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Self–other decision making and loss aversion

Evan Polman

Stern School of Business, New York University, 701C Tisch Hall, 40 W. 4th St., New York, NY 10012, United States

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ABSTRACT

In eight studies, we tested the prediction that making choices for others involves less loss aversion than making choices for the self. We found that loss aversion is significantly lessened among people choosing for others in scenarios describing riskless choice (Study 1), gambling (Studies 2 and 3), and social aspects of life, such as likeability and status (Studies 4a–e). Moreover, we found this pattern in relatively realistic conditions where people are rewarded for making desirable (i.e., profitable) choices for others (Study 2), when the other for whom a choice is made is physically present (Study 3), and when real money is at stake (Studies 2 and 3). Finally, we found loss aversion is moderated when factors associated with self–other differences in decision making are taken into account, such as decision makers' construal level (Study 4a), regulatory focus (Study 4b), degree of information seeking (Study 4c), omission bias (Study 4d), and power (Study 4e).

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Introduction

Among the most prevalent biases in judgment and decision making is the principle of negativity (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001), defined broadly to include loss aversion whereby negative events are more potent with respect to their objective magnitude than are positive events (Tversky & Kahneman, 1991). In a typical demonstration of loss aversion, people are asked to rate the (un)pleasantness of losing or finding \$100. In almost all cases, losing \$100 is rated more unpleasant compared to how much finding \$100 is rated pleasant (for a review, see Thaler, 1999). Although it might seem odd that, all things equal, people weigh losses more heavily than gains, recent research suggests that this psychological asymmetry is evolutionarily adaptive—insofar as overestimating the extent of losses protects people from physical danger (Li, Kenrick, Griskevicius, & Neuberg, 2011). In Lehrer's (2007) words, "it's better to be safely good than dangerously great." Consistent with this view, several studies in developmental and comparative psychology have found evidence of loss aversion among young children and capuchin monkeys (Chen, Lakshminaryanan, & Santos, 2006; Harbaugh, Krause, & Vesterlund, 2002; Lakshminaryanan, Chen, & Santos, 2008), suggesting that loss aversion reflects a long-held, fundamental phenomenon.

Although loss aversion is robust in decision making, to our knowledge it has yet to be replicated with a sample of decision makers who are charged with choosing for others. By *choosing for*

others, we mean those instances of selecting among alternatives for others' consumption; i.e., experiencing self-determination without choice gestation (e.g., Stone & Allgaier, 2008; Kray, 2000; Kray & Gonzalez, 1999; Laran, 2010). This type of decision making applies to interpersonal and intergroup negotiations, whereby people negotiate on others' behalves (Lee & Thompson, 2011), and includes a wide range of principal–agent relations (Eisenhardt, 1989) as well as social dilemma and game situations, such as the ultimatum game where players make offers to other players (e.g., Camerer, 2003; Komorita & Parks, 1994). In these contexts, people have a tendency to behave in an egocentric or self-interested manner, a common problem in relationships in which one individual manages the affairs of another (Jensen, 1998). For instance, in a medical setting in which a surrogate chooses whether or not to end an incapacitated patient's treatment, research has found that surrogates project their own treatment preferences onto their decisions that concern others' treatment, creating an asymmetry between what surrogates decide and what patients prefer (Fagerlin, Ditto, Danks, Houts, & Smucker, 2001). Such differences in self–other decision making apply not only to surrogates, but often to physicians as well. In one example, research has found that physicians recommend different treatments for patients than they would choose for themselves, by preferring treatments with higher death rates for themselves (Ubel, Angott, & Zikmund-Fisher, 2011). In another example, physicians exhibited higher preferences for recommending active treatments to others (e.g., taking a vaccine) compared to the relatively more passive treatments that patients preferred to take themselves, evidencing differences in omission bias between people who choose for others and people who choose for

E-mail address: epolman@stern.nyu.edu

themselves (Zikmund-Fisher, Sarr, Fagerlin, & Ubel, 2006). Although special training and expertise among physicians could probably explain these differences, the results hold among people who are simply asked to *imagine* that they are physicians (or parents) who choose for others (Zikmund-Fisher et al., 2006).

It is important to note that choosing for others is distinct from, though surely related to, other kinds of choices (or judgments) that may occur with others, such as making choices in groups or making predictions about others' preferences and behaviors (e.g., Burson, Faro, & Rottenstreich, 2010; Faro & Rottenstreich, 2006; Hsee & Weber, 1997). Much of this research deals with risk preferences, with some research reporting that decisions tend to be more risky when made on behalf of others (Beisswanger, Stone, Hupp, & Allgauer, 2003; Stone, Yates, & Caruthers, 2002; Wray & Stone, 2005) and other research reporting that decisions tend to be less risky when made on behalf of others (McCauley, Kogan, & Teger, 1971; Teger & Kogan, 1975; Wallach, Kogan, & Bem, 1964; Zaleska & Kogan, 1971). Although there is some doubt about whether choices for others are more or less risky compared to choices for the self, in this paper, we ask a different question: Are choices that people make for others less loss averse? Theoretically, there are sound reasons to believe that people who choose for others would be less loss averse than people who choose for themselves—on account of documented differences between the former and latter with respect to: construal level, regulatory focus, information seeking, omission bias, and power. We discuss each of these differences in turn.

Construal level

Polman and Emich (2011) described differences in the systems of thought among people who choose for others and people who choose for themselves—indicating different levels of construal (i.e., psychological distance) among decision makers. Psychological distance is egocentric (Trope & Liberman, 2010)—such that when people choose for themselves, psychological distance is set near zero (i.e., distance is relatively short/close); whereas when people choose for others, psychological distance is greater than zero (i.e., distance is relatively long/far). For example, participants who imagined themselves in a tower reported the tower as closer compared to participants who imagined someone else in a tower (Polman & Emich, 2011). Research on decision making has shown that people tend to think in more abstract, general, de-contextualized, high-level construals as psychological distance increases (for a review, see Trope & Liberman, 2003). This work is important because similar research has shown that loss aversion is influenced by psychological distance. Specifically, Malkoc and Zauberman (2006) asked participants to imagine winning a lottery, with the proviso that some participants were asked how much money they would demand to defer their present winnings (short-distance condition), whereas other participants were asked how much they would pay to expedite future winnings (long-distance condition). Participants reported demanding more money to delay current winnings than to pay to expedite future winnings (controlling for compound interest). In addition, participants' demands declined significantly with time. These findings suggest that as psychological distance increases, participants judge deferred lottery winnings as less of a loss. In other words, losses loom larger for distances that are short compared to distances that are long, precisely the psychological distance that distinguishes choosing for the self and choosing for others (Polman & Emich, 2011).

Regulatory focus

Regulatory focus theory identifies two basic motivational orientations that individuals adopt in the process of making a choice.

Individuals in a promotion focus are sensitive to the presence and absence of positive outcomes, whereas individuals in a prevention focus are sensitive to the presence and absence of negative outcomes (Crowe & Higgins, 1997; Higgins, 2000). Research suggests that changes in psychological distance can cause shifts in regulatory focus, suggesting that construal level theory and regulatory focus theory are interrelated (Mogilner, Aaker, & Pennington, 2008; Pennington & Roese, 2003). For example, Pennington and Roese (2003) found that as psychological distance increases, so too do promotion related concerns. Specifically, people show more promotion focused concerns (e.g., getting a high score on a test) after thinking about a test that would take place in 2 weeks, in contrast to a test that would take place later that day (Pennington & Roese, 2003). In a more recent study, Mogilner et al. (2008) showed evidence for construal level shifts in promotion and prevention related concerns. In particular, they found that participants were willing to pay more for a distant future vacation if the information about the vacation was promotion focused rather than prevention focused; and vice versa, participants were willing to pay more for a last minute vacation if information about the vacation was prevention focused rather than promotion focused. In keeping with this idea that construal level and regulatory focus are connected, research by Polman (2012) has found that people who choose for others are relatively promotion focused, whereas people who choose for themselves are relatively prevention focused. Of import, research has shown that a promotion focus is related to less loss aversion. For example, Idson, Liberman, and Higgins (2000) found that losing is experienced more intensely by participants in a prevention focus than by participants in a promotion focus, whereas the opposite is true for winning (see also Liberman, Idson, & Higgins, 2005). Taken together, these studies suggest that choosing for others may lessen loss aversion—that is, negative outcomes may loom larger than corresponding positive outcomes among people who choose for themselves, whereas the opposite (or a less intense) pattern may hold among people who choose for others. In further support of this idea, Beisswanger et al. (2003) found that after choosing for others, people give more positive reasons for their choices compared to people choosing for themselves, who give more negative reasons—suggesting that people who choose for themselves are more sensitive to negative outcomes, like losses.

Information seeking

Another relevant difference between choosing for the self and choosing for others is the amount of information that decision makers seek before making a choice. When people choose for others, they typically examine more information. For example, in one study Polman (2010) instructed participants to choose between two restaurants with some participants choosing for themselves, and other participants choosing for others. Participants who chose for others elected to look at more information about each restaurant (e.g., ambiance, menu, location) compared to participants who chose for themselves. Along similar lines, Jonas and Frey (2003) instructed participants to imagine that they were in a travel agency. Among the participants, some played the role of a travel agent whose job it was to book a holiday for another participant, who played the client. When travel agents were asked to make a vacation choice for their clients, they sought out more travel information than clients who were asked to make vacation choices for themselves. One of the advantages of processing extra amounts of information is that it limits narrow framing by aggregating multiple reference levels—a solution that has been found to curb loss aversion (Huber et al., 1997). For example, investors who evaluate a large number of stocks show less loss aversion—by their willingness to appropriate losses—compared to investors who evaluate

just a small number of stocks (Kumar & Lim, 2008). Because choosing for others increases the amount of information that people seek out, we expect that people who choose for others will show less aversion than people who choose for themselves.

Omission bias

Another possible reason for self–other differences in loss aversion is found in the work on omission bias, which describes people judging harmful actions as worse than equally harmful inactions (Ritov & Baron, 1990). Stemming from a classic scenario by Kahneman and Tversky (1982) describing two investors, one who sells shares and discovers later he would have been better off by \$1200 if he had not sold (action condition), and another who considers against selling shares and discovers later he would have been better off by \$1200 if he had sold (inaction condition), research has shown that people confer greater regret to the former individual—the one who takes action by selling shares—than to the latter individual—the one who does nothing (Baron & Ritov, 1994). Of course, this is despite both investors are equally worse off. Applied to the present case, loss aversion underlies the omission bias—such that an omission (e.g., not selling shares) is seen as a foregone gain (in contrast to a loss), whereas a commission (e.g., selling shares) is seen as a loss (Spranca, Minsk, & Baron, 1991). Because losses are weighted more heavily than foregone gains (Idson, Liberman, & Higgins, 2000), a commission is considered more unpleasant than an omission.

Consistent with this view, research has shown that people who choose for others are less likely to evidence omission bias than people who choose for themselves. For example, in a medical scenario in which a deadly flu kills 10% of the population (and a vaccine kills 5% of the population), people who choose for themselves—between taking the vaccine and doing nothing—are more likely to eschew the vaccine in favor of doing nothing compared to people who choose for others (Zikmund-Fisher et al., 2006). In other words, people who choose for themselves are willing to select higher risks of death (i.e., doing nothing) to avoid increasing a sense of responsibility for befalling a potential loss (i.e., taking the vaccine). In a similar example, Gershoff and Koehler (2011) found that participants will prefer a car that has a 2% chance of death over a car with a 1.01% chance of death, provided the chance of death of the latter car includes harm caused by air-bag deployment. Although the latter car has a lower death rate, participants prefer it less—on account of an aversion to losses caused by products that “betray” their implicit promise to protect and guard against harm (e.g., faulty airbags). Termed betrayal aversion, Gershoff and Koehler reported that participants who choose for others are less averse to losses caused by risk of betrayal among safety devices (despite their active role in causing harm), choosing instead a survival-maximizing choice. Together these results imply that compared to choosing for oneself, choosing for others is less biased toward omissions (e.g., harmful, inactive behaviors) than to equally (or less) harmful, active behaviors—a difference that coincides with changes in loss aversion (Ritov & Baron, 1992).

Power

Finally, people who make choices for others may experience power over others—in particular, people who make decisions for others are often found in positions of power (Hibbing & Alford, 2005). Additionally, research has found that making choices for others increases the psychological distance one feels from others (Polman & Emich, 2011), not unlike when people have power over others (Lammers, Galinsky, Gordijn, & Otten, 2012); they feel less like they need others, and more like they can control others (Magee

& Galinsky, 2008). We might suspect then that decisions for others resemble, in a non-trivial way, the effects of power on decisions. Of import, Inesi (2010) has shown that people who experience power demonstrate less loss aversion. Specifically, Inesi asked participants how much value they ascribe to negative outcomes (e.g., not finding a required book for a class). Participants high in power reported valuing the negative outcomes less, indicating reduced loss aversion, compared to participants low in power. Because choosing for others potentially heightens people's feelings of power over others, we expect that people who choose for others will show less loss aversion than people who choose for themselves.

Present research

Collectively, these five different areas of research that are each separately related to self–other decision making and loss aversion lead us to propose that choices for others will involve less loss aversion than choices for the self. By investigating this relationship, we contribute to the relatively neglected study of self–other decision making by identifying factors that may lead people to choose differently for themselves than for others. This is an important distinction because research on loss aversion has been applied across many disciplines including management, finance, law, political science, and medicine—and it is among these disciplines that we observe a predominance of decisions that are made on behalf of others. CEOs make choices on behalf of their employees; financial planners on behalf of their customers; lawyers on behalf of their clients; politicians on behalf of their constituents; and physicians on behalf of their patients. In this vein, we draw insights regarding the underlying psychological processes that contribute to the effects of self–other decision making on loss aversion by explicitly measuring a gambit of variables (*viz.* construal level, regulatory focus, information seeking, omission bias, and power).

Overview

We carried out eight studies with four different measures of loss aversion, in domains as varied as riskless choice (Study 1), gambling (Studies 2 and 3), and social aspects of life (Studies 4a–e). In each study, we juxtaposed a context in which people make their own choices, and/or make choices on behalf of others; furthermore, we employed both between- and within-subjects designs. Moreover, we tested whether differences in loss aversion generalize to various, relatively realistic conditions such as when people are rewarded for making desirable (i.e., profitable) choices for others (Study 2), when the other for whom a choice is made is physically present (Study 3), and when real money is at stake (Studies 2 and 3). Finally, the latter studies explore the unique effects of construal level (Study 4a), regulatory focus (Study 4b), degree of information seeking (Study 4c), tendency for omission bias (Study 4d), and power (Study 4e) on the relationship between self–other decision making and loss aversion. All in all, the results could shed light on an apparent asymmetry whereby individuals' choices for others differ substantially from their choices for themselves.

Study 1

In this study, we measured loss aversion by using a modified procedure from Tversky et al. (1991). In their original study, participants could win a prize that comprised of a free dinner, or alternatively, a photo portrait. Then participants were told that they could exchange their gift for two free dinners, or alternatively, a photo portrait plus three wallet-sized photos. Among participants who were originally endowed with the single, free dinner prize, an

exchange to two free dinners represents a gain (i.e., adding to their initial prize); in contrast, among participants who were originally endowed with the photo portrait prize, an exchange to two free dinners represents a gain *and a loss* (i.e., a gain of two dinners, yet a loss of the photo portrait). Tversky and Kahneman suggested that if participants are loss averse, then they should be less likely to exchange their original prize for the option that implies some loss than to exchange for the option that implies only a gain. In this vein, participants originally endowed with the single, free dinner prize were less likely to select the photo portrait exchange that comes with three additional photos than to select the exchange that includes two free dinners. Likewise, participants originally endowed with the photo portrait prize were less likely to select the exchange that includes two free dinners than to select the exchange that includes the photo portrait and three additional photos. Based on a recent modification to this procedure by Inesi (2010), we used gift cards in lieu of dinners and photo portraits.

Method

Forty-five undergraduates agreed to participate in exchange for \$7 and entrance in a lottery that provided a chance of winning a \$25 Visa gift card. Participants completed a packet of exercises unrelated to the present study. After finishing the exercises, participants had the opportunity—before potentially winning the lottery—to choose among keeping the \$25 Visa gift card, exchanging it for a \$40 Visa gift card, or exchanging it for a \$40 MasterCard gift card. In keeping with Tversky and Kahneman (1991; see also Inesi, 2010), choosing to switch to the \$40 Visa gift card option is seen as a gain; whereas choosing to switch to the \$40 MasterCard gift card option is seen as both a gain and a loss (i.e., the loss of a Visa gift card). Participants who are loss averse should be less likely to choose the higher value MasterCard gift card option which implies some loss, compared to the higher value Visa gift card option which implies only a gain. The design was between-subjects, such that participants in this study made choices for themselves, or decided on behalf of the next participant.

Results and discussion

The dependent variable in this study is the proportion of participants who switch to the higher value Visa gift card. If participants who make their own choices are more loss averse than participants who make choices for others, then we should observe a greater tendency toward switching to the \$40 Visa gift card than to the \$40 MasterCard gift card among participants who make their own choices. Consistent with this prediction, nearly all participants who made choices for themselves chose to stay with a Visa gift card, by upgrading and selecting the \$40 Visa gift card. Specifically, participants who made their own choices selected the \$40 Visa gift card more often ($M = .96$, $SD = .21$) than participants who made choices for others ($M = .70$, $SD = .46$), $\chi^2(1, N = 45) = 3.91$, $p < .05$, $d = .73$.

This study provides support for the prediction that people who make choices for others demonstrate less loss aversion than people who make choices for themselves. One alternative explanation, however, is that people who choose for others make more random choices, and thus switch options more often. For example, Choi, Kim, Choi, and Yi (2006) found that people seek more variety when choosing for others than when choosing for themselves. In this regard, we carried out Study 2 with two goals in mind; first we employed a different measure of loss aversion, and second we created an environment which discourages participants from choosing randomly.

Study 2

In Study 2, we measured loss aversion by telling participants that they could pay to take part in a game in which a coin would be tossed, whereby participants would lose money if tails shows up and win money if heads shows up. To the extent that including a variety of loss aversion measures provides a consistent set of results, it is possible to more confidently conclude that choosing for others has a non-trivial effect on loss aversion. Another contribution of Study 2 is to investigate the relation between choosing for others and loss aversion when real money is at stake (a potential prize of \$200). Participants were given tokens that they could use to take part in the coin toss—participants could choose not to gamble (and still potentially win the prize), or participate in the gamble and potentially increase or decrease their chances of winning the prize. In particular, we provided an incentive for decision makers to choose carefully (i.e., not randomly) by instructing participants that if the other for whom they decided won the raffle, they would in turn receive a prize. In other words, we rewarded people for making desirable (i.e., profitable) choices for others—not unlike a commission that is paid to financial advisors after they make lucrative choices for their clients.

Method

Eighty-four undergraduates agreed to participate in exchange for extra credit. We gave each participant twenty tokens, and then asked how many tokens, from 1 to 10, they would pay to enter a coin-toss gamble. Specifically, the gamble described that if heads turns up, participants would win twice their bet, and if tails turns up, participants would lose their bet as well as ten extra tokens. Participants could choose whether or not they wanted to gamble, but if they choose to not gamble, they lose ten of their tokens. For example, if a participant chooses to bet 7 tokens, and heads turns up, then she will have 27 tokens in total (original 20 tokens less the 7 tokens bet, plus 14 tokens in earnings); but if tails turns up, she will have 3 tokens in total (original 20 tokens less the 7 tokens bet, less 10 extra tokens for losing); and if she chooses to not gamble, she will have 10 remaining tokens (original 20 tokens less 10 tokens for not gambling).

To make the tokens valuable among participants, we added that the tokens could be exchanged for raffle tickets. For each token, participants could exchange one ticket to be entered into a raffle that included a \$200 cash prize. Thus, the more tokens participants have by the end of the (optional) coin toss, the more likely participants can win \$200. This study was run with a within-subjects design, such that participants made choices for themselves, and for someone else (ostensibly, the next participant). The order was randomized, and had no effect on loss aversion. In addition, we told participants who made choices for others that if the other for whom they decided won the raffle, they would in turn receive \$200. In truth, participants either chose for themselves or for others (no participants had their choices made for them), but, we held a raffle anyway. Because the winning ticket was associated with a participant who at that time was led to believe she was choosing for someone else, we selected a random participant among the sample to win a \$200 prize, hence \$400 in total was paid out.

Results and discussion

In this study, we measured loss aversion in two different ways. First, by investigating the propensity to gamble among participants, and second, by examining the size of the bets among participants who chose to gamble. Showing less propensity to gamble, and making smaller bets are indicative of loss aversion. On both

fronts, we found less loss aversion among choices that were made on behalf of others. Specifically, when choosing for others, participants decided to gamble more often ($M = .87$, $SD = .34$) than when deciding for themselves ($M = .64$, $SD = .48$), $\chi^2(1, N = 84) = 11.65$, $p < .001$, $d = .55$. Moreover, they bet more tokens ($M = 5.52$, $SD = 3.64$) than when deciding for themselves ($M = 3.27$, $SD = 3.47$), paired $t(83) = 5.45$, $p < .001$, $d = .39$.

A number of important findings emerged from this study. First, and consistent with Study 1, making choices for others reduced loss aversion. Second, this pattern was replicated in the context of a choice with real implications for participants—being that the tokens represented raffle tickets for a prize of money that would be considered desirable and meaningful among our sample participants. Third, the results emerged despite participants in this study made choices for themselves as well as for others, providing a relatively conservative test of the hypothesis. Finally, the results were obtained for a choice that reflects a typical choice that people make for others in real life. People are often hired to make decisions on behalf of others—consultants and financial advisors are two prominent examples. And the quality and success of their decisions are tied to the rewards that they receive in return. Applied to the present case, the participants in our study were incentivized to make good choices on behalf of others, seeing as how they could profit off of the good fortunes that they create for others; what is more, the rewards between the decisions were of the same value indicating that it was not the value per se that influenced the difference between participants' decisions for themselves and others.

However, one limitation of the current study is that decision makers did not know the persons for whom they were making choices, creating a potentially ambiguous environment among participants. Thus, in Study 3 we instructed participants to make choices for someone in particular, in contrast to someone nebulous.

Study 3

In a departure from the previous studies, participants in this study made decisions for a confederate who we hired to be present during participants' decisions. In doing so, we believe this overcomes a potential limitation in Studies 1 and 2. In those studies, participants who chose for others had no contact with the others for whom they were choosing. However, by including a confederate to be present during participants' decisions, it was likely to be even more evident among participants that their decisions were being made in the service of another.

Method

One hundred and forty undergraduates agreed to participate in exchange for extra credit. In the first step of the study, we instructed participants that they would be making finance decisions involving real money for either themselves or for a present confederate who we hired. Then we gave each participant \$7 that they could use to gamble for themselves, or alternatively, for our confederate who was present during participants' decisions. Specifically, we asked participants to respond to six lotteries, each with the following form, "win \$6 with probability 50%, or lose \$X with probability 50%; if you reject the lottery you receive \$0." The six lotteries varied in the amount that \$X could be lost, where X took on values, 2 through 7. Before responding to the gambles, we told participants that one of the six gambles would be randomly selected and paid. The amount X at which a participant rejects the lottery is an indicator of loss aversion (cf. Thaler & Johnson, 1990). For example, a participant who rejects all lotteries with a

potential loss of $X > 3$ is classified as more loss averse than a participant who rejects all lotteries with a potential loss of $X > 5$.

Results and discussion

As in the previous studies, participants who chose for others showed less loss aversion ($M = 2.83$, $SD = 1.77$) than participants who chose for themselves ($M = 2.16$, $SD = 1.66$), $t(137) = 2.30$, $p < .05$, $d = .39$. Using a new scenario that includes a confederate, Study 3 provides additional support for the prediction that decisions for others elicit less loss aversion. Even in the presence of the other for whom people are choosing, it appears that this was the case. Of import, we employed a different measure of loss aversion, thus demonstrating the generalizability of this pattern of results.

In light of the three studies carried out so far, it seems reasonable to ask: Why do decision makers show less loss aversion in the service of making decisions for others? Studies 4a–e were carried out to answer this question, by shedding light on the moderating roles of construal level, regulatory focus, information seeking, omission bias, and power.

Studies 4a–e

In this set of studies, we investigated five variables that have been documented to vary between choices for others and choices for the self; specifically: construal level, regulatory focus, information seeking, omission bias, and power (Polman, 2010, 2012; Polman & Emich, 2011; Zikmund-Fisher et al., 2006). On the basis that these variables also influence loss aversion (Huber et al., 1997; Idson et al., 2000; Kumar & Lim, 2008; Liberman et al., 2005; Malkoc & Zauberman, 2006; Ritov & Baron, 1992), it stands to reason that these variables may interact with self–other decision making and consequently produce higher and lower levels of loss aversion. This notion was tested in Studies 4a–e, where we measured participants' construal level (Study 4a), regulatory focus (Study 4b), information seeking (Study 4c), omission bias (Study 4d), and power (Study 4e), as well we used a different measure of loss aversion—how much participants would pay to improve or worsen seven aspects of their lives or others' lives (Li et al., 2011). Because the five studies have similar methods, we describe them together.

Method

Eight hundred individuals participated in an online experiment via Amazon Mechanical Turk (MTurk). Participants were each paid \$0.75. Research has shown that the quality of data collected from MTurk is not significantly different from data collected in a laboratory (for a review of MTurk, see Paolacci, Chandler, & Ipeirotis, 2010). 224 participants failed to answer at least one of two attention checks correctly and thus were removed from the data, resulting in a total of 576 participants with valid responses.

In Study 4a ($N = 106$), we measured construal level with Vallacher and Wegner's (1989) Behavioral Identification Form (BIF) that has been used in past research to measure construal level (e.g., Freitas, Salovey, & Liberman, 2001). Specifically, participants responded to 25 items (e.g., "attending class") by indicating which statement best describes the behavior (e.g., "sitting in a chair" or "looking at the blackboard"). Each pair of statements has one high-level and one low-level statement—the number of high-level responses indicates construal level, with more responses demonstrating higher level of construal.

In Study 4b ($N = 129$), we asked participants to respond to items on the Regulatory Focus Questionnaire (RFQ; Higgins et al., 2001)—

a validated scale that measures promotion and prevention focus. The questionnaire asks participants to respond to how frequently specific events have occurred in their lives (e.g., “How often have you accomplished things that got you ‘psyched’ to work even harder?”) from 1 (*never or seldom*) to 5 (*very often*). Six of the items are summed to form a participant’s promotion focus; the remaining five items are summed to form a participant’s prevention focus.

In Study 4c ($N = 127$), we measured the extent that participants seek out information with Lai’s (2010) maximizing scale. This scale examines participants’ preference for extensive alternative search. We used this scale because research has shown that people who choose for others seek out more information and alternatives than people who choose for themselves (Jonas & Frey, 2003; Polman, 2010; Polman & Emich, 2011). Specifically, participants responded to five items ($\alpha = .72$; e.g., “Before making a choice, I consider many alternatives thoroughly.”) by answering from 1 (*completely disagree*) to 5 (*completely agree*)—higher levels of agreement indicate higher dispositional preferences for more information and alternatives.

In Study 4d ($N = 105$), we asked participants to respond to a vignette and a corresponding inventory of items that measure participants’ tendency toward omission bias (cf. Asch et al., 1994). The vignette describes a disease that kills 10 out of 10,000 people and a vaccine that kills five out of 10,000 people. We asked participants to respond to four items related to omission bias ($\alpha = .71$; “I do not want to interfere with nature by taking the vaccine.”; “I do not want to leave myself exposed to the dangers of nature by withholding the vaccine.”; “I would feel responsible if anything had happened because I failed to vaccinate.”; and “I do not like the thought of putting myself at risk by taking the vaccine.”) from 1 (*disagree strongly*) to 7 (*agree strongly*)—greater omission bias is indicated by higher values.

In Study 4e ($N = 109$), we measured the extent that participants regularly experience power in their daily lives by asking them to complete Anderson and Galinsky’s (2006) sense of power scale. Specifically, participants responded to eight items ($\alpha = .85$; e.g., “In my relationships with others, I can get people to listen to what I say.”) by answering from 1 (*disagree strongly*) to 7 (*agree strongly*)—higher levels of agreement indicate higher power.

Finally, in each of the studies, participants responded to our measure of loss aversion. Specifically, participants chose for either themselves or someone else and imagined that they had the opportunity to pay to either improve on, or prevent a worsening of seven different aspects of their life or someone else’s life (e.g., ability to get dates; cf. Li et al., 2011). Participants were asked to consider themselves or someone else to be at the 50th percentile on each aspect (e.g., “Imagine you’re [someone else is] at the 50th percentile of mate acquisition compared to your [their] peers.”), and then indicate how much money, up to \$1000, they would pay to gain (for themselves or someone else) a 30 percentile boost on each aspect, or to avoid (for themselves or someone else) a 30 percentile loss on each aspect, from 1 (\$0) to 11 (\$1000). Consistent with past research (Li et al., 2011), our measure of loss aversion was computed by subtracting the sum of participants’ willingness to pay to avoid a loss from the sum of participants’ willingness to pay for a gain. A negative value on this measure indicates that people would pay more to avoid a loss than they would pay for a gain of the same magnitude.

Results and discussion

We hypothesized that choosing for others involves less loss aversion than choosing for the self. To test this hypothesis we carried out six separate regressions, one regression per variable of interest (*viz.* construal level, promotion focus, prevention focus, information seeking, omission bias, and power). Table 1 shows

the results of regressing loss aversion on the individual interactions between each variable and self–other decision making (in addition to the main effects of each variable and self–other decision making). Next, we carried out a mini meta-analysis of the six main effects of self–other decision making in order to test whether choosing for others involves less loss aversion than choosing for the self. Using the method suggested by Rosenthal (1984), we obtained the z value associated with the probability of each null hypothesis, that is, the traditional p value. Then, we obtained the combined probability, which is the sum of the z s divided by the square root of the number of studies entered into the computation. The results to the mini meta-analysis confirm our hypothesis that people who choose for others demonstrate less loss aversion than people who choose for themselves ($z = 5.28, p < .001$). Overall then, there appears to be strong, reliable support for the relation between self–other decision making and loss aversion.

Next, we examined our moderating variables. In line with previous research (Huber et al., 1997; Idson et al., 2000; Kumar & Lim, 2008; Liberman et al., 2005; Malkoc & Zauberman, 2006; Ritov & Baron, 1992), each variable was significantly correlated with the amount of loss aversion (greater loss aversion is indicated by lower values): construal level ($r = .25, p < .01$), promotion focus ($r = .25, p < .05$), tendency toward information seeking ($r = .19, p < .05$), and power ($r = .33, p < .01$) were each negatively related to loss aversion; whereas prevention focus ($r = -.36, p < .001$) and tendency toward omission bias ($r = -.34, p < .001$) were each positively related to loss aversion. On Table 1, we show the results of regressing loss aversion on the individual interactions between each variable and self–other decision making. Consistent with our predictions, each of the interactions were significant. To interpret the interactions, we used a spotlight analysis (Irwin & McClelland, 2001). Specifically, we plotted each variable at one standard

Table 1

Results of regressions predicting the effects of construal level, promotion focus, prevention focus, information seeking, omission bias, and power on loss aversion (Studies 4a–e).

Variable	Loss aversion	
	Standardized coefficient (Beta)	t Statistic
<i>Construal level (Study 5a)</i>		
Construal level (CL)	.00	.03
Choosing for self vs. other (SO)	-.11	-1.16
CLXSO	.33*	2.59
<i>Promotion focus (Study 5b)</i>		
Promotion focus (PF)	.05	.56
Choosing for self vs. other (SO)	-.45***	-5.08
PFXSO	.22*	1.99
<i>Prevention focus (Study 5b)</i>		
Prevention focus (PF)	-.57***	-4.85
Choosing for self vs. other (SO)	-.23**	-2.76
PFXSO	.25*	2.16
<i>Information seeking (Study 5c)</i>		
Information search (IS)	-.03	-.21
Choosing for self vs. other (SO)	-.22**	-2.61
ISXSO	.25*	1.98
<i>Omission bias (Study 5d)</i>		
Omission bias (OE)	-.18	-1.49
Choosing for self vs. other (SO)	-.49**	-3.36
OB × SO	-.40*	-2.37
<i>Power (Study 5e)</i>		
Power (P)	.03	.20
Choosing for self vs. other (SO)	-.35***	-4.12
PXSO	.36**	2.86

Note: Greater loss aversion is indicated by lower, negative values.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

deviation above and below the mean, which enabled us to observe the simple effect of self–other decision making among participants who indicate a high level vs. a low level of each respective moderator. As can be seen in Fig. 1, decomposition of the interaction terms at one standard deviation above and below each of the moderator means revealed a significant effect of self–other decision making for participants who display a low level of each moderator. That is to say, participants who are low on the six variables show more loss aversion in choices that are for themselves than in choices that are for others—as indicated by a significant decrease in each of the respective slopes (see Fig. 1). In contrast, among participants who display a high level of each moderator, we found that participants who are high on four of the variables (construal level, prevention focus, information seeking, and power) do not significantly show any more or less loss aversion in choices that are for themselves and others. Participants who are high on the remaining two variables, however, (promotion focus and omission bias), showed more loss aversion in choices for themselves than in

choices for others. This pair of results is not contrary to our overall findings though, since we argue for a main effect that choices for others involve less loss aversion than choices for the self; and it is reasonable that different variables will moderate this relationship in varying degrees with some variables such as construal level, prevention focus, information seeking, and power having a stronger effect, and other variables such as promotion focus and omission bias having a weaker effect.

In sum, Studies 4a–e replicate the finding that people who choose for others experience less loss aversion. In addition, we found that construal level, regulatory focus, tendency toward information seeking, tendency toward omission bias, and power moderate this relationship. When self-choice resembles other-choice—i.e., when increasing levels of construal level, promotion focus, tendency toward information seeking, and power are evidenced among people who choose for themselves—people experience less loss aversion (analysis of simple slopes indicated a decrease in loss aversion among choices for the self; $\beta_{\text{construal level}} = 1.43, p < .05$;

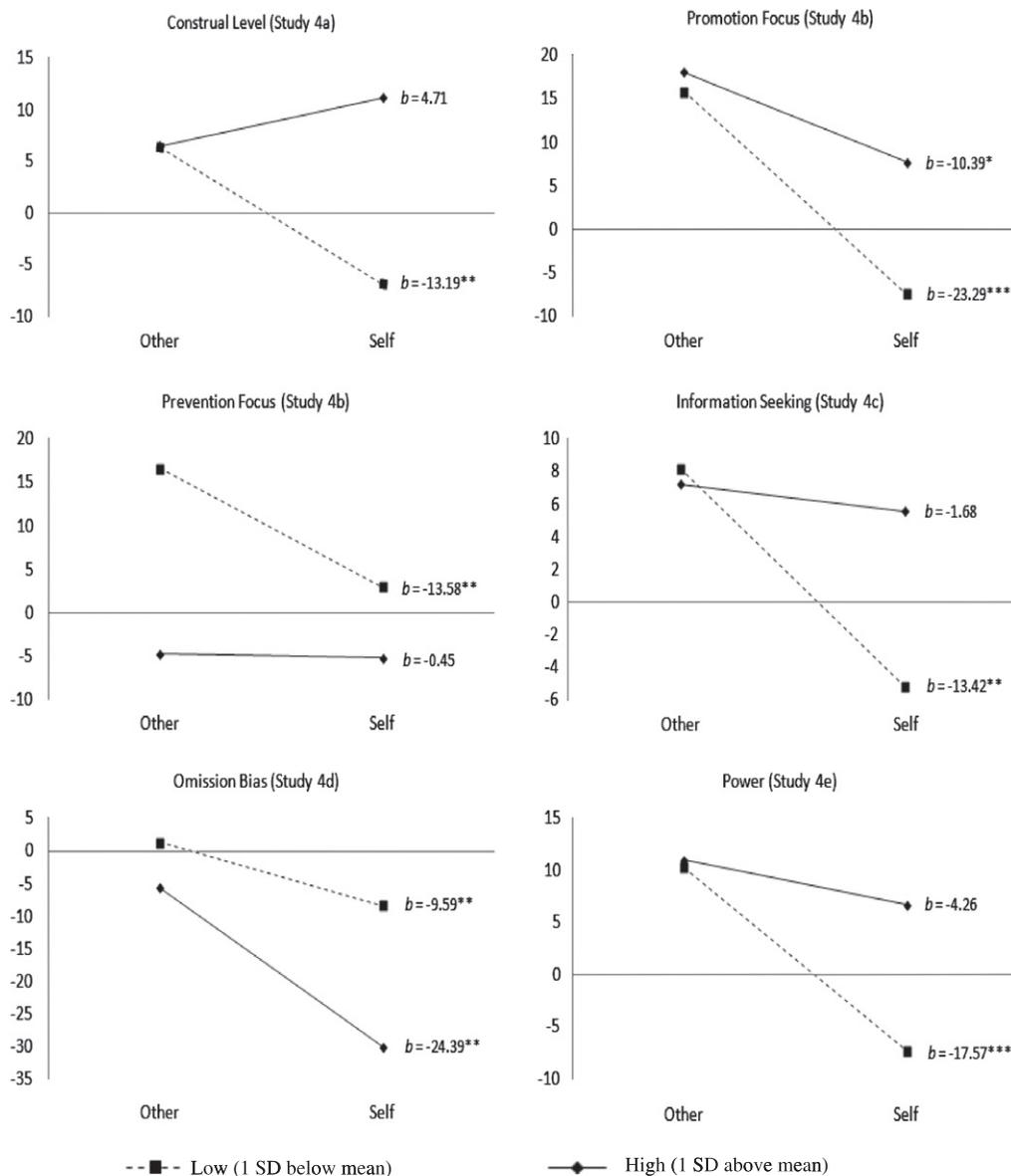


Fig. 1. Spotlight plots and slopes between self–other decision making and low and high levels of construal level, promotion focus, prevention focus, information seeking, omission. Bias, and power on loss aversion (Studies 4a–e). ■—Low (1 SD below mean), ◆—High (1 SD above mean). Note: Greater loss aversion is indicated by lower, negative values on the y-axis. * $p < .05$; ** $p < .01$; *** $p < .001$.

$\beta_{\text{promotion focus}} = 2.09$, $p < .01$; $\beta_{\text{information seeking}} = 8.58$, $p < .01$; $\beta_{\text{power}} = 7.54$, $p < .001$). Likewise, when other-choice resembles self-choice—i.e., when increasing levels of prevention focus and tendency toward omission bias are evidenced among people who choose for others—people experience more loss aversion (analysis of simple slopes indicated an increase in loss aversion among choices for others; $\beta_{\text{prevention focus}} = -2.65$, $p < .001$; $\beta_{\text{omission bias}} = -4.66$, $p = .11$). The convergence of these results demonstrates the robustness of the effect of self–other decision making on loss aversion, and reveals the underlying psychological processes that contribute to the effects of self–other decision making on causing loss aversion.

General discussion

Loss aversion accounts for a wide range of findings. In a classic demonstration of loss aversion, Kahneman, Knetsch, and Thaler (1991) showed that in a market comprising people buying and selling coffee mugs, most people were willing to buy a mug for \$2, yet twice that much was demanded by people who sell mugs. Illustrating that losses loom larger than gains—i.e., mug sellers' (un)willingness to part with their mugs exceeded mug buyers' willingness to acquire them—the notion of loss aversion has been shown to underlie stock investing (i.e., the disposition effect; Odean, 1999), pursuit of failing courses of action (i.e., the sunk cost effect; Staw, 1981), and reluctance to depart from the status-quo (i.e., the omission bias; Baron & Ritov, 1994). The purpose of the present research was to examine whether loss aversion would be exhibited similarly by people who make choices for themselves and people who make choices for others.

Eight studies investigated the effect of making choices for others on loss aversion, and provided evidence that making choices for others reduces loss aversion. In particular, we found this relationship across a range of different domains and measures of loss aversion. Specifically, we found that loss aversion is significantly lessened in domains such as riskless choice (Study 1), gambling (Studies 2 and 3), and social aspects of life (Studies 4a–e). What is more, we found evidence of less loss aversion when people were rewarded for making desirable (i.e., profitable) choices for others (Study 2), when the other for whom choices were made was physically present (Study 3), and when real money was at stake (Studies 2 and 3). Studies 4a–e brings the findings of Studies 1–3 together to provide a final test of the proposed relation between deciding for others and decreased loss aversion. Like the previous studies, Studies 4a–e measured the effects of deciding for others on loss aversion. But unlike the previous studies, we examined participants' construal level, regulatory focus, information search tendencies, omission bias, and power—and found interaction effects between the levels of these variables and self–other decision making on loss aversion, thus highlighting that the mechanisms that distinguish self-choice from other-choice coincide with differences in loss aversion.

The results presented here contribute to our understanding of decision making, especially to research on loss aversion. A variety of variables have been shown to influence loss aversion, such as emotional attachment, hedonic attributes, task difficulty, and age (e.g., Cole & Balasubramanian, 1993; Dhar & Wertenbroch, 2000; Krosnick, 1991; Novemsky & Kahneman, 2005). Here, making decisions for others emerges as an important addition to that list. Simply activating a mindset that a decision is for someone else reduces loss aversion. Further it does so even when real money is at stake. In light of these findings, we might think that people who make decisions for others suffer fewer cognitive biases. We caution, however, that it is plausible that choosing for others may also increase decision biases (e.g., Chang, Chuang, Cheng, & Huang, 2011; Jonas, Shulz-Hardt, & Frey, 2005; Polman, 2010).

Limitations

In spite of the current studies' relatively encouraging findings, there are some limitations to bear in mind. The decision makers in our study did not always know the persons for whom they were making decisions. On research in social judgment, Epley and Dunning (2000) suggested that individuals make different predictions for strangers or “averages persons” than they do for family members or friends (see also Hsee & Weber, 1997). The same could be said with making decisions, such that decisions vary according to whether the other is a close or distant other. Thus, we might expect differences in self–other decision making according to whom people are choosing (e.g., mother, employee). Future research should directly investigate specific degrees of psychological distance such as choosing for subordinates vs. superordinates, friends vs. enemies, citizens vs. foreigners, among possible other cases such as choosing on behalf of a group (e.g., Redelmeier & Tversky, 1990).

Another limitation of the current research is the hypothetical nature of the studies' choice scenarios. Except for Studies 1–3 hypothetical behavior was measured in contrast to actual behavior. That said, hypothetical scenarios are widely used in research on loss aversion—and in research on decision making in general. In fact, the original scenarios developed by Tversky and Kahneman (1981), such as the classic Asian disease problem, are hypothetical. To be sure, there is ample evidence that items measuring decision making that are derived from people's responses to hypothetical scenarios predict actual behavior (e.g., DiBonaventura & Chapman, 2008; Parker & Fischhoff, 2005). Indeed, considering the variety of conditions and circumstances that can be depicted through hypothetical scenarios, such methods facilitate exploration of people's choices in a broader context than is possible through the use of observational methods. Still, behavior is an important and accurate measure of what a person is thinking (Baumeister, Vohs, & Funder, 2007)—and in this vein, future research should investigate both hypothetical and behavioral outcomes of self–other decision making.

Another possible direction for future study is examining how self–other decision making and loss aversion extends cross-culturally. Existing research has found that members of other-oriented, collectivistic (e.g., Asian) cultures feel more similar to one another than members of self-oriented, individualistic (e.g., Western) cultures (Markus & Kitayama, 1991). For example, research by Hoshino-Browne et al. (2005) on cognitive dissonance has shown that Japanese Canadians display more dissonance reduction after choosing for others relative to European Canadians. Moreover, the authors report an interaction, such that European Canadians display more dissonance reduction after choosing for themselves relative to Japanese Canadians. Taken together, this indicates that others are implicated in choices made by highly other-oriented people (e.g., Japanese Canadians), but not as much among people high in self-orientation (e.g., European Canadians). This might suggest that other-oriented people show more loss aversion in choices for others compared to self-oriented people because there is more overlap between the self and others among other-oriented people (Cross, Bacon, & Morris, 2000).

Managerial implications

Our findings indicate that a hitherto unexplored yet nonetheless ubiquitous situational variable, self–other decision making, influences decision making by attenuating a cognitive bias that is considered fundamental among decision makers. Indeed, these findings should not only be valuable for researchers in management and psychology, but should also prove of considerable interest to people who regularly make decisions for others—managers, financial planners, lawyers, politicians, physicians, and coaches.

In the motivation literature for example, managers can be divided into two groups based on how they perceive their employees—as lazy and unmotivated, or as empowered and responsible (McGregor, 1960). It is easy to imagine managers in one group making different decisions for subordinates compared to managers in the other group. In fact, Simon (1979) writes that organizations are shaped by the choices that managers make, and to the extent that decisions for others reflect a tendency that employees are empowered and responsible, we can expect organizations to be decentralized and have high levels of participative management and job enlargement; whereas if decisions for others reflect a tendency that employees are lazy and unmotivated, we can expect organizations to be centralized and have low levels of autonomy. Thus, the way in which people make decisions for others may influence outcomes at the organizational level.

Also potentially worthwhile is considering whether people who make choices for others show empathy. Davis (1983) suggested that there is an individual difference in “placing oneself in another’s shoes.” Organizations could therefore assess which employees might be best suited to make choices for others. High scores on empathy scales indicate healthy social functioning, such as feeling sympathetic and warm toward others, plus the ability to anticipate others’ behaviors and reactions (Davis, 1983). Choices tend to be different according to whether people make choices in “hot” or “cold” states (Loewenstein, 1999), in other words, with or without emotions (e.g., anger), drives (e.g., hunger), or motivations (e.g., pain). Research has shown that people are unable to accurately predict what they will want in the future because their affective states will potentially be different in the future (Loewenstein & Schkade, 1999), but more to the point, people are also unable to predict what others will want in the future—this is called an *empathy gap*. As an example, Loewenstein (2005) asserted that a patient may be in a hot state after receiving bad news despite a physician’s pain-free cold state, a difference that could cause the physician to under-appreciate the patient’s pain and ultimately cause the physician to under-medicate the patient. Along these lines, we might not want to consider just the psychology of people who make choices for others, but also the psychology of people who submit to choices by others, since ultimately they bear the choice consequences (e.g., Botti & McGill, 2011). In the same way that leadership research looks at both leaders and followers (i.e., followership) decision making research could look at situations and dispositions that enable people to make choices for others, and likewise, consent to choices made by others.

Conclusion

There are many possible reasons for why a person would choose one way for herself, but another way for someone else. Our aim in this paper, however, was to merely investigate whether individuals’ choices for themselves differ from their choices on behalf of others—choosing as our measure one of the most concrete items we could find in the field of decision making, loss aversion. Consistent with our predictions, there is a discrepancy between what individuals choose on others’ behalves and what they would actually choose themselves, highlighting an interesting violation to the Golden Rule. As Confucius observed, “Never ever impose on others what you would not choose for yourself.”

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