** be horrified?

would **you** STARE?



Try **Beano** to avoid future embarrassing moments.

- Settles the digestive track.
- Gel tablets make swallowing less difficult.
- Made with no artificial ingredients.

Appendix C. Survey used in Chapter 4, Study 9.

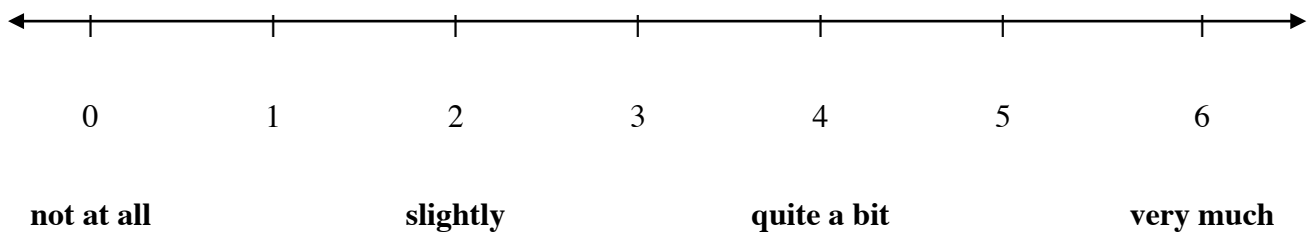
Social Stressors

Most people encounter social stressors on a fairly regular basis. You might have relationship problems, difficulties with a romantic partner, conflicts with family members, a falling out with a friend, or were just plain lonely.

Think back over the last three months and identify the *greatest social stressor* you faced.

Describe it briefly in the space below:

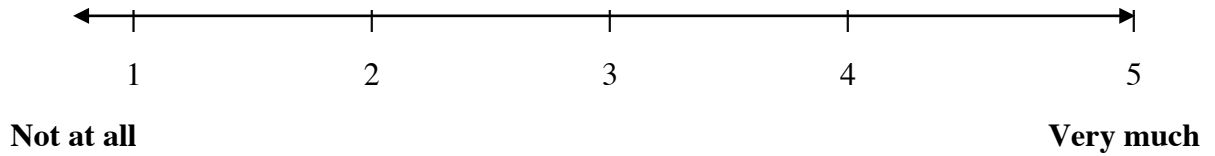
Please indicate the extent to which each statement below described your stressor using this scale:



1. ____ This event is *stressful*.
2. ____ The event is *negative*.
3. ____ I feel responsible for this event.

How Did You Cope?

Please read each of the following statements and indicate how much you used each of the followings ways of coping with the stressor on this 5-point scale:

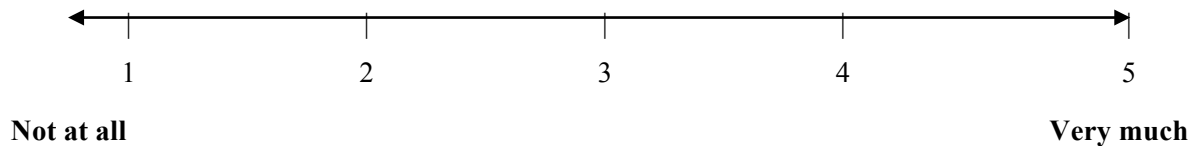


- _____ 1. I concentrated my efforts on doing something about the situation.
- _____ 2. I criticized myself.
- _____ 3. I tried to come up with a strategy about what to do.
- _____ 4. I gave up trying to deal with it.
- _____ 5. I tried to see it in a different light, to make it seem more positive.
- _____ 6. I used alcohol or drugs to make myself feel better.
- _____ 7. I accepted the reality of the fact that it happened.
- _____ 8. I talked to someone about the situation.
- _____ 9. I made jokes about it.
- _____ 10. I spent time with friends.
- _____ 11. I tried to find comfort in my religion or spiritual beliefs.
- _____ 12. I turned to work on other activities to take my mind off things.
- _____ 13. I got emotional support from others.
- _____ 14. I tried to get advice or help from other people about what to do.
- _____ 15. I blamed myself for things that happened.
- _____ 16. I took action to try to make the situation better.
- _____ 17. I gave up the attempt to cope.
- _____ 18. I thought hard about what steps to take.
- _____ 19. I got comfort and understanding from someone.
- _____ 20. I looked for something good in what was happening.
- _____ 21. I expressed my feelings to others.

- _____ 22. I learned to live with it.
- _____ 23. I refused to believe that it happened.
- _____ 24. I made fun of the situation.
- _____ 25. I did things to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
- _____ 26. I asked other people who had been through a similar situation what they did.
- _____ 27. I got help and advice from other people.
- _____ 28. I got comfort and understanding from someone.
- _____ 29. I made time to focus on the problem.
- _____ 30. I thought about how I might best handle the problem.
- _____ 31. I hung out with friends who did not know about the stressor.
- _____ 32. I spent time with people who are close to me without talking about the stressful event.
- _____ 33. I tried to relax with people who are close to me without bringing up the stressful even

People often consider many factors in deciding how to cope with a social stressor. Some people seek social support and help from their family and friends when they are trying to cope with a stressor, whereas others choose not to seek social support and help.

Using the below scale, please rate how important each of the following concerns would be for you in deciding whether or not to seek social support or help from others for dealing with a stressor like the one you just named.



- _____ 1. I'm concerned that if I tell the people I am close to about my problems, they would be hurt or worried for me.
- _____ 2. If something were bothering me, I would not want to disrupt my social group by sharing it.
- _____ 3. I wouldn't seek help because I think that others who are close to me will take care of my needs without me having to ask.
- _____ 4. I can save face by solving my problems myself.
- _____ 5. If I discuss my problems with the people I am close to, it makes it a bigger problem than if I keep it to myself.
- _____ 6. I would rather not tell the people I am close to my problems because they would blow them out of proportion.
- _____ 7. I would not need to ask for help because others will probably offer help without me asking.
- _____ 8. To preserve the happiness of my peer group, I try to keep my problems to myself.
- _____ 9. The people I am close to would be ashamed if I made my problems known to others.
- _____ 10. I don't want to ask for support for my problems because people might judge me negatively because of my problems.
- _____ 11. I would be embarrassed to share my problems with the people I am close to.
- _____ 12. I wouldn't want to make the people I am close to feel stressed about my problems.
- _____ 13. I would rather keep my problems to myself than risk criticism from the people I am close to.

Appendix D. Stimuli used in Chapter 4, Study 10.

Financial Stressor Scenario

Below is a story describing a stressful financial event. Please try to imagine all the steps you might undertake if you were actually part of the story and the events in the story were actually happening to you. Try to project yourselves into the story so you could characterize the experiences described in the story as if it were really happening to you.

Imagine that when you open your credit card statement for this month, the bill is twice as large as it usually is! You discover that the bank never received last month's payment. In addition to a \$100 late fee, you have been charged a 22% interest rate on last month's bill. You are unsure whether you can afford to pay off the entire bill this month. However, if you do not, you will again be charged a high interest rate on the remaining amount, which could total well over \$1000.

Relationship Stressor

Imagine that you had a fight with one of your family members. The relationship between the two of you becomes distant and weird after that.

Think about this event and write about what it is like.

Appendix E. Survey used in Chapter 4, Study 11.

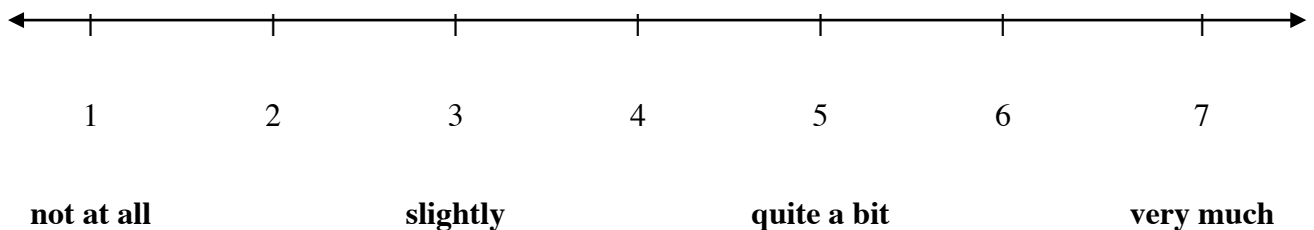
Study 11 is a 2 (Young vs. Older) x 2 (Explicit support vs. Implicit support) between-subject design.

Study stimuli:

Imagine that you had a fight with one of your family members. The relationship between the two of you becomes distant and weird after that.

Think about this event and write about what it is like.

Please indicate the extent to which each statement below describes your stressor using this scale.



_____ This event is *stressful*.

_____ The event is *negative*.

Explicit social support priming condition:

Please take a few minutes to think about those to whom you are close. We would like you to **write a letter seeking support and advice from one of these people or group of people about the stressor.** You might ask them to help you with the stressor, to root for you while

you are going through it, or to give you advice on how to get through it.

Are there any good or bad consequences of explicitly seeking social support from people close to you?

- All good consequences. No bad consequences.
- There are good and bad consequences, but mostly good consequences.
- There are equal numbers of good and bad consequences.
- There are good and bad consequences, but mostly bad consequences.
- All good consequences. No bad consequences.

Please list briefly the **good** consequences (on top of your mind) of seeking social support.

Please write list reason in a separate line in less than 10 words and number them (write NA if you believe there are no good consequences of seeking social support).

Please list briefly the **bad** consequences (on top of your mind) of seeking social support.

Please write each reason in a separate line in less than 10 words and number them (write NA if you believe there are no bad consequences of seeking social support).

Implicit support condition:

Please take a few minutes to think about a group to which you are a part of, with people whom you are close. It could be your family, a team, a club, or a romantic relationship. We would like you to **write about the aspects of this group and its members that are important to you**, such as the things you enjoy doing with them, how long you have known them, and why you are close to them.

Are there any good or bad consequences of writing about a social group you belong to?

- All good consequences. No bad consequences.
- There are good and bad consequences, but mostly good consequences.
- There are equal numbers of good and bad consequences.
- There are good and bad consequences, but mostly bad consequences.
- All good consequences. No bad consequences.

Please list briefly the **good** consequences (on top of your mind) of writing a social group you belong to. Please write each reason in a separate line in less than 10 words and number them (write NA if you believe there are no good consequences).

Please list briefly the **bad** consequences (on top of your mind) of writing a social group you belong to. Please write each reason in a separate line in less than 10 words and number them (write NA if you believe there are no bad consequences).

Appendix F. Stimuli used in Chapter 4, Study 12.

Study 12 assesses the effectiveness of explicit and implicit social support seeking for young and older adults. It is a 2 (Young vs. Older) x 3 (Explicit vs. Implicit social support vs. Control) between-subject design.

Study Stimuli:

Life Stressors

Most people encounter stressful events on a fairly regular basis. You might have relationship problems, financial difficulties, conflicts with family members, illness, job stressors or school related concerns. What is the *greatest stressor* you are currently facing? Describe it briefly in the space below.

The greatest stressor that I am currently facing is...

What is the nature of your stressful event? (circle one that is most relevant)

Family relationship	Friend relationship	Romantic relationship
Academic	Health	Financial
Job	Future	Other (please specify): _____

Please indicate the extent to which each statement below describes your stressor using this scale.

0	1	2	3	4	5	6
not at all		slightly		quite a bit		very much

_____ This event is *stressful*.

_____ The event is *negative*.

_____ I feel responsible for this event.

Explicit Social Support Condition

Please take a few minutes to think about those who care about you and to whom you are close.

Then **write a letter** seeking support and advice from one of these people or group of people and ask for support. You might ask them to help you with a stressor, to root for you while you are going through it, or to give you advice on how to get through it.

Implicit Social Support Condition:

Please take a few minutes to think about a group to which you are a part of, with people whom you are close. It could be your family, a team, a club, or a romantic relationship. Take several minutes to **write about the aspects of this group** and its members that are important to you, such as the things you enjoy doing with them, how long you have known them, and why you are close to them.

Control Condition:

Please take a few minutes to think about your current stressor. Then record these thoughts. Specifically, take a few minutes to write down how you feel about this stressful situation and describe your feelings and how you might cope with it.

12. <i>FEARFUL</i>	1	2	3	4	5	6	7
	Not at all						Very much
13. <i>HELPLESS</i>	1	2	3	4	5	6	7
	Not at all						Very much
14. <i>AT REST</i>	1	2	3	4	5	6	7
	Not at all						Very much
15. <i>DRAINED</i>	1	2	3	4	5	6	7
	Not at all						Very much
16. <i>SAD</i>	1	2	3	4	5	6	7
	Not at all						Very much
17. <i>ACTIVE</i>	1	2	3	4	5	6	7
	Not at all						Very much
18. <i>STILL</i>	1	2	3	4	5	6	7
	Not at all						Very much
19. <i>ASTONISHED</i>	1	2	3	4	5	6	7
	Not at all						Very much
20. <i>THREATENED</i>	1	2	3	4	5	6	7
	Not at all						Very much
21. <i>DROWSY</i>	1	2	3	4	5	6	7
	Not at all						Very much
22. <i>EXCITED</i>	1	2	3	4	5	6	7
	Not at all						Very much
23. <i>RELAXED</i>	1	2	3	4	5	6	7
	Not at all						Very much
24. <i>BLUE</i>	1	2	3	4	5	6	7
	Not at all						Very much
25. <i>CHALLENGED</i>	1	2	3	4	5	6	7
	Not at all						Very much
26. <i>QUIESCENT</i>	1	2	3	4	5	6	7
	Not at all						Very much

<i>27. SURPRISED</i>	1	2	3	4	5	6	7
	Not at all						Very much
<i>28. HAPPY</i>	1	2	3	4	5	6	7
	Not at all						Very much
<i>29. NERVOUS</i>	1	2	3	4	5	6	7
	Not at all						Very much
<i>30. TENSE</i>	1	2	3	4	5	6	7
	Not at all						