

5-1-2015

Guilt and Moral Compensation: Relational or Self-Presentational?

Heather C. Renetzky
Macalester College, heather@renetzky.com

Follow this and additional works at: http://digitalcommons.macalester.edu/psychology_honors



Part of the [Psychology Commons](#)

Recommended Citation

Renetzky, Heather C., "Guilt and Moral Compensation: Relational or Self-Presentational?" (2015). *Psychology Honors Projects*. Paper 35.

http://digitalcommons.macalester.edu/psychology_honors/35

This Honors Project is brought to you for free and open access by the Psychology Department at DigitalCommons@Macalester College. It has been accepted for inclusion in Psychology Honors Projects by an authorized administrator of DigitalCommons@Macalester College. For more information, please contact scholarpub@macalester.edu.

Guilt and Moral Compensation: Relational or Self-Presentational?

Heather C. Renetzky

Macalester College

Abstract

This project investigates the relationship between guilt and moral compensation, or pursuing morally positive behavior following morally suspect behavior. Additionally, the current research seeks to examine whether interpersonal, relational motives or intrapersonal, self-focused motives drive this relationship. In Study 1, participants recalled a moral transgression or a neutral memory; they then rated their guilt and completed a compensatory monetary donation task (or vice versa). Guilt was lower after the compensatory task, particularly for participants who had recalled a transgression, suggesting that compensatory behavior can mitigate guilt. Pre-compensatory guilt also significantly predicted the decision to donate. Study 2 manipulated the anonymity of both the transgression and the compensatory opportunity in order to probe the interpersonal versus intrapersonal mechanisms of guilt and moral compensation. Guilt and donations were higher for known than unknown transgressions, but were unaffected by compensation anonymity, supporting both interpersonal and intrapersonal mechanisms. The link between transgression anonymity and donations was fully mediated by guilt, indicating that guilt motivates subsequent compensatory behavior. Together, the results of these studies illustrate that guilt affects and is affected by compensatory behavior. Further research may help clarify the mechanisms behind this relationship.

Keywords: moral compensation, guilt, prosocial behavior, moral inconsistency

Guilt and Moral Compensation: Relational or Self-Presentational?

One area of acute tension in human moral decision making is in the conflict between wanting to be moral and wanting to benefit from the advantages of acting selfishly or immorally. On the one hand, people often strive to be moral, as immoral behavior leads to a jeopardized self-image, judgment by others, and in some cases, punishment (Merritt, Effron, & Monin, 2010). Yet, on the other hand, immoral behavior—such as cheating, stealing, and acting selfishly—can lead to immediate reward (Mazar, Amir, & Ariely, 2008). The tension between these competing incentives can lead to moral inconsistency; people attempt to benefit from immoral behavior while maintaining a moral self-image, thus engaging in both kinds of behavior (Mazar, Amir, & Ariely, 2008).

Two manifestations of this moral inconsistency are moral licensing and compensatory behavior. In the case of moral licensing, people feel licensed or entitled by previous moral behavior to do something immoral. Acting morally or even recalling previous moral behavior can license a variety of subsequent negative behaviors, including committing selfish acts, making questionable consumer choices, and acting on politically incorrect or racist intuitions (Merritt, Effron, & Monin, 2010). For example, if someone acts generously, they may be more likely to act selfishly later on, even if the context or situation is different.

Such moral licensing effects have been demonstrated by several studies. Monin and Miller (2001) found that giving participants the opportunity to demonstrate lack of prejudice led to more prejudiced decisions later on. In one study, participants had an opportunity to disagree with blatantly sexist statements (e.g., “*Most* women need a man

to protect them”) or ambiguously sexist statements (e.g., “*Some* women need a man to protect them”), or they received no statements at all. Men who received the blatantly sexist statements—and thus, had the greatest opportunity to demonstrate their opposition to sexism—were subsequently more willing to favor hiring a man for a stereotypically male job than were men who received ambiguous statements or no statements. In this instance, the opportunity to disagree with sexist statements licensed making sexist decisions later on.

Further demonstrating the moral licensing account, licensing behavior also emerges in domains that differ from those of the preceding moral behavior. For example, one study revealed that participants who recalled a past moral action indicated less likelihood of engaging in unrelated prosocial activities (e.g., donating blood, volunteering at a homeless shelter, etc.) than those who recalled a past immoral or neutral action (Jordan, Mullen, & Murnighan, 2011). Thus, moral licensing is a robust phenomenon, occurring even when the original licensing behavior has nothing to do with the subsequent immoral behavior. It is important to note, however, that while people may be motivated to act immorally or to compensate as a result of recalling past actions, this motivation may not be conscious. For example, Khan and Dhar (2006) found that participants who were licensed failed to recognize this licensing effect. Students committed to helping a classmate subsequently donated less money to charity than those who were not given a licensing opportunity. However, when asked to justify their donation choice, participants did not identify that the prior task impacted the amount they chose to donate.

This subconsciously driven moral inconsistency is also evident in the form of compensatory behavior (DeCremer, 2009). Compensatory behavior occurs in instances where the pursuit of immoral behavior motivates the pursuit of positive behavior. In these cases, people pursue moral behavior following morally suspect behavior as if to compensate for their moral transgression. Like licensing, compensatory behavior is a well-established phenomenon that occurs in a variety of contexts. For example, Jordan et al. (2011) found that participants who recalled their own previous immoral behavior cheated less in a computer task than those who recalled their own moral behavior. Furthermore, those who recalled their own previous immoral behavior showed more persistence with the task—i.e., answered more questions before beginning to cheat—than did those recalling their own moral behavior.

Research conducted by Zhong and Liljenquist (2006) augments the literature on compensatory behavior by indicating that compensatory behavior can indirectly manifest itself in a decreased desire for physical cleansing, which symbolizes moral purification. Zhong and Liljenquist (2006), who examined the relationship between threatened morality and physical cleansing, found that people who recalled immoral acts had a greater desire for physical cleanliness, which can function as a surrogate for moral purification. Those who recalled their own immoral acts recalled more cleanliness-related words as compared to those who recalled neutral or moral acts. Additionally, participants who copied a story about an immoral act showed a greater preference for cleaning products than those who recalled moral acts. These tendencies are indicative of this overall desire to compensate or fix a past transgression, as according to compensatory behavior.

Guilt and Moral Compensation

Zhong and Liljenquist (2006) also found that compensatory behavior might regulate the experience of negative emotions such as guilt and shame. Their findings showed that engaging in physical cleansing (a form of moral purification) after recalling or reading about an immoral act not only reduced participants' willingness to volunteer but also their moral emotions, including guilt and shame. Furthermore, while the compensatory act of hand washing reduced moral emotions, it did not influence non-moral emotions, suggesting a unique relationship between compensatory behavior and specifically moral emotions. In particular, the reduction of guilt through physical cleansing after the recollection of an immoral act suggests that compensatory behavior may reduce guilt. Additionally, the fact that moral emotions and the desire to volunteer were both reduced by moral cleansing suggests that the mechanisms motivating these changes might be similar.

These findings are indicative of the larger role that emotions play in moral decision making. Moral emotions link internal standards and moral intuitions to subsequent behaviors (Ghorbani, Liao, Çayköylü, & Chand, 2013, Greene & Haidt, 2002); neuroimaging studies, as well as studies of individuals with brain damage, show that emotion and affective intuition are primary drivers of moral judgment (Greene, 2008). For example, Greene (2008) found that classically cognitive brain areas (e.g., the anterior dorsolateral prefrontal cortex) and classically emotion-related areas (e.g., the amygdala) are both activated when people consider moral dilemma cases. While all emotions provide a motivational tendency, particular emotions, such as anger, shame, and guilt are especially relevant to moral behavior (Greene & Haidt, 2002). Such moral

emotions may moderate the link between moral standards and moral decisions, ultimately affecting moral behavior.

These individual emotions elicit specific motivations, serving different emotional functions (Polman & Ruttan, 2012). Anger, for example, plays a role in morally inconsistent behavior in that it causes people to judge others more harshly while simultaneously relaxing judgment of themselves (Hemenover & Zhang, 2004). For example, a study conducted by Polman and Ruttan (2012) found that when participants who recalled an experience that made them angry were given the opportunity to allocate money to cancer research, they donated less money than participants in the neutral condition and urged others to donate more money than those in the neutral condition. Thus, angry people showed a decrease in their own moral behavior while expecting others to act more prosocially than themselves.

Conversely, emotions such as guilt and shame have been found to function as self-conscious emotions, raising awareness of one's own transgressions (Tangney, Stuewig, & Mashek, 2007). Much of the research focused on distinguishing shame from guilt indicates overlap between these emotions. For example, analyses of personal shame and guilt experiences recalled by adults and children revealed little difference between the types of events that elicit shame and guilt (Tangney, Steuwig, & Mashek, 2007). Furthermore, empirical research has shown that shame and guilt are equally likely to be experienced in the presence of others. These emotions do differ, however, in the role of the self in these experiences and in their utility in motivating reparative behavior (Tangney, 1995). While shame emphasizes the self (i.e., in thinking, "I am a bad person."), guilt usually relates to a specific behavior (i.e. in thinking, "I did a bad

thing.”). In this way, shame motivates a hyper-focusing on the self that makes one less likely to focus on repairing the hurt or pain caused to another person; guilt, on the other hand, sparks other-oriented empathy, driving restorative actions (Tangney, 1995). In addition, proneness to shame is correlated with proneness to feelings of outwardly directed anger and hostility, while guilt is not; a study of young adults showed that the tendency to experience shame was significantly positively correlated with measures of trait anger, while proneness to guilt was negatively or negligibly correlated with anger and hostility (Tangney, 1995).

These findings suggest that guilt may play a unique role as an emotional motivator of compensatory behavior. Compensatory behavior is driven by a desire to make up for past transgressions (Ghorbani, M., Liao, Y., Çayköylü, S., & Chand, M., 2013). Guilt can serve as a signifier for these moral violations, motivating reparative behavior (Eisenberg, 2000; Haidt, 2003). Yet, anger allows people to maintain a high sense of moral self-worth, creating entitlement to transgress, and shame is correlated with trait anger and fails to motivate compensatory action (Polman and Ruttan, 2012; Tangney, 1995).

Past research examining the role of guilt in cooperation further indicates that guilt can play a role in compensatory behavior (Ketaleer & Au, 2003). Ketaleer and Au (2003) found that feelings of guilt can spark cooperation in a social bargaining game. In their study, participants who reported guilty feelings after making selfish offers in an ultimatum game were more likely to act cooperatively and make generous offers when re-playing the game up to a week later. In contrast, those who did not report initially feeling guilty continued to pursue selfish strategies a week later. This difference in action

based on guilt feelings seems to show that when guilt arises, it motivates positive behavior. Such findings are suggestive of a relationship between guilt and compensatory behavior, whereby guilt provides motivation to compensate for past misdeeds.

Other evidence further supports the connection between guilt and compensatory behavior by indicating that guilt plays a role in motivating compensatory behavior on behalf of in-group members. In a study by Gino, Zu, and Zhong (2009), participants observed an in-group member (a confederate in a UNC shirt, the school that all participants attended) or an out-group member (a confederate in a Duke shirt, a rival school) act selfishly in a dictator game in the presence of an out-group member (another confederate in a Duke shirt). Participants were instructed that they were each partnered with someone in the other room (a room in which, in reality, students were completing an entirely different study) and that they had \$10 to decide (without any input from their partner) to allocate between themselves and their partner. Individuals were told that they could offer their partner any portion of the \$10, from nothing to the entire amount. Those in the in-group selfish condition left more money for their partner than those in the out-group selfish condition, as if to compensate on their in-group member's behalf. In a follow-up study examining the mechanism behind participants' restitutive acts, Gino et al. (2009) found that participants who were asked to imagine viewing the selfish behavior of an in-group member reported feeling more guilty about the person's selfish behavior than the participants in the out-group selfish condition. Furthermore, self-reported guilt by the participant was a predictor of the amount of money a participant chose to donate. The fact that guilt was associated with the magnitude of participants' donations clearly implicates guilt as a motivating factor in compensatory behavior.

Mechanisms Motivating Guilt and Compensation

Gino, Zu, and Zhong's (2009) findings in combination with Ketaleer and Au's (2003) evidence demonstrates that guilt impacts compensatory behavior. These studies indicate that guilt can motivate compensatory cooperation and prosocial behavior after committing morally suspect behavior or after observing an in-group member acting selfishly. However, what is unclear is how and why this relationship exists.

Although the existing literature implies that guilt motivates compensatory behavior, the mechanisms behind this motivation have not been investigated. In what specific contexts are guilt and compensatory behavior linked, and what do these differing contexts tell us about when and why guilt leads to compensatory behavior? Are there specific contexts in which this relationship does not hold? As a result of this scant data, potential contextual restrictions or limitations to this relationship are unclear.

Additionally, the current research focuses primarily on how guilt might motivate compensatory behavior and there has been little research on how compensatory behavior affects guilt. While the fact that guilt motivates compensatory behavior suggests that compensatory behavior might subsequently affect guilt, this directionality of the guilt and compensatory behavior relationship has not been tested or confirmed.

In order to fully understand the relationship between guilt and compensatory behavior, it is important to more closely examine the theoretical explanations for each phenomenon. Ongoing debates over the mechanisms that drive both guilt and compensatory behavior focus on two broad potential mechanisms: one that is *relational* (i.e., driven by interpersonal motivations) and one that is *self-presentational* (i.e., driven by intrapersonal motivations). Both of these perspectives suggest that guilt and

compensatory behavior allow for the regulation of moral and immoral behavior such that one can accrue the benefits of acting morally while avoiding penalties for transgressions. However, these perspectives differ in what they identify as the potential penalties for transgressions committed without compensation. The interpersonal perspective identifies that acting immorally can negatively affect someone by causing them to be viewed as immoral by others or by negatively impacting their relationships with others. In contrast, the intrapersonal perspective holds that immorality can lead to a compromised sense of self-worth or a damaged self-image.

Interpersonal Compensatory Behavior

According to one view, moral behaviors are driven by our desire to preserve relationships and to be seen positively by others. This perspective holds that status promotion, which occurs when others publicly view one's moral behavior, is the primary motivator for moral actions. Thus, such a perspective can be considered an interpersonal theory of moral behavior. Evidence for this theory comes from the fact that individuals behave the most morally when in the presence or imagined presence of others (Bateson, Nettle, & Roberts, 2006). Public contexts not only heighten morality, but can even prevent moral licensing from occurring. In the context of compensatory behavior, this manifests itself as a desire to retain a good reputation by making up for past transgressions.

A study conducted by Greene and Low (2014) demonstrated the interpersonal nature of moral behavior by examining the effect of recalling past behavior on evaluations of hypothetical moral transgressions in public and private settings. Greene and Low (2014) looked specifically at moral licensing, but their findings connote how

interpersonal mechanisms may work in the context of compensatory behavior. In the experiment, individuals showed a typical licensing effect, whereby they reported being more likely to transgress, and they viewed transgressions as more permissible, after recalling past moral behavior. However, this licensing effect disappeared when the transgressive behavior was conducted in public. In other words, the presence of others and the opinion of others is so important that it can cause one to refrain from acting licensed in the first place. This finding suggests that the public or private context of a transgression can make a difference such that public transgressions are more detrimental, as the opinion of others is of the utmost importance. If public awareness of a transgression increases its salience—to a point where moral licensing no longer even occurs—then it suggests that relationships and reputation are of utmost importance in moral decision making. A similar relational perspective may likewise explain compensatory behavior; compensatory behavior could be fueled by this heightened awareness of moral transgression in a situation where an outside party was affected or observed the initial moral transgression. According to this view, people engage in compensatory behavior to reduce a negative reputation, rather than to preserve their own self-worth.

Intrapersonal Compensatory Behavior

While interpersonal theory claims that a desire to preserve relationships and public reputation drives moral behavior, intrapersonal theory holds that moral behavior is driven by a desire to preserve one's own self-image. According to this theory, people compensate in order to restore their own self-image, which is constructed based on perceptions of one's own morality (Dunning, 2007). In the context of compensatory

behavior, intrapersonal theory holds that an initial immoral action compromises a person's self-worth, subsequently motivating them to pursue self-restorative moral action.

A study conducted by Sachdeva, Iliev, and Medin (2009) demonstrates that compensatory behavior may indeed be driven by intrapersonal mechanisms. Participants were asked to write a short story about themselves or about someone they knew using either negative or positive trait words. After completing the written task, participants had the opportunity to donate part of their compensation to charity. Among participants who wrote a story about someone they knew, donation behavior did not differ depending on the trait words used in the story (negative vs. positive). However, participants who wrote a self-relevant story about their own negative traits donated five times as much as those who wrote a self-relevant story about their own positive traits. Thus, donation behavior was specifically influenced by reflection on one's own traits, with negative reflection creating the greatest need to compensate. The absence of a compensatory effect when participants wrote about others implies something other than interpersonal mechanisms at work. While interpersonal theory would suggest that writing negatively about others might induce a need to compensate—given the relational implications of writing negatively about someone—this was not the case. Rather, it was self-image, and thus intrapersonal factors, that fueled compensatory behavior.

Intrapersonal Guilt

In a similar fashion, intrapersonal theory proposes that guilt drives subsequent actions that can restore one's self-worth. This theory, like the interpersonal theory, still maintains that guilt is a reparative moral emotion. However, the intrapersonal account

suggests that guilt drives any reparative action that will make one feel better about oneself, not just actions that will repair one's relationship with others. Consistent with this notion, a series of studies by de Hooge (2012) demonstrate that even when a transgressor's damage is repaired by someone else, the transgressor's guilty feelings, reparative intentions, and prosocial behavior diminish.

In all five experiments, participants read about transgressing someone (e.g., borrowing someone's bike without permission and having it stolen) and were then asked about their own prosocial behavior and repair motivation (e.g., how much money they would spend on a birthday present for the person they transgressed). Participants read about restoring the transgression themselves, having a third party restore their transgression (e.g., by finding the original stolen bike), or not having the transgression restored at all. de Hooge (2012) found that guilt, repair motivation, and prosocial behavior were equally low when the transgression was restored, regardless of whether it was restored by oneself or by a third party. If guilt serves an interpersonal function, then repair motivations should have remained high when a third party repaired the transgression. Given that, in contrast, repair motivations decreased when someone else did the repairing, it seems that preserving the relationship is not as crucial as the overall alleviation of guilty feelings. Thus, de Hooge's (2012) data supports the intrapersonal theory of guilt—that guilt motivates us to repair our own self-worth.

Interpersonal Guilt

The intrapersonal account of guilt is complicated, however, by other evidence that supports interpersonal mechanisms. According to the interpersonal theory of guilt, guilt is intended to preserve relationships and motivates us to act in order to preserve these

relationships. Guilt—along with shame, embarrassment, and pride—is seen as a self-conscious emotion elicited by others’ negative moral judgments (Tangney, Stuewig, & Mashek, 2006).

According to Baumeister, Stillwell, and Heatherton (1994), guilt serves to reinforce social bonds and is strongest and most common when one transgresses against relationship partners. Autobiographical accounts support such an interpersonal function of guilt. In one study, for example, participants who were asked to provide autobiographical accounts of times when they felt guilty almost solely described interpersonal incidents, with very few accounts referring to solitary transgressions (Tangney, 1992). In another study, participants who wrote a story about feeling guilty were more likely to convey high regard or esteem for the victim, as compared to those who wrote about not feeling guilty (Baumeister, Stillwell, & Heatherton, 1995). Additionally, communal relationships—such as those with family members or romantic partners—were more commonly discussed in the guilty stories than in the neutral stories. These repeated references to close relationships imply that guilt is interpersonal in nature, arising in relational contexts. Furthermore, those recounting guilty stories were more likely to report apologizing or making an effort to reconcile with the victim, thus illustrating that guilt is generally intended to fuel reparative actions.

Connections between Guilt and Compensatory Behavior

Considering that guilt motivates reconciliation and reparative action, it is possible that guilt can specifically motivate compensatory behavior (Haidt, 2003). Guilt is implicated in compensatory contexts as an emotional motivator, leading to greater cooperation and greater likelihood to compensate on behalf of a group member (Ketaleer

& Au, 2003; Gino, Zu, and Zhong, 2009). However, there is a gap in the literature with regards to the directionality of this potential relationship. Past research has not explicitly investigated if guilt affects and drives compensatory behavior, if compensatory behavior affects or mitigates guilt, or if both effects occur. Previous research has mostly looked at correlational data, examining guilt either before or after compensatory tasks, rather than comparing how guilt may change over time.

Furthermore, the mechanisms behind guilt and compensatory behavior, which hint at a relationship between the two, are debated. Research on both guilt and compensatory behavior have yielded conflicting views about whether each of these phenomena is driven by a desire to preserve relationships or a desire to preserve one's own self-image. While some data suggests that guilt occurs overwhelmingly in contexts where close relationships are violated (Baumeister, Stillwell, & Heatherton, 1994) , other data suggests that repair motivations decrease when someone else repairs for you, indicating that preserving one's self-image, not one's relationships is most important (de Hooge, 2012). Similarly, in some cases, compensatory behavior has been shown to increase in the presence of others (Bateson, Nettle, & Roberts, 2006), while in other cases, it appears to occur primarily when self-reflection leads to a compromise in one's self-worth (Sachdeva, Iliev & Medin, 2009).

Given these conflicting mechanistic accounts and the lack of research regarding the ways in which compensatory behavior and guilt may affect each other, it is unclear how exactly guilt and compensatory behavior are related, and whether interpersonal or intrapersonal factors may be driving this relationship. The present research seeks to

answer these questions, elucidating how guilt affects and is affected by compensatory behavior, and what mechanisms are behind this relationship.

In Study 1, the basic relationship between compensatory behavior and guilt was explored using a memory recall manipulation and a compensatory task. Participants were asked to recall either a moral transgression or a neutral experience, and they subsequently had an opportunity to donate a portion of bonus money to charity. Participants reported their level of guilt either before completing this compensatory task (pre-compensatory) or afterward (post-compensatory). Examining the difference in guilt across these conditions has the potential to shed light on the way in which guilt both affects and is affected by compensatory behavior. In particular, if guilt plays a role in compensatory behavior, then thinking about a past moral transgression should lead to larger donations than recalling a neutral event, and this pattern should be mediated by reported guilt. Additionally, if compensatory behavior reduces the experience of guilt, then post-compensatory guilt should be weaker than pre-compensatory guilt.

If guilt and compensatory behavior are related to each other, then the question remains as to what forces drive this relationship. Study 2 will seek to answer this question by looking more closely at the interpersonal and intrapersonal mechanisms that potentially drive guilt and compensatory behavior.

Study 1

Method

Participants. 328 participants (201 males, 126 females, and 1 transgender person) ages 18-63 ($M=30$, $Mdn=28$) completed the study via Amazon Mechanical Turk, a crowdsourcing internet marketplace in which people participate in online tasks in

exchange for monetary compensation. Participation was restricted to residents of the United States. All participants received \$.35 for their participation; they could receive up to an additional \$.20 as a bonus during the compensatory task.

Design. A 2 (order: pre-compensatory vs. post-compensatory) x 2 (recall: transgression vs. neutral) between-subjects design was used in which participants were randomly assigned to one of four between-subjects conditions and subsequently had an opportunity to engage in compensatory behavior in the form of donating money. The order variable manipulated whether guilt was assessed before the compensatory task (pre-compensatory) or after the compensatory task (post-compensatory).

Materials. The initial distractor task contained four questions about probability and was adapted from Lipkus, Samsa, and Rimer (2001). (See Appendix A for questions).

Guilt was manipulated by asking participants either to recall an experience in which they made someone angry and felt bad afterwards (transgression) or to recount their typical Tuesday (neutral) as modeled after Baumeister, Stillwell, and Heatherton (1994), and Jordan, Mullen, and Murnighan (2011), respectively. (See Appendix B for full prompts).

Guilt was assessed with a modified version of the Momentary Emotional States Measure (Peeters et al., 2008). Participants were asked “How do you feel right now?”, followed by a series of emotions evaluated with a 7-point scale, ranging from “not at all” to “very.” The scale included a mix of eight positive and negative emotions taken from Peeters et al.’s (2008) original set of 16. (See Appendix C for modified Momentary Emotional States Measure). Although guilt was the only relevant emotion, the other

seven emotions were included to mask the primary aim of assessing guilt.

As modeled after Sachdeva et al. (2009), compensatory behavior was assessed as the amount of a small bonus (\$.20) that participants decided to donate to charity.

Procedure. All participants completed the study via Amazon Mechanical Turk. Each participant provided consent and was assured that their data would be recorded anonymously. All questions were optional so as to ensure that a participant could opt out of a given question or the entire experiment at any time. To prevent demand characteristics, participants were informed that the study was examining the relationship between numerical literacy and memory recall.

All participants first completed four probability problems, which served to reinforce the false premise of the study. There was a three minute time limit for this task.

Following this task, participants were randomly assigned to one of two recall conditions. Participants in the transgression condition recalled and wrote about an experience in which they made someone angry and felt bad afterwards; those in the neutral condition recalled and wrote about their typical Tuesday. Both groups spent three minutes on the recall task, after which they completed both the emotion questionnaire and the compensatory task. In the compensatory task, participants received a 20 cent bonus for their participation and had the option to donate any amount of the bonus to the American Cancer Society.

Half of the participants in each recall condition completed the emotion questionnaire first and then the compensatory task (pre-compensatory) and the other half completed these tasks in the opposite order (post-compensatory).

Results

A 2 x 2 between-subjects ANOVA examined whether guilt differed as a function of recall (transgression vs. neutral), order (pre-compensatory vs. post-compensatory), and their interaction. There was a main effect of recall, such that guilt was greater in the transgression condition ($M = 3.24$, $SD = 2.05$) than the neutral condition ($M = 1.70$, $SD = 1.27$), $F(1, 326) = 19.03$ $p < .001$, $\eta^2 = .190$. There was also a main effect of order, such that guilt was higher before the compensatory task (pre-compensatory $M = 2.76$, $SD = 2.05$) than afterward (post-compensatory $M = 2.13$, $SD = 1.58$), $F(1, 326) = 15.44$ $p < .001$, $\eta^2 = .046$. The recall x order interaction was significant, $F(1, 326) = 19.03$ $p < .001$, $\eta^2 = .056$, revealing that difference between pre- and post-compensatory guilt was far greater in the transgression condition than the neutral condition (see Figure 1).

Examination of compensation showed that the distribution was non-normal. Although participants could select any option between 0 and 20 cents (via a sliding bar), 98% of responses were either 0 or multiples of 5; over half of the responses were 0. Because of this unusual distribution, compensatory responses were re-coded into two new variables. The *donation decision* variable simply represented whether participants chose to donate nothing (i.e., 0 cents) or something (i.e., any amount from 1 to 20 cents). The *donation amount* variable represented the magnitude of donation decisions; given that nearly all donations were made in multiples of 5, donations of 0, 5, 10, 15, and 20 cents were re-coded as values of 0-4, respectively (any original donations that were not multiples of 5 were rounded up).

A logistic regression predicting decision to donate by condition showed a significant effect of condition (Wald=5.25, $p < .05$) such that people decided to donate more often in the transgression condition (43%) than in the neutral condition (30%).

However, condition did not significantly predict donation amount ($F(1, 325)=2.25$, $p=.135$, $\mu=.007$). This inconsistency across ways of assessing donations seems to be explained by the fact that among people who did donate, donations were descriptively, although non-significantly, higher in the neutral condition ($M=2.15$, $SD=1.00$) than in the transgression condition ($M=1.99$, $SD=.97$), $p>.1$.

Pre-compensatory guilt was a significant predictor of donation decision (Wald=6.45, $p<.05$) indicating that higher ratings of guilt were associated with a greater inclination to donate. A linear regression analysis revealed that pre-compensatory guilt was likewise a marginally significant predictor of donation amount ($\beta=.14$, $t(162) = 1.78$, $p = .077$).

Although Study 1 was concerned specifically with guilt, participants were also asked to report how energetic, anxious, happy, distractible, irritated, talkative, and tense they felt before or after completing the compensatory task. Separate ANOVAs examining these pre-compensatory emotions revealed that anxiety, happiness, irritation, and tenseness differed significantly by condition (All $F_s>4.33$, all $p_s<.039$). However, none of these emotions significantly predicted either donation decision (all $r_s<.057$) or donation amount (all $r_s<.051$). Additionally, donation decision and donation amount were not significantly correlated with any post-compensatory emotions (All $r_s<.114$ and all $r_s<.099$, respectively).

Discussion

This initial study sought to examine the relationship between guilt and compensatory behavior. More specifically, by looking at guilt before and after

compensation, Study 1 sought to determine how guilt both affects and is affected by compensatory behavior.

People who recalled a time when they angered someone felt guiltier than those who recalled a neutral experience. This finding is consistent with previous research, which suggests that recalling experiences of angering or hurting someone can trigger guilt (e.g., Baumeister, Stillwell, & Heatherton, 1994).

As expected, pre-compensatory guilt was lower than post compensatory guilt, indicating that compensatory behavior can reduce the experience of guilt. Guilt was mitigated by compensation more in the transgression condition than in the neutral condition, indicating that this relationship between guilt and compensatory behavior might have limiting conditions. In the neutral condition, pre-compensatory guilt was already very low. It is possible that participants' guilt in this condition was so low that it could not be decreased any further. Alternately, it is possible that the "baseline" guilt that someone feels in their everyday life—rather than guilt explicitly related to a specific experience—cannot be mitigated or otherwise affected by compensatory behavior.

Although those in the transgression condition decided to donate more often than those in the neutral condition, donation amounts were only marginally predicted by guilt. This finding may be explained by the nature of compensatory behavior. Compensatory behavior is intended to allow one to benefit from immoral behavior (e.g., keeping money for oneself rather than donating it), while maintaining a moral self-image (e.g., alleviating the guilt of acting immorally) (Mazar, Amir, & Ariely, 2008). Therefore, if the mere act of donating is enough to alleviate guilt, then guilt may only drive someone to perform this minimal compensation. According to this principle, in the context of the present

experiment, a person would be expected to donate the smallest amount possible to achieve compensation. If, for example, donating less than five cents is effective at alleviating guilt, people may donate up to five cents and nothing more. In doing so, the person benefits by not only decreasing their guilt but also by keeping most of the bonus. Thus, this finding may be indicative of the way in which guilt and compensatory behavior are related; guilt may drive someone to compensate, but only enough to resolve the guilt.

The results of Study 1 suggest a relationship between guilt and compensatory behavior, but do not provide concrete evidence as to the extent of or foundation for this relationship. In particular, Study 1 was limited in its ability to determine the mechanisms behind guilt and compensatory behavior; guilt and compensatory behavior were only evaluated in an interpersonal context as all participants in the transgression condition were asked to recall a time when their actions affected someone else. Study 2 seeks to remedy this by comparing guilt and compensatory behavior across interpersonal and intrapersonal contexts.

Study 2

Study 1 provided evidence for a relationship between guilt and compensatory behavior, suggesting that transgressing can lead to guilt, and that the subsequent compensatory behavior can assuage this guilt. These findings reveal that guilt both affects, and is affected by, compensatory behavior. The question, however, of what drives this relationship remains unanswered. As described earlier, it is unclear whether guilt and compensatory behavior are driven primarily by interpersonal or intrapersonal motivations. While interpersonal motivations include the desire to be perceived morally

by others and to preserve relationships, intrapersonal motivations include wanting to preserve one's own self-image and self-worth.

Study 2 therefore seeks to more closely examine these mechanisms, aiming to distinguish between the interpersonal and intrapersonal accounts.

According to the interpersonal theory of compensatory behavior, status promotion is the primary motivator for moral actions and occurs when one's morality is publicly viewed (Greene & Low, 2014). This theory suggests that public knowledge of one's actions is particularly important, as the opinion of others is the primary concern. This account would predict that transgressors who act immorally in public or with the knowledge of others should fuel a stronger desire to compensate than those who act immorally in a private setting. Furthermore, public transgressions should fuel more guilt than private transgressions, potentially contributing to this greater desire to compensate.

In contrast, the intrapersonal theory holds that public knowledge is irrelevant, as the motivator for acting morally after committing a transgression is to restore one's own self-worth. Thus, according to the intrapersonal theory, the public nature of a transgression should make no difference in either the level of guilt or the desire to compensate.

Study 2 relies on this public versus private distinction in order to examine the interpersonal versus intrapersonal nature of compensatory behavior. In this study, participants' compensatory donation behavior was either publicly disclosed (published in an organization's newsletter) or it was anonymous (published in the newsletter without donor information). If compensatory behavior is primarily driven interpersonally, then participants should donate more in the disclosed condition than in the anonymous

condition. However, if compensatory behavior is driven intrapersonally, then the anonymity of donations should not affect people's desire to donate.

To look more closely at the interpersonal vs. intrapersonal nature of guilt, Study 2 also manipulates the anonymity of the transgression itself. Participants read a scenario in which their transgression would be known, or in which it would be unknown. According to interpersonal theory, guilt is intended to preserve relationships and is inspired by a self-consciousness derived from the judgment of others. If guilt is primarily driven by the judgment of others, then a known transgression should elicit more guilt than an unknown transgression. Alternately, the intrapersonal theory predicts that the anonymity of a transgression should not affect guilt levels.

As in Study 1, Study 2 also varies whether participants reported their guilt before completing the compensatory task (pre-compensatory) or afterward (post-compensatory).

Thus, the interpersonal theory—but not the intrapersonal theory—predicts that the anonymity of both the compensation and the transgression will affect guilt and compensatory behavior, but in a nuanced way. In particular, the effect of compensation anonymity should depend on the transgression anonymity; whereas unknown transgressions should elicit similar donation behavior regardless of whether the compensation occurs anonymously versus publicly, known transgressions should elicit greater donations when public than when anonymous. In other words, the interpersonal theory predicts an interaction between compensation anonymity and transgression anonymity, such that known transgressions would lead to more donations than unknown transgressions and that disclosed donations would be more effective than anonymous donations in addressing this desire to compensate, particularly for known transgressions.

A similar interaction should likewise emerge for ratings of guilt, such that guilt should show greater mitigation from public donation than from anonymous donation, particularly for known transgressions.

Overall, then, the interpersonal theory predicts that both guilt and compensatory behavior will be higher for initial transgressions that are known rather than unknown. Given the role of guilt in driving compensatory behavior—as established by Study 1—Study 2 will test a mediational model of this relationship. This model assesses whether the relationship between transgression anonymity and compensatory behavior is mediated by feelings of guilt. If found, a mediation effect would demonstrate that guilt affects compensatory behavior.

Method

Participants. 496 participants (317 males, 177 females, and 2 gender-nonconforming or undisclosed gender participants) ages 18-74 ($M=31$, $Mdn=28$) were recruited for this study via Amazon Mechanical Turk. Participation was limited to residents of the United States. All participants received \$.35 for their participation.

Design. A 2 (transgression: known vs. unknown) x 2 (compensation: known vs. anonymous) x 2 (order: pre-compensatory vs. post-compensatory) between-subjects design was used in which participants were randomly assigned to one of eight between-subjects conditions.

Materials. All participants imagined themselves as the actor in a scenario in which they volunteer for a non-profit organization and accidentally delete some of the organization's important and irreplaceable data. In the known transgression condition, participants learned that they would be directly implicated as the transgressor (the

supervisor was the only other person with access to the deleted data). In the unknown transgression condition, participants learned that they would not be identifiable as the transgressor (since many others had access to the deleted data; see Appendix D for the complete scenarios).

In the compensatory task, participants had an opportunity to compensate for their mistake by donating a portion of a recently received \$200 bonus back to the organization. Participants selected one of seven specified monetary amounts (\$0, \$5, \$10, \$20, \$50, \$100, \$200) to donate. In the known compensation condition, participants learned that all donations are disclosed and published with the donor's name in the organization's monthly newsletter. In the anonymous compensation condition, participants learned that all donations are published anonymously in the monthly newsletter (See Appendix E for compensatory task).

Guilt was assessed, along with seven other emotions, in the same manner as in Study 1.

Procedure. All participants completed the study via Amazon Mechanical Turk. Each participant provided consent and was assured that their data would be recorded anonymously. All questions were optional so as to ensure that a participant could opt out of a given question or the entire experiment at any time.

Participants were randomly assigned to either the known or unknown transgression condition. They were instructed to read the scenario carefully and to imagine themselves in the situation. After reading the scenario, participants completed both the emotion questionnaire and the compensatory task; in the latter task, participants were randomly assigned to have an opportunity for known vs. anonymous compensation.

Half of the participants in each transgression condition completed the emotion questionnaire before the compensatory task (pre-compensatory), while the other half completed these tasks in the reverse order (post-compensatory).

Results

Donation (the measure of compensatory behavior) statistics and analyses were conducted using an interval scale. Initial donation data was collected on an ordinal scale. However, participants' responses were treated as respective monetary values (e.g., \$0, \$5, \$10) rather than as the original ordinal scale values (e.g., 1, 2, 3).

A 2 x 2 x 2 between-subjects ANOVA examined whether guilt differed as a function of transgression (known vs. unknown), compensation (known vs. anonymous), order (pre-compensatory vs. post-compensatory), and their interactions. There was a main effect of transgression such that guilt was greater in the known transgression condition ($M = 5.29$, $SD = 2.29$) than the unknown transgression condition ($M = 4.83$, $SD = 2.38$), $F(1, 486) = 6.07$, $p < .05$, $\eta^2 = .012$ (see Figure 2). Additionally, there was a main effect of order by which pre-compensatory guilt ($M = 5.67$, $SD = 2.06$) was greater than post-compensatory guilt ($M = 4.44$, $SD = 2.45$), $F(1, 486) = 38.30$, $p < .001$, $\eta^2 = .073$. There was no main effect of compensatory task; guilt did not differ as a function of whether the compensation was known ($M = 5.16$, $SD = 2.30$) or unknown ($M = 4.96$, $SD = 2.38$), $F(1, 486) < 1.0$. Moreover, there were no significant interactions (All $F_s < 2.02$, all $p_s > .15$).

A 2 x 2 between subjects ANOVA was also conducted to examine compensatory behavior, as measured in money donated. This analysis specifically explored whether donations differed as a function of transgression condition (known vs. unknown) and compensatory task condition (known vs. anonymous) as well as their interaction. There

was a main effect of transgression such that donations were higher for known transgressions ($M = 116.91$, $SD = 90.55$) than unknown transgressions ($M = 85.84$, $SD = 85.4$), $F(1, 494) = 15.19$, $p < .001$, $\eta^2 = .030$ (see Figure 3). As with the guilt analyses, there was no main effect of compensatory task condition, $F(1, 494) = .158$, $p = .691$, $\eta^2 = .000$ nor was there a transgression x compensation interaction, $F(1, 494) = .742$, $p > .389$, $\eta^2 = .002$.

Thus, transgression predicted both donation and guilt. Furthermore, pre-compensatory guilt was correlated with donation, indicating that the more guilt someone felt, the larger their subsequent donation ($r(243) = .303$, $p < .001$). Because all three conditions held, a mediation analysis examined whether pre-compensatory guilt mediated the relationship between transgression and donation. Only pre-compensatory guilt was examined, given that the analysis was concerned with assessing whether guilt affects subsequent donations.

Running a mediation model with a 95 percent confidence interval and 10,000 bootstrap samples (Hayes, 2013) showed that there was a significant indirect effect of transgression influencing donation by virtue of pre-compensatory guilt ($p < .05$, $z = -2.38$). Furthermore, when the mediating effect of pre-compensatory guilt was accounted for, the link between transgression and donation was no longer significant ($p = .094$). Thus, pre-compensatory guilt fully mediates the relationship between transgression anonymity and compensation.

As in Study 1 an examination of pre-compensatory non-guilty emotions revealed that some emotions differed significantly by condition. Specifically, participants in the known transgression reported feeling more anxious, irritated, and tense and less happy

than those in the unknown transgression condition (All $F_s > 7.47$, all $p_s < .011$). Moreover, pre-compensatory irritation, tenseness, and anxiety were all positively significantly correlated with donation amount and pre-compensatory happiness was negatively significantly correlated with donation amount (All $r_s > .178$). Additionally, donation decision and donation amount were significantly correlated with post-compensatory anxiety, happiness, distractability, irritability, and tenseness (All $r_s > .128$).

Discussion

Study 2 sought to replicate the findings from Study 1 that guilt motivates subsequent compensatory behavior, and that the opportunity to engage in such behavior can mitigate guilt. Study 2 also sought to extend these findings by examining the candidate mechanisms for guilt and compensatory behavior, distinguishing between interpersonal and intrapersonal factors.

As expected, Study 2 showed that compensatory behavior decreased guilt. People felt less guilty after compensating than those who had not yet engaged in compensatory behavior. Study 2 also revealed that guilt was mitigated equally in the unknown and known transgression tasks. Although the mitigation effect on guilt in Study 1 differed across conditions, the consistent mitigation effect in Study 2 may have arisen because guilt was high in both of the transgression scenarios. In contrast, participants in the neutral condition in Study 1 may not have had enough guilt in the first place to experience a subsequent mitigation.

The patterns of guilt ratings suggested that those whose transgression was known felt more guilty than those whose transgression was unknown. This finding was congruent with the interpersonal theory of guilt. Because interpersonal guilt is primarily

driven by the way in which others see oneself, feelings of guilt should be higher when others know about one's wrongdoings or mistakes. This pattern contrasts with the intrapersonal account, which holds that guilt is self-focused; if guilt was self-focused, the anonymity of a transgression should not have made a difference, and people whose transgression was unknown should have felt equally guilty as those whose transgression was known.

Interestingly, the anonymity of donations did not affect guilt. This is juxtaposed with the finding that the anonymity of the transgression significantly affected guilt. If guilt is interpersonal—as the effect of transgression anonymity suggests—then anonymity of the donation should also make a difference, with disclosed donations mitigating guilt more than anonymous donations. The fact that this was not the case supports an alternative view of guilt, which holds that guilt is more intrapersonal, and is about having the transgression repaired rather than about having the transgressor themselves repair the wrong and preserve a relationship (de Hooze, 2012). These two findings—that donation anonymity did not affect guilt, while transgression anonymity did—are in apparent contrast to one another and require further reconciliation. Potential interpretation of this incongruence will be discussed further in the General Discussion.

Donation behavior largely mirrored patterns of guilt. In particular, anonymity of the donation itself did not affect the amount people chose to give. Donations differed, however, based on transgression condition, such that known transgressions elicited greater donation than did unknown transgressions. Furthermore, the link between transgression condition and donation behavior was fully mediated by guilt: known transgressions led to greater guilt, which in turn led to greater donations. This

mediational effect of guilt, which was expected, suggests that guilt is not only affected by compensatory behavior, but also affects compensatory behavior.

General Discussion

Compensatory Behavior Mitigates Guilt

Taken together, Studies 1 and 2 indicate a relationship between guilt and compensatory behavior such that compensatory behavior can reduce guilty feelings. In both studies, guilt decreased after compensation. This is supported by previous research suggesting that compensatory behavior has an effect on guilt. For example, the finding that compensatory behavior can reduce guilty feelings is congruent with Zhong and Liljenquist's (2006) research that indicates the reduction of guilt by physical cleansing (a physical form of compensation). Furthermore, the present study augments previous research; previous studies have suggested that guilt can motivate cooperation and compensation, but have not examined how this compensation subsequently affects guilt. Ketaleer and Au (2003) found that guilt motivated compensatory cooperation following previous uncooperative actions in a social bargaining game, but did not examine guilt post-cooperation. In the present study, recording guilt before and after compensatory tasks allowed for a comparison of guilt that demonstrates a decrease in guilt post-compensation, and ultimately suggests that compensatory behavior can mitigate guilt.

It is important to note that in Study 1 in particular, compensating decreased guilt even when the compensation had nothing to do with the source of guilt. Participants recalled a wide variety of transgressions, including hurting others, cheating on partners, and emotionally hurting or disappointing other family members. Yet, despite the irreparability of some of these transgressions, participants who recalled a transgression

chose to donate money to the American Cancer Society (as part of the experimental compensatory task) more often than those who recalled a neutral transgression. The fact that participants chose to donate despite this incongruency suggests that guilt may lead to token behavior, such that guilt motivates a compensatory behavior, but not necessarily a behavior equivalent to the original action.

According to Batson, Thompson, Seufferling, Whitney, and Strongman (1999), moral inconsistency is driven by a desire to benefit from acting selfishly while also maintaining one's moral reputation or self-worth. Thus, someone is most likely to take the action that allows for the greatest possible material reward while also preserving their reputation or self-worth. In the case of the current experiment, the only compensatory opportunity participants had was to engage in a minor, unrelated prosocial behavior. If such behavior cannot preserve one's self-worth, then people would not have been motivated to donate, as it would have done little for their self-worth or reputation and would have caused them to incur a cost; donating, in this case, would have caused a decrease in material reward while not accruing any benefit. However, given that participants did donate money, it is possible that minor, token prosocial behavior can alleviate guilt, and in this particular case, allowed the participant to both reap the benefit of material reward (by keeping part of the bonus) and the benefit of preserving their reputation or self-worth (by decreasing guilt).

In Study 1, although people donated more often in the transgression condition, among people who did donate, the amount that they donated did not differ across condition. This may be explained by the idea that moral inconsistency is driven by a desire to benefit from acting selfishly while also maintaining one's moral reputation or

self-worth. It is possible that when participants did choose to donate, they were still donating very little, in order to keep the costs of compensating low. Given these small donation amounts, the actual amount that participants donated may have been based more on individual differences than on the transgression manipulation, as donation behavior can be significantly affected by the way in which personal values align with organizational values (Bennet, 2003).

Guilt Affects Compensatory Behavior

In both Study 1 and Study 2, guilt was also found to motivate compensatory behavior. In Study 1, pre-compensatory guilt was a significant predictor of donation decision, such that greater guilt predicted a greater likelihood to donate. Furthermore, Study 2 showed that guilt not only directly affected compensatory behavior (such that greater guilt led to larger donations), but also fully mediated the relationship between transgression anonymity and compensation. This mediation effect demonstrates that guilt can directly and indirectly affect compensatory behavior.

Analysis of the correlation between compensatory behavior and post-compensatory emotions in Studies 1 and 2 demonstrated that guilt may not be unique in driving compensatory behavior. Several additional emotions significantly differed across neutral and transgression conditions, and across known and unknown transgression conditions in Studies 1 and 2, respectively.

Previous examinations of moral behavior indicate that a variety of emotions affect moral hypocrisy by altering the judgments of one's own moral behavior or the judgments one makes of others' moral behavior (Polman & Ruttan, 2012). For example, Polman and Ruttan's (2012) findings that anger increased moral hypocrisy and envy reversed moral

hypocrisy demonstrate that emotions as a whole are crucial to understanding compensatory behavior. It is therefore unsurprising that the current study revealed a correlation between such emotions as irritation, happiness, and tension, and compensatory behavior.

Past studies also indicate that guilty feelings are closely related to other emotions in a pattern similar to that demonstrated in the current experiment. In an experience sampling method, Baumeister, Reis, and Delespaul (1995) found that guilt feelings among adults were positively correlated with aversive arousal states and were negatively correlated with pleasant arousal states. In the present study, tension and irritation, which are negative arousal states, were higher among those in the known transgression condition than in the unknown transgression condition, and happiness, a positive arousal state, was lower in the known transgression condition than in the unknown transgression condition (Haidt, 2003). These findings are expected given the initial prediction that guilt would be higher among those in the known transgression condition than in the unknown transgression condition. In cases where guilt is thought to be negatively correlated, i.e., in the case of positive arousal states, positive emotions were rated lower than guilt. In cases where guilt is thought to be positively correlated, i.e., in the case of negative arousal states, negative emotions were rated similarly to guilt. Thus, these other emotional findings do not necessarily weaken the relationship between guilt and compensatory behavior. Rather, they indicate that other emotions may be affecting compensatory behavior in conjunction with guilt.

Post-compensatory guilt was similar among those who donated and those who did not donate. This was contrary to the hypothesis that guilt would be lower after donating.

However, this null effect may not rule out the possibility that compensatory behavior reduces guilt. It is still possible that an individual's decision to donate may have reduced their guilt, but that the between-subjects nature of the guilt measurement was unable to assess this possibility.

Interpersonal or Intrapersonal?

Findings regarding the mechanisms behind guilt and compensatory behavior were less clear in that although known transgressions led to higher guilt and thus higher compensation, the public nature of the compensatory task did not affect guilt or donations.

The fact that a known transgressor both felt more guilty and donated more money than an anonymous transgressor seems to imply that there may be interpersonal mechanisms motivating guilt and compensation. According to interpersonal theory, status promotion, which occurs when others publicly view one's moral behavior, is the primary motivator for moral actions. Public transgressions thus create more negative feelings than transgressions committed without public knowledge because there is a greater opportunity for judgment by others (Bateson, Nettle, & Roberts, 2006). In the case of the current experiment, those whose action was known by others may have felt guiltier and donated more due to this very reason.

This evidence for interpersonal mechanisms is complicated, however, by the fact that anonymity of the compensation did not make a difference in guilt or donations. If the presence and judgments of others mattered, then there would have been an effect of compensation anonymity such that public donations were larger, and had a greater ability to mitigate guilt. Yet, findings were more in line with intrapersonal mechanisms.

Intrapersonal theory holds that guilt drives any reparative action that will make one feel better about oneself—public or private (de Hooge, 2012).

Previous research examining non-interpersonal ways to combat guilty feelings suggests a way of reconciling these two findings. A study conducted by Inbar, Pizarro, Gilovich, and Ariely (2013) demonstrated that people will sometimes atone for transgressions by harming themselves. In the study, participants who recalled a guilt-inducing event were more willing to inflict unpleasant electric shocks on themselves than those recalling sad or neutral events. Guilt was also subsequently decreased after administering the shocks. In the case of Inbar et al.'s (2013) experiment, transgressions induced self-harm, despite not necessarily being self-focused transgressions. It is possible that in the present experiment, although guilt and compensation were driven by interpersonal behavior, they were able to be alleviated intrapersonally.

This idea, that guilt and compensation, while sparked by interpersonal mechanisms, can be alleviated by the self, is also supported by Nelissen and Zeelenberg (2009), who found that when opportunities for compensation are not present, guilt can evoke self-punishment. Participants read a situation in which they failed exams, thus incurring extra costs for university on behalf of their parents. While this situation in and of itself was interpersonal in nature, Nelissen and Zeelenberg (2009) found that participants who were unable to repair the transgression (i.e., had to wait until the next academic year to take the course), inflicted self-punishment in the form of self-denied pleasure in a scenario study and inflicted self-enforced penalties.

Nelissen and Zeelenberg's (2009) study has some similarities to the present study in that a given participant was only presented one way to repair a transgression. In the

present study, participants were forced to either donate anonymously or publicly. If given the choice, participants may have preferred to make public donations, thus providing evidence for the interpersonal theory of compensation and guilt. However, when only given one option, they may have donated equal amounts under both conditions because it was the only method of alleviating guilt.

Limitations

Hypothetical scenarios vs. recall. Although there was a strong mediation effect of guilt in Study 2, guilt was only a marginally significant predictor of donation amount (such that greater guilt led to higher donations) in Study 1. These findings may be explained by the difference in experimental designs across the two studies. While participants in Study 1 were making decisions about donating real money, Study 2 presented an entirely hypothetical compensatory task. It is possible that it was easier for people to compensate in Study 2 than in Study 1, given the hypothetical nature of the compensation. This difference in design may explain the fact that guilt was only a partial predictor of compensatory behavior. Previous research has found that real moral decisions can contradict moral decisions made in hypothetical scenarios (Ajzen, Brown, & Carvajal, 2004). For example, in a study conducted by Brown, Azjen, and Hrubes (2003), college students voted in a referendum to contribute a certain amount of money to a scholarship fund in either a hypothetical or a real payment context. Votes to make payments above \$1 were up to 48% higher in the hypothetical condition than in the real condition. A similar effect may have occurred in the present experiment, confounding the ability of guilt to predict donations. It is possible that people donated differently in Study

1 because real money was at stake, and there was a higher threshold of guilt necessary to motivate donations.

Individual differences. One alternative explanation as to why guilt did not accurately predict the amount of money donated is that money itself can be very context dependent. In the context of Amazon Mechanical Turk, money is spare and participants can get paid less than \$2 an hour (Harris, 2014). Thus, the 20 cent bonus allocated as a possible compensatory donation, may have been considered quite large, and might have made participants weary of donating money. Additionally, there may have been other factors keeping people from donating. For example, people may have had particular qualms about donating to the specific charity (The American Cancer Society) in Study 1. Previous research has shown that personal values and inclinations can powerfully influence where people to choose to donate (Bennet, 2003). This complicates the way in which donations to a particular charity can be read as indicative of emotions, rather than personal inclinations.

Congruency. While the current studies demonstrate that compensatory behavior alleviates guilt, the strength of this effect may have been underrepresented because of the incongruency between transgressions and compensatory tasks. Study 1 forced a strong incongruency; while participants recalled irreparable interpersonal transgressions, donating a small amount to charity was the only compensatory option presented. In contrast, Study 2, while presenting an irreparable transgression, presented a compensatory option more closely related to the original transgression (i.e., the donation was going back to the charity affected by the transgression).

Furthermore, this incongruence may have weakened the ability of guilt to predict compensatory behavior. A further investigation of behaviors elicited by guilt may help elucidate whether guilt is an accurate predictor of compensatory behavior overall, or if the link between guilt and compensatory behavior is context specific.

Future Investigation

Manipulating the transgression. Given the evidence supporting both interpersonal and intrapersonal mechanisms of guilt and compensation, these mechanisms may be worthy of further investigation. While the current study demonstrated that transgressing knowingly increases guilt, a future experiment might look at whether differences in familiarity with the person transgressed makes a difference. A study conducted by Ghorbani, Liao, Çayköylü, and Chand (2013) examining hypothetical ethical decisions regarding compensation towards flood victims of differing psychological proximity demonstrated that increased psychological proximity can increase guilt, shame, and compensatory behavior. In the study, participants reported the highest levels of guilt, shame, and compensation when a victim in an imaginative scenario was an in-group member, while the lowest levels of guilt, shame, and compensation resulted when the victim was an abstractly described stranger. If interpersonal mechanisms play a large role in guilt and compensation, as Ghorbani et al.'s (2013) findings suggest, then one would expect to see higher guilt and more compensation in instances where a transgression involves a loved one than when it involves a stranger.

Manipulating whether the initial transgression itself is interpersonal or intrapersonal may help further clarify to what extent guilt and compensatory behavior are

relationship-oriented. In the current studies, transgressions were interpersonal in nature. In Study 1, participants were specifically asked to recall a time that their actions affected someone else. Similarly, in Study 2, although the public nature of the transgression was manipulated, in all cases, deleting the data impacted the organization, and thus, people outside of the self.

It is possible that interpersonal transgressions—i.e. poor decisions that negatively affect others rather than the self—elicit more guilt and a greater need to compensate than intrapersonal transgressions. Previous research examining which types of harm play a determining role in the experiences of guilt and regret found that guilt increased as interpersonal consequences became more severe (Berndsen, van der Pligt, Doosje, & Manstead, 2004). In the study, participants read a scenario in which their decision (e.g., choosing to go on vacation during a family member's anniversary) had ramifications that differed in the degree to which they caused self or interpersonal harm (e.g., at opposite ends of the spectrum: the family members do not care but the holiday goes badly, or the holiday goes well but the family members are disappointed). Guilt was found to increase as negative interpersonal consequences increased.

In accordance with these findings, interpersonal transgressions could trigger more guilt than intrapersonal transgressions. Accordingly, compensatory behavior could be affected as well. If, as the present study suggests, guilt and compensatory behavior are linked, and if compensatory behavior is itself interpersonally motivated, then it is possible that interpersonal transgressions would elicit greater compensatory behavior as well.

Examining a variety of transgressions may also contribute to the literature on compensatory behavior and guilt by indicating whether moral or conventional transgressions are more or less likely to evoke guilt. Previous research has suggested that transgressions can be categorized as either moral or conventional transgressions (Kelly, Stitch, & Haley, 2007). According to this distinction, moral rules, such as those prohibiting murder, have an objective and prescriptive force, while conventional rules, such as dress codes, are arbitrary and situation dependent (Kelly, Stitch, & Haley, 2007). According to the moral/conventional task paradigm, in which subjects are asked to judge examples of prototypical moral and conventional transgressions, moral transgressions are judged more severely across diverse age groups, nationalities, and religions (Kelly, Stitch, & Haley, 2007). In the current study, this distinction was not of relevance; both the transgression prompt and the scenario, in Studies 1 and 2 respectively, were designed simply to elicit guilt and examine the effect of guilt on compensatory behavior. However, coding responses to the transgression prompt in Study 1 based on transgression type may help determine if moral or conventional standards are more often associated with guilty feelings. It is possible that the nature of a moral transgression can either itself influence compensatory behavior, or may influence compensatory behavior by way of guilt, such that moral transgressions are more severe and thus evoke greater guilt and compensation.

The nature of compensation. Given the current study's focus on monetary means of compensation, future investigation might look at other ways to mitigate guilt that are less monetarily focused. Examining other compensatory tasks can reveal the ways in which guilt affects different kinds of compensatory behavior and whether some types of compensatory behavior are more guilt-driven than others. Additionally, further

research can elucidate what it is about compensatory behavior that mitigates guilt and if directly compensating for a transgression is more or less effective at mitigating guilt than indirectly compensating for a transgression. More specifically, manipulating the congruency between transgressions and subsequent compensation can further illuminate the extent of compensatory behavior's ability to affect guilt. In the current study, guilt was affected more by compensation in Study 2 than in Study 1. While study 2 offered a more direct way to compensate—in the form of making a donation back to the organization affected by the transgression—this kind of congruency did not exist in the first task. Thus, it is possible that the greater congruency between transgression and compensation, the more the compensation can mitigate guilt.

Using a within-subjects design. Additionally, examining guilt within-subjects may uniquely contribute to understandings of guilt and compensatory behavior. Because the current study examined pre-compensatory and post-compensatory guilt between subjects, it is difficult to directly deduce the ways in which guilt may affect and be affected by compensatory behavior. Examining an individual's guilty feelings overtime may provide more information regarding how guilt fluctuations correlate to specific actions. In particular, looking at an individual's guilt at the time of a specific guilt-inducing event, versus looking at base-level guilt, can provide insight as to the ways in which compensatory behavior may interact with guilt in certain contexts and over time.

The importance of continued research. The present research indicates that there is, in fact, a relationship between guilt and compensatory behavior. In both studies, guilt was lower after donating, suggesting that compensatory behavior can mitigate guilt. Furthermore, guilt predicted the decision to donate in Studies 1 and 2. While the current

study did not offer clear evidence as to whether interpersonal or intrapersonal mechanisms drive guilt, the fact that the effect of transgression anonymity on donations was fully mediated by guilt indicates that in the case of either mechanism, guilt motivates subsequent compensatory behavior.

Continuing to examine the way in which moral emotions drive compensatory behavior can only further our understanding of moral inconsistency and the source of this enigmatic tendency. Such investigations can contribute to the greater literature regarding why and how we make ethical and moral decisions, shedding light on the complexities of human moral behavior.

References

- Ajzen, I., Brown, T. C., & Carvajal, F. (2004). Explaining the discrepancy between intentions and actions: The case of hypothetical bias in contingent valuation. *Personality and Social Psychology Bulletin, 30*, 1108-1121. doi:10.1177/0146167204264079
- Bateson, M., Nettle, D., & Roberts, G. (2006). Cues of being watched enhance cooperation in a real-world setting. *Biology Letters, 2*, 3, 412-4.
- Batson, C. D., Kobrynowicz, D., Dinnerstein, J. L., Kampf, H. C., & Wilson, A. D. (1997). In a very different voice: Unmasking moral hypocrisy. *Journal of Personality and Social Psychology, 72*, 1335-1348. doi:10.1037/0022-3514.72.6.1335
- Batson, C. D., Thompson, E. R., Seufferling, G., Whitney, H., & Strongman, J. A. (1999). Moral hypocrisy: Appearing moral to oneself without being so. *Journal of Personality and Social Psychology, 77*, 525-537. doi:10.1037/0022-3514.77.3.525
- Baumeister, R. F., Reis, H. T., & Delespaul, P. G. (1995). Subjective and experiential correlates of guilt in daily life. *Personality and Social Psychology Bulletin, 21*, 1256-1268. doi:10.1177/01461672952112002
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin, 115*, 243-267. doi:10.1037/0033-2909.115.2.243
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1995). Personal narratives about guilt: Role in action control and interpersonal relationships. *Basic and Applied Social Psychology, 17*, 173-198. doi:10.1207/s15324834basp1701&2_10
- Bennett, R. (2003). Factors underlying the inclination to donate to particular types of charity. *International Journal of Nonprofit and Voluntary Sector Marketing, 8*, 1, 12-29.
- Berndsen, M., van der Pligt, J., Doosje, B., & Manstead, A. R. (2004). Guilt and regret: The determining role of interpersonal and intrapersonal harm. *Cognition and Emotion, 18*, 55-70. doi:10.1080/02699930244000435
- Brown, T. C., Ajzen, I., & Hrubes, D. (2003). Further tests of entreaties to avoid hypothetical bias in referendum contingent valuation. *Journal of Environmental Economics and Management, 46*, 353-361.
- DeCremer, David (2009). *Psychological Perspectives on Ethical Behavior and Decision Making*. Charlotte, NC: Information Age Publishing
- de Hooge, I. E. (2012). The exemplary social emotion guilt: Not so relationship-oriented when another person repairs for you. *Cognition and Emotion, 26*, 1189-1207. doi:10.1080/02699931.2011.640663
- Dunning, D. (2007). Self-image motives and consumer behavior: How sacrosanct self-beliefs sway preferences in the market place. *Journal of Consumer Psychology, 17*, 237-249. doi:10.1016/S1057-7408(07)70033-5

- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology*, 51, 665-697. doi:10.1146/annurev.psych.51.1.665
- Ghorbani, M., Liao, Y., Çayköylü, S., & Chand, M. (2013). Guilt, shame, and reparative behavior: The effect of psychological proximity. *Journal of Business Ethics*, 114, 311-323. doi:10.1007/s10551-012-1350-2
- Gino, F., Gu, J., & Zhong, C. (2009). Contagion or restitution? When bad apples can motivate ethical behavior. *Journal of Experimental Social Psychology*, 45, 1299-1302. doi:10.1016/j.jesp.2009.07.014
- Greene, J., & Haidt, J. (2002). How (and where) does moral judgment work? *Trends in Cognitive Sciences*, 6, 517-523. doi:10.1016/S1364-6613(02)02011-9
- Greene, M., & Low, K. (2014). Public integrity, private hypocrisy, and the moral licensing effect. *Social Behavior And Personality*, 42, 391-400. doi:10.2224/sbp.2014.42.3.391
- Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences*. Oxford: Oxford University Press. (pp. 852-870).
- Harris, Mark (2014, Dec. 3) Amazon's Mechanical Turk workers protest: 'I am a human being, not an algorithm' *The Guardian*
- Hayes, Andrew F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: Guilford Press
- Hemenover, S. H., & Zhang, S. (2004). Anger, personality, and optimistic stress appraisals. *Cognition and Emotion*, 18, 363-382. doi:10.1080/02699930341000103
- Inbar, Y., Pizarro, D. A., Gilovich, T., & Ariely, D. (2013). Moral masochism: On the connection between guilt and self-punishment. *Emotion*, 13, 14-18. doi:10.1037/a0029749
- Jordan, J., Mullen, E., & Murnighan, J. K. (2011). Striving for the moral self: The effects of recalling past moral actions on future moral behavior. *Personality and Social Psychology Bulletin*, 37, 701-713. doi:10.1177/0146167211400208
- Khan, U., & Dhar, R. (2006). Licensing effect in consumer choice. *Journal of Marketing Research*, 43, 259-266. doi:10.1509/jmkr.43.2.259
- Ketelaar, T., & Au, W. T. (2003). The effects of feelings of guilt on the behaviour of uncooperative individuals in repeated social bargaining games: An affect-as-information interpretation of the role of emotion in social interaction. *Cognition and Emotion*, 17, 429-453. doi:10.1080/02699930143000662
- Lipkus, I. M., Samsa, G., & Rimer, B. K. (2001). Numeracy Task. doi:10.1037/t05138-000
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45, 633-644. doi:10.1509/jmkr.45.6.633

- Monin, B., & Miller, D. T. (2001). Moral credentials and the expression of prejudice. *Journal of Personality and Social Psychology, 81*, 33-43. doi:10.1037/0022-3514.81.1.33
- Merritt, A. C., Effron, D. A., & Monin, B. (2010). Moral self-licensing: When being good frees us to be bad. *Social and Personality Psychology Compass, 4*, 344-357. doi:10.1111/j.1751-9004.2010.00263.x
- Nelissen, R. A., & Zeelenberg, M. (2009). When guilt evokes self-punishment: Evidence for the existence of a Dobby Effect. *Emotion, 9*, 118-122. doi:10.1037/a0014540
- Peeters, F., Berkhof, J., Rottenberg, J., & Nicolson, N. A. (2010). Momentary Emotional States Measure. doi:10.1037/t14574-000
- Polman, E., & Ruttan, R. L. (2012). Effects of anger, guilt, and envy on moral hypocrisy. *Personality and Social Psychology Bulletin, 38*, 129-139.
- Sachdeva, S., Iliev, R., & Medin, D. L. (2009). Sinning saints and saintly sinners: The paradox of moral self-regulation. *Psychological Science, 20*, 523-528. doi:10.1111/j.1467-9280.2009.02326.x
- Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. *Annual Review of Psychology, 58*, 345-372. doi:10.1146/annurev.psych.56.091103.070145
- Tangney, J. P. (1992). Situational determinants of shame and guilt in young adulthood. *Personality and Social Psychology Bulletin, 18*, 199-206. doi:10.1177/0146167292182011
- Tangney, J. P. (1995). Recent advances in the empirical study of shame and guilt. *American Behavioral Scientist, 38*, 1132-1145. doi:10.1177/0002764295038008008
- Zhong, C., & Liljenquist, K. (2006). Washing Away Your Sins: Threatened Morality and Physical Cleansing. *Science, 313*, 1451-1452. doi:10.1126/science.1130726

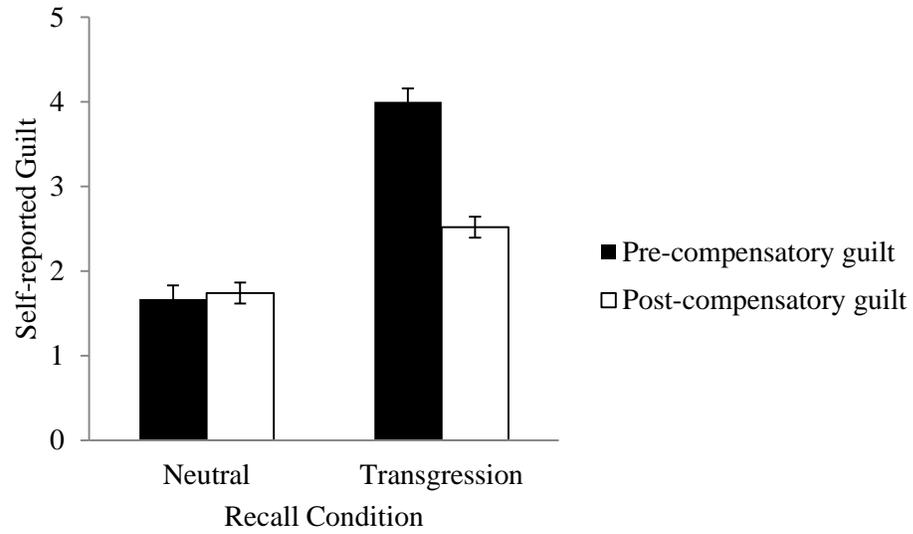
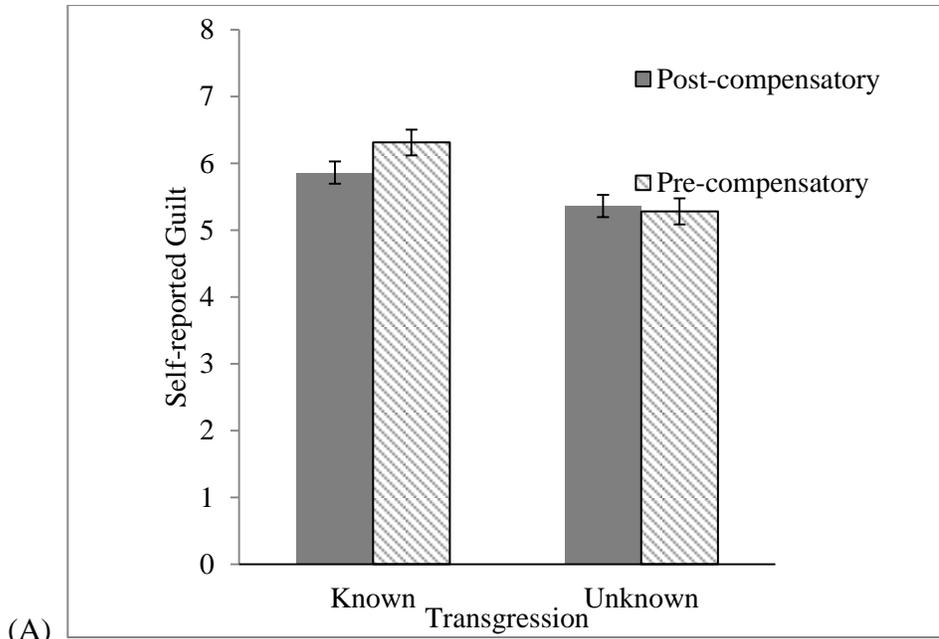
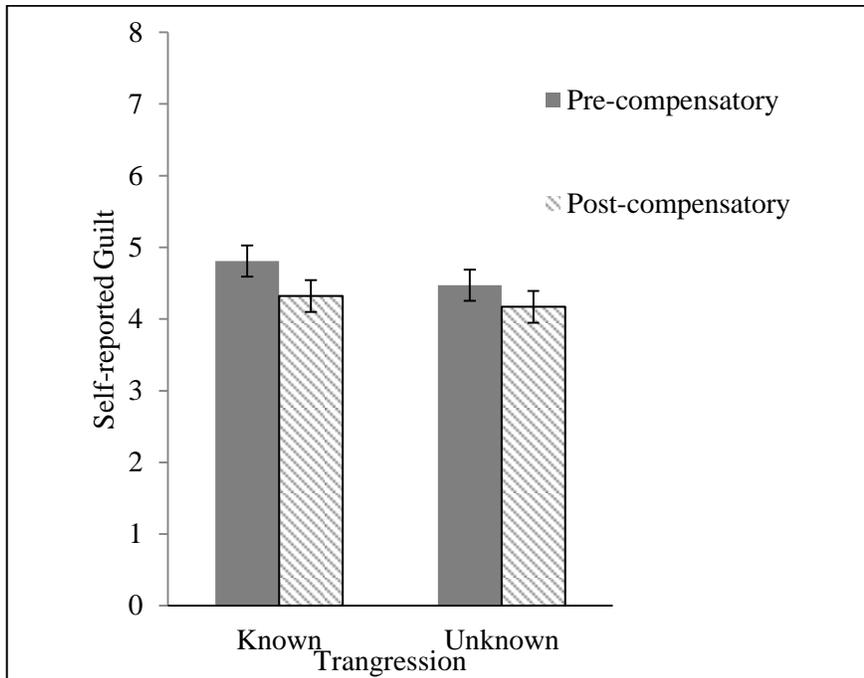


Figure 1: Self-reported guilt in transgression and neutral conditions reported before or after performing a compensatory task in Study 1.



(A)



(B)

Figure 2: Self-reported guilt in known and unknown transgression conditions reported before or after performing a compensatory task in Study 2 in the a) known compensation condition b) anonymous compensation condition

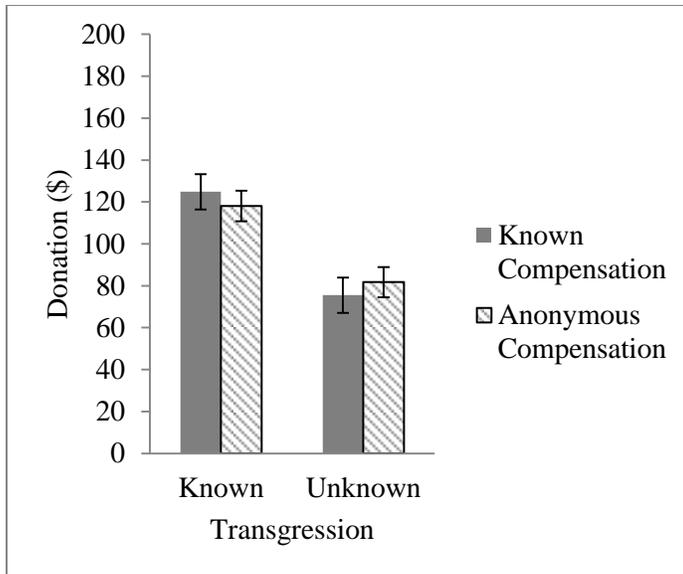


Figure 3: Donations (\$) in the known and unknown transgression and compensation conditions in Study 2.

Appendix A

Please answer the following questions to the best of your ability. You will have three minutes to complete this portion of the questionnaire.

1. Imagine that we roll a fair, six-sided die, 1,000 times. Out of 1,000 rolls, how many times do you think the die would come up even (2, 4, or 6)?

Number of times:

2. In the Big Bucks Lottery, the chances of winning a \$10 prize are 1%. What is your best guess about how many people would win a \$10 prize if 1,000 people each buy a single ticket from Big Bucks?

Number of people: (fill in the blank)

3. In the Acme Publishing Sweepstakes, the chance of winning a car is 1 in 1,000. What percent of tickets of Acme Publishing Sweepstakes win a car?

Percent of tickets: (fill in the blank)

4. Which of the following numbers represents the biggest risk of getting a disease?

(1) 1 in 100

(2) 1 in 1,000

(3) 1 in 10

Appendix B

(transgression) Please write about a time that you angered someone and then felt badly about your actions.

(neutral) Please write about what you do during your average Tuesday.

Appendix C

Items rated on a 7-point Likert scale from 'not at all' to 'very.'

Please indicate how you feel in this particular moment

anxious

irritated

tense

guilty

distractible

energetic

happy

talkative

Appendix D

Scenario instructions: Please read the following scenario carefully. As you are reading, imagine yourself as the person in the story.

(UNKNOWN Transgressor):

For the last three months, you have been volunteering as a computer science intern at a non-profit organization. You just received a \$200 bonus for your hard work.

Motivated to do even more work for the organization, you decide to reformat the computer's data system. Although the task is beyond your skill level, you know that updating the system would really help the organization. In the process of trying to reformat the data system, you accidentally delete the data before copying it all over, causing your organization to lose irreplaceable data that has been collected over the past 30 years.

Since many people had access to this particular data, no one will know it was you who made this fatal error.

(KNOWN Transgressor):

For the last three months, you have been volunteering as a computer science intern at a non-profit organization. You just received a \$200 bonus for your hard work.

Motivated to do even more work for the organization, you decide to reformat the computer's data system. Although the task is beyond your skill level, you know that updating the system would really help the organization. In the process of trying to reformat the data system, you accidentally delete the data before copying it all over, causing your organization to lose irreplaceable data that has been collected over the past 30 years.

Since only you and your supervisor had access to this particular data, it will be obvious that it was you who made this fatal error.

Appendix E

(UNKNOWN Compensatory task)

Now, think back to the scenario you read.

To try to make up for your mistake, you think about donating some of your \$200 bonus back to the organization.

It is the organization's policy only to accept anonymous donations; all donations are published in the monthly newsletter, but without the donor's name.

How much do you donate?

(\$0, \$5, \$10, \$20, \$50, \$100, \$200)

(KNOWN Compensatory task)

Now, think back to the scenario you read.

To try to make up for your mistake, you think about donating some of your \$200 bonus back to the organization.

It is the organization's policy not to accept anonymous donations; all donations are published in the monthly newsletter along with the donor's name.

How much do you donate?

(\$0, \$5, \$10, \$20, \$50, \$100, \$200)