Uncertainty Exacerbates the Endowment Effect

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In standard endowment effect studies, participants cannot lose their holdings. However, real-world endowments are often uncertain. Accordingly, we examine how uncertainty impacts reluctance to trade by extending standard paradigms: after trades are completed, there is a 50% chance participants will lose their holdings. We find that uncertainty exacerbates the reluctance to trade.

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**Special Session**

**“I Have a Feeling It Will Turn Out Fine”: How Social and Emotional Factors Affect Risk Perception**

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**EXTENDED ABSTRACTS**

“Gaming with Mr. Slot or Gaming the Slot Machine? Power, Anthropomorphism, and Risk Perception”  
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Recent research in social psychology has begun to investigate factors that influence people’s tendency to anthropomorphize non-human entities such as objects or animals (Epley et al. 2008). Consumer behavior researchers have been interested in how anthropomorphism in turn affects judgments and behavior (Aggarwal and McGill 2007). To date this work has primarily been interested in how anthropomorphism affects quality assessments and overall liking, and studies have contrasted evaluations of anthropomorphized and non-anthropomorphized products. The present research, by contrast, explores situations in which the same degree of anthropomorphism can color judgments differently depending on how people apply beliefs and expectations of social concepts such as power. Moreover, this research focuses on other types of judgments beyond liking, in particular, risk perception.

The central hypothesis of this research is that anthropomorphizing a product causes consumers to apply social expectations and beliefs they would not normally apply to an inanimate entity. For example, for consumers considering playing a slot machine, our hypothesis is that their perception of risk (and so their willingness to play) would depend on whether they see the machine as being human. If the product is not anthropomorphized, risk assessments should follow from nonsocial considerations. However, if the entity is anthropomorphized, risk assessments should follow from beliefs and expectations about human interaction, such as consumers’ perceived social power over others, their degree of trust in others, their sense of personal need, and their view of others as kind or altruistic. Hence, anthropomorphism may have different effects depending on the model of social interaction brought to mind at the time of the decision.

In this sense, we can view the effect of anthropomorphism on risk assessment as a type of illusion of control. Previous research on illusory control shows that when a task has some characteristics that people associate with personal skill, individuals sometimes behave as if they can influence outcomes that are actually the result of pure chance (Langer 1975) This research proposes that anthropomorphism can also increase or decrease illusory control through the (mis-) application of social factors to outcomes that are based on chance. In this research, we focus in particular on the effect of perceived social power on risk assessments for anthropomorphized products.

In most social psychology studies, power is defined as an individual’s relative controllability to change the states of others in accordance with his or her own will (Thibaut and Kelley, 1959). Further, the causal relationship between perceived power and feelings of control is bidirectional (Thibaut and Kelley, 1959). People believe they have more power over others when they have more control, and people believe they have more control when they feel more powerful. We propose that anthropomorphism increases application of power perception. That is, people who feel very powerful transfer this feeling of mastery to the anthropomorphized entity, believe they can control it, and so feel less risk. In contrast, people who are low in power feel at the mercy of the entity, and so feel greater risk.

In the first experiment, we showed that participants who felt powerful acted as if they had more control when they anthropomorphized the slot machine (lower risk perception). Anthropomorphism was manipulated by modifying the look of the machine so it appeared to have a face or not. Power was manipulated by asking participants to recall an incident in which they felt powerful or not. Powerful consumers who saw the machine as human were more willing to play a risk-related game, whereas the powerless acted as if they had less control over the outcomes when they anthropomorphized the slot (higher risk perception), decreasing willingness to play the game.

In the second experiment, we used skin cancer as a risk generating entity, a conceptual replication but also one which extends our investigation to a less pleasurable domain than gambling. Again we replicated the interactive effect between anthropomorphism and power on risk perception. In this study, anthropomorphism was manipulated by the message about the disease. In the high anthropomorphism condition, the disease was described as if it has evil intentions to hurt people. Power was manipulated as in the first study. Participants with low power perceived skin cancer as a more risky disease when it was highly anthropomorphized, whereas those with high power showed the opposite pattern. Moreover, this risk perception was positively correlated with liking of a sunscreen which can prevent skin cancer.

In the third experiment, we investigated the reverse effect that perceived risk affected people’s tendency to anthropomorphize depending on their feelings of power. High risk (vs. low risk) increased anthropomorphism for people with low power, while low risk (vs. high risk) increased anthropomorphism for those with high power. Specifically, participants with low power were more likely to anthropomorphize the slot machine after losing than winning the game, whereas those with high power were more likely to anthropomorphize the slot after winning than losing the game. Theoretical implications pertaining to the power and anthropomorphism in judgments and preference construction and managerial implications regarding what managers might be able to do to change risk perception involving with products will be discussed. (843 words)

**References**


“Aesthetics as Impetus to Riskier Decision-Making”
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We investigate the psychological impact of aesthetics on decision-makers and how this affects propensity to engage in risky behavior. Previous research has shown that the aesthetics of a chosen object can influence a person’s thoughts about themselves. Specifically, choice of highly aesthetic options can be a form of self-affirmation and have the same impact on subsequent behavior as does a self affirmation manipulation (Townsend and Sood 2009). Experimentally induced self-affirmation interventions can lead to positive outcomes such as overcoming confirmation bias and reduced defensiveness (e.g. Cohen, Aronson, and Steele 2000). Townsend and Sood (2009) find that people who choose a highly aesthetic product show subsequent reduced defensiveness, as though they had earlier engaged in self-affirmation. Using this prior literature as a starting point, we examine whether providing the consumer with a personal association with high aesthetics impacts subsequent decision-making and specifically risk taking. Given that association with highly aesthetic objects seems to be a source of self affirmation, we hypothesize that it will lead to both increased openness to arguments and riskier behavior. The increased risk taking that comes from association with aesthetic objects is consistent with recent findings that individuals with an induced or chronic greater sense of self engage in riskier behavior (Johnson 2000). The primary domain in which we test these predictions is financial decision making and investment in company stocks.

In study 1 we examine whether association with high aesthetics leads to riskier investment behavior. Using a student population we created an association with either high aesthetics or high functionality through hypothetical ownership in a company that either emphasizes aesthetics or functionality. We find that respondents who have previously been associated with high-aesthetics are more likely to invest in a hypothetical risky investment and also offer a higher minimum investment at which they would invest ($637.23 vs. $435.60) than respondents who have previously been associated with high functionality. Consistent with the theory that association with high aesthetics is self-affirming and impacts subsequent openness to arguments, participants who had been associated with the high aesthetics company found the pitch for the subsequent risky investment opportunity to be more convincing and reasonable than both the Control and Function-association participants. We also find that participants associated with aesthetic objects exhibit less risk aversion as measured through willingness to accept a risky gamble than respondents in the other two conditions.

In Study 2 we test this effect using a population with relevant expertise and real financial documents. We examine the investment behavior of respondents with a background in finance who, presumably, are more immune to irrelevant influences on their financial decision-making. Using pairs of actual published company annual reports matched by industry, respondents were told that they were owners of stock in either the companies represented by more aesthetic reports or by the less aesthetic reports within each pair (without explicit referral to aesthetics). After this association we presented respondents with the same risky investment decision and questions on willingness to engage in risky gambles as in study 1. The results confirmed the findings of study 1 revealing that association with high aesthetics leads to riskier investment behavior even among respondents with a background in finance who claim that the aesthetics of the report has no influence on their decisions. Moreover, we find that association with company annual reports alone can provide the aesthetic association needed to self-affirm and cause this effect.

Study 3 replicates the previous results and examines closely the process of self-affirmation through which this occurs. Respondents are told that they own stock in the companies with the aesthetic annual reports used in study 2. We then measure reduced defensiveness and openness to arguments, and show that the effect of high aesthetics on these measures is as strong as a self-affirmation condition, relative to a control group. It is this connection between high aesthetic design and the sense of the self that results in the increased risky behavior. Implications for this are discussed in the realms of self-affirmation theory, risk preferences, and decision-making. (665 words)

References


“Negative Emotions and Health Messaging: Coping Efficacy and Message Framing Effects”
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Consumer research in recent years has explored how emotional experiences impact consumer attitudes and behaviors. While most research focused on the role of valenced affective states (i.e., positive or negative mood), recent research has begun to look at the role of specific discrete emotional states. A few studies have documented ways in which emotions might affect information processing and persuasion. The current research studies the emotions of shame and guilt in the context of public service messages related to binge drinking. We test the basic proposition that the specific negative emotions of shame and guilt, differ with respect to the efficacy appraisals underlying these emotions and these emotions are differentially responsive to gain versus loss message frames. Building off of theoretical work examining interactions between efficacy and message frame, we postulate the differential effectiveness of these messages are due to differences in the appraisal of coping efficacy, thereby contributing to the literature examining emotions and message framing effects.

Study 1 found that the low efficacy emotion of shame was compatible with a negative message frame, whereas the high efficacy emotion of guilt was compatible with a positive message frame. Not only did this compatibility result in increased persuasion in terms of binge intentions, but also with respect to individual perceptions of risk associated with excessive drinking. Study 2 examined the role of efficacy-based compatibility on subsequent resistance to information that runs counter to the health message. Those experiencing shame (guilt) and exposed to negative (positive) frames were better equipped to resist subsequent pro-alcohol information that ran counter to the health message. In both cases, these individuals were less willing to view alcoholic beverage recipes. Study 3 demonstrated that these compatible conditions resulted in increased efficacy as individuals in the shame (guilt) negative (positive) frames were more persuaded and held subsequently greater activation of the relevant coping strategy. Importantly, this coping strategy-related finding demonstrates the integral role of efficacy in interpreting the effects of message frame on persuasion. Study 4 sought additional evidence of the role of efficacy in driving these effects by testing a problem-focused coping empowerment mechanism to reverse the compatibility-effects of the low efficacy emotion of shame and negative frames. Those experiencing shame, a low efficacy emotion, responded to messages in ways similar to those experiencing
the high efficacy emotion of guilt when they were empowered by problem-focused coping strategies.

This paper makes three main contributions to theory related to message frame and emotions as well as to the substantive domain of consumer health messaging. First, while past research has examined the effect of valenced affective states (positive versus negative mood) on message framing, we make a unique contribution by examining the effects of two discrete negative emotions on message framing. Second, we extend previous research on message frames by articulating an appraisal-based account of emotions that leads to discrepant predictions of message frame for two negative emotions. Finally, we determine a mechanism through which low efficacy emotions can be empowered to mimic high efficacy emotions. This finding is among the first to provide evidence of a positive outcome resulting from a low efficacy emotion like shame.

(519 words)

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In standard endowment effect experiments, participants cannot lose their holdings. For instance, Knetsch (1989) gave participants either mugs or candy that they could keep or trade. Regardless of their choice, people walked away from the experiments with one of the items. However, actual endowments are often uncertain. For example, post-Madoff, investors worry their investments will disappear. In this paper, we examine how uncertainty impacts the reluctance to trade. Doing so is of practical significance and may also provide insight into the processes underlying the endowment effect.

In a baseline condition mirroring previous work, participants were endowed with either a mug or a box of highlighters, and given the opportunity to trade. We observed reluctance to trade. A second group of participants underwent the same procedure, but was told that after requested trades were completed, two coins would be flipped. One coin would determine whether participants holding mugs at the end of the experiment would keep their mugs (heads) or lose their mugs (tails); another coin would make the same determination for those endowed with highlighters. Compared to the baseline condition, reluctance to trade was significantly more pronounced when holdings were uncertain.

Researchers have recently suggested that feelings of attachment to an endowed item may underlie reluctance to trade (Strahilevitz and Loewenstein, 1998; Wolf et al., 2008; Johnson et al., 2009). Our results cast doubt on this notion. Because one should presumably be less attached to items that are only tentatively held, attachment accounts imply that certain endowment should yield more pronounced reluctance to trade than uncertain endowment.

It could be argued, however, that anticipatory regret of a “bad” trade engendered our results. For example, consider a mug holder who contemplates trading their mug for highlighters. Under uncertainty, the individual simply determines their preferences. However, under uncertainty, the individual might be highly averse to the possibility of losing their highlighters in the highlighter coin flip—especially if mug holders were to keep their mug in the coin flip. We ruled-out this possibility in a second uncertainty condition where a single coin was flipped to determine whether both mug and highlighter holders kept or lost their item. Importantly, the level of reluctance to trade was virtually identical in the one and two coin flip conditions.

We also examined whether uncertainty external to the items being traded might impact the reluctance to trade. Participants again received either a mug or highlighters, which they could trade; in addition, every participant received a Pack of Post-Its, which they could not trade. As expected, people were reluctant to make mug-highlighter trades. We then contrasted this baseline condition with two further conditions: A negative uncertainty condition, in which people could lose their Post-Its via a coin flip, and a positive uncertainty condition, in which people were initially endowed with a mug or highlighter and could win Post-Its via a coin flip. Reluctance to trade mugs and highlighters in the negative and positive uncertainty conditions was virtually identical to the baseline condition. Evidently, to increase reluctance to trade, uncertainty must be associated directly with the tradable items. Thus, we infer that anxiety or other affect arising from the mere presence of uncertainty was not responsible for increased endowment effects in our earlier uncertainty conditions.

In sum, it appears that uncertainty, as long as it is applied to the items to be traded, increases reluctance to trade. These findings indicate that notions of attachment cannot on their own account for endowment effects. Perhaps counter-intuitively, people may be more likely to hold onto their endowments, rather than trade, when holdings are uncertain. (597 words)

References