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ABSTRACT

This study seeks to explain self-other differences in decision making pertaining to risk through the comparison of social value theory (Stone & Allgaier, 2008) and construal-level theory (Trope & Liberman, 2010). Research has demonstrated that in comparison to decisions for the self, individuals tend to be more risk-taking when giving advice or deciding for others in low-impact relationship scenarios (Beisswanger, Stone, Hupp, & Allgaier, 2003). Social value theory (Stone & Allgaier, 2008) proposes that advisers decide for others based on a social norm that emphasizes the importance of the social value. In contrast, construal level theory (Trope & Liberman, 2010) suggests that individuals choose differently for others based on a higher-level mental construal that lends to more abstract thinking. Contrary to construal-level theory (Trope & Liberman, 2010), manipulations of mental construal mindset and temporal distance had no impact on the riskiness of the decision outcome in a low-impact relationship scenario. In line with social value theory (Stone & Allgaier, 2008), participants were riskier when making decisions for others than for themselves regardless of the mental mindset and temporal distance.
INTRODUCTION

Every day, people choose whether or not to take risks. Risks may range from deciding to talk to an attractive stranger, to choosing a career, to making a financial investment. While certain decisions are made on the individual’s own behalf, in many instances people will turn to others for advice. For instance, a patient may request health recommendations from a physician, a child may rely on parents for direction, and a friend may ask another friend for advice. Exploring such instances of deciding for other people is important, as research indicates there are often discrepancies between decisions made for others and what individuals decide for themselves (Beisswanger, Stone, Hupp, & Allgaier, 2003; Danziger, Montal, & Barkan, 2012; Kray, 2000; Pronin, Olivia, & Kennedy, 2008; Stone & Allgaier, 2008).

The primary purpose of this investigation is to examine evidence for and against the most prominent explanations and mechanisms for self-other differences in decision making pertaining to risk. Risk is often defined as the “possibility of loss” (Yates & Stone, 1992, pg. 4). Risky decisions refer to problems in which an individual must choose from multiple options that are associated with known or unknown probabilities of desirable (gain) and undesirable (loss) outcomes. As will be illustrated, risk is a subjective experience that involves an interaction between the decision maker and his or her perception of the loss’ significance and probability. For example, risk perception can be impacted by the decision frame and affect of the decision maker. Most important to this investigation, the decision target, or whether an individual chooses for the self or another person, can influence risky decision making.
Originally, it was assumed that individuals approached risk in a rational manner, making choices that would maximize their expected utility. According to *expected utility theory*, people choose based on finding the greatest utility (value) with respect to its probability of occurring (von Neumann, Morgenstern, Kuhn, & Rubinstein, 1944). Contrary to this notion, Tversky and Kahneman (1981) found that choices can be influenced by “decision frames,” or “the decision-maker’s conception of the acts, outcomes, and contingencies associated with a particular choice” (p. 453). This violates dominance and invariance, two fundamental principles of expected utility theory (Kahneman & Tversky, 1984). Dominance means that if choice A and choice B are equivalent in almost all respects, but choice B has some additional benefit over choice A, then choice B should always be preferred. According to the principle of invariance, the way in which the options are presented or described should not affect the preference of choice. Several studies have contradicted these two concepts, demonstrating that the presentation of a decision problem can influence choice preferences (for review, see Kahneman & Tversky, 1984).

Rather than calculating utility values by probabilities, as in expected utility theory (von Neumann et al., 1944), *prospect theory* (Tversky & Kahneman, 1981) states that decision weights influence subjective values. Perhaps the most notable finding explained by this theory is loss vs. gain framing. Tversky and Kahneman (1981) found that when a message is framed as a gain, people tend to favor the less risky choice alternatives, but when the same message is framed as a loss, people tend to favor the riskier choice alternatives.
Prospect theory explains these findings in terms of subjective values and decision weights (Tversky & Kahneman, 1981). Presumably, individuals use a neutral reference point when evaluating an outcome. Rather than adding or subtracting from their current wealth, outcomes are viewed as gains or losses from a value of 0. These gains and losses are believed to be represented on a subjective value scale. Losses loom larger than gains, so that the displeasure associated with a loss is more extreme than the pleasure associated with a gain. This is known as loss aversion, or the tendency to avoid perceived losses. Losses and gains are placed along an S-shaped value scale, concave in domain of gains and convex in the domain or losses. Due to loss aversion, the curve is considerably steeper for losses.

Probabilities are also multiplied by a decision weight, as opposed to standing on their own. Low probabilities are overweighted, while larger probabilities are underweighted. As a result of these two aspects, the value of the 200 lives gained is perceived as greater than the value associated with the gain of nothing and 2/3 probability, while the negative value of 400 lives lost is perceived as smaller than the value associated with the loss of nothing and 1/3 probability. A simple change in word choice results in a considerable change in risk perception.

Other factors that can influence decision making include stress and affect. When estimating probabilities, people often rely on the availability heuristic (i.e., judging likelihood or frequency based on how easily instances are brought to mind; Tversky & Kahneman, 1973). Interestingly, use of the availability heuristic may be influenced by the mood of the decision maker. For instance, Johnson and Tversky (1983) found that inducing negative mood via a news story resulted in increased estimates of death by
different causes. Alternatively, inducing a positive mood resulted in decreased estimates of death. Lerner and Keltner (2001) found that (highly) happy and angry participants tended to make more optimistic predictions about future life events, whereas (highly) fearful participants tended to make more pessimistic predictions. Inducing an angry or fearful mood state in participants resulted in similar findings. Thus, whether one is generally a happy, angry, or fearful person can influence risk perception and optimism pertaining to decision situations.

Mood can also directly impact risk-taking preferences. Isen and Patrick (1983) demonstrated that participants induced to have a positive-affect were more willing to accept a bet and wagered more in a low-risk condition, but were less willing to accept a bet and wagered less in a high-risk condition. Such risk preferences may have been influenced by a motivation to maintain the positive mood state.

Time pressure can affect risk taking as well. In one study, individuals tended to make safer gambles under higher time pressure (Ben Zur & Breznit, 1981). In this case, participants seemed to pay more attention to losses when given less time to decide.

Depression can influence the decision weight attached to risk. Depressed individuals tend to be more risk-averse, assigning greater weight to riskier options (Costello, 1983; Pietromonaco & Rook, 1987). In summary, risk estimates and preferences can be affected by temporary and long-lasting mood states.

Finally, risky decisions can be influenced by the decision target, or whether the individual is making the decision for the self or another person. With respect to the existing literature on this topic, self-other differences in decision making are especially evident in situations pertaining to dating and romantic relationships. Studies have found
that in various relationship scenarios, people tend to choose the risk-taking option for others and the risk-averse option for themselves (Beisswanger, Stone, Hupp, & Allgaier, 2003; Stone & Allgaier, 2008). For instance, an individual might advise others to approach an attractive stranger at a party or ask an acquaintance out on a date, but would choose to avoid this and keep talking to friends for him- or herself. Self-other differences have also been revealed in safety scenarios (Stone, Choi, de Bruin, & Mandel, 2013). These instances showed the opposite pattern, such that participants tended to prefer the riskier option for themselves, and the risk-averse option for others. For example, individuals would choose for their friends to wear a seatbelt, but would forgo wearing a seatbelt for themselves.

Two prominent theories, social values theory (Stone & Allgaier, 2008) and construal-level theory (Trope & Liberman, 2010), help to explain why such self-other differences in decision making occur. However, to date, no study has juxtaposed these two theories in a single experiment. The current investigation seeks to compare and evaluate these two theories, as well as to identify and clarify the precise mechanisms underlying self-other differences in decision making. For the sake of clarity, personal decision maker refers to an individual choosing for him or herself, whereas adviser refers to someone choosing for another person.

Social Values Theory

One predominant explanation for self-other differences, as proposed by Stone and Allgaier (2008), is social values theory. According to this theory, individuals make risky decisions for others when risk-taking is socially valued in the particular situation that one may face. In their work, social value is defined as “people’s perceptions of what other
people in their social groups value, which may or may not correspond to the groups’ actual values” (Stone & Allgaier, 2008, p. 117). For many relationship decisions, risk-taking is the perceived social value. Consequently, a social norm appears to have emerged prescribing risk-taking options when choosing for others. When choosing for oneself, however, there is less expectation to make decisions on the basis of social values. Although a social value may play a role in the individual’s decision, other factors are more likely to dilute the influence of the social value. Similarly, in situations where risk is not socially valued, it is deemed more appropriate to choose the risk-averse option when choosing for others, whereas other factors will influence the personal decision maker. This was demonstrated in a series of safety scenarios, such as whether or not to wear a seat belt or take a diet pill, in which the personal decision maker tended to make the riskier choice, but advised others to be risk-averse (Stone et al., 2013).

In line with this explanation, situations that do not clearly define the social value of risk do not tend to result in self-other differences (Stone, Yates, & Caruthers, 2002). While self-other differences have been found in low-impact relationship scenarios, such as whether to ask someone out on a date, they have not been detected in high-impact relationship scenarios, such as whether or not to move in with a partner (Beisswanger et al., 2003; Stone & Allgaier, 2008). Furthermore, such differences failed to emerge in the context of gambling tasks (Stone, Yates, & Caruthers, 2002).

Adding support to social values theory, previous research on decision weights reinforces the notion that individuals are less likely to consider the social value when choosing for themselves than when choosing for others. Kray (2000) found that personal decision makers tended to weigh decision attributes evenly, whereas advisers placed
more weight on a single attribute. For instance, in choosing where to volunteer, personal
decision makers equally weighed the “time commitment” and “personal development”
attributes, whereas advisers placed greater weight on the “personal development”
attribute. This differential weighting was likely not due to fewer attributes being
considered, as another scenario demonstrated that advisers actually tend to list more
attributes as contributing to their decisions. In the case of relationship scenarios, it is
feasible that personal decision makers may be weighting the social value of risk equally
to other attributes, such as the anxiety associated with approaching an attractive stranger.
Advisers, on the other hand, may be placing preferential weight on the social value.

Social values theory holds that a social norm determines such decision weights.
Stone and Allgaier (2008) asked participants to assess the appropriateness of the risk-
taking and risk-averse options in low-impact relationship scenarios in which an
individual was stated as having to choose for herself or a friend. The differences in
appropriateness between the two options tended to be stronger in the other condition than
the self condition. In other words, it was viewed as especially inappropriate to endorse
the risk-averse option when choosing for another person. Choosing the risk-averse option
for oneself, though, was not judged as harshly. This demonstrates a social norm in which
the social value of risk should be considered when choosing for others, but this
expectation is lessened when choosing for oneself.

Stone and Allgaier (2008) also refuted other explanations that may be posed as
underlying the differences in self-other decision making. According to the misprediction
hypothesis, individuals choose differently for others because the adviser mispredicts what
the other person would prefer the adviser to choose. Stone and Allgaier (2008) refuted
this hypothesis by including a condition in their low-impact relationship scenarios in which the adviser predicted what the other person would choose. Advisers did not tend to indicate that individuals, on their own, would choose the risk-taking option, but still tended to choose this option for them.

An additional possibility underlying the differences in self-other decision making is the *self-expansion hypothesis* (Aron & Aron, 1986), which states that a person is motivated to include close others’ perspectives and identities in his or her own sense of self. In accordance with this theory, one way to expand the subjective sense of self would be for friends to participate in valued behaviors. Contrary to this hypothesis, Stone and Allgaier (2008) found that advisers tended to choose the risk-taking option for both a same-sex friend and a typical student on campus. Under the self-expansion hypothesis (Aron & Aron, 1986), there would not have been any motivation to choose differently for distanced others.

Given the evidence and elimination of alternative theories, social values theory is a viable explanation for self-other differences in decision making. These differences only appear to occur when there is a clear social value associated with risk, and the theory illustrates a plausible motivation for choosing differently for other people (Beisswanger et al., 2003; Stone & Allgaier, 2008; Stone et al., 2013; Stone, Yates, & Caruthers, 2002).

**Construal-Level Theory**

Another explanation for self-other differences in decision making is construal-level theory (Trope & Liberman, 2010). Rather than being driven by a social norm, individuals may choose differently for others due to a high-level mental construal that
results from increased social distance. Understanding this explanation requires a general understanding of construal-level theory.

According to construal-level theory, *psychological distance* affects how an individual mentally construes objects and events (Trope & Liberman, 2010). Psychological distance is determined by how far removed (by time or space) an individual is from his or her present self. Temporal distance refers to the degree to which an individual is permitted to think beyond the here and now (i.e., near or distant past or future). Imagining an event that will occur in the distant future, for instance, results in further distance from the present self than imagining an event that will occur in the next five minutes. As psychological distance increases, so does the mental construal-level, or representation of the event. Low-level (concrete) construals are associated with proximity to the present self, whereas high-level (abstract) construals are associated with distance from the present self. As construal-level increases, the target or event becomes more abstract, so that central features are retained, but incidental features are omitted.

For instance, in deciding whether or not to attend a lecture, one might consider where the lecture is taking place in a building and who the speaker is. Changing the location of the lecture to another floor is not going to affect the event as much as changing who delivers the lecture. As such, in this example, the detail of “where” is subordinate to the detail of “who.” Subordinate details are often more salient in a low-level construal, whereas superordinate details tend to be more salient in a high-level construal. Low-level construals tend to focus on the concrete details or the “how” of an action. In the previous example, this could refer to how the individual will get to the
lecture room. High-level construals tend to focus on the abstract details or the “why” or an action. This could refer to the individual’s reason for attending the lecture.

**Temporal distance.** Supporting this theory, studies (Fujita, Eyal, Chaiken, Trope, and Liberman, 2008; Liberman & Trope, 1998) have demonstrated that as temporal distance increases, individuals focus more on desirability concerns, defined as “the valence of an action’s end state”, and less on feasibility concerns, defined as “the ease or difficulty of reaching the end state” (Liberman & Trope, 1998, p. 7). Simply put, people tend to focus on the “why” when a situation is temporally distant, but focus on the “how” when a situation is closer in time.

For example, Liberman and Trope (1998) gave participants decision scenarios pertaining to attending a guest lecture, installing a word processor, and going to a concert. Feasibility (i.e., the subjective sense that the event/outcome is possible) and desirability (i.e., the subjective estimate of the preference for the event/outcome) features were manipulated in each of these scenarios. The guest lecture, for instance, differed in how interested the participant was in the speaker (desirability) and the convenience of the lecture (feasibility). Desirability tended to matter more when choosing for the distant future (a year from now) and feasibility tended to matter more when choosing for the near future (tomorrow). In other words, a participant in the distant future condition would likely prefer to install the word processor if it is high-quality (high desirability) but takes a long time to learn (low feasibility) than if it is low-quality (low desirability) but does not take very long to learn (high feasibility). The reverse would be true for someone in the near future condition.
In Study 3 of Trope and Liberman (1998), participants rated the importance of the desirability and feasibility features in the previously stated decision problems. The desirability feature was rated most important in the distant future condition, while the feasibility feature was rated most important in the near future condition. The researchers demonstrated similar results in Study 4 when asking participants to choose between an assignment that was difficult (low feasibility) but interesting (high desirability) or easy (high feasibility) but not interesting (low desirability). Participants preferred the easy assignment when it would be given a week from the present and the difficult assignment when it would be given 9 weeks from the present. Taken together, these studies demonstrate a shift away from feasibility concerns and towards desirability concerns with increased temporal distance.

Other researchers have revealed similar findings. For instance, Fujita et al. (2008) found that high-level arguments (i.e., arguments focused on abstract concepts and desirability concerns) were more persuasive when choosing for the distant future. Participants had more positive attitudes towards classes that were offered next year, as opposed to next semester, if student evaluations emphasized desirability features (e.g., fair grading) than feasibility features (e.g., good classroom lighting). In Study 2 of Fujita et al. (2008), participants were more likely to choose to purchase a DVD player three months from now (as opposed to next week) if presented with an additional desirability feature (good for the environment) than an additional feasibility feature (easy to use). No significant differences emerged in either of the studies when choosing for the near future, however. In these scenarios, desirability concern appeared to increase with greater temporal distance, but feasibility concern did not decrease.
Desirability concerns also appear to be augmented with increasing levels of temporal distance. Lutchyn and Yzer (2011) found that participants listed a greater proportion of desirability beliefs (compared to feasibility beliefs) concerning dieting behavior for three months into the future than one day into the future, and for five years in the future than three months into the future.

As proposed by construal-level theory, temporal distance is associated with low-level or high-level mental construal. Thinking about the distant future often encourages a high-level mental construal, with a focus on desirability concerns, or the “why” of a situation. Thinking about the closer future, however, often invites a low-level mental construal, with a focus on feasibility concerns, or the “how” of a situation.

This relationship has been demonstrated in both directions, such that mental construal influences the perception of temporal distance. Liberman, Trope, McCrae, and Sherman (2007) had participants indicate how or why someone would do an activity, such as open a bank account, and to estimate how long from now the target would perform the task. Participants in the “why” condition (i.e., high-level, abstract construal) gave more distant time estimates that participants in the “how” condition (i.e., low-level, concrete construal). In another study, participants listed three goals and were asked successive “how” or “why” questions. These questions asked each participant to state how or why he/she would achieve each goal, followed by how he/she would achieve the listed action or why the listed reason was important, and so on. When asked to state how much time from the present that they would start working on their goals, participants gave answers farther into the future in the “why” condition than “how” condition. High-level mental construals appear to be associated with the perception of greater temporal
distance than low-level mental construals, suggesting a bi-directional relationship between mental construal and temporal distance.

**Social distance.** Social distance appears to be another type of psychological distance that can contribute to decision making. Choosing for the self can be viewed as nearer to the present self than choosing for another person. Just as making a decision for the near future would result in a low-level construal and making a decision for the distant future would result in a high-level construal, so should choosing for the self result in a low-level construal and choosing for another result in a high-level construal.

Research has supported this parallel between social distance and temporal distance. Using the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998), Bar-Anan, Liberman, and Trope (2006) demonstrated that participants implicitly associated temporal distance with construal level, as well as social distance with construal level. The IAT asks participants to categorize word displayed on a screen by pressing one of two keys. Bar-Anan et al. (2006) found that participants were quicker in response time when keys were congruent, with one key for low-level concrete words (e.g. “specific”) and near events (e.g. “tomorrow”) and the other key for high-level abstract words (e.g. “universal”) and distant events (e.g. “old age”), than when keys were incongruent. Incongruent keys represented low-level words and distant events, as well as one representing high-level words and near events. The same results emerged for construal level and social distance, such that a key for low-level and near (e.g. “us”) words and another key for high-level and distant (e.g. “them”) words resulted in slower response times. Thus, both temporal distance and social distance appear to be associated with mental construal at an implicit level.
Only one study has explicitly tested if individuals make the same decisions for others as they would for the distant future. Pronin, Olivia, and Kennedy (2008) found that participants tended to make the same decisions for others as they would for their future selves, and that these decisions differed from what they would choose for their present selves. For example, compared to their present selves, participants tended to volunteer their classmates or future selves to drink more of a disgusting liquid for the sake of science or to devote more time to tutoring freshmen during finals week. Participants were also more likely to delay gratification, accepting a higher lottery winning a few weeks into the future than a lower lottery winning immediately, for their future selves or others than for their present selves. Presumably, deciding for one’s present self resulted in a greater weighting of feasibility concerns, such as inconvenience, whereas deciding for one’s future self or another person resulted in a greater weighting of desirability concerns, such as abstract goals (i.e. helping others and financial gain).

Lastly, constructs related to construal level can impact whether or not self-other differences occur. Individuals who have adopted a high-level mental construal appear to be less likely to choose differently for others than for themselves. Contrary to previous research (Stone, Yates, & Caruthers, 2002), Polman (2012) found that self-other differences emerged in the context of a gambling task. Participants could enter twenty entries into a raffle for a real $200 prize, or spend 1-10 tokens to take a gamble that would increase or decrease their entries into the raffle. Participants tended to gamble more tokens when choosing for others. However, participants who adopted a high mental construal level, reported feeling more power in their everyday lives, or tended towards a
prevention focus (i.e., avoiding undesirable consequences), endorsed as much risk-taking for others as for themselves.

Polman (2012) argued that these findings could be explained in terms of loss aversion. Losses appear to be greater when choosing for near targets than when choosing for distant targets (Polman & Emich, 2011). As distance increases, individuals also become more promotion focused (i.e., approaching desirable consequences) and less prevention focused (Pennington & Roese, 2003). Power, or feeling control over others, can also increase the psychological distance an individual feels from other people (Polman & Emich, 2011). Individuals appeared to experience decreased loss aversion when choosing for others due to a higher construal level. If they had already adopted a higher mental construal, then self-other differences did not emerge.

**Construal-Level Theory vs. Social Values Theory**

Construal-level theory can be easily applied to previous research on self-other differences in decision making. Kray’s (2000) findings could be attributed to an increased weighting of central features and decreased the weighting of incidental features as the result of greater social distance when choosing for others. While advisers may consider more attributes than personal decision makers, they may place greater weight on desirability concerns, and less weight on feasibility concerns. In the case of low-impact relationship scenarios, Stone and Allgaier (2008) have identified the social value of risk as an important desirability concern. According to construal-level theory, choosing for others would result in increased social distance and a high-level construal, so that the social value becomes more important than incidental details, such as one’s own anxiety.
Construal-level theory and social values theory are similar in that when choosing for others, the desirability of the choice becomes more important than the feasibility. However, the two theories differ in determining the drive underlying the shift from feasibility to desirability. According to construal-level theory, the self and other condition represent different social distances, which then result in a low- or high-level mental construal. Social values theory, on the other hand, states that the self and other conditions result in different societal expectations, rather than social distances. Advisers choose based on the social value because it is socially appropriate, not because they are construing information in a different way.

There are reasons to believe that construal-level theory may provide a better explanation than social value theory for self-other differences in decision making. First, construal-level theory explains findings that social values theory by itself cannot explain. When making decisions in the low-impact relationship scenarios, advisers tended to list out more positive reasons for making their decisions, and personal decision makers more negative reasons (Beisswanger et al., 2003). Construal-level theory dictates that cons are subordinate to pros (Eyal, Liberman, Trope, & Walther, 2004; Trope & Liberman, 2010). Having reasons to perform an action are necessary for an action to first be considered. If there are only negative reasons for doing something, than that option will not be considered at all. Pros are still important if there are no cons, but the reverse is not true. Cons, therefore, may receive less weight in the shift from a low-level to high-level construal. Such findings have been reported regarding temporal construal. Eyal, Liberman, Trope, and Walther (2004) found that participants listed more pros and fewer
cons towards events, such as new exam procedures and public policies, in the distant future than the near future.

Additionally, measuring appropriateness does not confirm that individuals are driven by a social norm, as Stone and Allgaier (2008) proposed. When deciding for others, the social value pertaining to risk may become more salient, resulting in an increased appropriateness rating of the risk-taking option. Participants may be choosing differently for others not due to a social norm that dictates it is more appropriate to do so, but due to an increased focus on the social value brought on by distance from the present self. When asked, “how appropriate is this option?,” participants could rate it as more or less appropriate simply based on how much weight they are applying to the social value at the time. This decision weight could be caused by a social norm or psychological distance, but this question alone does not distinguish between the two.

Most notably, research has demonstrated that decisions made by the self or for others can be changed by manipulating construal-level. If decisions are determined primarily by a social norm, than priming participants to think in a “how” or “why” fashion should not influence their decisions. However, Danziger, Montal, and Barkan (2012) found that advisers could be primed to make the same choice as personal decision makers, and vice versa. Participants were given a scenario in which they or another undergraduate had to choose between applying for medical school or accepting a high-paying job at a pharmaceutical company. Personal decision makers tended to choose the more pragmatic option, taking the job, whereas advisers tended to choose the more idealistic option, applying for medical school. In a subsequent study, participants were primed to take on a low-level or high-level mental construal by answering questions
pertaining to “how” or “why” health should be maintained, respectively. Advisers primed to adopt a low-level construal were less likely to recommend applying to medical school than advisers who were primed to adopt a high-level construal or not primed at all. In this scenario, mental construal influenced the participants’ choices, rather than any alternative explanation.

**Current Investigation**

This study seeks to explore if similar findings would be found in decision problems pertaining to risk. Despite Danziger et al.’s (2012) findings, it is still possible that in the case of low-impact relationship scenarios, the social norm could determine the decision outcome. If so, then manipulating mental construal mindset should have no impact on the selected choice. Advisers should tend to choose the risk-taking option, and personal decision makers should tend to choose the risk-averse option. However, if construal level theory underlies these self-other differences, then mental construal level should determine the decision outcome. The current investigation tests this possibility by prompting participants to think in an abstract or concrete manner prior to the decision problem.

A way to further compare construal-level theory and social value theory is to take temporal distance into consideration. If social value theory (Stone & Allgaier, 2008) is accurate, then making a decision for the present should not differ from making a decision for the distant future. In both cases, the importance of the social value would be determined by whether the decision is made for the self or another person. According to construal-level theory, the importance placed on the desirability concern is augmented by increased psychological distance (Liberman & Trope, 2010). As discussed, desirability
features tend to be weighed more heavily than feasibility features when making a
decision for the distant future (Fujita et al., 2008; Liberman & Trope, 1998; Lutchyn &
Yzer, 2011). If mental construal impacts the decision outcome, then participants should
focus more on the social value when making decisions for the distant future. According
to construal-level theory, increased temporal distance should result in a preference for the
riskier option. This study asked participants to imagine the decision scenario in the
immediate present or distant future (a year from now).

Finally, the current investigation seeks to confirm the mechanisms underlying
self-other differences in decision making pertaining to risk. There appears to be a shift
from feasibility to desirability concerns when making the decision for another person.
Underlying this shift is either a social norm or a change in mental construal.

In line with construal-level theory (Liberman & Trope, 2010), it is proposed that
deciding for another person lends itself to a higher construal level, which then leads to an
increase in weighing of desirability concern, resulting in the risk-taking decision outcome.
The current study was designed to test these mechanisms through the use of mediated
moderation analysis. Mediated moderation is determined by another variable mediating
the relationship between interacting variables and a dependent measure (Muller, Judd, &
Yzerbyt, 2005). This can be calculated using a three-way (or two-way) interaction term
as the initial predictor via a set of hierarchical regression analyses (Muller et al., 2005)
and a bootstrap procedure (Preacher & Hayes, 2004, 2008) to determine if the size of an
indirect effect differs significantly from zero. A mediated moderation model can test
whether the link between the three-way interaction (target × time frame × mental
construal) and the decision outcome (risk-taking) is mediated by Desirability/Feasibility concerns.

**Hypotheses**

The purpose of the current study is to assess the degrees to which social value theory or construal-level theory provide explanations for self-other differences in decision making pertaining to risk. According to construal-level theory, increased psychological distance can lead to a higher mental construal, resulting in a focus on desirability concerns (Fujita et al., 2008; Liberman & Trope, 1998; Liberman & Trope, 2010; Lutchyn & Yzer, 2011). Studies have indicated that social distance can parallel temporal distance (Bar-Anan, Liberman, & Trope, 2006; Pronin, Olivia, and Kennedy, 2008). This suggests that rather than making decisions based on a social norm, as social value theory (Stone & Allgaier, 2008) dictates, people are making different decisions for others due to increased psychological distance, which lends itself to a higher mental construal. Based on previous research, this study theorizes that mental construal may explain self-other differences in decision making pertaining to risk.

To test these assertions, this study gave participants a low-impact relationship scenario selected from Beisswanger et al. (2003). Before being presented the decision problem, participants were manipulated to adopt a low-level or high-level mental construal. The decision scenario was framed as occurring in the immediate present or distant future (a year from now). Participants were also asked about the degree to which feasibility and desirability factored into their decisions. The study employed a 2 (Mental Construal: low vs. high) × 2 (Decision Target: self vs. other) × 2 (Temporal Distance: near vs. distant) × 2 (Order of Desirability/Feasibility Measure: before vs. after) complete
between-subjects factorial design, with decision outcome (riskiness of decision), desirability, and feasibility as the dependent variables to test the following hypotheses.

Hypothesis I: If construal-level theory underlies self-other differences in risky decision making, then people will be more likely to endorse riskier decisions options when their thoughts are characterized by high-level, abstract mindsets than low-level, concrete mindsets, regardless of whether they are making a decision for the self or others. If social values theory underlies self-other differences in risky decision making, then the mindset manipulation will not have any effect. People will always tend to endorse the riskier decision for others than themselves.

Hypothesis II: If construal-level theory underlies self-other differences in risky decision making, people will be more likely to endorse riskier decision options when the decision is more temporally distant, regardless of whether they are making the decision for the self or others. If social values theory underlies self-other differences in risky decision making, then manipulating temporal distance will not have any impact on the riskiness of the decision.

Hypothesis III: Desirability/feasibility concerns mediate the relationship between the decision target (self vs. other) and risk-taking. If construal-level theory underlies self-other differences in risky decision making, then mental construal, in turn, will drive the relationship between the decision target and desirability/feasibility concerns. In other words, deciding for another person should lend itself to a high-level, abstract mental construal, which should then lead to more consideration of desirability concern, resulting in a preference for riskier decision options. Deciding for the self should lend itself to a low-level, concrete mental construal, which should then lead to more consideration of
feasibility concerns, resulting in a preference for risk-averse decision options. If social values theory underlies self-other differences in risky decision making, then mental construal will not impact the relationship between the decision target, desirability/feasibility concerns, and risk-taking.
METHOD

Participants and Design

Participants were 230 undergraduates enrolled in introductory psychology courses, who took part in the research study to fulfill a course requirement. The experiment utilized a 2 (Mental Construal: low vs. high) × 2 (Decision Target: self vs. other) × 2 (Temporal Distance: near vs. distant) × 2 (Order of Desirability/Feasibility Measure: before vs. after) complete between-subjects factorial design. Decision outcome (Riskiness of the Decision), Desirability, and Feasibility were measured as the dependent variables.

Procedure

Participants were randomly assigned to one of 16 experimental conditions. Participants were randomly assigned to complete one of two mental construal mindset tasks, randomly assigned to one of two decision problems whereby they reported what their decision would be for either themselves or another person (i.e., a friend), and randomly assigned to one of two conditions whereby the temporal distance of the decision problem was set in the near or distant future. Participants were asked to report their perceived level of the Desirability/Feasibility of the intended decision outcome. The order of the Desirability/Feasibility measurement was counterbalanced such that half of the participants received the measurement immediately prior to the decision problem, and half of the participants received this measurement immediately following the decision problem. Such counterbalancing was employed to ensure that any potential mediating effects were not due solely by the order (or salience) of the given measurement (psychological construct).
Mental construal mindset. Construal level was manipulated using an exercise modified from Freitas, Gollwitzer, and Trope (2004; see Appendix A). Half of the participants were randomly assigned to the concrete (low-level construal-level) mindset condition and the other half of the participants were randomly assigned to the abstract (high-level construal-level) mindset condition.

All participants were asked to first read an introductory paragraph as a way to introduce one of two mindsets (see Appendix A). After reading the introductory paragraph, participants assigned to the concrete condition were asked to list three means by which they could improve and maintain their health. After listing three examples, each example was displayed on the computer monitor (one at a time) and participants were asked to indicate the degree to which engaging in each activity would improve and maintain their health using a five-point Likert scale with 1 (a little) and 5 (very much) as the anchor labels.

Participants assigned to the abstract condition were asked to list three reasons why improving and maintaining their health would help them to reach important life goals. After listing three examples, each example was displayed on the computer monitor (one at a time) and participants were asked to rate the degree to which improving and maintaining their health would help them reach this important goal using a five-point Likert scale with 1 (a little) and 5 (very much) as the anchor labels.

Decision problem. The decision problem was a low-impact relationship scenario as described by Beisswanger et al. (2003; see Appendix B). Participants were randomly assigned to one of four conditions: decision for self-near, decision for other-near, decision for self-distant, or decision for other-distant. In the decision for other conditions,
prior to the decision problem, participants were asked to type in the initials of a friend, and to consider that friend as the friend mentioned in the decision problem. Participants were asked to indicate their decisions using a seven-point Likert scale with 1 (Stay with Friends and Do Not Introduce Myself [Himself/Herself]) and 7 (Introduce Myself [Himself/Herself]) as the anchor labels, such that lower scores indicate endorsement of the risk-averse option and greater scores indicate endorsement of the risk-taking option.

**Desirability/feasibility concerns.** Participants answered two questions to assess the degree to which they believe that they weighed desirability and feasibility concerns in their decision. For desirability, participants were asked “When making your decision, to what degree are you considering the desirability of achieving your desired outcome?” and for feasibility, participants were asked “When making your decision, to what degree are you considering the difficulty of achieving your desired outcome?” Participants provided their response using a seven-point Likert scale with 1 (Not at all Considered) and 7 (Extremely Considered) as the anchor labels. These questions were based on the concepts of desirability and feasibility as defined by Liberman and Trope (1998).
RESULTS

Descriptive Statistics and Intercorrelations

Descriptive statistics and correlations were analyzed for the three dependent variables of decision outcome, desirability, and feasibility (see Table 1). Decision risk was correlated with desirability and feasibility, as would be expected if both constructs contribute to the decision outcome. Desirability and feasibility were not correlated with each other, suggesting they are two separate constructs.

Table I

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decision Risk</td>
<td>—</td>
<td></td>
<td></td>
<td>4.53</td>
<td>1.66</td>
</tr>
<tr>
<td>2. Desirability</td>
<td>.39*</td>
<td>—</td>
<td></td>
<td>4.81</td>
<td>1.29</td>
</tr>
<tr>
<td>3. Feasibility</td>
<td>-.18*</td>
<td>.09</td>
<td>—</td>
<td>4.41</td>
<td>1.50</td>
</tr>
</tbody>
</table>

*p < .01

Riskiness of Decision

In order to test the hypotheses that mental construal and temporal distance can influence the riskiness of the decision (Hypotheses I and II), a 2 (Mental Construal: low vs. high) × 2 (Decision Target: self vs. other) × 2 (Temporal Distance: near vs. distant) × 2 (Order of Desirability/Feasibility Measure: before vs. after) between-subjects analysis of variance (ANOVA) was conducted with decision outcome as the dependent variable (see Table II). Contrary to construal-level theory, there was not a significant main effect of Mental Construal or Temporal Distance (Fs < 1.5). In line with previous research and
social value theory, there was a significant main effect for decision target, $F(1, 214) = 16.59, p = .001$, such that those who chose for others tended to prefer the riskier option ($M = 4.97, SD = 1.55$) more so than those who chose for themselves ($M = 4.09, SD = 1.64$). A significant main effect also emerged for order of the desirability/feasibility questions, $F(1, 214) = 4.59, p = .03$, in which those presented the desirability/feasibility questions before making the final decision tended to prefer the riskier option ($M = 4.75, SD = 1.58$) more so than those presented the desirability/feasibility questions after making the final decision ($M = 4.3, SD = 1.7$). Desirability and feasibility concerns may have been more salient to those presented these questions before making the decision, thus influencing the decision outcome. The significant main effects were not qualified by any of the possible two-way or three-way interactions nor the four-way interaction (all $F$s < 1.5).

Desirability

Another 2 (Mental Construal: low vs. high) $\times$ 2 (Decision Target: self vs. other) $\times$ 2 (Temporal Distance: near vs. distant) $\times$ 2 (Order of Desirability/Feasibility Measure: before vs. after) between-subjects ANOVA was conducted with Desirability as the dependent variable to determine if Mental Construal impacts desirability concerns (see Table III). Consistent with construal-level theory (Hypothesis III), there was a significant main effect for Mental Construal, $F(1, 214) = 5.76, p = .02$, such that participants reported considering desirability more in the high mental construal condition ($M = 5.02, SD = 1.29$) than participants assigned to the low mental construal condition ($M = 4.63, SD = 1.27$). There was also a significant main effect of order, $F(1, 214) = 6.59, p =$
### Table II: Riskiness of Decision

<table>
<thead>
<tr>
<th>Mental Construal</th>
<th>Self</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Temporal Distance: Near</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Before</td>
<td>M = 3.94</td>
<td>M = 4.54</td>
</tr>
<tr>
<td></td>
<td>SD = 1.65</td>
<td>SD = 2.02</td>
</tr>
<tr>
<td>Order After</td>
<td>M = 3.53</td>
<td>M = 3.86</td>
</tr>
<tr>
<td></td>
<td>SD = 1.30</td>
<td>SD = 1.51</td>
</tr>
<tr>
<td>Temporal Distance: Distant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Before</td>
<td>M = 4.33</td>
<td>M = 4.92</td>
</tr>
<tr>
<td></td>
<td>SD = 1.54</td>
<td>SD = 1.66</td>
</tr>
<tr>
<td>Order After</td>
<td>M = 3.78</td>
<td>M = 3.93</td>
</tr>
<tr>
<td></td>
<td>SD = 1.76</td>
<td>SD = 1.64</td>
</tr>
</tbody>
</table>

Note: Order refers to order in which Desirability/Feasibility measures were presented relative to the measurement of risk.

.01, in that participants tended to consider desirability more when the desirability/feasibility questions were presented before the decision problem ($M = 5.03, SD = 1.21$) than when they were presented after the decision problem ($M = 4.6, SD = 1.34$). This suggests that desirability concerns were more salient when the desirability/feasibility questions were presented before making the decision. No other significant main effects ($F_s < 1.5$) or interactions emerged (all $F_s < 1.5$).
### Table III: Desirability

<table>
<thead>
<tr>
<th></th>
<th>Self</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Mental Construal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>M = 4.81</td>
<td>M = 5.23</td>
</tr>
<tr>
<td></td>
<td>SD = .98</td>
<td>SD = 1.42</td>
</tr>
<tr>
<td>High</td>
<td>M = 3.93</td>
<td>M = 5.07</td>
</tr>
<tr>
<td></td>
<td>SD = 1.22</td>
<td>SD = 1.20</td>
</tr>
<tr>
<td>Temporal Distance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Before</td>
<td>M = 4.86</td>
<td>M = 5.38</td>
</tr>
<tr>
<td></td>
<td>SD = .91</td>
<td>SD = 1.12</td>
</tr>
<tr>
<td>Order After</td>
<td>M = 4.50</td>
<td>M = 4.42</td>
</tr>
<tr>
<td></td>
<td>SD = 1.50</td>
<td>SD = 1.34</td>
</tr>
</tbody>
</table>

Note: Order refers to order in which Desirability/Feasibility measures were presented relative to the measurement of risk.

**Feasibility**

A final 2 (Mental Construal: low vs. high) × 2 (Decision Target: self vs. other) × 2 (Temporal Distance: near vs. distant) × 2 (Order of Desirability/Feasibility Measure: before vs. after) between-subjects ANOVA was conducted with feasibility as the dependent variable to test the hypothesis that Mental Construal may influence feasibility concerns (see Table IV). Inconsistent with construal-level theory, there was no significant main effect of Mental Construal or Temporal Distance (all $Fs < 2.00$). However, there was a significant main effect of decision target, $F(1, 214) = 4.57, p = .03$, such that
participants tended to consider feasibility more in the self condition ($M = 4.62, SD = 1.54$) than the other condition ($M = 4.20, SD = 1.43$). A significant interaction between decision target and order also emerged, $F(1, 214) = 4.16, p = .04$. Participants tended to consider feasibility equally when desirability/feasibility questions came before ($M = 4.50, SD = 1.47$) and after ($M = 4.74, SD = 1.61$) the decision in the self condition. In the other condition, feasibility was considered less when desirability/feasibility questions came after ($M = 3.91, SD = 1.34$) than before ($M = 4.50, SD = 1.48$) the decision problem. Increasing salience of desirability/feasibility by presenting the questions before the decision may increase feasibility concerns in the other condition. This does not appear to have such an effect when deciding for the self. There were no other significant interactions (all $F$s < 3.00).

**Mediation Analyses**

Given the absence of significant 3-way interactions for Desirability and Feasibility, there is no justification for conducting a mediated moderation analysis. However, due to the main effect of Mental Construal on Desirability and the correlation between Desirability and the Riskiness of Decision, a mediation analyses was conducted to determine if Mental Construal indirectly influences the riskiness of a decision through desirability concerns.

As recommended by Preacher and Hayes (2004, 2008), a bootstrap procedure based on 5000 random samples with replacement from the full sample can construct bias-corrected confidence intervals to determine if the size of an indirect effect differs significantly from zero. A full model simultaneous regression, controlling for Order of
Table IV: Feasibility

<table>
<thead>
<tr>
<th>Mental Construal</th>
<th>Low</th>
<th>High</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal Distance: Near</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Before</td>
<td>M = 4.43</td>
<td>M = 5.08</td>
<td>M = 4.27</td>
<td>M = 4.57</td>
</tr>
<tr>
<td></td>
<td>SD = 1.75</td>
<td>SD = 1.32</td>
<td>SD = 1.62</td>
<td>SD = 1.09</td>
</tr>
<tr>
<td>Order After</td>
<td>M = 4.87</td>
<td>M = 4.71</td>
<td>M = 3.42</td>
<td>M = 4.43</td>
</tr>
<tr>
<td></td>
<td>SD = 1.55</td>
<td>SD = 1.90</td>
<td>SD = 1.28</td>
<td>SD = 1.34</td>
</tr>
<tr>
<td><strong>Temporal Distance: Distant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Before</td>
<td>M = 4.53</td>
<td>M = 4.00</td>
<td>M = 4.33</td>
<td>M = 4.80</td>
</tr>
<tr>
<td></td>
<td>SD = 1.12</td>
<td>SD = 1.58</td>
<td>SD = 1.72</td>
<td>SD = 1.42</td>
</tr>
<tr>
<td>Order After</td>
<td>M = 4.92</td>
<td>M = 4.43</td>
<td>M = 3.80</td>
<td>M = 4.00</td>
</tr>
<tr>
<td></td>
<td>SD = 1.54</td>
<td>SD = 1.55</td>
<td>SD = 1.37</td>
<td>SD = 1.30</td>
</tr>
</tbody>
</table>

Note: Order refers to order in which Desirability/Feasibility measures were presented relative to the measurement of risk.

Desirability/Feasibility Measure was computed. As expected, this indicated no significant direct effect of Mental Construal on the decision outcome, but revealed a significant indirect effect. The size of the indirect effect was .20 ($SE = .1$), and the 95% confidence interval excluded zero, 95% CI [.04, .43], indicating statistically significant mediation. This finding suggests that mental construal does not directly determine the riskiness of the decision, but high mental construal results in greater desirability concerns, which then lead to a greater tendency to prefer the riskier decision outcome; that is, the effect of mental construal on risk appears to be entirely indirect (see Figure 1).
Mediation of the indirect relationship between mental construal and riskiness of the decision through desirability concern.

Coefficients are standardized regression coefficients. Coefficient in parentheses is from model that does not control for mediator.

* $p < .02$

** $p < .001$

There was also a main effect of Decision Target on Riskiness of the Decision and Feasibility, suggesting that the decision outcome could be influenced by self and other conditions through feasibility concerns. Another full model simultaneous regression, controlling for Order of Desirability/Feasibility Measure, indicated that Feasibility impacted the decision outcome, such that greater feasibility concerns resulted in a weaker tendency to prefer the riskier option. The Decision Target was no longer a significant predictor of decision outcome. The size of the indirect effect was -.07 ($SE = .05$), and the 95% confidence interval excluded zero, 95% CI [-.21, -.003], indicating statistically significant mediation. This finding suggests that choosing for others results in a decrease in feasibility concerns, which then lead to a tendency to prefer the riskier decision option (see Figure 2).
Figure 2

Mediation of the relationship between the decision target and riskiness of the decision through feasibility concern.

Coefficients are standardized regression coefficients. Coefficient in parentheses is from model that does not control for mediator.

* $p < .02$
** $p < .001$
DISCUSSION

As expected, overall, participants tended to prefer the riskier decision option more so when deciding for others than when deciding for themselves. In the current investigation construal-level theory did not appear to underlie the self-other difference that emerged in risky decision making. Manipulating mental construal mindset did not influence the riskiness of the decision (Hypothesis I), nor did manipulating the temporal distance of the decision problem (Hypothesis II). Such findings are in line with previous research and provide support for social values theory (Beisswanger et al., 2003; Stone & Allgaier, 2008). If psychological distance underlied the self-other difference in endorsement of risk, then participants should have preferred the riskier decision when prompted to think abstractly or when deciding for the distant future. Instead, only the decision target influenced the riskiness of the decision. An alternative motivation must have driven individuals to make riskier decisions for others. Given the previous research and refutation of alternative hypotheses (Beisswanger, Stone, Hupp, & Allgaier, 2003; Stone & Allgaier, 2008; Stone, et al., 2013), social value theory provides the most reasonable explanation for self-other differences in risky decision making.

Also in line with social values theory (Stone & Allgaier, 2008), feasibility concerns were greater when deciding for the self than when deciding for others. Furthermore, the relationship between the decision target and riskiness of the decision was partially mediated by feasibility. When making the decision for the self, there is more focus on feasibility, resulting in a preference for the risk-averse decision option. In this scenario, personal decision makers appear to value the difficulty of achieving the desired outcome, or presumably the difficulty of accomplishing a successful interaction
with the attractive stranger. Such feasibility concerns may dilute the social norm when deciding for the self. Since feasibility is not as important when deciding for others, advisers can place greater weight on the social value of risk-taking.

Such reasoning is in line with research by Wray and Stone (2005). They found that risk-taking for personal decision makers in low-impact relationship scenarios was associated with greater perceived probability of success, better reactions to negative outcomes (i.e. rejection), and a more negative view of risk-aversion. Advisers’ decisions, on the other hand, took everything else into consideration, but were not influenced by feelings about the negative outcome. Additionally, anxiety and self-esteem played a role for personal decision makers, but not advisers. Personal decision makers with higher anxiety or lower self-esteem tended to view a positive outcome as less likely and were more concerned about the negative outcome. Consequently, they preferred the less risky decision option. This pattern did not emerge for advisers. The current investigation provides further support that individuals tend to consider feasibility factors, such as anxiety and rejection, more so when deciding for themselves than for others.

Desirability concerns did not follow the same pattern as the other dependent variables, requiring a more complex interpretation of the findings. There was no influence of decision target on desirability concerns. Instead, desirability appeared to provide an indirect pathway for mental construal to influence riskiness of the decision. A high-level, abstract mindset resulted in more focus on desirability, which then led to a preference for the riskier decision. This indicates that mental construal can impact risky decision making, albeit indirectly, by increasing desirability concerns.
It should be noted that the lack of a relationship between the decision target and desirability is not necessarily evidence against social values theory (Stone & Allgaier, 2008). The decision target may not have an influence on desirability concerns in the way construal-level theory defines it. After all, participants are not necessarily making different decisions for others due to the desirability of the outcome. Rather, they are choosing the riskier decision because social expectations dictate that risk is socially valued in that situation. Achieving the best outcome is not necessarily the social value of concern.

While the mediation analyses are suggestive that construal level may play an indirect role in risk taking, the current data suggest that construal-level theory (Trope & Liberman, 2010) does not provide the most adequate explanation for self-other differences in risky decision making. Mental construal may influence risky decision making, but it is does not indicate the underlying cause of self-other differences in risky decision making. If construal-level theory was the stronger explanation, then social distance should have paralleled temporal distance. Instead, temporal distance had no impact at all on the riskiness of the decision. More importantly, neither mental construal nor desirability eliminated self-other differences in decision making. Prompting participants to think in a high-level, abstract manner increased focus on desirability. An increase in desirability in turn led to a preference for the riskier decision option. Yet overall, participants still tended to make riskier decisions for others than for themselves. Decision target had no influence on the desirability, thus, something other than desirability concerns must have driven the tendency for participants to make riskier decisions for others.
As previously stated, the relationship between the decision target and riskiness of the decision was mediated by feasibility concerns. Thus, it is reasonable to conclude that participants made riskier decisions for others due to a decrease in focus on feasibility. This decrease in feasibility was not influenced by mental construal mindset, nor did desirability of the desired outcome impact the decision target. When deciding for others, it seems most plausible that a decrease in feasibility concerns allowed participants to decide based on the social value attached to risk-taking.

However, these findings do not imply that construal-level theory (Trope & Liberman, 2010), as a whole, is invalid. After all, there was an indirect effect of mental construal in the current investigation, and many studies have indicated that temporal and social distance can influence decision making (Fujita, et al., 2008; Liberman & Trope, 1998; Pronin, et al., 2008). Rather, the current investigation demonstrates that psychological distance may not apply to risk-taking, especially in scenarios where there is a clear social value associated with risk.

Another possibility is that previous studies investigating the effects of temporal and social distance may not have concerned risk at all. Recall that risky decisions involve two or more options with known or unknown probabilities that the option will lead to a gain or loss. There is little indication that individuals influenced by psychological distance estimate the probabilities of gains and losses when making their decisions. On the contrary, an outcome may be viewed as a gain or a loss through the manipulation of feasibility and desirability features.

Consider the scenario of choosing whether or not to attend a lecture. The convenience of the lecture is a feasibility concern and how interested one is in the
speaker is a desirability concern. The outcome was whether or not an individual will enjoy the lecture (not the degree of risk endorsed). When deciding the near future, people will theoretically prefer the lecture that is convenient with a boring speaker over the inconvenient lecture with the interesting speaker (Liberman & Trope, 2010; Trope & Liberman, 1998). Deciding for the distant future will result in the opposite pattern. Does this choice actually constitute a risk? It can be argued that in manipulating the psychological distance, one changes the desirable outcome in itself. The two options do not lead to different possibilities of gains and losses. Instead, one option could be in itself the desirable outcome (gain) and the other option the undesirable outcome (loss). The inconvenient, but interesting, lecture may be perceived as more enjoyable due to a higher mental construal. There does not appear to be any assessment of probability that this decision may result in an unfavorable outcome. Perhaps a more accurate definition of feasibility refers to the difficulty of performing an action, rather than the difficulty of achieving an ideal outcome. Likewise, desirability might be better conceptualized as concerning abstract goals.

Even if past experiments utilizing psychological distance could be classified as risky, they do not feature scenarios with a clear social value associated with risk-taking. It has been shown that the perceived probability of a successful outcome influences risk-taking in low-impact relationship scenarios (Wray & Stone, 2005), and that individuals consider the riskier decision more appropriate when choosing for others (Stone & Allgaier, 2008). It is also reasonable to assume that safety scenarios, such as wearing a seatbelt, also involve a calculation of risk (Stone, et al., 2013). On the other hand, deciding whether or not to tutor freshmen, donate more to charity, or drink disgusting
liquid in the name of science (Pronin, et al., 2008) arguably involves more of an assessment of personal values than the social value of risk. Regardless, future studies on self-other differences should take into account whether or not individuals make probability estimates concerning decision options.

In line with previous research suggesting that mood influences risk-taking (Costello, 1983; Johnson & Tversky, 1983; Pietromonaco & Rook, 1987), self-other differences may ultimately hinge on how the decision target effects the way in which an individual interprets the significance of loss and the probability of an outcome. Most notably, Wray and Stone (2005) found that the relationship between self-esteem/anxiety and riskiness of the decision was mediated by the perceived probability of success and feelings about the negative outcome for personal decision makers, but not for advisers. The researchers proposed that deciding based on the social value could be a self-protective strategy. When choosing for others, advisers may use the social norm as a guide for the option that will lend itself to the greatest social approval. As the adviser will not have to experience the decision outcome, they may be less concerned about the loss associated with undesirable consequences.

Wray and Stone’s (2005) reasoning helps to explain Polman’s (2012) findings, which, contrary to previous research (Stone, Yates, & Caruthers, 2002), found self-other differences in gambling tasks, and connected these differences to construal level. This research is in line with the current investigation’s findings that mental construal can influence self-other differences. Just as having high self-esteem or low anxiety appears to eliminate self-other differences, so does having a generally high mental construal, a promotion focus, or feeling more power in everyday situations. This does not necessarily
explain why individuals who are low in these constructs choose differently for others. As manipulating construal level did not eliminate self-other differences in the current study, it suggests that advisers do not (by default) adopt higher mental construals. Consequently, the mechanisms proposed by Wray and Stone (2005) likely provide the better explanation for self-other differences in risky decision making.

Similar to Polman’s (2012) position, it can be argued that personal decision makers experience greater loss aversion than advisers. Individuals choosing for themselves are more concerned with feasibility, but the current data suggest that this is not due to social distance and/or mental construal. Rather, affective factors likely play a greater role for personal decision makers. Because advisers are less concerned with feasibility, they choose the socially valued option based on a social norm that dictates it is the appropriate choice.

Limitations

Unfortunately, there were limitations to the assessment tools used in the current investigation. One concern is that the temporal distance and mental construal manipulations may have lacked in potency. Framing the decision as occurring a year in the future may not have been enough to motivate participants to imagine themselves as deciding for the future. Participants completed the experiment very quickly, and may have treated the distant future condition in the same manner as deciding for the present.

The mental construal mindset condition was modified from the original design employed by Freitas et al. (2004). The original research asked participants a series of “how” or “why” questions in which they proceeded to think more and more about the abstract or concrete reasons underlying their goals. This study had participants read the
same instructions, but only asked them to rate their goals in terms of “why” and “how,” in order to keep the instructions as clear and understandable as possible. Using the original design may have produced a stronger effect. However, the current experiment still produced an effect of mental construal mindset on desirability concerns. This indicates that the manipulation worked, even if another design might hypothetically make it stronger.

A single question assessed desirability and another assessed feasibility. This was not the ideal way to measure desirability and feasibility concerns. There was certainly an impact of desirability and feasibility on conditions, especially given the influence of order on the results. This study sought to illuminate of desirability and feasibility as it has been operationally defined in the literature. As stated earlier, previous definitions of these constructs may need revisions. Another way to assess these constructs would be to ask participants to rate the importance of features specific to the scenario, such as the difficulty of approaching the attractive stranger. Alternatively, one could manipulate the feasibility and desirability features of the decision problem. This may be difficult to do in low-impact relationship scenarios, as anxiety and fear of rejection depend on individual differences, rather than features inherent in the framing of the decision problem.

Due to the measurement of several independent variables, only one decision problem could be featured in this experiment. It is possible that another low-impact relationship scenario could have resulted in different findings. This seems somewhat unlikely given the similarities and self-other differences inherent in other scenarios. Still, future research might seek to replicate the current study’s findings using another decision scenario borrowed from Beisswanger, et al. (2003).
Another limitation of the current study and past experiments is that it is unknown whether or not participants are currently in romantic relationships. If an individual assumes that the imagined friend/other is not dating, but the individual is in a relationship, then this could explain why the riskier decision is chosen for the other, but not for the self. Variation in participants would hopefully account for this possibility. Future studies, however, should ensure the refutation of this explanation by determining if participants are currently in a romantic relationship.

Lastly, it is impossible to state for certain the cause underlying self-other differences in risky decision making. Although mental construal can be eliminated as a possibility, this does not confirm the existence of a social norm. Unfortunately, there is no validated measurement that assesses the influence of the social norm in these scenarios. Participants may or may not realize that is why they are choosing their answers, which would make directly asking about the social norm an ineffective way of measuring it. The elimination of alternative hypotheses, along with the finding that self-other differences in risky decisions only occur when there is an apparent social value attached to risk, makes social values theory the most plausible explanation (Stone & Allgaier, 2008).

Implications and Future Directions

Overall, there are two important implications of the current investigation. First, different processes may underlie self-other differences in decision making depending on whether or not the scenario features risk. While social distance appears to underlie self-other differences in particular decision scenarios (Pronin, et al., 2008), social values theory (Stone & Allgaier, 2008) may better explain self-other differences in decisions
pertaining to risk. Future studies on self-other differences should assess whether participants are considering the probability of different outcomes when making their decisions.

Additionally, there are many situations where self-other differences do not occur. If mental construal can impact certain situations but not others, then research may need to clarify the features underlying decision problems that do not reveal self-other differences compared to those influenced by social distance. For instance, could the feasibility and desirability features of high-impact relationship scenarios be manipulated in such a way that it induces mental construal and results in self-other differences? This may reveal whether or not desirability and feasibility can change the way options are perceived, or if there are still probability calculations associated with such a problem.

The second implication is that the mechanism by which social value theory (Stone & Allgaier, 2008) operates may depend on a shift in feasibility concerns. Future studies should seek to replicate this finding in other risky decision problems, such as safety scenarios.

Research may also benefit from a better understanding of the social value attached to risk. Identifying additional areas where risk is socially valued would reveal new situations in which self-other differences can occur. This information would aid in identifying situations in which it may (or may not) be beneficial to seek the counsel of others. Such knowledge could help personal decision makers and advisers make better decisions.
REFERENCES


APPENDIX A

Mental Construal Mindset

Concrete mindset (low-level construal): 

For everything we do, there always is a process of how we do it. Moreover, we often can follow our broad life-goals down to our very specific behaviors. For example, like most people, you probably hope to find happiness in life. How can you do this? Perhaps finding a good job, or being educated, can help. How can you do these things? Perhaps by earning a college degree. How do you earn a college degree? By satisfying course requirements. How do you satisfy course requirements? In some cases, such as today, you participate in a psychology experiment. This thought exercise is intended to focus your attention on how you do the things you do. For this thought exercise, please consider the following activity: “improving and maintaining one's physical health.”

Abstract mindset (high-level construal): 

For everything we do, there always is a reason why we do it. Moreover, we often can trace the causes of our behavior back to broad life-goals that we have. For example, you currently are participating in a psychology experiment. Why are you doing this? Perhaps to satisfy a course requirement. Why are you satisfying the course requirement? Perhaps to pass a psychology course. Why pass the course? Perhaps because you want to earn a college degree. Why earn a college degree? Maybe because you want to find a good job, or because you want to educate yourself. And perhaps you wish to educate yourself or find a good job because you feel that doing so can bring you happiness in life. This thought exercise is intended to focus your attention on why you do the things you do. For this thought exercise, please consider the following activity: “improving and maintaining one's physical health.”
APPENDIX B

Decision Problem

Self-Near Condition:
Imagine that you and a friend are at a frat party. You spot someone you find attractive across the room. You are thinking of introducing yourself but feel kind of hesitant because you were looking forward to hanging out with your friends. Consider your decision in this scenario.

Other-Near Condition:
Imagine that you and a friend, <initials>, are at a frat party. Your friend spots someone he/she finds attractive across the room. Your friend is thinking of introducing himself/herself but feels kind of hesitant because <initials> was looking forward to hanging out with friends. Consider your decision for your friend in this scenario.

Self-Distant Condition:
Imagine that next year, you and a friend will be at a frat party. You will spot someone you find attractive across the room. You will think of introducing yourself but feel kind of hesitant because you will have been looking forward to hanging out with your friends. Consider your decision in this scenario.

Other-Distant Condition:
Imagine that next year, you and a friend, <initials>, will be at a frat party. Your friend will spot someone he/she finds attractive across the room. Your friend will think of introducing himself/herself but feel kind of hesitant because <initials> will have been looking forward to hanging out with friends. Consider your decision for your friend in this scenario.
CURRICULUM VITAE

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Education

2014   M.A. in Psychology, Wake Forest University, Winston-Salem, NC.

2012   B.A. in Psychology, magna cum laude, St. Edward’s University, Austin, TX.

Research Experience

August 2012 – May 2014   Wake Forest University
Research Assistant
Conducted independent research projects under the guidance of Dr. John Petrocelli.
Administered consent forms and experiments to participants. Coded experiments using
Inquisit and MediaLab software. Reviewed literature. Analyzed data in SPSS.

August – December 2011   St. Edward’s University
Advanced Research and Field Experience
Conducted an extension to the previous independent research project (see below) under
the guidance of Dr. Jeannetta Williams.

May – August 2011   St. Edward’s University
McNair Scholars Program Research Internship
Conducted an independent research project under the guidance of Dr. Jeannetta Williams.
Administered online survey measurements via Qualtrics. Scored and analyzed data in
SPSS. Wrote up proposal and research article. Presented research at McNair symposiums.

January – May 2011   St. Edward’s University
Research Assistant
Conducted research with Dr. Helen Just and team. Designed section of project on self-
esteeem and self-compassion. Administered assessments. Utilized biofeedback equipment.
Entered and analyzed data in SPSS. Presented research at conferences.

Teaching Experience

October 2013 – May 2014   Wake Forest University
Teaching Assistant
Graded quizzes, tutored students, proctored exams, and assisted professors with research
as needed.
February 2013 – May 2014 El Buen Pastor Latino Community Center
Tutor

August 2011 - May 2012 St. Edward’s University
Mentor
Mentor to a sophomore psychology student for Expanding Opportunities for Minority Scholars in Psychology program. Helped team plan information and discussion sessions on psychology research, careers, and graduate school.

August - December 2011 St. Edward’s University
Teaching Assistant
Assisted students and graded papers for Experimental Psychology course and lab.

January - May 2010 St. Edward’s University
Supplemental Instruction Leader
Planned and led weekly study sessions for two sections of American Experience course.

Presentations and Publications

“Self-Other Differences in Risky Decision Making: An Evaluation of Social Value Theory and Construal-Level Theory”
Finalist in Three-Minute Thesis Competition, Wake Forest University, Winston-Salem, North Carolina. (March 2014)
Lecture presented at Seminar in Self-Regulation at Wake Forest University, Winston-Salem, North Carolina. (November 2013)

“Examining Evidence of the Stroop Effect in the Shooter Bias Paradigm”
Lecture presented at First-Year Graduate Colloquium at Wake Forest University, Winston-Salem, North Carolina. (May 2013)

“The Self-Compassionate Person Versus the Self-Enhancer: Differences in Psychological Traits”
Lecture presented at McNair Scholars Program Research Symposium at St. Edward’s University, Austin, Texas. (July 2011)
Lecture presented at California McNair Scholars Symposium at University of California, Berkeley, California. (August 2011)

“Be Kind to Yourself: The Relationship Between Self-Compassion and Stress Effects”
Poster session presented at Symposium on Undergraduate Research and Creative Expression at St. Edward's University, Austin, Texas. (April 2011)
Lecture presented at Student Conference for Research and Creative Arts at University of Houston-Clearlake, Houston, Texas. Nominated for Outstanding Presentation. (April 2011)