Loss Framing Attenuates Delay Discounting in Older Adults

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Age-related differences and the interaction of decision making biases have been understudied. Older adults discounted future rewards less steeply, yet projected collecting Social Security sooner. Both older adults and younger discounted future rewards less when choices are loss framed, but older adults exhibited a higher susceptibility to loss framing.

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Come and Have Fun with Us: Social Influences and Social Perception in Leisure Activities

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Paper #1: The Decision to Share: From the Joy of Self-Possession to the Joy of Shared Consumption
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Paper #2: Getting the Most from Shared Experiences: The Undervalued Impact of Clear Objectives
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Paper #3: Celebrations and Social Support
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SESSION OVERVIEW
Leisure is time that people spend with freedom of choice, intrinsic motivation and enjoyment (Shaw and Dawson 2001). We spend leisure time attending baseball game with friends, celebrating accomplishments with family, or volunteering in the neighborhood. As these examples suggest, many of the ways people spend leisure time involve social contexts and the presence of other people. As such, examining how the presence of others affects leisure choices and experiences is both theoretically important and substantively relevant. What activities do consumers prefer sharing with others, and when do consumers derive more utility from shared leisure experiences? How do consumers in the social contexts perceive another person’s leisure choices?

Our session sheds light on these questions. The first three papers examine how the presence of others influences the anticipated and actual leisure experiences. Yang and McGill begin by discussing how the anticipation of activity partner’s affective experience influences consumers’ choice of sharing. Consumers are more willing to share affect-rich (e.g., desserts) than affect-poor resources (e.g., vegetables), because they expect more positive affective reactions from activity partners, which will in turn increase their own enjoyment. Such tendency is further amplified if consumers have an experiential (vs. material) goal.

Moving from the anticipation of shared experiences, Wu et al. examine how clarity about a partner’s objectives influences the consumer’s actual experience. When consumers are sharing experiences with others (e.g., visiting an art gallery), they may be unclear about the degree to which her friend prioritizes absorbing the artwork or socializing with her. A lack of clarity limits the consumer’s ability to absorb consumption content and socialize, which can have downstream effects including reduced enjoyment. However, Many consumers do not spontaneously take simple steps to increase clarity.

Next, Brick et al. focus on a specific type of leisure activity—celebration, and examine the emotional and social benefits provided by celebrations. The authors find celebrations provide greater social support compared to other shared leisure activities because of the presence of more close others. Further, being the focal celebrant and/or organizing celebrations for others can further increase perceptions of social support.

Finally, Olson et al. examine how people in social contexts perceive another consumer’s ethical choices, including spending leisure time on volunteering, based on income sources (welfare recipients vs. income earners). The authors show welfare recipients (vs. income earners) are perceived less moral when they spend much time on volunteering (e.g., in a museum) or make donations of material possessions due to the stronger perception of wastefulness.

Together, this session investigates both social influences on people’s sharing choices and actual leisure experiences, as well as the effects of leisure choices on others’ impressions of them. These papers also suggest multiple ways to help consumers derive more utility from shared leisure experiences, including increasing objective clarity and the presence of close others. We expect this session to appeal to a broad audience, including researchers interested in social influence, social cognition, experiential consumption, moral judgment and consumer decision making.

EXTENDED ABSTRACT
Why do people share desserts, which feel good, but not vegetables, which are good? Little research has examined the decision to share in which resource re-allocation is targeted at, and immediately followed by consumption of the resources. In the present research, we investigate how people make such sharing decisions, and distinguish them from the conventionally studied giving decisions where resources are re-allocated without considering subsequent consumption outcomes (e.g., when allocating monetary tokens).

Such decisions to share arise before (or during) one’s consumption of resources and involves the transfer of resources. As such, decision-makers face the tradeoff between two goals: to maximize one’s possession, and to maximize one’s experience from consumption. What maximizes one’s possession is not necessarily the same as what maximizes one’s experience. In particular, based on a distinction made between the affective value and the monetary value as two independent sources of value (Hsee and Rottenstreich 2004), we theorize that the monetary value of resources is crucial for evaluating one’s possession, whereas the affective value of resources is more crucial for evaluating one’s consumption experience, because it is during consumption that the affective value can be realized. Moreover, the involvement of others during consumption can augment one’s own consumption experience (Boothby, Clark and Bargh 2014; Ramanathan and McGill 2007; Steinmetz, Fishbach and Zhang 2016). Thus, while people will be less willing to share resources of great monetary value, they may be more willing to share resources of great affective value, due to the spontaneous consideration of how enjoyable the consumption experience will be.

Therefore, we hypothesize that when making a sharing decision, people are more willing to share affect-rich resources with others when holding the monetary value constant. Further, although the anticipated personal enjoyment from consumption may be enhanced by either the mental simulation of others’ involvement, or the pros-
pect of actual joint consumption, we predict the prospect of actual joint consumption may further amplify one’s willingness to share affect-rich resources, because synchronized joint consumption has been shown to enhance enjoyment in multiple facets (Boothby et al. 2014; Ramanathan and McGill 2007; Steinmetz et al. 2016). We present four studies to examine the decision to share.

In study 1, we recruited 186 mturk participants (M_{age} = 35, 52% Male) to an allocation task between themselves and another mturker modeled after the Dictator Game. Participants were randomly assigned to two conditions that differed in the nominal resource for allocation (token vs. joke). The value of each token was equated with a joke. Participants either allocated tokens that they would use to redeem jokes, or allocated jokes directly. We found participants allocating jokes were more generous than those allocating tokens (giving 5.5 vs. 4.1 out of 11 to the other, t(184)= -3.57, p < .001). Subsequent measures suggest that participants allocating jokes considered each other’s enjoyment from consumption (i.e., of listening to the jokes) more than those allocating tokens, whereas they similarly considered each other’s satisfaction with possession (i.e., with the allocation decision). In sum, the consideration of the subsequent consumption experience may underlie the willingness to share affect-rich resources with others. A replication study with real consequences in a lab is in progress where preliminary evidence of the same pattern has been observed (N= 45 (target N=200), Median= 6.0 vs. 4.5, non-parametric t-test p < .07).

In study 2, we further examine how subsequent consumption affects the sharing decision. We randomly assigned online participants (N= 320, M_{age} =35, 56% Male) to a 2 (resource: affect-poor vs. affect-rich) x 2 (subsequent consumption: separate vs. joint) between-subjects design. We asked participants to imagine that they had been kept hungry for a food-tasting study and were given seven mini trays of cracker chips. The experimenter ran short on chips for the next participant, so participants were asked how much they would like to share their chips, from one to six trays. The cracker chips were either described as plain or flavorful, paired with doctored images that highlighted the difference in flavors. A pretest (N=60) validated that the flavored chips were rated more likely to induce positive affective reactions than the plain cracker chips, and both were rated to have a similar market price. Further, participants either read that the other participant would retrieve the allotted cracker chips and taste them in a separate room, or that they would taste the cracker chips sitting next to each other. Overall, participants were more willing to share when the cracker chips were considered affect-rich than affect-poor (2.9 vs. 2.3, non-parametric p = .002). Moreover, subsequent joint consumption amplified this effect (F(1,318)=3.3, p =.044). Participants were more willing to share when the allocation decision was followed by joint consumption (3.2 vs. 2.2, p <.001).

In study 3, we examined a theoretical moderator, that people will be more willing to share if they considered experiential gain to be more crucial to their happiness, and less so if they considered material gain to be more crucial to their happiness. We recruited participants (N=194, M_{age} = 35, 49% Male) online and asked them either to recall three material possessions or three experiential consumption experiences that made them happy in order to prime material or experiential goals. Manipulation checks confirmed that participants considered material possession or experiential consumption to be more crucial for their happiness depending on the condition (p<.05). We then asked participants to imagine that they were having a good time catching up with a specified neighbor/friend, and wanted to have a drink together. The participants were asked to choose between a generic bottle vs. a premium bottle of wine. Results revealed that the experiential goal prime increased participants’ willingness to share the affect-rich premium wine (45% vs. 24%, χ² = 6.4, p=.012).

Last, we explored how affective value influences the decision to share in common food consumption scenarios (N=266). We found the willingness to share a food item with a friend was predicted by the anticipated affective experiences (r = .44, p <.001), but not the overall substantial benefits (e.g., nutritional or material) brought by the food item (β=.02, p>.25).

**Getting the Most from Shared Experiences: The Undervalued Impact of Goal Clarity on Shared Consumption**

**EXTENDED ABSTRACT**

Consumers often engage in leisure activities with others, such as visiting an art gallery or attending a baseball game. When these activities support multiple objectives, such as absorbing the consumption content and socializing with the partner, it may be unclear to consumers the degree to which an activity partner wants to absorb the consumption content versus simply to enjoy the experience and socialize. The primary goal of this research is to examine how the degree of clarity about the partner’s objectives impacts a consumer’s ability to balance focusing on the consumption content and socializing with the partner during shared leisure activities.

Building on previous research on teamwork suggesting that clarity about objectives facilitates coordination and reduces concerns about the partner’s experience (e.g., Bang et al. 2010; Fitzsimons, Finkel and vanDellen 2015), we posit that lacking (vs. having) clarity about the partner’s objectives (i.e., whether the partner prioritizes absorbing the consumption content or socializing) hinders consumers’ ability to coordinate during the experience. The poorer coordination associated with low (vs. high) clarity about the partner’s objective not only undermines consumers’ ability to absorb the consumption content, but also their ability to socialize with the partner. This poorer coordination can also lead to downstream consequences such as lower enjoyment and higher regret about engaging in the experience accompanied. However, given people tend to underestimate the necessity of remedying a mildly harmful (vs. critical and intense) situation (Gilbert et al. 2004), we predict that in mundane leisure contexts consumers underestimate the importance of clarity and do not take simple steps to increase clarity. Five experiments tested these hypotheses.

In experiment 1, participants were asked to explore an art gallery in their campus student union either alone or with another person. We measured accompanied participants’ clarity about the partner’s objectives. As predicted, the higher the clarity accompanied participants had about their partner’s objectives, the better they remembered information about the artwork, and the more they felt they learned (p<.05). Slow consumers learned more and better than accompanied consumers with low but not high clarity. Further, enjoyment of the shared experience increased with higher clarity (p=.03).

Experiment 2 examined the effects of clarity when partners had incongruent (vs. congruent) objectives. We also tested the mediating role of coordination. Specifically, participants in the high-clarity condition recalled an accompanied leisure activity where they were clear that their partner had the same (congruence condition) or different (incongruence condition) objectives. Participants in the low-clarity condition recalled an experience where they were not sure whether their activity partner had the same (vs. different) objectives. Whereas objective (in)congruence had no significant effects, participants with low (vs. high) clarity were less able to focus on the consumption content (p=.005) and socialize with the partner (p=.038), effects that were mediated by the ease of coordination. Results also
revealed that low (vs. high) clarity led to lower enjoyment and higher regret about engaging in the activity accompanied (ps < .01).

We conducted experiment 3 in the art gallery of a hotel/conference center to further examine the effects of clarity in real consumption environments and whether consumers would take steps to increase clarity. We manipulated clarity by instructing one-third of the pairs to discuss about their objectives before entering the gallery (“high-clarity”), instructing one-third to go directly into the gallery (“low-clarity”), and allowing one-third to choose whether to discuss their objectives before entering the gallery. Additional participants were sent into the gallery solo. Consistent with results of studies 1 and 2, low-clarity participants felt less able to read brochures and absorb art, and had poorer memories of the artwork than participants in high-clarity or solo conditions (ps < .01). Low (vs. high) clarity participants were also less able to socialize with the partner (p = .019). Again, the ease of coordination mediated these effects. Despite the benefits of clarity, 24 out of 26 pairs in the choosers condition chose not to discuss about their objectives, providing evidence that consumers underestimate the benefits of having high (vs. low) clarity.

Most dyads in experiments 1-3 were friends/family. Experiment 4 manipulated the relationship (friends vs. strangers) between partners in addition to clarity to test whether the positive effects of clarity can be generalized to strangers. Participants were asked to explore five movies with another person in the lab. Whereas dyads in the “strangers” condition went directly to the movies, dyads in the “friends” condition had a Relationship-Closeness-Induction-Task (Sedikides et al. 1999) first. We manipulated clarity by having pairs disclose (vs. not disclose) their objectives to each other before starting the activity. Results showed that dyads under low (vs. high) clarity learned less about the movies (p = .005), enjoyed the experience less (p = .046), and were less interested in visiting the movie festival (p = .058). In a separate study, we described the procedures of this study and asked participants to predict the effects of clarity on enjoyment and learning. Only about half of the participants correctly predicted the positive effects of clarity, suggesting that people tend to underestimate the benefits of clarity.

To provide further support for the proposed mechanism of coordination, experiment 5 manipulated the level of coordination required during an activity. Clarity about the partner’s objective was measured. Specifically, participants were asked to explore photos from National-Geographic Instagram with another participant in the lab, and they were either shown the photos and the blurbs automatically (“low-need-for-coordination” condition) or they needed to navigate through the activity together (“high-need-for-coordination” condition). Results showed significant interaction effects of clarity and need-for-coordination on the ability to focus on the consumption content and enjoyment (ps < .04): when the activity required high coordination to navigate through, lower clarity about the partner’s objective decreased consumers’ ability to focus on the consumption content and enjoyment; however, when the activity required minimal coordination, clarity did not impact consumers’ ability to focus on the consumption content or enjoyment.

Together, our results show that clarity about the partner’s objective plays an important role in shared consumption. However, consumers don’t predict the strong effects of clarity nor do they take simple steps to increase clarity.

Celebrations and Social Support

EXTENDED ABSTRACT

Extensive research has focused on social support during times of adversity (e.g., Bolger, Zuckerman, and Kessler 2000; Cohen 1988; Kasser and Sheldon 2000; Lakey and Cohen 2008); yet, almost no empirical work has examined social support during positive life events (see Gable et al. 2004; Reis et al. 2010 for exceptions). Recently, Feeney and Collins (2014) called attention to the lack of research on social support during times of non-adversity and emphasized the importance of this type of supportive function in helping people thrive. In particular, they note that “very little theoretical or empirical work has focused on the factors that promote or hinder effective social support processes in close relationships” (Feeney and Collins, p. 18). The current research examines this understudied area and investigates how celebrations can be a relevant context for understanding the process by which individuals garner social support during positive life events.

In our first study, we explored individuals’ innate definitions of celebrations and the benefits they receive from celebrations. 204 participants from Amazon’s Mechanical Turk completed the study in exchange for financial compensation. Participants answered a series of open-ended questions and prompts designed to explore celebrations and social support (e.g., “What does a ‘celebration’ mean to you?” “Please recall and describe a recent celebration you had or participated in that was not related to a holiday” “What did you get out of the celebration?”) We then had two undergraduate RAs code the responses. Coders were highly reliable and any disagreements were resolved by a third coder. Supporting our own conceptualization, participants viewed celebrations as joint consumption highlighting at least one member’s separate, positive event. Celebrations were also viewed as largely providing social and emotional benefits. Furthermore, we found that individuals who are the focal celebrant and have a celebration organized for them report greater support than do individuals who have to organize their own celebration.

In our next set of studies, we expand upon our initial findings using experimental designs to better understand how celebrations may contribute to perceptions of social support. In Study 2, we examined whether individuals report greater perceptions of social support after recalling a celebration, experience (i.e., positive consumption) than a coping experience (i.e., negative consumption) as previous research has largely focused on social support in response to negative life events. In addition, Study 2 examines the process through which celebrations may increase perceptions of social support, namely by increasing the number of close others in one’s social network. 214 participants from Amazon’s Mturk successfully completed this study. Participants received financial compensation in exchange for participation. Participants were randomized to recall a time when something positive [negative] happened and they celebrated [coped with] this positive [negative] event by engaging in a consumption activity with others. Participants then indicated, “about how many close friends and close relatives do you have (people you feel at ease with and can talk to about what is on your mind)?” Finally, they completed the measure of perceived social support (MDSPSS, Zimet et al. 1988). An ANOVA revealed a significant difference between the conditions in terms of perceived social support (p < .05) with individuals in the celebration condition reporting greater social support (M = 5.7) than the coping condition (M = 5.4). Moderated mediation analyses revealed that the number of close others mediated the link between consumption experience and perceived social support.

Study 3 used a 3-cell design (celebration vs. coping vs. positive control) to further explore celebrations and social support. After indicating consent, participants were randomized to recall one of the following: a time when something positive happened and they engaged in a consumption activity with others (celebration), a time when something negative happened and they engaged in a consumption activity with others (coping), or a time when something positive
happened (positive control). Participants then completed the same measure of number of close others as in the previous study and the MDSPPS (Zimet et al. 1988). An ANOVA revealed a significant difference between the groups in terms of number of close others (p < .05) and planned comparisons indicated that individuals in the celebration condition reported significantly more close others than did those in the coping (p < .02) or the control (p < .05) conditions. Number of close others significantly predicted perceived social support, and moderated mediation analyses revealed that the number of close others mediated the link between consumption experience and perceived social support.

Finally, Study 4 experimentally manipulated the focal celebrant and the organizer to replicate the findings from Study 1 and to explore whether the role of the individual at a celebration may differentially contribute to perceptions of social support. Study 4 used a 2 (focal celebrant: self vs. other) x 2 (organizer: self vs. other) design. 406 participants from Mturk completed the study in exchange for financial compensation. After consenting, participants were randomized to recall and describe a recent celebration that was for them [not for them] and that they helped [did not help] organize. They then completed a series of measures, including the measure of perceived social support (MDSPPS, Zimet et al. 1988). In line with the findings from the previous study, an ANOVA with focal celebrant condition, organizer condition, and their interaction as predictor variables revealed a significant interaction on perceived social support (p < .02). Planned comparisons indicated that individuals who organized a celebration for someone else reported greater perceptions of social support than did individuals who organized a celebration for themselves (p < .05). Conversely, individuals who did not organize a celebration reported greater perceived social support when the event was for them than when it was for someone else (p < .05).

Across four studies, we find evidence that celebrations as joint consumption increase perceptions of social support. Furthermore, we suggest some of the ways in which this process occurs, e.g., increasing the number of close others, and how different roles, e.g., whether one is the focal celebrant and/or organizer, in celebrations can influence perceptions of social support. The theoretical and practical implications are discussed.

Wasting Time and Money? How Consumers Evaluate Others’ Resource (Mis)Management

EXTENDED ABSTRACT

Recent research demonstrates that low-income consumers receiving government assistance are seen as undeserving of ethical consumption choices (Olson et al. 2016). This group, relative to those who earn modest to high incomes, are perceived as less moral when buying organic food, renting a Prius, or making monetary donations, presumably because such options cost additional money. We build upon this research by examining decisions beyond financial expenditures. Specifically, we propose that divergence in moral attributions extends to decisions about all resources, including time and material goods.

This prediction is not obvious based on past research. Previous work on consumer altruism suggests that resources are not perfectly fungible. The act of giving time versus money (holding dollar value constant) is seen as more caring, moral, and heartfelt (Reed, Aquino, and Levy 2007). While favorable perceptions of altruism exist for the act itself, they may not extend to the people doing the act, especially when those people are at the lower end of the socioeconomic (SES) ladder. We propose that identical resource expenditures by low-income consumers receiving government assistance are subject to greater scrutiny due to opportunity costs (i.e., “considering alternative uses for one’s resources when deciding whether to spend resources on a focal option”; Spiller 2011, 595). Simply put, low-income consumers receiving government assistance “should” be devoting resources toward gaining economic independence (Henry, Reyna, and Weiner 2004). From this perspective, volunteering without pay is a wasteful use of one’s time. Similarly, donating material possessions is perceived as wasteful because it implies that the giver has so many possessions that s/he can afford to give some away, making him/her appear less needy and therefore more wasteful of government assistance. Consumers have a strong aversion to waste, especially when waste is tangible (Bolton and Alba 2012). Accepting government assistance without contributing back to the economic system through hard work may be a “tangible” reminder of “their” (participants’) taxpayer dollars being misallocated. We examine these predictions in a series of experiments.

Experiment 1 examined moral judgments toward three types of equivalent resource expenditures. Participants read about a target described as either receiving $12,000 a year in welfare benefits or earning $12,000 a year. Participants also learned that the person had donated $250 to a local charity, donated $250 worth of material possessions, or volunteered for 35 hours at a local charity. These amounts were calibrated based upon the federal minimum wage of $7.25 per hour (U. S. Department of Labor 2016), which would be a probable wage for someone earning $12,000 a year. Thus, working 35 hours for minimum wage would be valued at approximately $250. The key dependent variable was a morality index (used in all experiments), which was created by averaging responses from four items: unethical/ethical, cruel/kindhearted, immoral/moral, and uncaring/caring. The results revealed that across all three resource expenditures, the welfare recipient was perceived as less virtuous than the low-income earner.

Experiment 2 was designed such that the ethical choice directly benefited the target (vs. donations to others in experiment 1). Specifically, participants read about a target who has a dessert craving and decides to either buy or make an organic apple pie. The experiment followed a 3 (Income: $12,000 in welfare benefits vs. $12,000 earned vs. $85,000 earned) x 2 (Resource: Money vs. Time) between-subjects design. The results revealed that $12,000 welfare recipients were perceived as more moral when they made an organic apple pie at home versus buying the same pie at the store. Targets earning $12,000 or $85,000 a year were evaluated similarly whether they chose to spend time or money.

Although welfare recipients received a boost for spending a small amount of time versus money in experiment 2, they did not receive moral credit on par with earners. Given the importance of opportunity costs (Spiller 2011), time spent baking is time not spent seeking paid employment. Thus, spending time that comes at the cost of gaining employment may be seen as wasteful and ultimately immoral. We tested this prediction in experiment 3 using a 3 (Income: $12,000 in welfare benefits vs. $12,000 earned vs. $85,000 earned) x 2 (Employment: Yes vs. No) between-subjects design. Participants read a scenario about an individual who was volunteering each week at a museum without pay; the position was described as either being likely or unlikely to lead to future employment. Mediation results revealed that volunteering at a position that is unlikely (vs. likely) to lead to employment is deemed wasteful for low-income consumers receiving government assistance, and being wasteful is seen as immoral. This judgment sequence did not extend to low- or higher-income earners.

Our next three experiments focused on moderators of these moral attributions. We find that spending money to purchase organic
food for children (experiment 4A) or spending time to help a child with her volunteer efforts (experiment 4B) are considered moral endeavors for everyone, regardless of income. We also find that low-income consumers receiving government assistance are judged less harshly than wealthier consumers when lying about the price of an organic purchase to save money (experiment 5).

Our final experiment demonstrates that these divergent moral reactions also have behavioral implications. Specifically, we manipulated the income of a volunteer ($12,000 in welfare benefits vs. $85,000 earned) seeking monetary donations for his organization. The results revealed that low-income consumers receiving government assistance were perceived as more wasteful of their time than relatively wealthier volunteers (i.e., “he should be working, not volunteering”), which resulted in lower donor support from participants. Donating money to his cause, however commendable it may be, may be perceived as facilitating waste and condoning his reliance on taxpayer dollars.

In conclusion, results from seven experiments demonstrate that moral attributions extend to non-financial expenditures, showing that those lowest in SES are under the greatest moral scrutiny.

REFERENCES


Age-related Changes in Decision Preferences: From Mechanisms to Interventions

Chair: Vinod Venkatraman, Temple University, USA

EXTENDED ABSTRACT

Paper #1: Affective Forecasting Improves Across the Life Span
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Eric J. Johnson, Columbia University, USA

Paper #2: Loss Framing Attenuates Delay Discounting in Older Adults
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Paper #3: Taking the Best and Worst First: Age Differences in Preferences for Monetary and Hedonic Sequences
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SESSION OVERVIEW

By 2030, the proportion of US adults over 65 is projected to swell by 53% and top 71.5 million. A better understanding of how consumer decision making changes across the life span is therefore increasingly more relevant for the well being of the society as a whole. Yet, research on aging and consumer decision making has been relatively limited, and has yielded mixed findings. In this session, we focus on a set of studies that seek to characterize the nature of decision biases in older adults, and elucidate their underlying mechanisms. The papers, which involve tasks from different decision-making domains and use different methodologies, address two core questions: 1) How and why do older adults behave differently than younger adults, and 2) what are the implications of these differences for real-world consumer decisions involving older adults?

The first two papers examine temporal discounting in older adult population. Zaval and colleagues use an inter-temporal choice task, and focus on age-related differences in affective forecasting. Across four studies, they indicate that future anhedonia is a skill that improves across the life span. They further show that improvements in future anhedonia may underlie older adults’ lower temporal discounting. Hampton and colleagues show that the degree of discounting is modulated by how the decision options are “framed”. They demonstrate that younger adults discount future rewards more steeply and project collecting Social Security later, relative to older adults. Both groups discounted future rewards less in the loss-frame condition. However, older adults exhibited greater susceptibility to loss framing, providing valuable insights for the development social security claim interventions.

Seaman and colleagues examined age-related differences for decisions under risk, focusing on skewness. They found that older adults were more likely to accept positively-skewed gambles, and to reject negatively-skewed gambles. These differences were also borne out in the brain: individuals who were more biased towards positively-skewed gambles showed increased activity in a network of regions, including the nucleus accumbens. These findings imply that age-related preference for skewed risks assessed in laboratory might provide an index of fraud susceptibility in everyday life, which could bolster prevention efforts before fraud occurs.

Overall, this session will appeal to researchers interested in decision making across the life span. This session brings together papers that draw on a wealth of methodologies, including laboratory experiments, large-scale field surveys, with the common goal of seeking to better understand decision biases in older adults. As such, these findings have important implications for designing choice architecture and for public policy. They additionally speak to issues regarding the welfare of individual consumers, particularly in the realm of consumer financial decision making.

Lastly, Seaman and colleagues examined age-related differences in future anhedonia in domains such as financial rewards, financial losses, receipt of a utilitarian and hedonic product, free-time rewards, as well as measuring FA using a second dependent variable—willingness to pay. Participants from across the life span were surveyed online and estimated their present reaction to a future event, and their future reaction to a future event (at the time of its occurrence). Study 2 also ruled out a number of cognitive explanations of this age effect and tested the relationship between age-related preference for skewed risks assessed in laboratory might provide an index of fraud susceptibility in everyday life, which could bolster prevention efforts before fraud occurs.

Affective Forecasting Improves Across the Life Span

Background

Although the literature on affective forecasting is broad and wide-ranging, it has largely neglected to examine whether affective forecasting errors improve or worsen with age. The present research addresses this gap by investigating age differences in one type of affective forecasting error, and exploring what underlying processes may contribute to age-related improvements. Understanding age differences in affective forecasting ability is essential, as aging is associated with a range of critical decisions about the future in areas from retirement planning to health care. Research on age differences in time perception, affective processing, and accumulated experience suggest that older adults should exhibit greater accuracy in affective forecasting, specifically the recognition that an outcome will produce similar affective responses regardless of whether it occurs now or in the future—i.e., future anhedonia (FA; Kassam et al, 2008) will reduce with age. We present four studies that investigate this hypothesis.

Methods

In Studies 1 (N=645) and 2 (N=618), we tested the relationship between age and future anhedonia in domains such as financial rewards, financial losses, receipt of a utilitarian and hedonic product, free-time rewards, as well as measuring FA using a second dependent variable—willingness to pay. Participants from across the life span were surveyed online and estimated their present reaction to a present event, and their future reaction to a future event (at the time of its occurrence). Study 2 also ruled out a number of cognitive explanations of this age effect and tested the relationship between age-related differences in FA and age-related increases in crystallized intelligence, reductions in fluid intelligence, and reductions in temporal discounting. In Study 3 (N=750), we investigated several psychological factors that may account for age differences in affective forecasting, and also examined the implications of this age effect on evaluative consumer judgments, such as purchase regret. Because
prior research indicates that future self-continuity is an important determinant of inter-temporal decisions, we tested whether differences in future self-continuity underlie age differences in FA. Study 4 (N=600) extended these results by experimentally manipulating future self-continuity.

Results and Discussion

Across studies, we show that older adults are less likely than younger adults to wrongly predict that their affective response to an event will be less intense if the event occurs later in time—a reduction in FA. These findings suggest that with age comes the awareness that events will likely feel the same, regardless of whether they occur in the immediate present or at some delay in the future. This age difference occurs regardless of outcome valence and product types, highlighting the generalizability of the effect. Further, age differences in FA remained robust controlling for age differences in crystallized and fluid intelligence (Study 2). Our results also offer a new potential explanation of the trend of increasing patience in intertemporal choices over the life span, as we find that increased patience in older adults is related to age-related improvements in FA (Study 2).

We also demonstrate that this age-related improvement may occur because older adults feel a stronger sense of connection with their future selves: Among the covariates measured in the present study (including fluid and crystallized intelligence, domain-specific experience, and current affective state), future self-continuity alone explained age-related differences in affective forecasting accuracy. Older adults’ enhanced connection to their future identity mediates the association between age and diminished FA (Studies 3 and 4). This work joins an emerging literature that emphasizes the importance of the mental representation of future events in understanding temporal discounting.

Discussion

These findings make theoretical contribution on several fronts. First, given age-related cognitive decline, it is critical to investigate whether other abilities may help to compensate for and mitigate declines in decision making. Taken together, the present results add to the literature on age differences in decision-making by suggesting that future anhedonia is a skill that improves across the life span. Second, our findings contribute to the growing literature demonstrating that people tend to devalue future outcomes and have a fundamental inability to project their feelings into the future. We find that increased patience in older adults is related to age-related improvements in FA.

Background

By 2035, the proportion of US adults over 65 is projected to swell by 65% and top 79 million (Social Security Fact Sheet). These older adults (OA) face a myriad of life-changing decisions, such as when to begin collecting social security and how to manage their long-term health. OA, like most people, exhibit delay discounting, in which they devalue future rewards according to how long they must wait (Johnson et al. 2002). Despite the ubiquity of discounting behaviors, there is substantial variability in the extent to which future rewards are discounted. Discounting rates tend to decrease with age (Steinberg et al. 2009), yet OA are also more variable in their discounting behavior (Webb et al. 2014), and exhibit sharp discounting in many critical real-world situations.

Aside from being biased toward immediate smaller rewards, people are also biased in many other ways; most individuals, including OA, are also influenced by how options are framed, even if the choices are logically equivalent. Specifically, people dislike losses more than they like matched gains (e.g. losing $100 is more painful than the joy of gaining $100). This bias leads people to avoid choices framed as losses, i.e. they exhibit loss aversion (Tversky and Kahneman, 1991). Loss aversion and delay discounting have been studied at length in isolation, yet their interaction is understudied. Here we collected samples of YA and OA who (1) completed gain- and loss-framed behavioral delay discounting tasks, (2) responded to questions relating to social security collection.

Methods

We recruited 50 younger (aged 18 to 25) and 50 older (aged 60 to 75) through Temple Psychology Research Participation System, and Osher Lifelong Learning Institute, respectively. We measured financial impulsivity via two delay discounting tasks. These tasks find an individual’s indifference point, the dollar amount at which they are indifferent between a present and future reward. This procedure is then repeated for different points in the future. Participants completed two versions the discounting task: 1) a traditional delay discounting task with choices displayed as gains, and 2) a task with logically equivalent choices, that were been modified to display choice outcomes to included both loss and gain information.

The discount rate (k) is an index of the degree to which an individual devalues delayed rewards as a function of the length of delay to receipt of the delayed reward. We used a standard equation used to compute this value is $V = A/(1 + kD)$, where $V$ is the subjective value of the delayed reward (indifference point), $A$ is the actual value of the delayed reward (in this case, always $1000)), $D$ is the time delay interval, and $k$ is the discount rate (Odum 2011). Higher discount rates indicate increased devaluation of delayed rewards in favor of immediate rewards. We also calculated a “framing susceptibility” score by subtracting each participant’s loss-framed k value from his or her gain-framed k value. We then analyzed group differences between younger and older adults across our measures.

Results

Consistent with prior research, we found that both older and younger adults hyperbolically discounted delayed rewards. Younger adults discounted future rewards more steeply than OA. Younger adults also predicted they would begin collecting Social Security later than OA either predicted or actually did. When the immediate
rewards were framed as a loss, both young and older adults discounted future rewards less, i.e. both groups were susceptible to loss framing effects. However, OA had significantly higher loss- versus gain-framed discounting rates. In other words, OA were more susceptible to loss framing effects than were younger adults. Interestingly, participant’s loss-framed $k$ value, but not their gain-framed value predicted planned or actual age of collection of Social Security.

**Discussion**

Over a fifth of married Social Security recipients and nearly half of single recipients over the age of 65 depend on Social Security for 90% or more of their income (Social Security Fact Sheet). The decision of when to begin collecting Social Security closely mirrors a delay discounting task: OA must choose between a smaller-sooner monthly payment and a larger delayed monthly payment. In 2013, more than a third of OA claimed Social Security benefits as soon as they became eligible, at age 62 (Munnell et al. 2015). For some, this proves a serious mistake: many OA find themselves without the necessary funds to maintain their quality of life in the last years of their lives (Bohn et al. 1996). Indeed, delaying Social Security collection until age 70, results in 76% higher monthly benefit (Social Security Fact Sheet).

Delay discounting has also been connected with addictive behaviors. For instance, cigarette smoking, which is increasingly dangerous with age, involves the rapid loss of subjective value for delayed outcomes (LaCroix et al. 1993). Similarly, gambling is associated with steep discounting and is increasingly a form of recreation and entertainment for OA (McNeilly et al. 1998). Further, when gambling and substance use co-occur, the effects on discounting can be additive, and trap OA in a feedback loop (Andrade et al. 2013).

Our findings therefore have important implications for policy relating to OA decision-making. Given that OA are more susceptible to loss framing effects, this information could be applied to Social Security communication. Specifically, on Social Security documents, the choices of when to collect could be framed in terms of losses, in order to encourage older adults to wait until an older age to collect. Similar framings might be applied in other domains such as when giving older adults options regarding health management, or in consumer scenarios.

**Taking the Best and Worst First: Age Differences in Preferences for Monetary and Hedonic Sequences**

**EXTENDED ABSTRACT**

**Background**

People commonly face choices about scheduling free time and medical procedures, as well as about paying and receiving money. Choices about sequences of hedonic and monetary events often show a preference for ‘saving the best for last’ (Chapman, 2000; Loewenstein & Prelec, 1993). An example would be a preference to receive a fixed amount of salary in increasing increments instead of receiving larger amounts sooner than smaller amounts. For salaries, this preference toward improving sequences conflicts with the normative economic principle of maximizing the present value of funds (Loewenstein & Sicherman, 1991).

Few studies consider age differences in sequence preferences. Those that do show mixed results as to whether older people ‘save the best for last’ or ‘take the best first’ (e.g., Drolet et al., 2010; Loekenhoff et al., 2012). Mixed results could reflect a dependence of age differences on the decision context (Strough et al., 2011). Positive and negative hedonic and monetary features of the decision context could cue age-related individual differences in using emotion, experience, and reasoning skills to make decisions (Strough et al., 2015).

Emotion regulation improves with age and emotional processes have been linked to age-related improvement in decisions (e.g., Bruine de Bruin et al., 2014). Life experience increases with age (Baltes et al., 2006), and could facilitate a better appreciation for the present value of money. Self-reports of using reason to make decisions have been linked to better performance on judgment and decision making tasks (Bruine de Bruin et al., 2007) and older age is associated with a deliberate and self-controlled approach to decision making (Delaney et al., 2015). Future time perspective also may be important for understanding age differences about sequences of events over time. With age, future time perspective is shorter due to increased awareness of life’s finitude (Strough et al., 2016).

Here, we first investigated age differences in sequence preferences in monetary and hedonic contexts with a positive or negative valence. Second, we considered the roles of emotion, experience, reason and future time perspective in accounting for age differences in sequence preferences.

**Methods**

Participants were from RAND’s American Life Panel, an internet-based panel study of adults age 18 and older from across the U.S. (see https://mmicdata.rand.org/alp/). The sample ($n = 1296$) ranged in age from 20-91 years (Mean age=53.06, SD=16.33).

In two surveys, participants were shown four hypothetical decision scenarios that together formed a 2 (valence: positive, negative) X 2 (context: money, hedonic) within-subjects design. One survey contained two positively-valenced scenarios depicting decisions in monetary (receiving an unexpected inheritance) and hedonic contexts (spending weekends enjoyably). A second survey completed two weeks later contained two negatively-valenced decision scenarios that depicted a decision in monetary (paying bills) and hedonic contexts (painful dental procedures). Survey order was counterbalanced and randomly assigned.

After each scenario, participants indicated their sequence preferences on a scale that ranged from 1 to 6. For example, for the monetary scenarios, 1 was labeled “Start with larger amounts first, end with the smaller” and 6 was labeled “Start with smaller amounts first, end with the larger.” For all scenarios, lower scores indicated a preference for the most impactful event sooner over later (i.e., receiving most of the money up front, paying most of the money at the beginning, starting off with the most pleasant weekend, starting off with the most painful procedure).

Each survey ended with individual-differences measures. The positively-framed survey included items from the inferential and affective subscales of the Types of Intuition (TIntS) scale (Pretz et al., 2014) and the rational subscale of Scott and Bruce’s (1995) decision styles inventory to measure use of experience, emotion, and reason when making decisions, respectively. The negatively-framed survey included a twelve-item version of Carstensen and Lang’s (1996) future time perspective scale. For each scale, higher scores indicated greater endorsement of the items on the scale.

**Results**

The significant association between age and sequence preferences indicated that older age was associated with being less likely to delay ‘larger’ events ($r =-.22, p<.001$). The age by valence interaction indicated that this age difference in preference was more pronounced for positive events ($r =-.21, p<.001$) than negative events ($r =-.09, p=.002$). The significant three-way interaction between age, valence and context indicated that the association between older age
and being less likely to prefer to delay the ‘largest’ event was significantly stronger for choices about receiving money \((r=-.21, p < .001)\) compared to the other three choices: enjoyable weekends \((r=-.11, p<.001)\), dental procedures \((r=-.07, p=.008)\), and paying money \((r=-.06, p<.05)\).

Correlations indicated that older age was significantly associated with greater reported use of reason and experience to make decisions, lesser reported use of emotion, and shorter future time perspective. Mediation analyses (Hayes, 2013) indicated: (1) older adults’ lesser reported use of emotion to make decisions partly explained their preferences to receive larger amounts of money sooner than smaller amounts; (2) older adults’ greater reliance on reason partly accounted for their preferences to pay larger amounts of money sooner than smaller amounts; and (3) older adults’ greater reliance on experience partly explained their preferences to get more painful procedures over with sooner than less painful procedures. Future time perspective did not account for age-related variance in sequence preferences.

**Discussion**

Our findings add to the emerging literature on age differences in choices about sequences of events. Understanding sequence preferences is important because the choices people make about when to receive versus pay money and when to schedule aversive health appointments and positive experiences likely have implications for their wealth, health, and psychological well-being. Older age was associated with present-oriented preferences of taking both the best and worst first, as shown in scheduling events with a ‘larger’ impact sooner in the sequence. This association characterized all the sequences we examined and was strongest for positive sequences of receiving money. Individual differences in using experience, emotion, and reason to make decisions offer a starting point for understanding why older age was associated with taking the best and worst first.

**Individual Differences in Skewed Financial Risk Taking Across the Adult Life Span**

**EXTENDED ABSTRACT**

People frequently confront risky choices, ranging from whom to interact with to what to invest in. Given an uncertain future, nearly all long-term financial choices involve some degree of risk. Although research on financial risk taking has explored the effects of expected value (mean) and risk (variance) on financial choice (e.g., Knutson & Huettel, 2015), less research has focused on how extreme or skewed outcomes influence choice. Although older adults are often targeted by fraudulent investment schemes which promise positively-skewed outcomes, individuals who were more biased towards positively-skewed gambles showed increased activity in a network of regions including the nucleus accumbens. Within older adults, individuals showed increased activity in the right inferior frontal gyrus on trials where they were more likely to accept the gamble. This association was not present in younger adults.

This study investigated individual and adult age differences in choice and neural activity during skewed financial risk taking. Controlling for age, participants showed greater acceptance of positively-skewed gambles relative to negatively-skewed gambles. Although positively- and negatively-skewed gambles were equivalent in expected value, many participants revealed an increased preference for positively-skewed gambles, or a decreased preference for negatively-skewed gambles, or both. This suggests that many participants placed relatively greater subjective value on positively-skewed gambles relative to negatively-skewed gambles. These differences in behavioral preferences for positively- over negatively-skewed gambles increased with age and follow-up analyses confirmed that these trends were not driven by outliers or an artifact of averaging. These findings might begin to clarify some inconsistencies reported in previous studies of the effects of age on risk preferences, since prior studies have not accounted for the skewness of risky choices.

The predicted but novel age-related increase in a bias towards positively-skewed gambles is consistent with the age-related positivity effect (Mather & Carstensen, 2005). The findings suggest that an increased focus on positive incentives may bias choice and could increase susceptibility to fraudulent investments and lotteries in real life. Older adults also were less likely to accept negatively-skewed gambles. Although this result was unpredicted, it is consistent with another theory of adult development, the selection, optimization and compensation model (SOC; Baltes & Baltes, 1990) which posits that as people age, they become less focused on acquiring new resources and more focused on maintaining and avoiding the loss of current resources (Baltes & Baltes, 1990). An age-related increase in loss-avoidance could have important real-life consequences. For example, older adults may be more likely to allocate financial resources to insurance to protect against potential losses.

Many studies of aging show that older adults recruit broader neural networks in cognitive tasks (Cabeza & Dennis, 2012; Reuter-Lorenz & Park, 2014). While the left IFG was recruited by both age groups when considering skewed gambles, only older adults also engaged the right IFG. “Hyperactivation” has been interpreted as compensatory, such that older adults recruit more neural resources to counteract age-related declines in other neural circuits. Future research will need to clarify how and whether these systems interact to influence skewed risk taking differentially across adulthood.
Although little research has focused on skewed risk preferences, many major financial choices in everyday life necessarily invoke skewed risks. While some evidence suggests that older adults might not necessarily be more susceptible to fraud (Ross, Grossmann, & Schryer, 2014), the consequences of being financially defrauded in older age are much more severe, since older individuals have more to lose but limited time and marketable labor resources to recover from a major financial loss (MetLife Mature Market Institute, 2011). Both researchers and policymakers are interested in identifying and reducing susceptibility to victimization by financial fraud. These findings imply that age-related preference for skewed risks assessed in the laboratory might provide some index of fraud susceptibility in everyday life, which could bolster prevention efforts before fraud occurs (Scheibe et al., 2014) and older consumers are disproportionately targeted. We conducted a field experiment to test whether forewarning could protect people who were victimized in the past. A telemarketer pitched a mock scam 2 or 4 weeks after participants were warned about the same scam or an entirely different scam. Both warnings reduced unequivocal acceptance of the mock scam although outright refusals (as opposed to expressions of skepticism).

REFERENCES


