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The Role of Self-esteem and Anxiety in Decision Making for Self versus Others in Relationships

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ABSTRACT

Previous research has documented a tendency for people to make more risk-seeking decisions for others than for themselves in relationship scenarios. Two experiments investigated whether this self–other difference is moderated by participants' self-esteem and anxiety levels. In Experiment 1, lower self-esteem and higher anxiety levels were associated with more risk-averse choices for personal decisions but not for decisions for others. Therefore, participants with lower self-esteem/higher anxiety showed greater self–other differences in comparison to participants with higher self-esteem/lower anxiety levels. Experiment 2 demonstrated that this effect was largely mediated by participants' expectations of success and feelings about potential negative outcomes. These results are discussed in the context of ''threats to the self,'' with a central role played by anxiety and self-esteem threats in personal decision making but not in decision making for others. Copyright © 2005 John Wiley & Sons, Ltd.

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Although decision-making research has long tackled the question of how people make decisions for themselves (cf. Abelsen & Levi, 1995; Kahneman, Slovic, & Tversky, 1982), only recently have researchers begun to investigate how people make decisions for other people. Since people make decisions for others in a wide variety of contexts, ranging from medical decisions regarding treatment (e.g., Raymark, 2000) to business decisions (e.g., Borresen, 1987) to providing advice or making decisions for others regarding relationships (e.g., Beisswanger, Stone, Hupp, & Allgaier, 2003), it is important to understand how decision making for others differs from deciding for the self.

SELF–OTHER DIFFERENCES IN RISK-TAKING BEHAVIOR

The majority of research that has compared personal decision making to decision making for another person has investigated whether there are self–other differences in people's tendency to take risks (but see

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Kray, 2000; Kray & Gonzalez, 1999, for investigations that did not examine risk-taking behavior per se). In particular, a number of studies have investigated whether people make more risk-averse or risk-seeking monetary choices for the self versus for another person when presented with risky gambles (e.g., Cvetkovich, 1972; Stone, Yates, & Caruthers, 2002; Teger & Kogan, 1975). Although certain specific conditions (such as reciprocal decision making) can produce self–other differences (Teger & Kogan, 1975), generally no self–other differences have been uncovered in risky monetary situations.

Recently, however, Beisswanger et al. (2003) documented a large self–other difference in risk-taking behavior when making relationship decisions for a friend versus for the self.[1] For example, undergraduate participants were told to imagine that they noticed someone attractive across the room at a fraternity party. They were given the choice between a risk-seeking option (e.g., introducing themselves) and a more risk-averse option (e.g., staying with their friends). Participants were more likely to choose a risk-seeking option when deciding for or giving advice to a same-sex friend than they were to choose that option for themselves, although there were no differences in participants' responses when asked to ''decide for'' versus ''give advice to'' a friend. In addition, Beisswanger et al. differentiated between what they labeled high- and low-impact decisions, depending on the seriousness of the decision's consequences. No self–other difference was found in the high-impact condition (e.g., eloping with someone), but a large self–other discrepancy arose in the low-impact condition (e.g., introducing him- or herself at a party), with people being more risk taking for others than for themselves.

Beisswanger et al. (2003) speculated that this self–other difference was in part due to the value placed on risk in our culture (see, e.g., Wallach & Wing, 1968). Using Beisswanger et al.'s decision situations, Allgaier and Stone (2002) confirmed that risk taking is valued in low-impact decision situations but not in high-impact scenarios. Thus, viewing risk as a cultural value can explain why people make risky decisions for others in certain situations.

However, to the extent that risk is valued, everyone should want to take more risks, and it seems logical that this desire would be particularly strong for decisions made for oneself. Indeed, Wallach and Wing (1968) found that most people feel that their level of risk-taking behavior is greater than that of others. The self–other differences found by Beisswanger et al. (2003), however, demonstrate that many individuals are not as risk taking for themselves as they are for others. Thus, risk taking appears to be valued in theory but not always in practice for oneself. The question then becomes, why do people avoid taking risks for themselves when they are willing to take those risks for other people?

One possibility, also suggested by Beisswanger et al. (2003), is that people consider potential negative outcomes to a greater extent when making decisions for themselves than for other people. This possibility is consistent with work by Kray (Kray, 2000; Kray & Gonzalez, 1999) suggesting that people's personal decisions are influenced by more factors than are their decisions for other people. Further, even if people consider the same information in both situations, they may react to the information differently. For example, Vorauer and Ratner (1996) found that people thought their actions would be more inhibited by fear of rejection than would a potential partner's actions. Additional evidence that people are less affected by the potential negative outcomes when deciding for others was found by Kray (2000), who showed that individuals giving advice to others felt less regret and less blamed for a negative outcome compared to personal decision makers. Similarly, certain visceral emotions such as anxiety are perceived as being stronger for the self than for another person (see Loewenstein, Weber, Hsee, & Welch, 2001). As most of the low-impact scenarios investigated by Beisswanger et al. (2003) contained the possibility of negative outcomes such as rejection, it seems plausible that these potential negative outcomes had a greater influence on deciding for oneself than on deciding for another person, thereby leading to the observed self–other differences.

[1]Although the decision scenarios were arguably not relationship scenarios as the term is often used in social psychology, in that they involved the potential for forming a romantic relationship rather than decisions made *within* relationships, we are using the term relationships for ease of exposition and for consistency with the Beisswanger et al. (2003) study.

If the preceding argument is correct, it suggests that decision making for the self, and thus self–other differences, should be influenced by how much people are affected by concerns such as rejection, or more generally, by a need to protect one's self-image from threats to the self (see Larrick, 1993). To the extent that people are only minimally affected by these concerns when deciding for themselves, self–other differences should disappear or at least be reduced. Although a number of personality characteristics might moderate the degree to which people are affected by these types of concerns, two that could be expected to be particularly important are self-esteem and anxiety.

Self-esteem

Self-esteem is generally considered to be the degree to which a person likes, values, and accepts himself or herself (Rogers, 1951). Self-esteem is an important variable to consider when there is potential for failure or rejection in personal decisions (Brown & Dutton, 1995). In particular, self-esteem has been linked to rejection sensitivity (Downey & Feldman, 1996). According to sociometer theory, trait self-esteem develops from evaluations of one's experiences with acceptance and rejection over time, and is related to how accepted people generally feel (Leary & Downs, 1995; Leary & MacDonald, 2003).

Many theorists argue that people are motivated to preserve self-esteem (e.g., Steele, 1988; however, see, e.g., Swann, Stein-Seroussie & Giesler, 1992, for an opposing view), and some suggest that people attempt to maintain self-esteem due to a fundamental motive of avoiding social exclusion (Baumeister & Leary, 1995; Leary & Downs, 1995). To the extent this is the case, one's self-esteem would reflect the perceived state of that person's relationships with other people (Leary & MacDonald, 2003). Further, Leary and Downs (1995) suggested that concerns with social acceptance are more salient for individuals with lower self-esteem, which may deter them from actions that would undermine social acceptance. In contrast, those individuals with higher self-esteem are free to take interpersonal risks because they see themselves as more acceptable to others. Brockner, Wiesenfeld, and Raskas (1993) made a similar argument, suggesting that individuals with lower self-esteem are more likely to self-protect by acting in ways that minimize bad things happening while higher self-esteem people are more apt to self-enhance and thus make more risky choices.

Consistent with the above argument, Josephs, Larrick, Steele, and Nisbett (1992) found a correlation between risk-seeking tendencies and self-esteem in the domain of monetary decisions, with higher self-esteem associated with more risks taken in positive gain scenarios. When decision outcomes were withheld from the individuals in order to remove the ''threat'' to self-esteem, however, the low self-esteem group was equally as risk seeking as the high self-esteem group. This research suggests, then, that the potential damage to self-esteem due to failure motivates those with lower self-esteem to avoid risk. Although the relationship between self-esteem and risk-taking behavior has not been examined for decision making for others, it seems likely that certain types of threats should be less salient when deciding for others than for oneself. In particular, concerns with rejection should pose a greater threat when deciding for the self than for someone else. To the extent that these threats to the self have a greater influence when deciding for the self than for another person, then, we would expect that self–other differences should be greater for people with lower self-esteem than for people with higher self-esteem.

Anxiety

Anxiety arises in response to the perception of threat (Epstein, 1973). Often, the threat experienced is a threat to self-esteem (Epstein, 1973). Indeed, most studies on self-esteem have found a link between low self-esteem and anxiety (Mruk, 1999). Although anxiety and self-esteem are highly negatively correlated, the causal relationship between these two variables remains unclear. Some say that anxiety is a mechanism that alerts an individual to problems with the self-system and the need to maintain self-esteem (Epstein, 1973; Leary & Downs, 1995). Others argue in favor of a reciprocal relationship between anxiety and

self-esteem (Coopersmith, 1967; Horney, 1950), whereby those who are highly anxious over time will come to think of themselves in less-positive terms, and those with low self-esteem are hypersensitive to threats, putting them in a constant state of anxiety. Still others argue that self-esteem serves as an anxiety buffer (Greenberg, Pyszczynski, & Solomon, 1995; Mruk, 1999). Evidence for this view is found in that those with higher self-esteem perform better under stress than do those with lower self-esteem (Solomon, Greenberg, & Pyszczynski, 1991). Furthermore, increased anxiety leads to a greater focus on self-esteem maintenance, and the temporary bolstering of self-esteem leads to lower reported anxiety (Solomon et al., 1991).

In keeping with the results regarding self-esteem, anxiety has been associated with risk-taking tendencies but in the opposite direction (Eisenberg, Baron, & Seligman, 1996; Raghunathan & Pham, 1999). For example, Raghunathan and Pham (1999) found that inducing anxiety led to more risk-averse decisions in a gambling as a well as a job-selection task. Additionally, research has suggested that, across a range of different situations, the occurrence of negative events is seen as being more likely by people high in anxiety (Butler & Mathews, 1983, 1987; Eisenberg et al., 1996).

A small amount of research has examined the role of anxiety in deciding for other people. Using a gambling task, Raghunathan and Pham (1999) found no difference between anxious and sad participants in how they made decisions for others. However, it is unclear whether their results found with gambling would generalize to the present scenarios. Further, due to their design, it is unclear whether both anxiety and sadness had no effect on decision making for others, or whether the two mood states had similar effects. Eisenberg et al. (1996) found results similar to those of Ragunathan and Pham (1999), across both a wider range of scenarios and examining anxious versus non-anxious participants. However, as the purpose of their research was not to explore self – other differences per se, their results were not reported in enough detail to determine whether the lack of anxiety effects held in all domains or even whether self – other differences occurred at all in their study.

In sum, the present evidence suggests that, like low self-esteem, high anxiety should be associated with making risk-averse decisions for the self. Also, the research conducted to date suggests that these effects should be reduced, if not eliminated, in decision making for other people. To the extent the above arguments hold for decision making about relationships, then, the previously-documented self – other differences detected in that domain should disappear, or at least be reduced, in participants with lower levels of anxiety.

EXPERIMENT 1

Our primary hypothesis was that self – other differences would be greater in participants with lower levels of self-esteem/higher levels of anxiety than in participants with higher levels of self-esteem/lower levels of anxiety. To test this prediction, we chose five scenarios from the Beisswanger et al. (2003) study that produced self – other differences, all of which included the potential for interpersonal rejection. We also measured participants' levels of self-esteem and anxiety, and examined whether these variables moderated the influence of self versus other decision making on level of risk-taking behavior.

One other methodological point is worth discussing. We have been assuming that risk is generally valued, at least in the types of scenarios that we are using. Nonetheless, there are individual differences in the extent to which risk is valued. In addition, there could be systematic tendencies to assume that other people value risk either to a greater or lesser extent than oneself. In an attempt to minimize this concern, we followed the procedure used by Beisswanger et al. (2003) and had participants make decisions for a specific friend who was similar to the participant. This decision was based in part on research by Hsee and Weber (1997), who found that participants predicted that others would display the same level of risk taking that they themselves would, but only if the person was ''concrete'' (defined, for example, as the person next to them in the room). By making the participant decide for a particular person, then, it was assumed that the person would be more concrete to the participant, and hence could be assumed to have more similar values to him or her.

This procedure is also in keeping with research conducted by Hoch (1987), who found that participants displayed a greater tendency to project their own values onto spouses or peers than onto the average American consumer.

METHOD

Participants

Participants were 233 undergraduate students (80 male, 153 female) from a small southeastern US university enrolled in introductory level psychology courses. They participated as one means of partially fulfilling a course requirement.

Materials

Self-esteem scale. The Rosenberg self-esteem scale (Rosenberg, 1965) is an index of one's global or trait self-esteem, and both its reliability and validity have been demonstrated in previous research (e.g., Baumeister, Tice, & Hutton, 1989; Rosenberg, 1979). This questionnaire consists of ten items with a four-point Likert scale ranging from strongly agree to strongly disagree, of which five items were reverse-scored. Each item was coded from 1 to 4 and summed so that the possible score range was 10 to 40, with higher scores indicating higher self-esteem.

Anxiety scale. We used the trait portion of the state-trait-anxiety inventory (STAI-T) (Spielberger, Gorsuch, & Lushene, 1970). This is a widely used and reliable measure of anxiety (Barnes, Harp, & Jung, 2002). The questionnaire consists of 20 items, which participants answer by choosing (1) almost never, (2) sometimes, (3) often, or (4) almost always, with nine of the items reverse-scored. The possible range of scores was from 20 to 80, with higher scores indicating higher anxiety.

Decision scenarios. Five different scenarios, based on those used by Beisswanger et al. (2003), were used to measure level of risk taking in relationships. These five scenarios were chosen out of the scenarios used by Beisswanger et al. because they produced self–other differences in their research, and because they contained the potential for rejection. Each scenario presented a situation where the participant needed to decide whether to engage in a safe (risk-averse) activity, or a more risky but potentially rewarding alternative. For example, in one scenario, participants were told to imagine that they saw someone cute talking with some friends at a bar, and needed to decide whether to introduce themselves to that person of the opposite sex or to stay with their friends. All of the scenarios were designed such that there was a chance for rejection but that any negative outcomes would likely not have a serious effect on the person.

The precise wording of the questionnaires varied according to decision type (self vs. other) and gender (male vs. female). In the ''self'' condition, participants were asked to imagine that they were not currently in a relationship, and to answer as they would personally react to the given situation. In the ''other'' condition, participants began by writing down the name of a same-sex friend who is similar to them, and were then asked to respond to the scenarios as if making the decision for that friend. Asking the participant to respond for a particular friend was done to make the situation more concrete for the participant, as discussed previously. For all scenarios, participants were asked to answer either as if they were not presently in a relationship or as if the friend was not presently in a relationship, depending on condition.

In addition, we attempted to manipulate the level of social evaluation in the decision situation. Our original idea was that low self-esteem participants would be more risk averse in situations where there was a greater potential for social evaluation (e.g., many people in a quiet room so that the situation would be observed by many people) compared to situations where there was less potential for social evaluation

(e.g., when no one was likely to observe the interaction). However, this manipulation had only a very limited effect,[2] and we suspect that our manipulation was too subtle. To conserve space, then, we will not consider this variable further in this paper.

Finally, the wording of the scenarios was manipulated to match gender pronouns with the participant's gender. A sample scenario used in the male, decision making for self condition is presented below:

> You and your friends are studying at a local coffee shop. You see a girl you are interested in studying with and her friends at a nearby table. You want to go over and talk to her but last time you saw her it was your birthday and you feel like you may have made a fool of yourself. She and her friends get in line to get more coffee, and you consider doing the same thing so you can talk to her. You decide to:
>
> A. Go up and talk to her.
> B. Avoid her.

Presented below is the same scenario in the decision making for other condition.

> You and your friends are studying at a local coffee shop. Your friend sees a girl that he's interested in studying with and her friends at a nearby table. He wants to go over and talk to her but last time he saw her it was his birthday and he feels like he may have made a fool of himself. She and her friends get in line to get more coffee, and he considers doing the same thing so he can talk to her. You tell him he should:
>
> A. Go up and talk to her.
> B. Avoid her.

Procedure

The primary design was a 2 (decision type: self vs. other) $\times$ 2 (participant gender: male vs. female) mixed design, where decision type was manipulated within subjects. The within-subjects nature of the design was used to increase the power of the experiment by removing error due to individual differences, as well as to allow for an examination of the consistency of participants' responses across the two decision types. Due to concerns about experimenter demand, a time interval of at least two weeks separated the two administrations of the experiment.

Specifically, the experiment consisted of two separate parts, each lasting approximately 30 minutes, and the participants took part in each 30-minute procedure in groups of 10 to 20. In each session, participants were asked to complete their responses to the relationship scenarios in terms of how they would decide for themselves or for others, with the self and other scenarios counterbalanced and separated by the two-week time interval. A different experimenter tested the participants during the second session, and nothing about the previous session was mentioned to participants.

At the completion of the decision scenarios in the first portion of the experiment, participants were given the Rosenberg self-esteem scale, an exploratory questionnaire, and an unrelated task. The participants completed the STAI-T and several other exploratory questionnaires at the end of the second session. The self-esteem and anxiety scales were administered this way due to time constraints in each session, but because these scales measure stable traits, time of completion should not influence responses (see Marsh, 1986).

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[2]There were actually trends in the predicted direction for both decision making for the self and decision making for others, but the effects produced were quite small (about 0.2 – 0.3 points on a 0 – 5 scale). We examined this issue inferentially by running a 2 (self-esteem: low vs. high) $\times$ 2 (social evaluation: low vs. high) ANOVA both on decision making for the self and decision making for others. (We ran a similar analysis using anxiety rather than self-esteem as well.) None of the effects involving social evaluation were significant at the alpha = 0.05 level, although the main effect of social evaluation was relatively close to significant in each of the analyses. Given the small size of the effects, their non-significance at the 0.05 level, and the lack of evidence of any interaction (all interaction Fs < 1.0), we decided it was not worth further pursuing social evaluation effects in this research.

When participants finished all of the required materials, they were thanked for participating and given an opportunity to hear an explanation of the experiment's purpose at the conclusion of the second session.

Results

Nineteen participants were not included in the analyses because they failed to return for the second portion of the experiment, and two additional participants were eliminated from the analyses involving anxiety for failure to respond to all of the items on that scale.

Repeated-measures ANOVAs

To determine what role, if any, self-esteem and anxiety play in deciding for the self versus another person, we began by treating both variables as dichotomous by taking median splits.[3] Mean scores for the low versus high self-esteem groups were 28.76 and 36.72, respectively, and mean scores for high versus low anxiety groups were 45.51 and 32.62, respectively. We then conducted two separate repeated-measures ANOVAs, one with self-esteem and one with anxiety.

Specifically, we conducted a 2 (decision type: self vs. other) × 2 (self-esteem: low vs. high) × 2 (participant gender: male vs. female) repeated-measures ANOVA on level of risk taking, where decision type was the within-subjects variable. There was a main effect of gender, whereby males ($M = 3.92$) tended to be more risk seeking than were females ($M = 3.34$), $F(1, 210) = 17.23$, $p < 0.001$. However, there were no interactions with gender and any of the other predictor variables, all ps > 0.15. Therefore, we provide means collapsed across gender in Table 1, although all the inferential analyses we report include gender in the analysis.

In keeping with the Beisswanger et al. (2003) study, there was a main effect of decision type, whereby participants made more risk-seeking decisions for others ($M = 4.19$) than for themselves ($M = 2.88$), $F(1, 210) = 113.61$, $p < 0.001$. Additionally, there was a main effect of self-esteem, whereby high self-esteem participants ($M = 3.75$) made more risk-seeking decisions than did low self-esteem participants ($M = 3.35$), $F(1, 210) = 8.43$, $p = 0.004$. Most importantly, we found the predicted decision type by self-esteem interaction, $F(1, 210) = 22.17$, $p < 0.001$. As shown in Table 1, although both high and low self-esteem individuals displayed a self – other difference (both ps < 0.001), this difference was more pronounced for people with low self-esteem (M difference $= 1.82$) than for participants with high self-esteem (M difference $= 0.72$). This interaction can also be seen in the fact that there were no differences in deciding for another person between those participants with low ($M = 4.26$) and high ($M = 4.11$) self-esteem,

Table 1. Experiment 1: Mean risk-taking scores by decision type and self-esteem

	Self-esteem level	
Decision type	Low	High
Self	2.44 (1.46)	3.39 (1.36)
Other	4.26 (0.80)	4.11 (1.05)

Note: Standard deviations are in parentheses. Scores range from 0 (all risk-averse choices) to 5 (all risk-seeking choices). Sample sizes were $N = 114$ for the low self-esteem group and $N = 100$ for the high self-esteem group.

[3]Although we dichotomize self-esteem and anxiety in terms of "high" and "low," it is important to note that low self-esteem, for example, is only "low" relative to the other scores. These participants do not rate themselves as low in any absolute sense; rather, they simply provide lower ratings than do the individuals classified as having high self-esteem (see Baumeister, Tice, & Hutton, 1989).

Table 2. Experiment 1: Mean risk-taking scores by decision type and anxiety

	Anxiety level	
Decision type	Low	High
Self	3.34 (1.36)	2.41 (1.49)
Other	4.16 (1.02)	4.22 (0.83)

Note: Standard deviations are in parentheses. Scores range from 0 (all risk-averse choices) to 5 (all risk-seeking choices). Sample sizes were $N = 107$ for the low-anxiety group and $N = 105$ for the high-anxiety group.

$F(1, 210) = 1.21$, $p = 0.27$, but a large difference in deciding for oneself between those participants with low ($M = 2.44$) and high ($M = 3.39$) self-esteem, $F(1, 210) = 30.90$, $p < 0.001$.

A 2 (decision type: self vs. other) × 2 (anxiety: low vs. high) × 2 (participant gender: male vs. female) repeated-measures ANOVA produced similar results. As before, there was only a main effect of gender and no significant interactions, so the means as displayed in Table 2 are collapsed over gender, although again all inferential tests include gender. Also in keeping with the previous analysis, there was a main effect of decision type, whereby participants made more risk-seeking decisions for others ($M = 4.19$) than for themselves ($M = 2.88$), $F(1, 208) = 116.36$, $p < 0.001$. Additionally, there was a main effect of anxiety, whereby low-anxiety participants ($M = 3.75$) made more risk-seeking decisions than did high-anxiety participants ($M = 3.31$), $F(1, 208) = 10.36$, $p = 0.001$. As with self-esteem, we found the predicted decision type by anxiety interaction, $F(1, 208) = 19.04$, $p < 0.001$.[4] As shown in Table 2, although both high and low anxiety individuals displayed a self – other difference (both ps < 0.001), this difference was more pronounced in people with greater anxiety levels (M difference $= 1.81$) than in participants with lower anxiety levels (M difference $= 0.82$). As with self-esteem, there were no differences in deciding for another person between those participants with high ($M = 4.22$) and low ($M = 4.16$) anxiety, $F(1, 208) = 0.42$, $p = 0.52$, but a large difference in deciding for oneself between those participants with high ($M = 2.41$) and low ($M = 3.34$) anxiety, $F(1, 208) = 30.49$, $p < 0.001$.

Correlational analyses

The previous analyses suggest that self-esteem and anxiety influence decision making for the self but not for other people. To ensure that the lack of relationships regarding decision making for others was not due to dichotomizing self-esteem and anxiety, we kept self-esteem and anxiety as continuous variables and used them to predict both risk taking for the self and risk taking for others. In keeping with the previous analysis, we found that both anxiety and self-esteem were correlated with the number of risky decisions made for the self ($r = -0.39$, $p < 0.001$; $r = 0.35$, $p < 0.001$, respectively), but neither anxiety nor self-esteem were related to the number of risky decisions made for the other person ($r = -0.01$, $p = 0.88$; $r = -0.08$, $p = 0.26$, respectively).

Given that the results with self-esteem and anxiety were so similar, we next examined whether either of these variables predicted any unique variance in level of risk taking. The two variables were indeed highly correlated ($r = -0.73$, $p < 0.001$), in keeping with previous research (e.g., Coopersmith, 1967; Heatherton & Ambady, 1993). To determine the amount of unique variance associated with the two predictors, we conducted a simultaneous multiple regression with level of risk taking for the self as the criterion variable

[4]We also ran these analyses separately for the individual scenarios, and there was a significant main effect of decision, decision × anxiety interaction, and decision × self-esteem interaction (all ps < 0.06) for each of the five scenarios.

and anxiety and self-esteem as predictors. This analysis showed that anxiety (*partial* $r = -0.19$, $p = 0.006$) predicted a unique amount of variance in decision making for the self, and self-esteem was marginally significant as well (*partial* $r = 0.13$, $p = 0.06$). The unique predictability of self-esteem and anxiety after taking into account the large correlation between the two demonstrates that self-esteem and anxiety are both important in explaining risk-taking behavior.

Consistency in self vs. other decision making

Recall that the primary rationale for using a within-subjects design was to reduce the amount of individual difference variability in the analyses. To determine whether or not this technique was successful, we examined the consistency among participants' judgments across self versus other decision making. Surprisingly, there was virtually no relationship between how people decided for themselves versus for others, $r = 0.10$, $p = 0.15$. Although not predicted, this finding provides further support to the notion that people make decisions differently when deciding for themselves versus for someone else.

Discussion

As predicted, self-esteem and anxiety both played a moderating role in terms of the observed self–other differences in risk taking. Nor were these effects small. Indeed, participants who were below average on self-esteem or above average on anxiety produced a self–other difference ($M = 1.82$ and $M = 1.81$, respectively) more than twice as great as did those participants above average on self-esteem or below average on anxiety ($M = 0.72$ and $M = 0.82$, respectively).

Subsequent analyses revealed that these personality variables were related to self–other differences primarily as a result of their role in deciding for the self. Specifically, participants with lower self-esteem and higher anxiety demonstrated less personal risk taking than did those individuals with higher self-esteem and lower anxiety levels. Although the relationships between self-esteem and anxiety with risk taking were clearly demonstrated, this study provided no evidence as to why these relationships exist. In other words, how does lower self-esteem/higher anxiety work to influence the level of risk taking in relationships? Experiment 2 was designed to provide some insight into that issue.

EXPERIMENT 2

Expected utility theory (e.g., von Neumann & Morgenstern, 1944), or more generally, subjective expected utility theory (e.g., Savage, 1954), provides a useful perspective for seeing how personality variables such as self-esteem and anxiety could influence decision making. When used as descriptive theories of choice, these theories suggest that people's decisions are based on two factors: the uncertainties involved in the decision and the values that people assign to the outcomes. For example, assume that your good friend Mark is trying to decide whether to ask someone attractive at a bar to dance or stay with his friends to talk. According to expected utility models, his decision will depend on how he perceives the two alternatives. That is, he will consider the likelihood that the person would agree to dance if asked, as well as how good it would make him feel if his invitation was accepted and how bad it would make him feel if rejected. He would then combine that information into an overall evaluation of the alternative, according to a formula like the following:

$$\mathrm{EU}(\text{ask to dance}) = (p)(u_1) + (1 - p)(u_2) \quad (1)$$

where p is the likelihood that the person would dance with him if asked, u_1 is the utility, or value, that he would assign to his invitation being accepted, and u_2 is the utility, or value, of being rejected. Once this

information is combined into an overall evaluation of that alternative, it is compared to an overall evaluation of staying with his friends, and he would choose the alternative with the greater expected utility. Although these types of expectation models are limited in multiple ways (see Larrick, 1993; Plous, 1993), they nonetheless can serve as useful approximations of how people make decisions (see, e.g., Yates, 1990).

According to this theoretical approach, then, self-esteem and anxiety could relate to risk taking by affecting either: (1) the probability that the risk-seeking choice would produce a positive outcome (e.g., the person agrees to dance); (2) the value placed on the positive outcome of the risk-seeking alternative (e.g., how good it would feel to dance with the person); (3) the value placed on the negative outcome of the risk-seeking alternative (e.g., how bad it would feel to be rejected); and/or (4) the value placed on the risk-averse alternative (i.e., how good it would feel to stay with friends and not ask the person to dance). The primary goal of our second study was to determine which, if any, of these components of the decision process were related to self-esteem and anxiety.

Using a similar theoretical framework, Brockner et al. (1993) defined behavioral and psychological strategies for low versus high self-esteem individuals in terms of expectancy-value discrepancy. Those with higher self-esteem feel as if they can achieve the things that they desire and engage in self-enhancement, which refers to acting or thinking in ways that provide the potential for good things to happen (e.g., by making risk-seeking choices). Individuals with lower self-esteem, however, have a greater discrepancy between their desires and perceived level of competence, which leads them to engage in self-protection, responding to situations in ways that minimize negative outcomes (e.g., by making risk-averse choices). Much of the reason for these different strategies comes from different expectations of success, which tend to vary more between low and high self-esteem individuals than do values of outcomes (see Brockner et al., 1993). Thus, it seems plausible that the effect of self-esteem on risk taking for the self is mediated in part by different expectations of success, i.e., decision component (1) above.

Although this hypothesis has not been directly tested within the relationship domain or with self-esteem, Eisenberg et al. (1996) tested a similar issue by examining the role of anxiety. Specifically, they provided people with a variety of risky decision scenarios across many different domains and measured participants' levels of risk seeking for themselves as well as their probabilities and utilities. They found that greater levels of anxiety were associated with greater levels of risk aversion and some speculative evidence that this effect was mediated by participants' probability estimates. Similar results were found by Butler and Mathews (1983, 1987), although there was some evidence that the relationship between anxiety and perceived likelihood held for negative but not positive occurrences (Butler & Mathews, 1983).

In sum, it is plausible that the relationship between both self-esteem and anxiety with risk taking may be mediated by perceived probability of success. In addition, the research by Butler and Mathews (1983) suggests that highly anxious people may perceive the negative outcome as being worse than would less anxious people. More specifically, they defined threat as a function of the probability of a negative event multiplied by the cost of the bad event, similar to the idea behind expected utility theory. Butler and Mathews then found differences between anxious and less anxious participants in terms of both the probability of the negative event as well as the cost of the negative event, suggesting that both components may be related to anxiety level. Similarly, Eisenberg et al. (1996) found that anxiety was associated with the perceived badness of an event, though to a lesser degree than probability of its occurrence. Further, they found no relationship between anxiety and the perceived goodness of an event.

Based on these previous findings, then, we predicted that self-esteem and anxiety would be related to perceived probability of success (i.e., decision component (1) above) as well as feelings about negative outcomes (i.e., decision component (2) above). Those with lower self-esteem/higher anxiety should think that a successful outcome is less likely, and feel worse about a potential bad outcome, than would those participants with lower self-esteem/higher anxiety. Given the lack of research demonstrating any influence on either of the other two components, we made no predictions regarding either of those components.

On the other hand, since we found no influence of self-esteem or anxiety on decision making for others in Experiment 1, it seems reasonable to expect that neither of these personality variables would be related to any of the four components of the decision situation. In support of this possibility, Eisenberg et al. (1996) found, in regard to other decision making, no difference in terms of ratings of probability of success, feelings toward the positive outcome, or feelings toward the negative outcome depending on anxiety level. Similarly, Butler and Mathews (1983, 1987) found no difference between anxious and less anxious individuals in terms of predicting probability of success for others. Thus, we expected that for decision making for others, there would be no effect of anxiety (or self-esteem) on any of the decision components.

To test these hypotheses, we constructed questions to measure each of the four components of the decision process discussed previously for each of the scenarios. We then measured the effects of self-esteem and anxiety on each of the four components both for decision making for the self and for others, as well as the relationship between each of those components and risk aversion. Finally, we tested whether the relationships between the personality variables and risk seeking are mediated by the particular components of the decision process, specifically predicting that perceived probability of success and feelings about rejection would be most likely to mediate the effects of self-esteem and anxiety on risk taking for the self.

Method

Participants

Participants were 270 introductory psychology students (158 female, 112 male) from a small southeastern US university enrolled in introductory level psychology courses. They participated as one means of partially fulfilling a course requirement.

Procedure

We employed a 2 (decision type: self vs. other) $\times$ 2 (participant gender: male vs. female) between-subjects design. The self versus other variable was manipulated between subjects given the lack of relationship between deciding for the self and the friend in Experiment 1. The primary dependent variables were the probability of having a positive outcome if the risk-seeking option was taken, the participant's reaction to both the positive and negative outcome of the risk-seeking option as well as a reaction to the risk-averse option, and the actual decision made. Participants received either the self-decide or the other-decide form of the questionnaire, block-randomized for each gender.

As in Experiment 1, participants were provided with decision scenarios relevant to themselves and were asked to answer either as if they were not presently in a relationship, or for a specific friend as if he or she was not presently in a relationship. These scenarios were identical to the ones used in Experiment 1, except that we made minor wording clarifications and only used the high social evaluation conditions in Experiment 2.

Rather than making decisions about each scenario, however, participants were asked to answer four questions for each scenario regarding: the probability of a successful outcome (e.g., asking someone to dance and having them accept); one's feeling about the negative outcome (e.g., being turned down); one's feeling about the positive outcome (e.g., having the person agree to dance); and one's feeling about the risk-averse outcome (e.g., not asking the person to dance). The probability judgment was on a 0–100% scale, although participants were provided with response options corresponding to each 10% (e.g., 0%, 10%, 20%, etc.) rather than on a continuous scale. The other three questions were on a nine-point scale ranging from very bad to very good. The specific wording was varied appropriately for both the self and other conditions, as well as according to gender.

After responding to the questions regarding the four decision components for each scenario, participants were given copies of the same scenarios to make decisions for either themselves or the other person, depending

on their condition. After this task, participants were given the Rosenberg self-esteem scale (Rosenberg, 1965) and the trait portion of the STAI (Spielberger et al., 1970).

Results

Two of the participants did not respond to all items on the self-esteem questionnaire, and two participants did not respond to all items on the anxiety questionnaire. They were excluded from the analyses regarding the particular construct.

Replication of Experiment 1 results

Experiment 2 utilized a between-subjects design rather than the within-subjects design used in Experiment 1. The use of the between-subjects design in the current study made it more straightforward to analyze the results via regression analysis, enabling us to take advantage of the power of keeping self-esteem and anxiety as continuous variables.

We began by centering each of our predictors and performing a regression analysis on level of risk-taking behavior with decision-type (self vs. other), participant gender (male vs. female), self-esteem, and all two-way and three-way interaction terms as predictor variables. Unlike in Experiment 1, there was no main effect of gender. Specifically, females ($M = 3.59$) were almost equally as risk taking as were males ($M = 3.62$), $t(262) = 0.23$, $p = 0.82$. In keeping with Experiment 1, however, the interactions including gender were all non-significant, all $p > 0.10$. Also in keeping with Experiment 1, main effects of condition and self-esteem revealed that participants were more risk seeking for others ($M = 4.18$) than for themselves ($M = 3.02$), $t(262) = 8.70$, $p < 0.001$, and self-esteem level was positively correlated with risk taking (*partial* $r = 0.22$), $t(262) = 3.68$, $p < 0.001$. Most importantly, the self-esteem by decision-type interaction was again significant, though not as strongly as in Experiment 1 (*partial* $r = -0.13$), $t(262) = 2.12$, $p = 0.04$. Note that the negative correlation indicates that the self – other difference became weaker as participants increased in self-esteem level, similar to the results we obtained in Experiment 1.

We then performed the same analyses with anxiety, decision type, gender, and the interaction terms as predictor variables in a regression equation predicting risk-taking behavior. Again, there were no significant effects with gender, all ts < 1. As in Experiment 1, there were main effects of condition and anxiety, whereby participants were more risk seeking for others than for themselves, and anxiety level was negatively correlated with risk taking (both ps < 0.001). The anxiety by decision type interaction also mirrored the results from Experiment 1 (*partial* $r = 0.17$), $t(262) = 2.74$, $p = 0.007$, whereby self – other differences were stronger in participants with higher anxiety than in participants with lower anxiety levels.

Given the significant interactions between self-esteem/anxiety and decision type, we computed the simple slope of each of the personality constructs with risk taking separately for decision making for the self and for another person (see Aiken & West, 1991, p. 18).[5] In the decision making for self condition, risk taking was significantly related to self-esteem ($B = 0.371$) as well as to anxiety ($B = -0.482$), $t(266) = 3.77$, $p < 0.001$, $t(266) = 4.89$, $p < 0.001$, respectively. Thus, for every change of one standard deviation in the personality construct, the amount of risk taking increased by a little less than half a point (out of a five-point scale). Conversely, in the decision making for other condition, risk taking was not significantly related to either self-esteem ($B = 0.115$) or anxiety ($B = -0.110$), both ps > 0.20. The same general relationships can be seen with the zero-order correlations, which were substantial in the decision making for self condition ($r = 0.28$ for self-esteem and $r = -0.38$ for anxiety) but not in the decision making for other condition

[5]Given the lack of significance of gender or any of the interactions involving gender, we did not consider gender when constructing these regression models.

Table 3. Experiment 2: Correlations of self-esteem and anxiety with the decision components

	Decision components			
	Probability	Neg. outcome	Pos. outcome	Risk-averse
Risk taking for self				
Self-esteem	0.30**	0.29**	0.03	0.11
Anxiety	−0.31**	−0.38**	0.00	−0.07
Risk taking for other				
Self-esteem	0.09	0.15	0.08	−0.06
Anxiety	−0.11	−0.08	−0.04	−0.02

Note: Probability = probability of successful outcome. Neg. outcome = feelings with regard to the negative outcome. Pos. outcome = feelings with regard to the positive outcome. Risk-averse = feelings with regard to the risk-averse alternative.
**$p < 0.01$.

($r = 0.11$ for self-esteem and $r = -0.10$ for anxiety). In addition, self-esteem and anxiety were again highly correlated ($r = -0.77$; $p < 0.001$).

Relationships of self-esteem and anxiety to the decision components

After establishing that the main results of Experiment 1 were replicated in Experiment 2, we examined the relationships of self-esteem and anxiety to each of the components of the decision process to determine more precisely just what effects self-esteem and anxiety had. The correlations are given in the top portion of Table 3 for decision making for the self. As predicted, self-esteem and anxiety were correlated with the belief that a successful outcome is probable for the self, with higher self-esteem and lower anxiety individuals tending to view success as more likely than those with lower self-esteem or higher anxiety. Also in line with our predictions, individuals with higher self-esteem and lower anxiety viewed rejection as less negative than did individuals with lower self-esteem or higher anxiety. There were no significant relationships between these personality variables and either the experience of the positive outcome or the risk-averse alternative, however.

The bottom portion of Table 3 provides the correlations between the personality variables and the decision components for deciding for the other person. None of these correlations were significant (all $ps > 0.05$).

Relationships between the decision components and choice

We next examined the relationships between the decision components and the amount of risk-taking behavior, and whether these relationships differed for deciding for the self vs. for another person. Table 4 provides the correlations between the four components and the level of risk-taking behavior. When deciding for oneself, risk taking was related to the perceived probability of a successful outcome, feelings about the negative outcome, and feelings about the risk-averse alternative. In particular, the results indicate that, to the extent that one finds success more likely, reacts less negatively to rejection, and views risk aversion as more negative, one will tend to make riskier personal decisions.

As in the self-decision condition, risk taking for others was significantly correlated with the perceived probability of success and feelings about the risk-averse outcome. However, in contrast to the results in the self-decision condition, risk taking for others was not related to feeling negatively about bad outcomes, but was related to feeling positively about good outcomes. This greater focus on the potential negative outcome when deciding for the self supports the idea that in the present scenarios rejection concerns (or whatever negative outcomes constituted threats to the self) play a greater role in decision making for the self than for others.

Table 4. Experiment 2: Correlations of the decision components with risk-taking behavior

	Risk taking	
	Self	Other
Probability	0.39**	0.39**
Neg. outcome	0.35**	0.03
Pos. outcome	0.04	0.32**
Risk-averse	−0.25**	−0.36**

Note: Probability = probability of successful outcome. Neg. outcome = feelings with regard to negative outcome. Pos. outcome = feelings feelings with regard to positive outcome. Risk-averse = feelings with regard to risk-averse decision.
**$p < 0.01$.

Mediational analysis regarding decision making for the self

The findings that self-esteem and anxiety are correlated with perceived probability of a successful outcome and feelings about negative outcomes, and that these variables are in turn correlated with the level of risk-taking behavior, suggest that these decision components might mediate the effects of self-esteem and anxiety on risk taking for personal decisions. According to Baron and Kenny (1986), mediation occurs when: (a) the predictor variable affects the mediating variable; (b) the predictor variable affects the criterion variable; (c) the mediator predicts the criterion variable after controlling for the effect of the predictor variable; and (d) the effect of the predictor on the criterion variable is significantly reduced when the mediator is included in the model.

We proceeded to test each of our four possible mediational models individually. That is, we tested whether perceived probability of success mediated the relationship between self-esteem (anxiety) and risk taking, and whether feelings about negative outcomes mediated the relationship between self-esteem (anxiety) and risk taking. The results with self-esteem and anxiety were very similar, so we present the results only with self-esteem below.[6] Our correlational results show that the first two requirements have been satisfied, in that self-esteem is correlated with perceived probability of success and feelings toward the negative outcome, as well as with risk-taking behavior for the self. To test the third requirement, we regressed level of risk-taking behavior on each of the mediation variables individually. Both potential mediators did in fact remain significant, *partial* $r = 0.33$, $p < 0.001$, and *partial* $r = 0.29$, $p = 0.001$, respectively. Finally, the Sobel test (see Preacher & Leonardelli, 2003) showed that the indirect path from self-esteem to risk-taking behavior via perceived probability of success was significant, $z = 2.66$, $p = 0.01$, as was the indirect path via feelings about negative outcomes, $z = 2.39$, $p = 0.02$. Again, qualitatively similar results were found using anxiety rather than self-esteem as the predictor variable.

These findings suggest that perceived probability of success and feelings about negative outcomes do mediate the relationship between self-esteem/anxiety and risk-taking behavior. To determine whether the mediation was complete or only partial, we next examined whether the relationship between self-esteem/anxiety and risk-taking behavior remained after controlling for perceived probability of success and feelings about negative outcomes (i.e., with both mediators in the regression model simultaneously). The relationship with self-esteem remained marginally significant, *partial* $r = 0.15$, $p = 0.09$, and the relationship with anxiety remained significant, *partial* $r = -0.22$, $p = 0.01$. All told, it therefore appears that the mediation is not complete, and anxiety and perhaps self-esteem do still predict some unique variance even after controlling for the mediating variables.

[6]Specifically, all of the analogous tests using anxiety rather than self-esteem were significant at $p = 0.01$ or less.

Discussion

Replicating the results of Experiment 1, those with higher self-esteem/lower anxiety produce smaller self–other differences in their level of risky behavior than do those with lower self-esteem/higher anxiety. Also in keeping with Experiment 1, self-esteem and anxiety levels were related to risk taking for the self but not for others. In the process of deciding for oneself, self-esteem and anxiety play a role in judgments of probability of success and feelings toward negative outcomes. Furthermore, the decision components of perceived probability of success and feelings regarding negative outcomes partially account for the effects of self-esteem and anxiety on risk taking for the self. These results are consistent with the argument by Butler and Mathews (1983) that the costs and probability of a potentially negative outcome constitute a threat to the self.

One puzzling result of Experiment 2 was the lack of gender differences. Previous research has consistently found that males are significantly more risk seeking than are females in a range of situations (cf. Powell & Johnson, 1995), and both Beisswanger et al. (2003) and our Experiment 1 found a large gender difference. We have no ready explanation for the lack of gender difference in this study, and it is plausible that this lack of effect is just due to chance.

GENERAL DISCUSSION

The primary goal of our research was to determine what role, if any, the personality factors of self-esteem and anxiety play in deciding for oneself and for others and consequently in self–other differences. In both our experiments, we found that self-esteem and anxiety levels were highly related to decision making for the self, but unrelated to decision making for another person. Therefore, both these factors are in part responsible for self–other differences. These results are consistent with the work of Kray and Gonzalez (1999; Kray, 2000), who found that personal decisions were influenced by more factors than were decisions made for other people. In Experiment 2, we also observed that the effects of self-esteem and anxiety on personal decision making are partially mediated by expectations of success and feelings toward the negative outcome. We shall proceed by discussing the theoretical implications of the above findings for how decisions are made for the self and for another person. Then, we will briefly speculate about the implications of our results for theories on self-esteem and anxiety. Finally, we shall end with a brief discussion of the extent to which we would expect our results to generalize to other situations.

Processes involved in deciding for the self and others

Given that self-esteem and anxiety are related to decision making for the self and others in different ways, and that the different decision components played separate roles in the two types of decision making, these two types of decisions appear to be made, at least in part, via different processes. In terms of personal decision making, our results suggest that self-esteem and anxiety levels are related to both the perceived probabilities of favorable outcomes occurring, as well as how bad people would feel about negative outcomes. These findings thus indicate that empirical results found more generally with self-esteem (see Brockner et al., 1993) and anxiety (Butler & Mathews, 1983; Eisenberg et al., 1996) hold with our relationship scenarios as well. Moreover, we then demonstrated that these two decision components—perceived probabilities of favorable outcomes and feelings toward negative outcomes—in turn affected the level of risk-taking behavior. Thus, the relationship between self-esteem/anxiety and risk-taking behavior is partially mediated by these factors.

However, the fact that anxiety and self-esteem continue to be associated with risk-taking behavior, even when controlling for the different decision components, suggests that our expected utility framework presented in the introduction to Experiment 2, although useful, does not fully capture how these personality variables influence decision making. One limitation to the EU approach is that it assumes that any influence

of either self-esteem or anxiety functions through a rational, cognitive analysis of the situation. As recently argued by Loewenstein et al. (2001), people's decisions are only based on this type of cognitive analysis to a certain degree and are additionally influenced by a more affective reaction to the situation. For example, people with higher levels of anxiety may react to avoid the risk-seeking option not out of any particular cognitive concern, but instead as a result of a more visceral reaction created by the anxiety-provoking situation. The fact that the decision components did largely mediate the effects of self-esteem and anxiety on risk-taking behavior suggests that the cognitive analysis does partially account for personal decision making, but other explanations such as Loewenstein et al.'s risk-as-feelings theory need to be invoked as well.

Additional support for Loewenstein et al.'s (2001) ideas can be seen in the decision making for others results. To the extent that anxiety is experienced more viscerally when deciding for the self versus for someone else, as argued by Loewenstein et al., anxiety should not have much of an effect on decision making for others. Our finding that anxiety and self-esteem levels are unrelated to deciding for a friend is thus consistent with Loewenstein et al.'s theorizing. Given, then, that decision making for others was not the result of an affective reaction to the situation, how were these decisions made? The present research was not primarily designed to answer that question, but some brief speculation is worthwhile.

Allgaier and Stone (2002) suggested that decision making for others is based largely on the extent to which risk is valued by one's society in the domain under investigation. Although other factors clearly do matter as well, such as one's assumptions regarding whether risk-taking behavior will produce the desired results (i.e., the perceived probabilities of success in our study), the basis of Allgaier and Stone's theory is that the value placed on risk has a greater influence on decision making for others than on personal decision making. One implication of that argument (see Allgaier, 2002) is that, since decision making for others is largely dominated by how risk is valued by society, other factors—such as individual differences—will play less of a role when deciding for others than for the self. Similarly, Kray (2000) provided evidence that advisors made choices for others based on the attributes of the decision that most people in general would find important, while individuals made decisions by weighting attributes differently based on personal preferences. Since neither self-esteem nor anxiety is related to deciding for another person, our findings support Allgaier and Stone's claim that everyone, regardless of their personality traits, will have the same tendency to decide for others in a risk-taking fashion since that option is generally more desirable in our society.

Self-esteem, anxiety, and threat of rejection

In both experiments, self-esteem and anxiety were highly related, with more than 50% of the variance in one measure explained by the other measure. Although the focus of this study was not on explaining the relationship between the constructs, a brief discussion of how our findings fit with present theorizing about self-esteem and anxiety is worthwhile.

Due to the strong relationship between self-esteem and anxiety, it seems plausible that both these personality variables reflect some underlying factor that influences risk-taking behavior. Indeed, there is some research that suggests that both self-esteem and anxiety are lower-order factors of the Big-5 personality traits, and that neuroticism in particular may be able to explain much of the variance of self-esteem and anxiety (Judge, Erez, Bono, & Thoresen, 2002; Watson, Suls, & Haig, 2002). Specifically, Watson et al. found that anxiety was a facet of neuroticism and that neuroticism was highly negatively related to self-esteem, and Judge et al. (2002) reported that a single factor could account for self-esteem, neuroticism, and locus of control. However, although the general factor of neuroticism may account for the shared variance between self-esteem and anxiety, we still found that each of these variables predicted some unique variance in risk-taking behavior. Likewise, Judge et al. (2002) advise that the individual study of these variables should not be abandoned due to their unique roles in predicting a variety of factors, such as subjective well-being.

Instead, we tentatively suggest that self-esteem and anxiety should be considered as distinct but related personality factors that interact to influence risk-taking behavior. This idea is in keeping with sociometer theory, which suggests that negative affective reactions, such as anxiety, act in a way that alerts the individual to the potential for social rejection, disapproval, or exclusion so that the person can act accordingly to avoid the negative outcome and thus maintain self-esteem (Leary & Downs, 1995). Of particular relevance to these ideas, we found strong relationships between self-esteem and especially anxiety with feelings toward the potential negative outcome, but not toward the potential positive outcome. Thus, it does appear that participants with higher levels of anxiety were particularly focused on the potential negative outcomes that involved the possibility of social rejection.

In addition, those with lower self-esteem not only tend to have higher anxiety, as we found, but also react to threats of rejection by lowering their opinion of themselves and giving up faster than usual on tasks (Sommer & Baumeister, 2002). In the context of romantic relationships, those with lower self-esteem respond to threats by distancing themselves from their romantic partner by finding fault and reporting less closeness (Murray, Rose, Bellavia, Holmes, & Kusche, 2002). As our work demonstrates, individuals with lower self-esteem take fewer risks in forming relationships, and are most likely anxious because social rejection is a potential result of risky action. Thus, it seems plausible that the anxiety experienced in these situations serves as a signal to alert the individual to potential negative social outcomes. Further, if individuals with lower self-esteem do react to anxiety-producing social situations by avoidance (i.e., risk aversion), shying away from approaching others may serve to reinforce a lack of social connectedness, feelings of low self-worth, and anxiety about approaching these situations in the future. Thus, a pattern is created, whereby low self-esteem leads to a lack of willingness to take risks, which in turn decreases the potential for positive events that might otherwise serve to raise the level of self-esteem.

Extensions and boundary conditions

As argued previously, we believe that decision making for the self and for other people operate at least in part via different processes. Of interest, then, is why this research and other research on relationships (e.g., Beisswanger et al., 2003) found large self–other differences in risk-taking behavior, but research on monetary decision making has generally found small or no differences in risk-taking behavior (e.g., Cvetkovich, 1972; Stone et al., 2002; Teger & Kogan, 1975). Are self–other differences the rule or the exception? Although ultimately this is an empirical issue that requires investigation, some preliminary speculation is warranted.

One important aspect of our theoretical analysis has been the role played by ''threat'' to the self (Butler & Mathews, 1983; Epstein, 1973) in those with lower self-esteem or higher anxiety (see also Josephs et al., 1992, and Larrick, 1993, for a related but slightly different approach to this issue). Essentially, those with lower self-esteem or higher anxiety are particularly vulnerable to various threats to the self and thus will often behave in ways that minimize these threats. One method for minimizing threats to the self is to behave in a risk-averse manner, passing up the possibility of a more positive outcome to guarantee that a negative outcome does not occur. Therefore, it should not be surprising that people with lower self-esteem or higher anxiety levels are more apt to behave in a risk-averse manner than are those with higher self-esteem or lower anxiety levels. Moreover, these types of self-esteem effects have been found both in the present research on relationships, as well as in monetary decision making (Josephs et al., 1992).

Thus, it appears that people act to reduce threats to the self in a wide range of situations (see also Larrick, 1993). Moreover, Stone et al. (2002) found that people act to reduce threats to the self when deciding for others as well as for themselves. In particular, using scenarios similar to those used by Josephs et al. (1992), they found that a concern with potential regret affected decision making for others to the same extent that it affected personal decision making. However, in the present research, we found no effects of self-esteem or anxiety on decision making for a friend. It is plausible that part of the reason for this lack of effect was that

the self was not threatened when making decisions for another person. However, we see no reason to believe that people would not feel threatened in the present situation, yet would when making hypothetical gambling decisions for another person.

Instead, we suggest that the threat to the self is different when making decisions for the self and for another person. In particular, when deciding for another person, the concern is that one makes the right decision for the other person. This threat can be alleviated, then, by making the decision that is consistent with what society values. This idea is consistent with research on advice-giving, where advice is seen in part as symbolic social support that is given and evaluated based on the broader cultural contexts (Goldsmith & Fitch, 1997). In simulated business decisions for others, for instance, Jonas and Frey (2003) found that participants were motivated by a desire for accuracy, leading them to present relatively balanced information to others. In our relationship scenarios, however, the societal concerns would be different. In particular, acting in accord with what society values would entail choosing the risk-taking option. If this hypothesis is correct, then participants should generally make risk-seeking decisions for others, regardless of their level of self-esteem or anxiety, which is consistent with our results.

The preceding argument suggests that in decision making for others, threats to the self can be alleviated by making decisions in keeping with what society values, but only when there is a clearly valued behavior. As the threat resolution strategy would likely be different in decision making for the self, self – other differences are likely to emerge when there is a clearly valued behavior. In situations where there is no clearly valued behavior, however, there is less reason for decision making for others to deviate from decision making for the self. Although this hypothesis needs to be verified in future work, it is consistent with data suggesting that risk is valued in relationship decision making but not in monetary decision making (Allgaier & Stone, 2002). Thus, we tentatively propose that self – other differences will emerge in situations in which the threat to the self can be resolved by different behaviors in the two situations.

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