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Psychological Tangibility of Money Influences Loss Aversion and Propensity For Gambling

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In this paper we show that reducing the subjective value of money decreases sensitivity to losses. We find that using less tangible forms of money increases the amount of money gambled, the propensity of selecting riskier gambles, and leads individuals to underestimate the amount gambled and overestimate their earnings.

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It's All Green to Me: How Intrapersonal and Interpersonal Factors Shape Consumers' Financial Decisions

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Paper #1: Psychological Tangibility of Money Influences Loss Aversion and Propensity for Gambling

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Paper #2: Greedy Loss Prevention in Economic Decision-Making

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Paper #3: The Planning Paradox: Increased Economic Uncertainty Decreases Retirement Planning

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Paper #4: Managing Debt and Managing Each Other: Debt Management Decisions in Interpersonal Contexts

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SESSION OVERVIEW

Consumers' everyday lives are strongly affected by financial decisions large and small. Individuals and households need to successfully build cash reserves, manage investments, eliminate debts, and plan for retirement. It is no surprise that in all of these domains, consumers are influenced considerably by personal and social factors. Despite the significance and ubiquity of such factors, little is known about their effects on consumers' everyday financial decisions. The goal of this session is to present novel research demonstrating how and why consumers' financial decisions and welfare are influenced by intra and interpersonal factors. Featuring multiple methods and diverse theoretical frameworks, this session provides new insights into how financial decisions are influenced by such factors as the subjective value of money, greed, childhood environments, and social relationships.

Shah, Bettman, and Payne investigate how one's subjective value of money influences individuals' loss aversion tendencies. Using a set of behavioral experiments, the authors find that subjective value of money moderates the degree to which people experience loss aversion. Specifically, they find that less painful forms of money (e.g., credit cards) decrease sensitivity to losses and the negative associations with losing wealth.

Krekels and Pandelaere identify a previously unexplored and counterintuitive aspect of greed: a chronic focus on loss prevention (vs. pure acquisitive behavior). The results from three studies show that people higher versus lower in dispositional greed are more focused on preventing losses. For example, in an online auction paradigm, those higher in dispositional greed bid a larger amount in order to ensure not losing an endowed product.

Mittal and Griskevicius extend beyond intrapersonal factors to explore how an interpersonal factor—childhood environment—influences financial planning behavior in the face of uncertainty. Four experiments suggest that childhood resources play a moderating role on people's motivation to plan. Specifically, individuals from impoverished backgrounds planned significantly less under resource uncer-

tainty. The authors find that sense of personal control mediates this effect and that boosting people's control beliefs helps in mitigating it.

As many important financial decisions are made within the context of relationships (e.g., between spouses), **Olson and Rick** examine whether and why dyads navigate debt management decisions differently than individuals. In an incentivized game, dyads performed significantly worse than individuals and were more likely to pay off smaller debts even when larger debts had larger interest rates. Further analyses among the dyads and a simulation suggest that the partner with the least optimal preferences had greater influence on joint outcomes.

Taken together, these four papers advance our understanding of how intra (i.e., valuation of money, dispositional greed) and interpersonal factors (i.e., childhood environments, deliberation with a partner) influence consumers' financial decisions. Overall, this session offers a coherent set of novel findings that enhance the breadth of our knowledge in an emerging area of research. We expect this session to appeal to a broad, interdisciplinary audience including researchers interested in consumer welfare, decision making, financial planning, debt management, loss aversion, childhood environments, and social relationships.

Psychological Tangibility of Money Influences Loss Aversion and Propensity for Gambling

EXTENDED ABSTRACT

Loss aversion is one of the key constructs in understanding how consumers make household financial decisions, and has been a topic of great interest across a variety of academic disciplines. Loss aversion refers to the phenomenon that the disutility of experiencing a loss weighs greater on the individual than experiencing the utility of an equal amount gained. In other words, it holds that "losses loom larger than gains" (Kahneman and Tversky 1979, 279). Research has demonstrated that whereas gambling preferences for large amounts of money were consistent with loss aversion, gambling preferences for small amounts of money showed a reversal of loss aversion (Harinck et al. 2007). Individuals expected small gains to be more favorable than equivalent small losses were unfavorable. Harinck et al. demonstrate that the objective value of money can influence the degree to which individuals are loss averse.

Whereas research demonstrates that people are loss averse and are unlikely to select gambles that have an equal chance of winning or losing the same amount of money, empirically, the results indicate a different story. Casino revenues in Nevada alone for 2012 have exceeded \$10.8 billion, up 1.5% from 2011, and continue to grow (Nevada Gaming Control Board 2013). Casinos regularly require patrons to use poker chips or casino tokens, a less salient and less painful form of money than cash. Furthermore, as consumers are moving toward payment forms such as debit/credit cards and even mobile payment technologies (which all decrease the salience and vividness of the payment experience), an important question emerges: Can the form of money lead individuals to be less sensitive to losses and more focused on gains?

Recent research has demonstrated systemic psychological and behavioral biases in the way individuals evaluate the value of money based on the payment form (e.g., Raghurir and Srivastava 2002; So-

man 2001). More salient forms of money (i.e., paying with cash vs. a debit or credit card) influence the amount of pain individuals feel when paying. Paying with a less painful form of money increases the propensity to spend and to evaluate products more favorably (e.g., Chatterjee and Rose 2011; Hirschman 1979). We propose and find that loss aversion is moderated not only by the objective value of money, but also the subjective value of money. Specifically, we show that less painful forms of money moderate the degree to which individuals experience loss aversion. This leads to an increased propensity to gamble, a greater likelihood in selecting gambles with a lower probability of winning or higher buy-in amount, and increased recall errors in the amount of money played and earned when gambling.

In study 1, we gave participants a chance to play as many gambles as they desired out of a set of gambles, using their own money. We varied the form of payment they gambled with (cash or plastic student card) and the number of gambles they could choose from (2, 6, 10, 14, or 18 gambles). For each of the gambles, we also manipulated the buy-in amount in order to play the gamble (\$0.50 or \$1), the probability of winning (10%-90%), and the amount earned if the participant won, such that the expected value of all gambles was equal to +\$0.50. In each of the conditions, participants could choose to purchase and play all, some, or none of the gambles. We find that individuals gambling with a plastic, less salient form of money gambled more overall, chose lower probability gambles, and were significantly more likely to choose \$1 gambles.

In study 2, we use a similar gambling paradigm but examine individuals' ability to recall the money spent gambling after a 5-minute filler task. In comparison to those gambling with cash, we find that individuals paying with plastic had higher recall errors regarding their gambling choices, underestimating the amount of money they gambled and overestimating the amount of money earned.

Our research shows that loss aversion can decrease and even reverse when the subjective value of money is attenuated, altering one's decision-making abilities under risky choice settings. Paying with a less painful form of money decreases the sensitivity to losses and the negative associations with losing wealth. These results have important theoretical and substantive implications. Theoretically, our findings indicate that the cognitive and affective components associated with risk can be influenced by the salience of the gain and loss. Individuals may be buffered more against emotions associated with financial loss when the salience of the loss is low. Cognitively, while people may want to discount negative outcomes (i.e., the hedonic principle), the psychological strategy of discounting may be more effective when the salience of the loss is reduced. Our findings also contribute to the precise understanding of the psychological underpinnings behind the pain of payment, the biases associated with payment form differences, and consumer self-regulation.

Greedy Loss Prevention in Economic Decision-Making

EXTENDED ABSTRACT

Greedy is omnipresent in our current society and highly relevant to financial decisions. For instance, the media and public opinion attributed the recent financial crisis to the greediness of bankers and stockbrokers, who risked clients' money to ensure greater turnover to satisfy their greed (Papatheodorou, Rosselló, and Xiao 2010). Greedy has also been related to corporate fraud (Smith 2003) and higher levels of consumer debt (Lunt and Livingstone 1991).

When people think about the concept of greed, they typically focus on acquisitive behavior (Wachtel 2003), classifying greed as an insatiable desire. Although we endorse this view of greed, we believe that an important aspect is missing from prior conceptualiza-

tions: avoiding losses might be another important characteristic of greedy people.

This dual vision on greed is often indirectly incorporated in research, where the same behavior might be explained as preventing losses in pay-offs, labeled fear, or increasing pay-offs, labeled greed (Rapoport and Eshed-Levy 1989). We believe that both labels are an essential part of dispositional greed. An initial study ($N = 184$, 91 males, $M_{\text{age}} = 30.9$, $SD = 11.8$) revealed a positive correlation between dispositional greed and both promotion and prevention foci (Grant and Higgins 2003; $r = .25$ and $.26$, $p < .001$). To further examine our predictions, we conducted three studies that investigated whether preventing losses (above and beyond acquisitive behavior) is an essential part of a greedy disposition in economically relevant contexts.

In study 1, we employed a validated measure of loss aversion borrowed from previous research (Tom et al. 2007). In this paradigm, respondents indicate their willingness to participate in a coin toss gamble with an equal chance of winning (10 - 45€, increments of 5€) or losing (5 - 25€, increments of 2.5€). These amounts were chosen because previous studies indicate that people are roughly twice as sensitive to losses as to gains (Tversky and Kahneman 1992). Next, participants completed a measure of dispositional greed (i.e., participants rated their agreement with six statements such as "Even when I am fulfilled, I often seek more"). Analyses showed that dispositional greed predicted respondents' loss aversion. Individuals high in dispositional greed (+1 SD) exhibited an average loss aversion ratio of 5.62 ($SD = .59$), indicating a willingness to participate in the gamble when the gain is more than five times the loss. For those lower in dispositional greed (-1 SD) this ratio was 3.82 ($SD = .59$). These results show that greedy people are not just oriented towards gaining more, but are also focused on preventing losses.

Study 2 featured an auction paradigm, which is common in economic research (Bajari and Hortascu 2003; Cilia and Buchmann 2002). Prior work has shown that bidding can produce a pseudo-endowment effect (Ariely and Simonson 2003), which might result in loss experiences when people do not become the final owner. A total of 471 U.S. participants (244 males, $M_{\text{age}} = 32.5$, $SD = 11.3$) imagined being in an online auction. They viewed ten items (e.g., an iPhone, a table lamp) and indicated the highest price they were willing to bid, ranging from 10% to 120% of the retail price. They also completed a measure of dispositional greed.

The results showed that greed predicted the amount respondents were willing to bid ($\beta = .16$, $F(1, 469) = 12.82$, $p < .001$). A binomial logistic regression showed that greedy people were more likely to bid at least 100% of the retail price (Wald = 5.57, $\beta = .30$, $p < .05$). Thus, greedy people are willing to bid more in an online auction, possibly to ensure not losing the object they already feel ownership over, even if it means paying more than their value.

In study 3, we investigated the consequences of when greedy people experience losses. Previous research has shown that allocators in an ultimatum game feel ownership of the money endowed to them and experience losses when the recipient rejects their offer (Leliveld, van Dijk, and van Beest 2008). As such, 184 U.S. participants (93 males, $M_{\text{age}} = 34.6$, $SD = 11.0$) played a \$1 ultimatum game with a computer programmed to reject any offer. Answers to an open-ended question ensured that respondents were unaware of this fixed response. They then indicated their feelings following this rejection on an 8-item bipolar scale (e.g. *frustrated* to *relaxed*, *disappointed* to *not disappointed*). After some filler items, they were allocated the role of proposer in a \$1 dictator game with a different recipient, to exclude a punishing explanation.

Greed significantly predicted the proposed amount in the ultimatum game ($\beta = .22$, $F(1, 182) = 9.50$, $p < .01$) but not their emotions following rejection of their offer ($\beta = .08$, $F(1, 182) = 1.19$, $p = .28$). In the dictator game, both greed and their emotions associated with rejection predicted the amount people kept for themselves. Moreover, there was a significant interaction between greed and the emotions associated with rejection: Whereas non-greedy individuals' emotions predicted how much they would keep, no negative emotional response was needed to increase greedy people's portion.

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

The Planning Paradox: Increased Economic Uncertainty Decreases Retirement Planning

EXTENDED ABSTRACT

Financial planning is pervasive in consumers' lives. Not only does it impact how we spend money in our everyday lives, but it also has a profound effect on wealth accumulation and retirement satisfaction (Ameriks, Caplan, and Leahy 2003; Elder and Rudolph 1999). Because a principal reason to plan is to have a better and more comfortable future, might uncertainties about the future change people's planning psychologies? For example, can cues indicating looming resource uncertainty and scarcity lead people to change their valuations and importance of financial planning? Would they overvalue planning or undervalue it? Would everyone respond to uncertainty cues the same way or would there be predictable individual differences among people?

Recent work indicates that people respond in adaptive and divergent ways when faced with threats of resource uncertainty based upon their childhood resource conditions (Griskevicius et al. 2013). Whereas adults raised in relatively resource-rich environments took fewer risks and became less impulsive under cues of resource uncertainty, those from relatively resource-deprived backgrounds responded to the same cues by taking more risks and becoming more impulsive. In the present work, we draw on the cost-benefit framework of life history theory to investigate the effects of resource uncertainty on people's financial planning behavior.

In study 1, we experimentally manipulated resource uncertainty by having people read either a news article about the recent economic recession or a control article. We then assessed their motivation for financial planning by using an adapted version of the propensity to plan scale (Lynch et al. 2009). The results revealed that resource uncertainty *decreased* the motivation to plan among those from poorer backgrounds but not for those from richer backgrounds.

In study 2, we sought to replicate the results of study 1 by using a behavioral measure of the value of planning. Economic uncertainty was manipulated by asking participants to recall and briefly describe a situation in which they felt that they could not financially obtain something that they wanted. In the neutral condition, there was no manipulation, meaning that people simply responded to the measure of financial planning. Then, in an ostensibly unrelated task, respondents were informed that the experimenters were interested in knowing the kinds of information people are interested in learning in the context of retirement planning. They were provided with a list

of topics pertaining to retirement finances that they could choose to learn about. Importantly, they were informed that they could choose as many or as few of the topics they were interested in. The dependent measure was the amount of time respondents spent on learning about retirement planning. Findings conceptually replicated the results of study 1. Specifically, economic uncertainty led respondents who grew up with relatively lower levels of family resources to spend significantly less time on the retirement planning task. No significant differences were observed for those growing up with higher levels of family resources.

Study 3 had two goals. First, to ensure the robustness of the experimental findings in studies 1 and 2, we sought to conceptually replicate the results using a third methodology to prime uncertainty—a photo slideshow. Second, we tested whether people's sense of control could be a potential mediator of the relationship between resource uncertainty and planning. Resource uncertainty cues were manipulated by having participants view a slideshow with visual images suggestive of economic uncertainty or control images. Next, participants rated their motivation to plan and their perceived sense of control. Consistent with the results from studies 1 and 2, study 3 found that uncertainty cues significantly *decreased* the tendency to plan only for those growing with lower levels of family resources. Additionally, this effect of resource uncertainty on planning was found to be mediated by people's sense of control.

Study 4 tested an intervention strategy for buffering individuals from the negative effects of uncertainty. Given that resource uncertainty lowers sense of control for individuals from deprived childhoods, Study 4 attempted to experimentally re-affirm people's sense of control in the face of uncertainty. Participants were randomly assigned to one of three experimental conditions: uncertainty, uncertainty *plus sense of control boost*, or neutral. Uncertainty was manipulated using the same procedure as in study 2. However, prior to this manipulation, participants recalled and described either an ordinary purchase transaction or a time when they felt in complete control of a situation (Whitson and Galinsky 2008). In the neutral condition, participants simply advanced to the dependent measure. Next, all participants worked on the retirement planning task used in study 2. The time spent reading about retirement planning served as the dependent measure. Consistent with previous studies, we found that whereas uncertainty cues did not affect planning among people from wealthier backgrounds, the same cues led to significantly reduced planning among those from poorer backgrounds. Importantly, however, enhancing sense of control led to a significant increase in planning in this group. This suggests that an intervention which aims at boosting people's sense of control can help in alleviating the effects of economic uncertainty on planning among those who are most vulnerable.

These studies provide important new insights into the complex relationship between resource uncertainty and people's financial behaviors. It draws upon life history theory to explore why people from different childhood backgrounds might plan differently during uncertain times such as economic recessions. It also identifies sense of control as an important variable that guides people's subsequent behaviors pertaining to financial planning. Furthermore, it documents the ameliorating role of a sense of control in getting people from poorer backgrounds to plan more during tough times. In sum, this work has important implications for public policy professionals and others who wish to foster better financial planning behaviors in people from disadvantaged backgrounds.

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

EXTENDED ABSTRACT

The past few years have witnessed a surge of interdisciplinary research aimed at understanding and improving consumer financial decision-making (Lynch 2011). The vast majority of work in this area has focused on how individual consumers process information and make decisions. However, outside the lab, many important financial decisions are subject to social influence and are made within the context of relationships (e.g., between spouses and business partners; Simpson, Griskevicius, and Rothman 2012). Moreover, the outcomes of such decisions can be important determinants of relationship satisfaction (e.g., Dew 2008). Our work begins to address this important gap in the literature by examining whether and why dyads navigate a common financial decision (how to manage debt) differently than individuals.

When individuals are faced with multiple debts, they tend to repay the smallest debt first rather than the debt with the highest interest rate, a costly tendency known as debt account aversion (Amar et al. 2011). A number of psychological factors appear to contribute to debt account aversion, including the temptation of pursuing goals nearest completion and the pleasure of eliminating an obligation. However, whether debt account aversion would persist in a joint decision-making context is unclear. On the one hand, people may find it difficult to publicly defend their desire to pursue the financially suboptimal strategy of closing small debts because it is pleasurable (Lerner and Tetlock 1999). Thus, the accountability inherent in joint decision-making may encourage more financially optimal debt repayment behavior. Performance within dyads may also be enhanced because having a partner offers an additional perspective, which encourages greater discussion and may ultimately enhance decision quality (i.e., by identifying and implementing the financially optimal strategy). On the other hand, dyads may focus their discussion on attributes that are easier to understand (e.g., the number of debts, in this context; Hsee 1996) and attempt to reach agreement on how to manage those attributes. Deliberation among like-minded people can also amplify existing preferences (e.g., Schkade, Sunstein, and Hastie 2007). Thus, if most people naturally prefer to focus on closing small debts (Amar et al. 2011), joint decision-making may make this preference even more pronounced.

Based upon work in social psychology indicating that groups value harmony and conformity (sometimes to the detriment of decision quality; Asch 1956; Janis 1972), individuals may be motivated by normative pressures. Specifically, dyads might “go along to get along” and thus focus on hedonically rewarding outcomes (which may be different than financially optimal outcomes). To test whether typical repayment behavior among individuals resembles happiness-maximizing behavior, we first examined the motives underlying debt account aversion. We presented individuals with a scenario in which they could either completely repay a low-balance debt with a low interest rate (APR) or partially repay a high-balance debt with a high APR. We asked participants what they would actually do in such a situation, what they rationally should do, or what they should do to maximize their happiness. We found that participants’ actual and happiness-maximizing preferences both favored paying off the small debt, whereas rational preferences favored chipping away at the high-balance, high-APR debt. The results suggest that individuals understand that, economically, they should focus on interest rates, but that the pleasure associated with eliminating debts is difficult to resist.

Our primary experiment examined whether these hedonic preferences would be enhanced or minimized in an interpersonal context. We randomly assigned 87 (previously unacquainted) participants to complete a debt management game individually or in pairs. In the game (Amar et al. 2011), participants are initially saddled with six debts varying in size and interest rates. Critically, larger debts tend to have larger interest rates, meaning participants must avoid the temptation of closing small debts to perform well. The game lasts 25 “years” (rounds), and participants receive annual salaries they must use to repay one or more debts. In addition to a show-up fee, each participant could earn up to \$7.50 (\$15 for each dyad) based upon his or her final debt amount at the end of the game.

We found that dyads performed significantly worse than individuals (i.e., they had significantly greater final debt levels) and were 38% more likely to pay off the smallest debts. Follow-up analyses among the dyads and a simulation suggest that the partner with the least optimal preferences “wins” by having greater influence on joint outcomes. We then conducted the same experiment with 25 groups of three people to examine whether the results were specifically driven by one-on-one interaction or generalize to other types of social interactions (i.e., interactions where “majority rules” and alliances were possible). The pattern among groups was virtually identical to the pattern among dyads, suggesting that any kind of social deliberation may intensify debt account aversion.

Our work challenges the generalizability of debt management research conducted among individuals. Analysis of measures collected after the experiment suggests that dyads may have been more motivated to get along than to behave optimally. If participants who advocate closing debts are more passionate about their beliefs than participants who advocate focusing on interest rates, this (combined with heightened affiliative motives) could help explain why dyads struggle. We are currently examining (among individuals) whether suboptimal preferences are indeed held more passionately than financially optimal preferences. We are also further examining the “go along to get along” hypothesis by manipulating the extent to which dyads are motivated to get along (i.e., by manipulating whether dyads are fixed for the duration of the experiment or are randomly repaired at the end of each round). We also plan to examine whether these effects replicate with real couples, as familiarity and an existing bond may increase one’s willingness to challenge others’ suboptimal preferences.

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