TRAUMA AND BETRAYAL BLINDNESS IN CHARITABLE DONATIONS

by

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DISSERTATION ABSTRACT

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Betrayal trauma theory posits betrayal events often require "betrayal blindness" in order to limit awareness or memory of information regarding the betrayal. This occurs in order to maintain a connection that is necessary for survival. Betrayal trauma theory may be applied to events that generally would not be considered traumatic, such as adultery or discrimination. In order to maintain connections within relationships, institutions, and social systems upon which there is a dependency, people (acting as victims, perpetrators, and witnesses) may show betrayal blindness. This dissertation consists of two studies investigating betrayal blindness and betrayal trauma history as they relate to charitable behavior.

Study 1 included 467 college students at the University of Oregon who completed self-report measures of trauma history and a behavioral measure requesting a hypothetical donation. Contributions were requested for three scenarios that varied in level of betrayal: natural disaster, external genocide, and internal genocide. Results indicated no significant main effects for trauma history or type of event. However, people were less willing to donate to the group of recipients and the genocide conditions at low levels of emotional arousal. Additionally, those who have experienced high betrayal traumas also were less likely to donate at low emotional response values. Given

the lack of significant findings in this experiment, a second study was conducted using a repeated measures design.

Study 2 involved 634 undergraduate students at the University of Oregon. In addition to the measures from Study 1, participants also completed additional self-report measures assessing trait measures of prosocial tendencies, social desirability, personality, emotion regulation, and betrayal awareness. There were no main effects on charitable behavior for personality traits, prosociality, emotion regulation, social desirability, or betrayal awareness. Significant order effects were observed when comparing the type of event and betrayal level of event. A between-subjects approach revealed people donated less money to the higher betrayal versions of both types of scenarios. Across both studies, increased affect, particularly guilt, was associated with more charitable behavior. Although there are several limitations of these studies, the findings represent an important first step exploring prosocial behavior within a betrayal trauma framework.

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CHAPTER I

GENERAL INTRODUCTION

Bekkers and Wiepking (2007) defined charitable giving as "the donation of money to an organization that benefits others beyond one's own family" (p. 2). In 2011, charitable giving in the United States amounted to $298.42 billion; individual donors comprised the largest category of contributors, donating a combined $217.79 billion (Giving USA, 2012). According to Giving USA (2012), almost two-thirds of American households gave to charity for a mean amount of $870. Most funds (32%) were provided to religious organizations; however, approximately $35 billion went to social or human services charities.

Much research has been conducted on the psychological, economic, and social factors associated with the act of giving money to those in need, including emotional responses and number of recipients. However, there has been little empirical investigation into how trauma characteristics may relate to charitable giving. Moreover, the previous examinations have never utilized betrayal trauma theory (BTT; see Freyd, 1996) as an explanatory paradigm. BTT asserts that, in order to maintain a necessary attachment, people may develop "betrayal blindness" that limits awareness or memory of the betrayal. This dissertation aims to elucidate betrayal trauma characteristics of donors and events that may promote or hinder helping behavior. A brief review of the more established lines of research regarding correlates of helping behavior is presented first, followed by an overview of the recent research exploring trauma aspects of generosity.

Emotional Responses

There is extensive literature on the relationship between mood and prosocial activities, with emotional responses serving as both motivators for, as well as outcomes of, providing aid.

Sadness

Research linking sadness to helping behavior is mixed. Some evidence suggests that feelings of sadness promote generosity (e.g., Cialdini & Kenrick, 1976; Manucia, Baumann, & Cialdini, 1984; Batson et al., 1989). Cialdini, Darby, and Vincent (1973) proposed a negative state relief model to explain the relationship between negative affect and increased helping behavior. They argue that empathy increases sadness and so the person is motivated to reduce that sadness by helping. Supporting this, Schaller and Cialdini (1988) found a positive relationship between empathy and sadness that was associated with increased helping. However, the empathy-altruism hypothesis (e.g, Batson & Shaw, 1991) proposes that true empathic concern for the other is the motivation for the helping behavior, not the egoistic desire to reduce negative emotions. Supporting this, research by Cialdini, Brown, Lewis, Luce, and Neurberg (1997) showed that empathic concern remained a significant predictor of willingness to help after excluding the effects of sadness and personal distress. Yet, the relationship between empathic concern and helping was eliminated once *oneness* (i.e., a sense of shared identities or overlap between self and other) was entered into the model. Thus, the authors argue that empathic concern truly represents self-other overlap, which is the motivating factor for the prosocial actions. Nevertheless, the controversy appears to concern the motivation behind how sadness enhances helping behavior, rather than whether there is a

relationship (Cialdini, Baumann, & Kenrick, 1981).

Yet, other evidence suggests feelings of sadness may reduce generosity. Two studies with children showed that, after a experiencing a sad mood induction, they donated less money than children who were in a positive or neutral mood (Moore, Underwood, & Rosenhan, 1973; Underwood, Froming, & Moore, 1977). Other developmental research did not replicate this finding (Rosenhan, Underwood, & Moore, 1974; Harris & Siebel, 1975). When comparing charitable donations before and after adults viewed either a sad or neutral film, Underwood, Berenson, and colleagues (1977) further demonstrated that sadness reduces generosity. However, donor ratings of emotions were not obtained so it is unclear what other emotions may have been experienced that could disrupt the sadness-helping connection (Cialdini, Baumann, & Kenrick, 1981).

Cialdini and Kenrick (1976) pointed out that much of the research revealing an inverse relationship between sadness and helping behavior was conducted with children. They proposed that young children do not yet have the association of positive affect with prosocial behavior and thus would not make use of helping behavior as an emotion regulation strategy. Testing this hypothesis with three age groups, they revealed that the inverse relationship between sadness and generosity changed to a direct one as age increased, with the oldest age group showing a significant increase in helping behavior when in a negative mood. Results from Kenrick, Baumann, and Cialdini (1979) provided further support for this, in that, even young children will donate more when feeling sad if there is the opportunity to evoke positive affect via public approval.

Sympathy and Compassion

Eisenberg and Miller (1987) define sympathy as "an emotional response stemming from another's emotional state or condition that is not identical to the other's emotion, but consists of feelings of sorrow or concern for another's welfare" (pp. 91-92). Sympathy is integral to attribution theory's model of helping behavior (Rudolph, Roesch, Greitemeyer, & Weiner, 2004). This theory proposes that, when confronted to provide aid, an evaluation is conducted to determine the reason aid is being requested. If the potential helper attributes the recipient's need to be due to factors beyond their control, the potential helper then feels sympathy and responds with helping behavior. Research by Russell and Mentzel (1990) provide support for the connection between attribution and sympathy. They performed a principal components analysis on sympathy ratings about 20 disasters and found a single underlying dimension, which they interpreted as "culpability", that explained 67% of the variability.

The link between increased feelings of sympathy and higher rates of prosocial behavior has been well documented (Eisenberg & Miller, 1987), albeit with difficulty because of the frequent use of related terms such as empathy (see Batson, 2009). However, the studies directly assessing sympathy do show the predicted positive associations (Eisenberg, Fabes, et al., 1989; Eisenberg, Miller, et al., 1989; den Ouden & Russell, 1997). Compassion, "the feeling that arises in witnessing another's suffering and that motivates a subsequent desire to help" (Goetz, Keltner, & Simon-Thomas, 2010, p. 351), also relates to prosocial behavior (Piff, Kraus, Cote, Cheng, & Keltner, 2010; Saslow et al., 2103).

Anger

Anger is the counter emotion to sympathy in attribution theory's model of helping behavior (Rudolph et al., 2004). If the causal attribution is perceived to be controllable by the recipient, the emotion evoked is anger rather than sympathy. This results in antisocial actions being taken, including the decision to *not* provide aid. Weiner, Perry, and Magnusson (1988) found that participants reported greater anger and less sympathy for perceived "controllable" behavioral/mental stigmas (compared to physically based stigmas), which in turn predicted lower charitable donations. Others researchers (Manucia et al., 1984; Cialdini, Baumann, & Kenrick, 1981) also suggest that feelings of anger and frustration would not be associated with increased helping behavior because those emotions are typically alleviated by taking aggressive actions.

Guilt

Numerous studies have linked guilt to increased helping behavior, consistently revealing a strong, positive association (Miller, 2010). In field experiments, guilt has been shown to promote prosocial behaviors ranging from picking up dropped papers (Cunningham, Steinberg, & Grev, 1980), to donating money prior to confessing at a Catholic church (Harris, Benson, & Hall, 1975), to agreeing to donate blood (Darlington & Macker, 1966). Jordan, Mullen, and Murnighan (2011) had participants recall their own (im)moral behavior and then complete a questionnaire that included items assessing the likelihood of them donating to charity, donating blood, or volunteering. Those who recalled immoral behavior had stronger prosocial intentions. Recent studies utilizing various social dilemma paradigms have also demonstrated an increase in generosity after feelings of guilt. Ketelaar and Au (2003) found that 91% of participants who made a

selfish offer in the initial round of the game *and felt guilty* made a generous offer the next time the game was played; however, 78% of those who made selfish offers initially continued to make selfish offers with the absence of guilt. Research from Nelissen, Dijker, and deVries (2007) and de Hooge, Zeelenberg, and Breugelmans (2007) using social dilemma games replicated this finding; perhaps more tellingly, de Hooge et al. (2007) also demonstrated the effect using a measure of general cooperative tendencies. Further evidence suggests the feeling of guilt does not even have to be conscious to result in increased giving. Zemack-Rugar, Bettman, and Fitzsimons (2007) subliminally primed participants with either sad or guilt affect and measured donation time to a charity for an unpleasant task. Despite there being no difference in self-reported affect states between the two groups, those in the guilt-primed condition donated more time. Overall, there is a solid line of research showing that experiences of guilt increase prosocial behavior, perhaps even when feeling guilty is outside of conscious awareness.

The Identifiable Victim Effect

One of the most established findings regarding charitable donations is that people donate more to a single person than a group of people. Identifying a specific survivor results in a greater willingness to donate, as well as an increase in actual donations, compared to providing statistical information on the number of victims (Kogut & Ritov, 2005a, 2005b; Small & Loewenstein, 2003; Small, Loewenstein, & Slovic, 2007; Slovic, 2007; Slovic & Västfjäll, 2010). This reflects the "identifiable victim effect", first identified by Thomas Schelling (1968).

In an attempt to understand causal factors of the "identifiable victim effect", Jenni and Loewenstein (1997) identified and evaluated four differences between identifiable

and statistical victims: vividness, certainty and uncertainty, *ex post* versus *ex ante* evaluation, and lastly the proportion of the reference group that can be saved. Generally, identifiable victims are more vivid because more information is known about them, particularly when details about them are shared such as photos, names, and ages. This may induce a sense of familiarity that in turn results in enhanced concern. Secondly, identifiable victims are perceived as certain victims, while statistical victims are, by definition, *probable* victims. Research has shown that people are loss-averse, such that a certain loss is seen as worse than an uncertain loss with the same expected value (Kahneman and Tversky, 1979). Thus, the identifiable, certain victim is viewed as more worthy of attention and aid than statistical victims. Typically, the decision to help an identified victim is made *ex post*, that is, after the event has occurred, while evaluation to assist statistical victims generally occurs *ex ante*, before the event has happened. In the *ex post* situation, the role of determining responsibility (and attribution of blame) is heightened because it is more difficult to apply a cost-benefit analysis. Jenni and Loewenstein (1997) found weak support for these explanations and suggest that the identifiable victim effect may be due in large part to the relationship between the "identified victim" and the relative size of the reference group.

Identifiable victims are seen to represent their own reference group with a highly concentrated distribution of risk. As the reference group grows smaller, concern for the victim increases; thus, identifiable victims, who have a much smaller denominator than statistical victims, receive more care and assistance. Fetherstonhaugh, Slovic, Johnson, and Friedrich (1997) demonstrated this effect, what they term "psychophysical numbing", in a series of experiments. Similar to how people's ability to notice change in a physical

stimulus diminishes as the magnitude of the stimulus increases, people also show a reduced sensitivity to saving lives as the number of lives at risk increase.

Two of the studies showed that the ability to save a *fixed* number of lives was viewed more positively when there were fewer lives at risk. Therefore, despite the same number of people being helped, the higher proportion was perceived as more desirable, even though participants themselves recognized that the interventions would save the same number. The third study revealed that most of the participants raised the minimum number of lives saved requirement for an intervention to be funded as the at-risk group size increased. When 15,000 people were at risk, the median number of lives to be saved was 9,000; however, when the at-risk population was increased to 290,000, the median increased as well (to 100,000). This implies that people perceive saving a larger proportion of lives in a smaller population as more valuable than simply saving a larger number of people (albeit a smaller proportion). Thus, the proportion of lives saved is given more consideration then the raw number of lives saved. This has been further replicated (e.g., Friedrich et al., 1999; Ubel, Baron, & Asch, 2001).

While there is clear evidence delineating the "proportion of the reference group effect", additional research suggests there is a qualitative difference between helping an "identified" person and helping some person, regardless of the size of the reference group from which they come. Small and Lowenstein (2003) conducted a study using a modified "dictator game" in which an "allocator" could contribute money to a "victim" who had lost their funds. The victims either were: a) already, or b) about to be, determined; that is, the victims were identifiable or unidentifiable, respectively. The "allocators" gave more money to the determined victims. A follow-up study with Habitat

for Humanity revealed the same effect: more was contributed when the family receiving the aid "has been selected" versus "will be selected".

Research by Kogut and Ritov (2005a) found that an individual, identified victim generated more donations than a group of identified victims and more than unidentified victims regardless of number. However, additional research showed that an identifiable victim in the context of statistical information significantly reduced donations compared to donations to just the identifiable victim (Small et al., 2007). The authors ruled out that the reduction in donations was due to an increase in the size of the reference, but rather demonstrated that it was diminished affect, in particular sympathy, that contributed to the differences; this process has been referred to as the collapse of compassion.

Collapse of Compassion

The term "collapse of compassion" refers to the "general phenomenon of diminished affective sensitivity toward groups of people in need of help" (Cameron & Payne, 2011, p. 2). This may occur because people use distinct processes when making judgments about individual targets compared to group (Hamilton & Sherman, 1996; Sherman, Beike, and Ryalls, 1999; Susskind, Maurer, Thakkar, Hamilton, & Sherman, 1999). Processing of information about an individual victim evokes a more intense emotional response (see Slovic, 2007). For example, Dickert and Slovic (2009) demonstrated that placing a target victim within a larger group reduces the attention necessary to generate affective reactions associated with helping behavior. That is, sympathy was lower for the target victim when other distractor victims were present.

A large body of work highlights the important role affective responses play in the decision to provide assistance to others. In fact, priming affective reactions results in

greater empathy and higher donations compared to priming cognitive deliberation (Dickert, Sagara, & Slovic, 2011; Small et al., 2007). Information about single survivors is more vivid and emotionally distressing than information about multiple survivors (Kogut & Ritov 2005a, Kogut & Ritov 2005b). Additional research has shown the effect is present for dyads as well; even when paired with only one other person, compassion and subsequent donations were less than when each were presented individually (Västfjall, Peters, & Slovic, 2009, as cited by Slovic & Västfjall, 2010). Cameron and Payne (2011) showed that participants, when having the expectation of being requested to donate, regulated emotion toward groups proactively, thereby preventing themselves from ever experiencing as much emotion toward groups as toward individuals. This proactive emotion regulation may drive the collapse of compassion.

Altruism and Personal History of Trauma Exposure

There is a commonly held belief, which has received empirical support, that violence begets violence. For example, childhood abuse is frequently associated with hostility, aggression, and antisocial behaviors in childhood (Koening, Cicchetti, & Rogosch, 2004) and adulthood (Horowitz, Widom, McLaughlin, & White, 2001). Keresteš (2006) found that the number of stressful and traumatic war experiences a child was exposed to during the Croatian war self-reported as being more aggressive. A recent meta-analysis (Wilson, Stover, & Berkowitz, 2009) found a moderate to large effect size between experiencing violence and antisocial behavior in adolescence. Also, high levels of violence and other negative experiences in one's neighborhood is a risk factor for later aggressive behavior (Valois, MacDonald, Bretous, Fischer, & Drane, 2002). This would

suggest persons who have experienced violence would be less likely to act in altruistic ways.

An alterative hypothesis is that altruism may be one form of posttraumatic growth, in that experiencing a traumatic event may increase empathy (Tedeschi, Park, & Calhoun, 1998). Staub (2003) has coined the phrase ‘‘altruism born of suffering’’ to describe how individuals who have suffered may become particularly motivated to help others (see Voldhart, 2009 for a review). However, “the possibility that previous adverse life experiences could motivate altruism and prosocial behavior, even toward outgroup members, has not been studied systematically, nor has it been recognized in research on prosocial behavior within social psychology” (Voldhart, 2009, p. 88). In fact, Frazier and colleagues (2013) stated that a recent volume on prosocial behavior (i.e., Mikulincer & Shaver, 2010) did not address trauma at all and a literature review of a leading psychological trauma journal contained no references to prosocial behavior or altruism. Despite this, some evidence does suggest prosocial behavior resulting from adverse experiences does occur.

Kaniasty and Norris (1995) showed that survivors of Hurricane Hugo had more prosocial behavior than non-victims and higher levels of suffering predicted increased levels of helping other victims. After 9/11, Piferi, Jobe, and Jones (2006) found that a majority of participants provided some type of support, for example, money (66%) or blood donations (24%), to those affected by the attacks on the World Trade Center. Previous research had also demonstrated helping behaviors following this event (Schuster et al., 2001; Wayment, 2004; Yum & Schenck-Hamlin, 2005). One year after the war in Crotia started, preschool children were rated as more prosocial by their teachers

compared to their levels immediately before the war began (Raboteg-Šarić, Žužul, & Keresteš, 1994). However, much of this aforementioned research was conducted with people who were not directly affected by the events but rather vicariously experienced them.

A study by Koening et al. (2004) compared the amount of donations made by physically maltreated, neglected, and non-maltreated children from low socioeconomic backgrounds. Physically abused girls donated fewer dimes than did neglected girls, but there were no other significant group differences. Thus, these data generally did not support either prosocial or antisocial tendencies. An important limitation of this research project was the low base rate of donations (approximately 25% of children made a donation).

Frazier and colleagues (2013) directly explored the relationship between trauma exposure and prosocial behavior, looking at daily helping behavior and volunteering. Daily helping behavior items were “helped out someone in need”, “provided emotional support to someone”, “volunteered my time”, and “gave money to a person in need”. They found that experiencing more traumatic events was associated with more daily helping behaviors and more volunteer activities. Furthermore, they showed that those who had experienced a recent trauma engaged in more prosocial activities than those who had not experienced a recent event.

While the interest in this area grows, there are still very few studies that have been conducted specifically to examine the relationship between trauma and prosocial behavior. Generally, the studies rely on self-report measures in that behavioral measures

are not incorporated into these designs typically. It is imperative additional empirical research is conducted to test these hypotheses.

Aid and Type of Event

One factor that may be associated with charitable giving that rarely has been explored is type of traumatic event. For example, are there differences in donations for natural disasters compared to war relief? An analysis conducted by the *Stanford Social Innovation Review* revealed that aid is skewed toward assisting survivors of emergency conditions and less toward helping those suffering from chronic conditions (e.g., poverty, AIDS, and malaria; Epstein, 2006; Spence, 2006).

Utilizing multiple experiments, Small (2010) empirically demonstrated that victims recovering from a loss are more sympathetic and provided with more helping behavior than those suffering from a chronic condition. In her first study, participants were randomly assigned to read scenarios describing a character who was either blind, physically challenged, or deaf. The scenarios differed only in terms of how long the person has had the health challenge: constant-state (entire life) or loss-state (recently developed). Results revealed higher sympathy ratings for the loss-state group. Her second experiment made use of an anonymous allocation task based on the "dictator" game during which participants could give money to less fortunate recipients who had either started the game with nothing (constant-state) or had forfeited their money by design of the research study (loss-state). People reported more sympathy for, and allocated more money to, those who began the game with funds and later lost them. Additional experiments by Small (2010) showed victims of a recent loss are deemed as

more deserving than those from a chronic condition, even when endorsing that they deserve equal treatment.

Recent research has suggested that the perceived cause of disaster also influences donation behavior (Zagefka, Noor, Brown, De Moura, & Hopthrow, 2011). Greater willingness to donate to natural rather than humanly caused disasters was demonstrated over a series of four experiments. In the first study, participants were provided with one of two flood scenarios and answered a single question assessing willingness to donate on a 7-point rating scale. In both scenarios, the flood was caused by a dam failure; however, the cause of the dam collapsing was manipulated to present either a "natural" or a "human" explanation. The "natural" reason was simply the strength of the storm overpowered the dam, while the "human" condition had the dam collapse because it was poorly built due to government embezzlement of the funds. This study showed a significantly higher willingness to donate to survivors of the natural flood than to those from a humanly caused flood.

The second study (Zagefka et al., 2011) attempted to understand the mechanisms behind the differences in willingness to aid based on cause. Participants read text describing either the South Asian Tsunami disaster or the Darfur genocide and answered questions regarding perceived cause, victim blame, victim self-help, and willingness to donate. Again, participants were more willing to donate to the natural event, the "Tsunami" condition. The mediators of victim-blame and victim self-help were also significant. In the third study, the participants read fictitious accounts of disasters but were provided "compensation" that could then be donated. The scenario in this study was a famine caused either by a natural drought or armed conflict. As before, donation

behavior was higher for victims of the natural disaster because they are perceived as less "blamable" and more "self-helping".

The final study (Zagefka et al., 2011) provided further empirical support for the causality of perceived "victim blame" and "victim self-help". Thus, evidence suggests that people are less willing to donate to survivors of humanly caused conditions than to survivors of natural disasters. The researchers further demonstrated why this difference happens: a systemic bias of higher perceived blame and lower perceived self-reliance for those in the humanly caused scenarios. The authors interpreted these findings as consistent with the just world hypothesis, in that humanly caused events provide more opportunities to blame the victims as deserving for what happened to them. When survivors are perceived to be responsible for their own misfortune, donors may deny any of their own responsibility for providing aid (Furnham, 1995).

In a follow-up study, Zagefka, Noor, Brown, Hopthrow, and De Moura (2012) presented participants with seven disaster scenarios (i.e., 3 civil wars, 2 hurricanes, a famine, and an earthquake) and provided hypothetical money that they could donate to one cause or divide and donate to two causes. After making their choices, respondents then provided up to three reasons for why they either selected or did not select that scenario. As previously found, the average amount donated to the four natural disasters was higher than the amount donated to the humanly caused events. The five most frequently self-reported rationales for donating (or not), in order, were: perceived need, perceived impact, perceived donations by others, cause, and victim blame. In a re-analysis of the data from the second study in Zagefka et al. (2011), the investigators

found that the Tsunami condition had higher perceived impact and higher perceived need than the Darfur condition.

This line of research provides clear evidence that willingness to donate is higher for natural events. Survivors of humanly caused disasters are perceived as more blamable and less self-sufficient in the recovery effort. There is also a perception that a donation is less needed and will have less of an impact when given to those suffering from a "human-caused" condition. However, an alternative framework for understanding these findings is provided by betrayal trauma theory (BTT; see Freyd, 1996).

Betrayal Trauma Theory

According to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; DSM–IV–TR; American Psychiatric Association, 2000), events are considered traumatic if they (a) include a loss of "physical integrity", or a risk of serious injury or death and (b) produce a response of intense fear, horror or helplessness. However, Freyd (1996) argues a core issue of trauma, in addition to fear/terror, is betrayal, which she defines as the "violation of implicit or explicit trust" (p. 9). She proposes a two-dimensional model of traumatic events consisting of both fear and betrayal responses. An example of a high fear/high betrayal event is genocide; a hurricane or other natural disaster may be high fear, but generally is low in betrayal (an exception to this might be Hurricane Katrina).

According to BTT, under certain circumstances, betrayal events require "betrayal blindness" so that there is limited or no conscious awareness or memory of knowledge around the betrayal. This is typically done in order to preserve an attachment that is necessary for survival. To illustrate, consider the case of childhood abuse perpetrated by

a caregiver. The child is dependent on this caregiver to meet his or her needs, however this same person is being abusive and distrustful. It may be more advantageous for the child to stifle their response to the betrayal (i.e., withdrawal) in an effort to maintain a close relationship with the parent. However, while the short-term advantage of betrayal blindness is clear, there are negative outcomes associated with it as well.

A large, growing body of literature demonstrates betrayal is a profound factor in predicting people's responses to traumas they experience. Betrayal has been connected to borderline personality disorder (Kaehler & Freyd, 2009), physical illness (Freyd, Klest, & Allard, 2005), posttraumatic stress disorder (Kelley, 2010), and revictimization (Gobin & Freyd, 2009). In addition to responses to first-hand traumatic experiences, betrayal may be an important influence on people's reactions to traumas disclosed to them. Foynes (2009) found that experiencing high betrayal traumas was associated with negative responses to disclosures of such traumas (e.g., disbelief, denial, or hostility). However, there was not an association with experiencing low betrayal traumas and negative responses to their disclosures.

While betrayal trauma history has never been examined before in relation to prosocial behavior specifically, constructs (i.e., trust and attachment style) that are also associated with betrayal trauma history have been. Generally, prosocial behavior tends to increase as trust rises (Bekkers, 2003; Bekkers, 2007; Cadenhead & Richman, 1996). Research has shown higher levels of social trust predicted greater donation amounts (Brooks, 2005) and more volunteering (Brown & Ferris, 2007) to secular and religious charities. Persons with high betrayal trauma histories report lower levels of trust. Gobin and Freyd (2009) found persons with a high betrayal trauma history had significantly

lower general levels of trust than people with no high betrayal trauma history. Follow-up work by Gobin (2012) showed a significant negative linear contrast with betrayal trauma history and general trust; participants with no betrayal trauma history had the highest levels of general trust.

Attachment style is an individual's typical pattern of beliefs, feelings, and behaviors about relationships that developed from early interactions with caregivers (Hazan & Shaver, 1987; for a review, see Mikulincer & Shaver, 2003). Brennan, Clark, and Shaver (1998) demonstrated that attachment styles vary along two independent dimensions: avoidance and anxiety. Attachment avoidance reflects a desire to maintain mutual distance and independence in the relationship; attachment anxiety refers to insecurity about the other person's availability and responsiveness. People who are low on both aspects are considered securely attached. High betrayal trauma history has been associated with both anxious and avoidant attachment characteristics (Owen, Quirk, & Manthos, 2012). Research has revealed a positive association between attachment security and prosocial behavior (Gillath et al., 2005; Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Thompson & Gullone, 2008). However, while Wayment (2006) found no direct link, there was a negative indirect link between avoidance and helping behaviors after the terrorist attacks of 9/11, mediated via empathy.

Betrayal blindness also applies to situations that are not generally considered "traumatic", for example, adultery, bullying, and discrimination. "Both victims, perpetrators, and witnesses may display betrayal blindness in order to preserve relationships, institutions, and social systems upon which they depend" (Freyd, 2009, Some FAQs, para. 4). Zurbriggen (2005) applied BTT to the 2004 Presidential election.

She suggests the American people, specifically conservatives, were psychologically dependent on George W. Bush to defend their shared values. As a result of this dependence, they were less likely to be aware of his administration's deceptions in order to maintain that connection.

BTT may also apply to understanding people's responses to charitable causes. According to BTT, events that threaten personal relationships or worldviews (e.g., humanly-causes disasters) would result in greater avoidance of emotions, thoughts, and experiences (i.e., similar to collapse of compassion), producing less willingness to donate. As work from Zagefka et al. (2011; 2012) show, donations are less to survivors of humanly caused disasters because they are perceived to be responsible for their own suffering and less needy. Under the BTT premise, this victim blaming and minimizing of need may occur in order to maintain a psychological connection that is threatened by awareness of this information.

CHAPTER II

INTRODUCTION – STUDY 1

This exploratory study was undertaken to explore how trauma (both in terms of personal history and types of traumatic events) relates to charitable donations. As previously mentioned, this is a currently understudied area of research and has never been examined from a betrayal trauma framework.

Summary of Purposes and Goals

While there is solid theoretical rationale for trauma increasing prosocial behavior, there has been limited empirical research on the topic. Frazier and colleagues (2013) demonstrated that persons who have experienced a traumatic event, particularly recently, engaged in higher levels of prosocial behaviors. However, this study relied on self-report measures of helping behavior and so may be subject to socially desirable responding. Thus, this study adds to the literature by including a behavioral task of providing aid, making a hypothetical charitable donation. This paradigm has been used in previous research (e.g., Dickert, Sagara, & Slovic, 2011). Furthermore, this design allows us to examine state prosocial behavior in response to a specific solicitation of aid, which can be used to identify the mechanisms behind how trauma history can lead to increased prosocial behavior.

Additionally, trauma history was assessed by Brief Betrayal Trauma Survey (Goldberg & Freyd, 2006). In the Frazier et al. (2013) study, the most common traumatic events endorsed were death of loved one (47%), a life-threatening event experienced by a loved one (30%), and childhood witnessing family violence (23%). This contrasts with typical trauma histories seen at the University of Oregon, where approximately 35% of

participants report physical abuse, sexual abuse, or emotional abuse (e.g., Gobin & Freyd, 2009). This allowed us to explore the relationship between personal trauma history and help giving in a differently traumatized sample and evaluating specifically the role of *betrayal* trauma history.

A new line of research examining how people respond to events that vary in causal attributions has been promoted by Zagefka and associates (2011; 2012). They have consistently shown that participants provide less aid to survivors of humanly-caused disasters. Their findings align with what is predicted by BTT, although they do not interpret their results in this manner. This study attempted to replicate their findings and expand on them using betrayal as a predictor. Thus, the event that is lower in betrayal (i.e., natural disaster) would receive more aid.

Importantly, this study is the first of which we are aware to examine both trauma history and type of event simultaneously. This allowed us to ascertain any interaction between the two constructs that might influence charitable behavior. Volhardt (2009) suggests that observing someone suffering from an experience similar to one that has been personally experienced can produce prosocial behavior in an effort to reduce distress activated by the triggered trauma memories (Volhardt, 2009). Moreover, a frequent observation is that donations increase as similarity between donator and receipt increase (Bekkers, & Wiepking, 2007). Thus, people who experienced a certain betrayal event may provide more helping behavior to survivors of a similar level of betrayal event, that is, a survivor of a natural disaster may provide more help to a victim from a natural disaster.

Hypotheses and Research Questions

- Hypothesis 1: Willingness to donate and amount donated will be higher for the single, identified survivor.
- Hypothesis 2: Increased affect will be associated with greater willingness to donate and higher donation amounts; however, anger and perceived betrayal would show a negative association with willingness to donate and amount donated.
- Hypothesis 3: There will be a negative linear association between type of betrayal event and donation willingness and amounts.
- Research Question 1: Is a personal history of betrayal trauma associated with more or less charitable behavior?
- Research Question 2: Is there an association between number of recipients and type of event that impacts willingness to donate and amount donated?
- Research Question 3: Is there an association between personal trauma history and number of recipients that impacts willingness to donate and amount donated?
- Research Question 4: Is there an association between personal trauma history and type of event that impacts willingness to donate and amount donated?
- Research Question 5: Is there an interaction between the different emotional responses and number of recipients?
- Research Question 6: Is there an interaction between the different emotional responses and type of event?
- Research Question 7: Is there an interaction between the different emotional responses and trauma history?

CHAPTER III

METHOD – STUDY 1

Participants

Participants were undergraduates students (*N*=467, 65.1% women) recruited from the University of Oregon Human Subjects Pool. The sample consisted predominantly of young persons whose ages ranged from 17 to 52 (*M*=20.3, *SD*= 4.33). Approximately 78% of the sample identified as Caucasian. For this sample, 67% were women (79% Caucasian) whose ages ranged from 17 to 52 (*M*=20.3, *SD*= 4.33).

Participants were recruited online without knowledge of the study content prior to registering for the study, thus minimizing self-selection bias. They earned partial credit for a research course requirement for participating. Before beginning the survey, each respondent was given a unique identification number to ensure anonymous responses. All variables had 3.2% or less missing data. Listwise deletion was used to handle missing data, resulting in a sample size of 428 participants.

Materials

Demographics Questionnaire

Demographic information was collected regarding age, gender, and ethnicity. The Human Subjects Coordinator, who manages the Human Subjects pool and General Survey studies, developed the questionnaire.

Brief Betrayal Trauma Survey

The Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006) is a 14-item, self-report measure of major traumatic events participants may have experienced. Each item is classified as having one of three levels of betrayal: low, medium, or high. Non-

interpersonal traumas (e.g., natural disaster) are conceptualized as a low-betrayal event, while interpersonal traumas (e.g., child sexual abuse) are considered a medium- or high-betrayal. Relational closeness of the perpetrator distinguishes high-betrayal (i.e., "someone with whom you were very close") from medium-betrayal (i.e., "someone with whom you were not so close") items. For each item, participants indicated how frequently the event occurred (*never, 1 or 2 times,* or *more than that*) and whether it took place before the age of 18, after the age of 18, or during both time periods. The BBTS has demonstrated good construct validity (DePrince, 2001), convergent validity (Martin, Cromer, DePrince, & Freyd, 2010), and test-retest reliability (Goldberg & Freyd, 2006). For childhood events, Goldberg and Freyd (2006) found agreement between test administrations of 83% (gamma coefficients ranged from .54 to .93) and 75% for adulthood events (gamma coefficients ranged from .27 to .91).

Charitable Behavior Vignettes

Adapted from Small et al. (2007), six vignettes were created to represent three events of differing levels of betrayal. Event A was a natural disaster (i.e., a flood, a low betrayal), Event B was external genocide (i.e., perpetrated by members outside the village, a medium betrayal), and Event C was internal genocide (i.e., perpetrated by neighbors, a high betrayal). For each event, the donation was to be given to either a single child or a group of 4 children. Each participant was presented with hypothetical $5 bills (totaling $50), the vignette and a photo, and were asked if (a) they would be willing to donate and (b) the amount to be donated. Participants also reported their emotional responses on a 7-point rating scale (*not at all* to *very much*) for the emotions of sadness,

sympathy and compassion, anger, guilt, and perceived betrayal of event. Participants were randomly assigned to one vignette.

Procedure

The measures were completed online as part of the General Survey, which is a battery of approximately 15 questionnaires submitted by many researchers. Human subjects approval and subsequent participant informed consent were obtained for the entire survey rather than individual measures. Participants were given an option to decline to answer any item without penalty. The survey was designed to take no more than two hours to complete; data are not available regarding average time to complete the study.

CHAPTER IV

RESULTS – STUDY 1

Overall, 94% of the sample (n = 402) made a hypothetical donation, leaving a small sample size (n = 26) of those not willing to donate. Given the small sample size of non-willing group, only approximately one to three parameters would be estimated without bias using logistic regression (e.g., see Stoltzfus, 2011). Because of this, when appropriate, nonparametric tests were used to answer research questions regarding willingness to donate. The average amount donated was 19.2 (SD =15.4).

Hypotheses and Research Questions

Hypothesis 1: Willingness to Donate and Amount Donated Will Be Higher for the Single, Identified Survivor.

There was not an association between number of recipients and willingness to donate, χ^2 (1, N = 428) = 1.28, p = .258, □ = .055; see Figure 1.

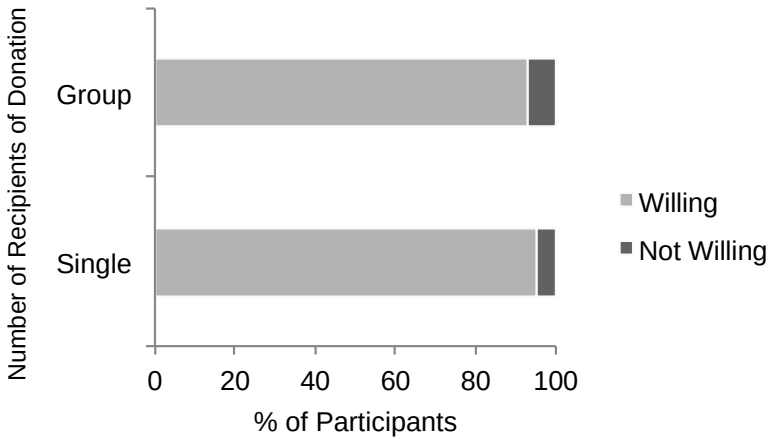

Figure 1. Percentage of participants willing to donate by number of recipients receiving donation in Study 1.

The average amount donated to the single recipient was 19.0 (*SD* = 14.3, *SE* = 1.08), while the average amount donated to the group was 19.4 (*SD* = 16.1, *SE* =1.02). After controlling for the effects of the covariates, the average estimated amount donated was 19.0 (*SE* = 1.18) for the single recipient and 20.3 (*SE* = 1.08) for the group of children; see Figure 2. This was not a significant difference, $F(1, 380) = 0.28$, $p = .600$, $\eta_p^2 = .001$.

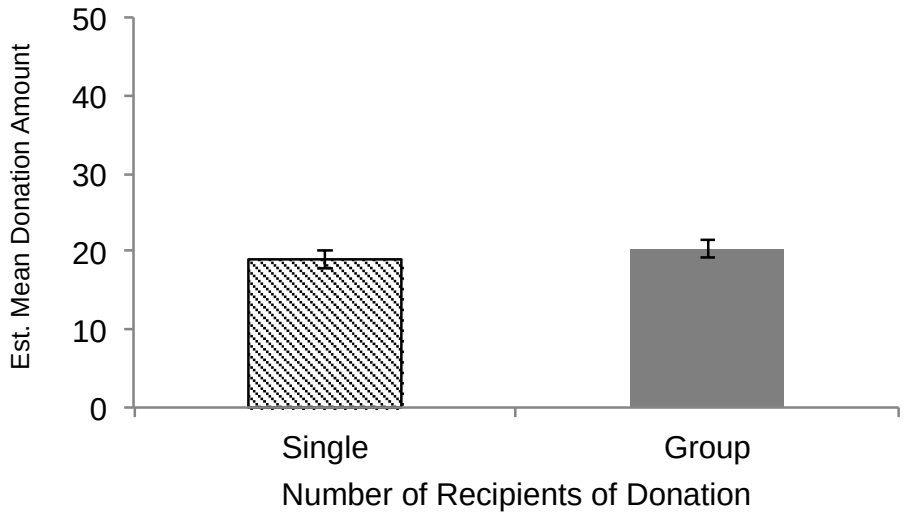

Figure 2. Estimated mean donation amounts by number of recipients. Est. = estimated. Error bars represent standard errors in Study 1.

Hypothesis 2: Increased Affect Will Be Associated With Greater Willingness to Donate and Higher Donation Amounts; However, Anger and Perceived Betrayal Would Show a Negative Association With Willingness to Donate and Amount Donated.

Point-biserial correlations showed an association between increasing emotional responses and higher rates of willingness to donate for all emotional variables: sadness, $r(426) = .240$, $p < .001$, $r^2 = .058$, sympathy $r(426) = .282$, $p < .001$, $r^2 = .080$, anger

$r(426) = .181$, $p < .001$, $r^2 = .033$, guilt $r(426) = .325$, $p < .001$, $r^2 = .106$, and betrayal $r(426) = .116$, $p = .016$, $r^2 = .013$, see Figure 3. However, when controlling for the effects of the other emotional variables, only sympathy, $r(422) = .110$, $p = .023$, $r^2 = .012$, and guilt, $r(422) = .202$, $p < .001$, $r^2 = .041$, were significantly associated with willingness to donate.

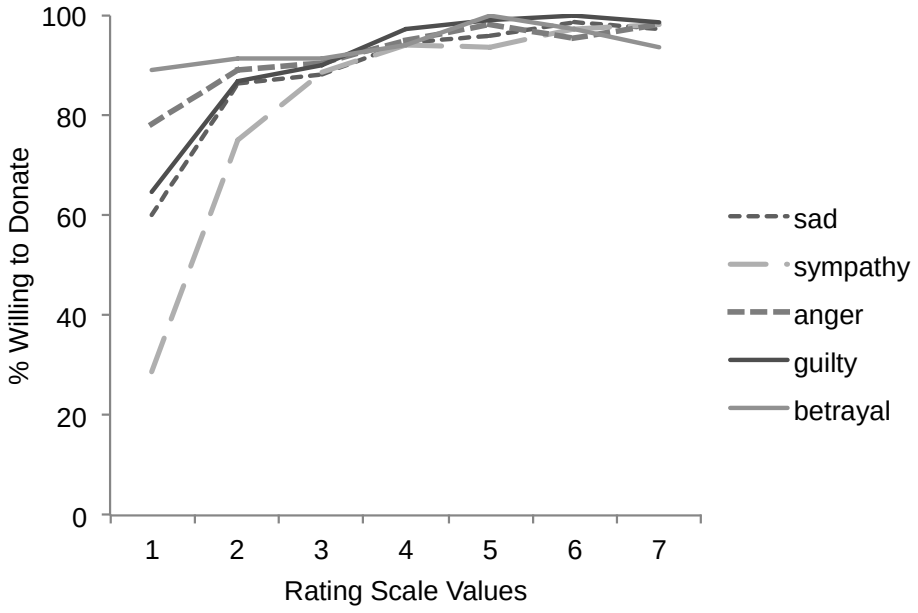

Figure 3. Percentage of participants willing to donate by emotional response ratings in Study 1.

See Table 1 for means and standard deviations for amount donated and the emotional response variables; correlations among these variables are also provided. See Figure 4 for a plot of the mean amounts donated by emotional response values. All emotional response variables were significantly correlated with amount donated, *p*s < .01.

After controlling for the effects of the covariates, only sympathy and guilt significantly predicted amount donated, such that increased feelings of sympathy ($p < .01$) and guilt ($p < .001$) were associated with higher donation amounts. See Table 2 for the results of the *F*-tests.

Table 1. *Correlations among Emotional Response Variables and Amount Donated in Study 1.*

	1	2	3	4	5	6
1. Amount donated	-					
2. Sad	.363**	-				
3. Sympathy	.400**	.724**	-			
4. Anger	.296**	.622**	.525**	-		
5. Guilt	.464**	.589**	.563**	.477**	-	
6. Betrayal	.223**	.384**	.274**	.536**	.332**	-
Mean	19.2	4.86	5.40	4.29	4.52	3.73
Standard deviation	15.4	1.56	1.44	1.75	1.85	1.77

Note. ** p < .01.

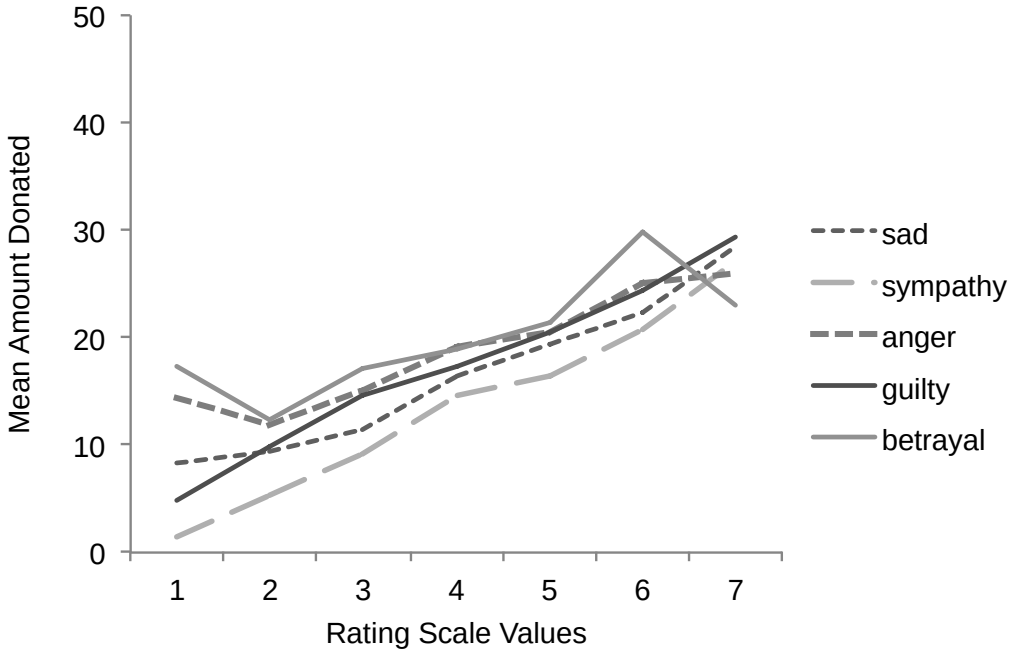

Figure 4. Average amount donated by emotional response ratings in Study 1.

Table 2. *Results of Emotional Responses Predicting Amount Donated in Study 1.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Sad	14.5	1	14.5	0.08	.776	<.001
Sympathy	1444.5	1	1444.5	8.06	.005	.021
Anger	74.5	1	74.5	0.42	.520	.001
Guilty	5111.3	1	5111.3	28.5	.000	.070
Betrayal	304.1	1	304.1	1.70	.194	.004
Error	68110.6	380	179.2			
Corrected Total	101128.2	427				

Hypothesis 3: There Will Be a Negative Linear Association Between Type of Betrayal Event and Donation Willingness and Amounts.

Type of traumatic event and willingness to donate were not significantly associated, χ^2 (2, N = 428) = 0.33, p = .849, Cramer's V = .028; see Figure 5.

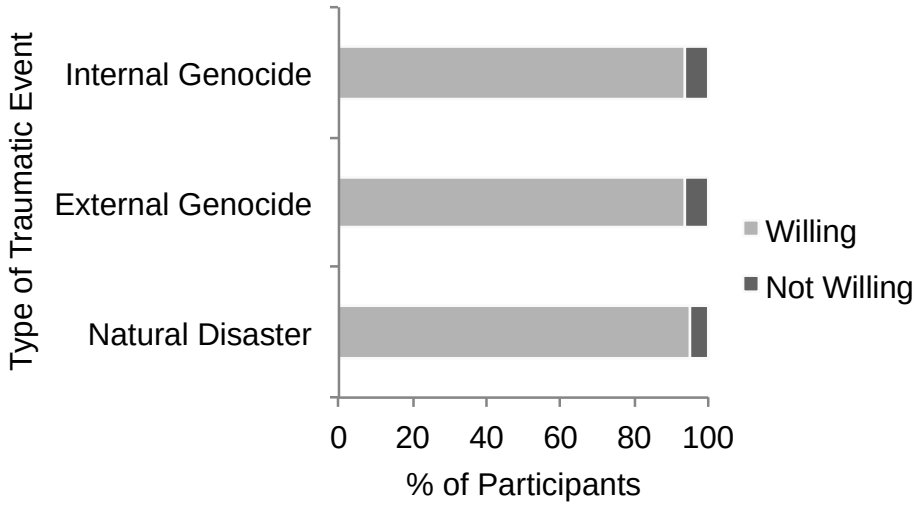

Figure 5. Percentage of participants willing to donate by type of traumatic event in Study 1.

The average amounts donated to the groups are as follows: the natural disaster group (M =20.5, SD = 15.9, SE = 1.58), external genocide (M =18.7, SD = 14.5, SE = 1.17), and external genocide (M =18.9, SD = 15.9, SE = 1.21). After controlling for the effects of the covariates, the average amounts donated to the groups became: the natural disaster group (M =21.0, SE = 1.60), external genocide (M =19.5, SE = 1.27), and external genocide (M =18.3, SE = 1.30); see Figure 6. Mean donation amounts did not differ among the three traumatic events, $F(2, 380) = 0.57$, $p = .567$, $\eta_p^2 = .003$.

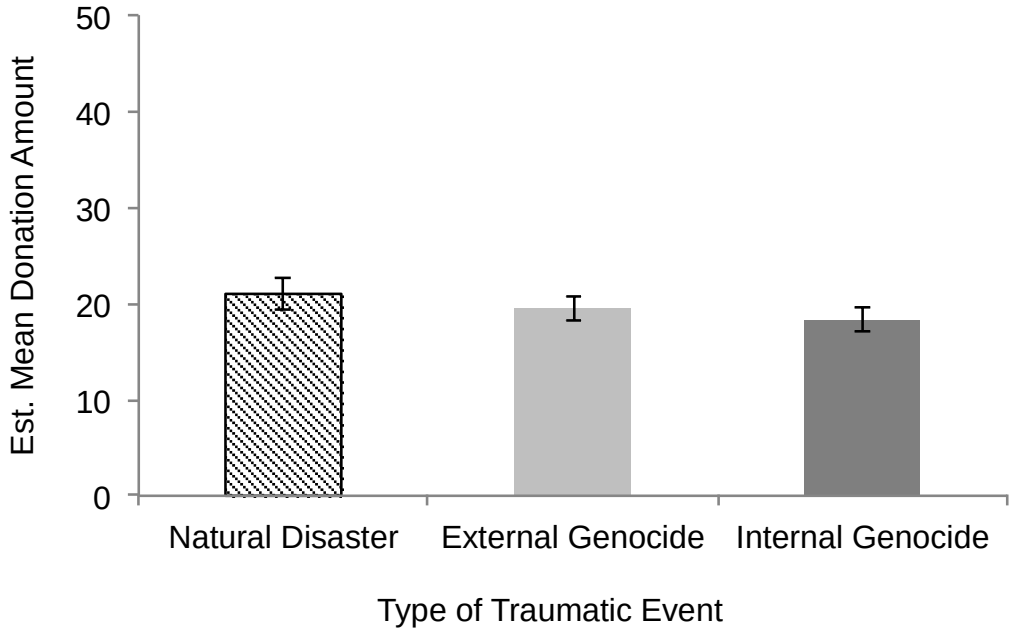

Figure 6. Estimated mean amount donated for each type of traumatic event in Study 1. Est. = estimated. Error bars represent standard errors.

Manipulation Check

A one-way MANOVA was run to determine if the donation events varied in levels of betrayal and the other emotions. There was a significant effect of type of trauma on emotional ratings, *Wilk's* $\Lambda = .901$, $F(2, 425) = 4.50$, $p < .001$, multivariate η^2

= .051. Subsequent univariate ANOVAs indicated that only perceived betrayal significantly differed across the three groups, $F(2, 425) = 12.1$, $p < .001$, $\eta^2 = .054$; there were non-significant effects for type of event on: sadness, $F(2, 425) = 0.48$, $p = .621$, $\eta^2 = .002$; sympathy, $F(2, 425) = 2.73$, $p = .066$, $\eta^2 = .013$; anger, $F(2, 425) = 1.60$, $p = .204$, $\eta^2 = .007$; and guilt, $F(2, 425) = 1.49$, $p = .227$, $\eta^2 = .007$. Tukey's post hoc comparisons revealed that the natural disaster vignette (M =3.03, SD = 1.76, SE = 0.17) had a significantly lower betrayal rating than both the external genocide (M = 3.80, SD = 1.71, SE = 0.14) and the internal genocide (M = 4.08, SD = 1.71, SE = 0.13) scenarios, $p = .001$ and $p < .001$, respectively. There was not a significant difference between the external and internal versions, $p = .332$.

A new variable was created combining the genocide conditions. There remained a non-significant association between type of traumatic event and willingness to donate, χ^2 (1, N = 428) = 0.32, $p = .570$, □ = -.027. The average amount donated to the natural disaster group was 20.5 (SD = 15.9, SE = 1.58) and to the genocide group was 18.8 (SD = 15.2, SE = 0.84). After controlling for the effects of the covariates, the average amounts donated to the groups became: the natural disaster group (M =21.0, SE = 1.61) and genocide group (M =18.8, SE = 0.88). There was not a significant difference in the amounts donated for the genocide and natural disaster events, $F(1, 391) = 0.22$, $p = .641$, $\eta_p^2 = .001$.

Research Question 1: Is a Personal History of Betrayal Trauma Associated with More or Less Charitable Behavior?

Participants' responses were summed across the number of BBTS items endorsed for each level of betrayal regardless of when the event occurred. Participants were then

hierarchically classified based on the highest level of betrayal event they had experienced. Thus, those in highest group may have experienced lower betrayal traumas. Table 3 includes the BBTS items comprising the betrayal categories (i.e., Lower and Higher Betrayal) according to Freyd's (2011) suggestions. Of the sample, 71% (n = 304) endorsed at least one of these items; 59.1% (n = 253) reported experiencing at least one lower betrayal item and 51.9% (n = 296) survived a higher betrayal event. Three groups were created to represent trauma history: none (n = 124), lower betrayal (n = 82), and higher betrayal (n = 222).

Table 3. *Categorization of Betrayal Trauma Events*.

Higher Betrayal Trauma Events
Witnessed someone with whom you were very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat.
Witnessed someone with whom you were very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.
You were deliberately attacked that severely by someone with whom you were very close.
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close (such as a parent or lover).
Lower Betrayal Trauma Events
Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death.
Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.
Witnessed someone with whom you were not so close undergoing a similar kind of traumatic event.
Witnessed someone with whom you were not so close deliberately attack a family member that severely.
You were deliberately attacked that severely by someone with whom you were not close.
You were made to have such sexual contact by someone with whom you were not close.
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not close.

Willingness to donate did not vary across personal trauma histories, χ^2 (2, N = 428) = 2.39, p = .302, Cramer's V = .075; see Figure 7.

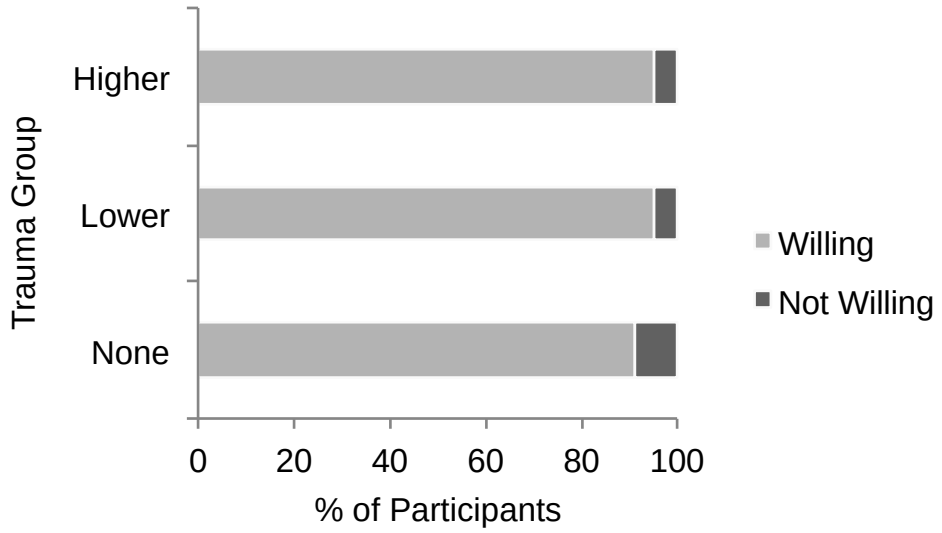

Figure 7. Percentage of participants willing to donate by history of betrayal trauma in Study 1. None = no betrayal trauma history; Lower = history of at least one lower betrayal trauma; Higher = history of at least one higher betrayal trauma.

The average amounts donated by the trauma groups are as follows: no betrayal group (M =18.7, SD = 15.6, SE = 1.40), lower betrayal group (M =20.7, SD = 16.7, SE = 1.84), and higher betrayal group (M =19.0, SD = 14.8, SE = 0.99). After controlling for the effects of the covariates, the average amounts donated by the groups became: the no betrayal history group (M =19.7, SE = 1.42), lower betrayal group (M =20.4, SE = 1.62), and higher betrayal group (M =18.8, SE = 0.99); see Figure 8. There was not a significant main effect of betrayal trauma group membership, F(2, 380) = 0.95, p = .388, η_p^2 = .005.

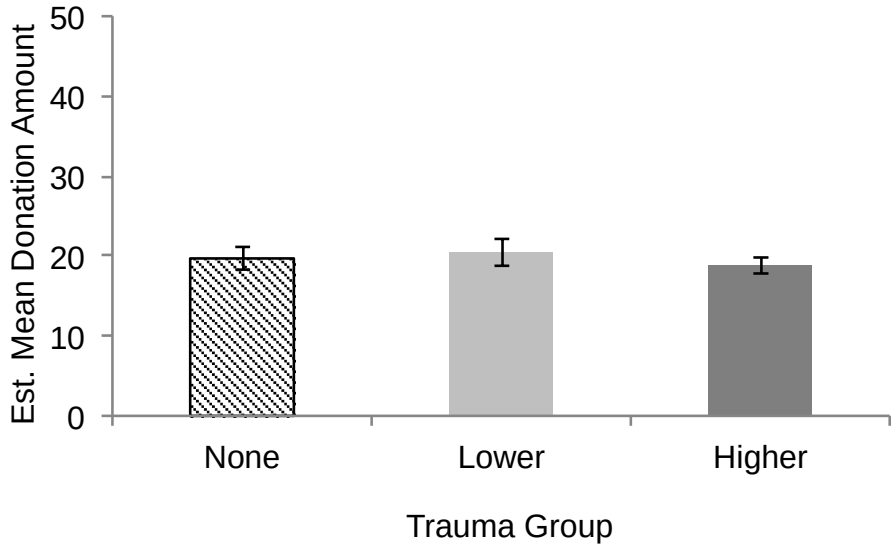

Figure 8. Estimated mean amount donated by history of betrayal trauma in Study 1. None = no betrayal trauma history; Lower = history of at least one lower betrayal trauma; Higher = history of at least one higher betrayal trauma. Est. = estimated. Error bars represent standard errors.

Research Question 2: Is There an Association Between Number of Recipients and Type of Event That Impacts Willingness to Donate and Amount Donated?

There was not a significant interaction between number of recipients and type of traumatic event on willingness to donate (p = .939, two-tailed Fisher's exact test, Cramer's V = .062); see Figure 9.

See Table 4 for means and standard deviations of amount donated for the number of recipients by type of traumatic event interaction. After controlling for the effects of the covariates, the estimated means are shown in Table 5 and Figure 10. There was not a significant interaction between number of recipients and type of trauma, $F(2, 380) = 1.56$, p = .211, η_p^2 = .008.

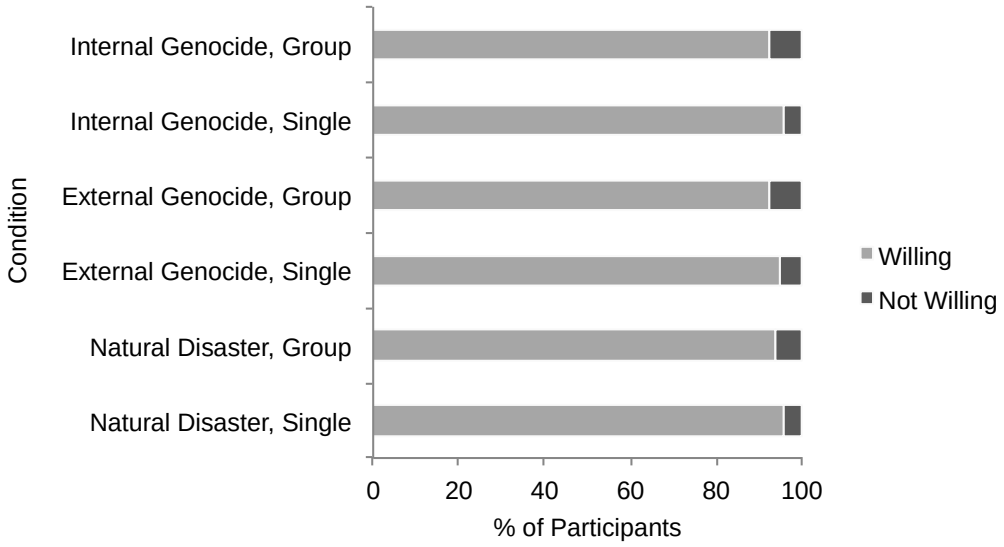

Figure 9. Percentage of participants willing to donate by number of recipients of donation and type of traumatic event in Study 1. Group = four children; Single = individual recipient of donation.

Table 4. *Means and Standard Deviations of Amount Donated by Number of Recipients and Type of Traumatic Event in Study 1.*

Number of Recipients	Type of Traumatic Event		
	Natural Disaster	External Genocide	Internal Genocide
Single	21.37 (15.3)	19.47 (14.4)	15.88 (13.0)
Group	19.71 (16.7)	18.01 (14.7)	20.20 (16.8)

Note. Standard deviations in parentheses. $N = 428$.

Table 5. *Estimated Means and Standard Errors of Amount Donated by Number of Recipients and Type of Traumatic Event in Study 1.*

Number of Recipients	Type of Traumatic Event		
	Natural Disaster	External Genocide	Internal Genocide
Single	22.45 (215)	18.31 (1.83)	16.13 (2.17)
Group	19.64 (2.34)	20.79 (1.76)	20.49 (1.34)

Note. Standard errors in parentheses. $N = 428$.

There remained a non-significant association between type of traumatic event and willingness to donate when comparing the natural disaster condition to the combined genocide groups, (p = .753, two-tailed Fisher's exact test, □ = .059). See Table 6 for means and standard deviations of amount donated for the number of recipients for the natural disaster and genocide conditions. After controlling for the effects of the covariates, the estimated means are shown in Table 7. There was not a significant interaction between number of recipients and type of trauma on amount donated when using the combined traumatic events, $F(1, 391) = 2.64$, $p = .105$, $\eta_p^2 = .007$.

Table 6. *Means and Standard Deviations of Amount Donated by Number of Recipients and Combined Type of Traumatic Events in Study 1.*

	Type of Traumatic Event	
Number of Recipients	Natural Disaster	Genocide
Single	21.37 (15.3)	18.02 (13.9)
Group	19.71 (16.7)	19.35 (16.0)

Note. Standard deviations in parentheses. N = 428.

Table 7. *Estimated Means and Standard Errors of Amount Donated by Number of Recipients and Combined Type of Traumatic Event in Study 1.*

	Type of Traumatic Event	
Number of Recipients	Natural Disaster	Genocide
Single	22.55 (2.16)	17.31 (1.40)
Group	19.54 (2.35)	20.24 (1.06)

Note. Standard errors in parentheses. N = 428.

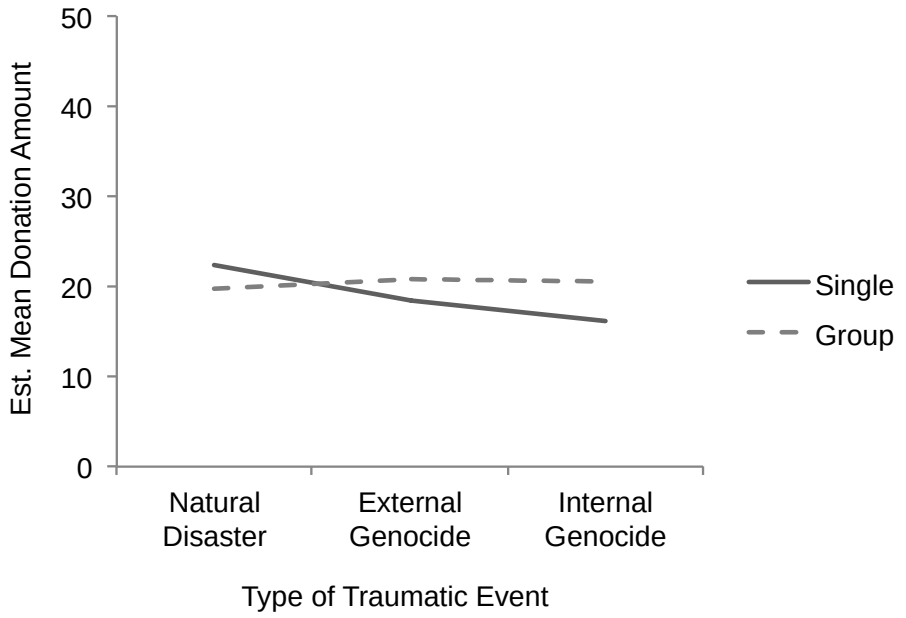

Figure 10. Estimated mean amount donated for number of recipients of donation by type of traumatic event in Study 1. Group = four children; Single = individual recipient of donation. Est. = estimated.

Research Question 3: Is There an Association Between Personal Trauma History and Number of Recipients That Impacts Willingness to Donate and Amount Donated?

There was not a significant interaction between number of recipients and personal trauma history (p = .355, two-tailed Fisher's exact test, Cramer's V = .115); see Figure 11. See Table 8 for means and standard deviations of amount donated for the number of recipients by type of traumatic event interaction. After controlling for the effects of the covariates, the estimated means are shown in Table 9 and Figure 12. There was not a significant interaction between number of recipients and trauma history on amount donated, $F(2, 380) = 0.49$, p = .613, η_p^2 = .003.

Table 8. *Means and Standard Deviations of Amount Donated by Number of Recipients and Trauma History in Study 1*.

	Trauma History		
Number of Recipients	None	Lower	Higher
Single	19.27 (14.0)	21.52 (17.3)	17.97 (13.4)
Group	18.29 (16.6)	20.10 (16.4)	19.84 (15.8)

Note. Standard deviations in parentheses. $N = 428$.

Table 9. *Estimated Means and Standard Errors of Amount Donated by Number of Recipients and Trauma History in Study 1*.

	Trauma History		
Number of Recipients	None	Lower	Higher
Single	19.83 (2.31)	19.72 (2.46)	17.34 (1.44)
Group	19.49 (1.87)	21.11 (2.16)	20.33 (1.34)

Note. Standard errors in parentheses. $N = 428$.

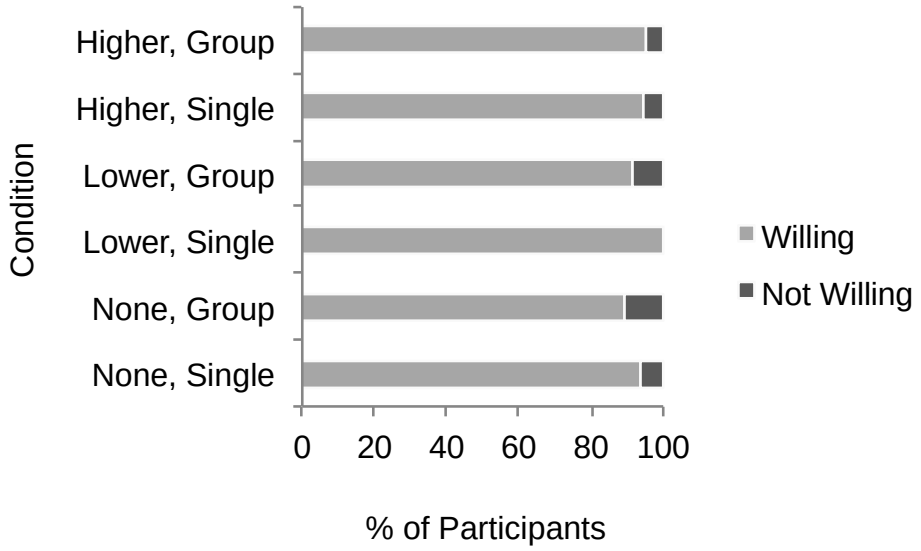

Figure 11. Percentage of participants willing to donate by number of recipients of donation and trauma history in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history. Group = four children; Single = individual recipient of donation.

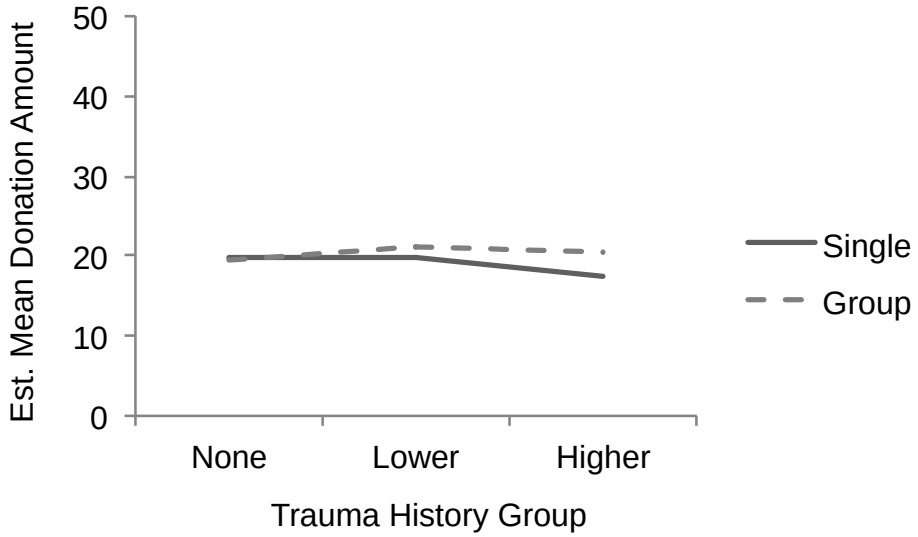

Figure 12. Estimated mean amount donated for number of recipients of donation by trauma history in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history. Group = four children; Single = individual recipient of donation. Est. = estimated.

Research Question 4: Is There an Association Between Personal Trauma History and Type of Event That Impacts Willingness to Donate and Amount Donated?

There was not a significant interaction between personal trauma history and type of traumatic event on willingness to donate (p = .276, two-tailed Fisher's exact test, Cramer's V = .151); see Figure 13. When comparing the combined genocide term to the natural disaster condition with respect to trauma history, the interaction remains non-significant, p = .389, two-tailed Fisher's exact test, Cramer's V = .116.

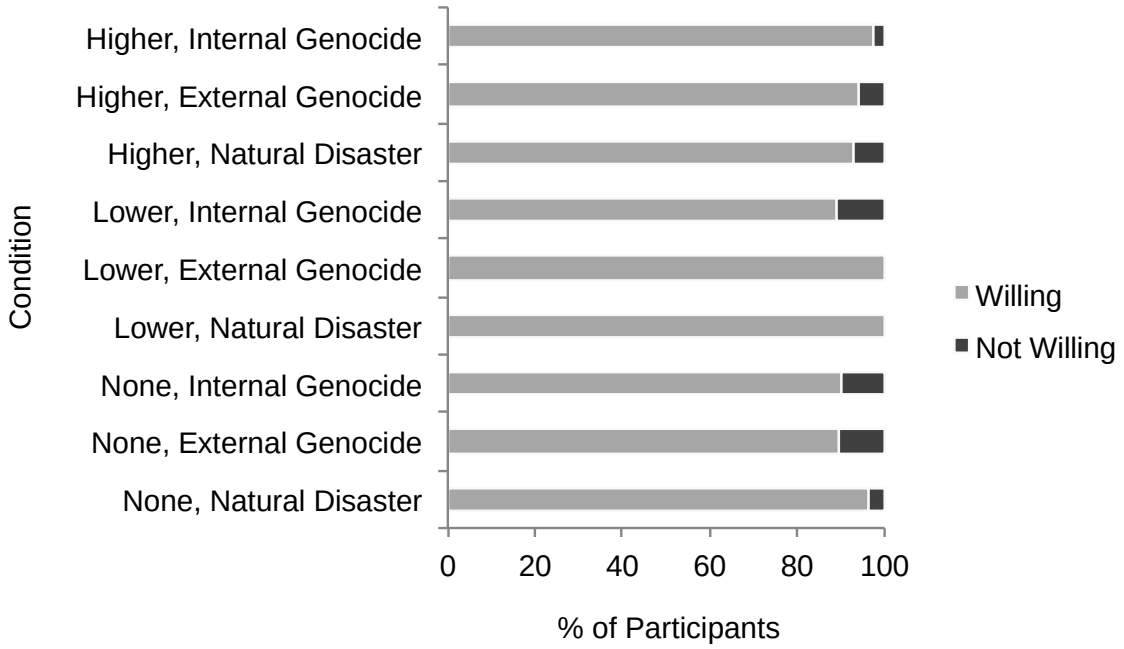

Figure 13. Percentage of participants willing to donate by trauma history and type of traumatic event in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history.

See Table 10 for means and standard deviations of amount donated for the interaction between type of event and trauma history. After controlling for the effects of the covariates, the estimated means are shown in Table 11 and Figure 14. There was not a significant interaction between personal trauma history and type of trauma on amount donated, $F(4, 380) = 1.49$, $p = .205$, $\eta_p^2 = .015$; nor was there a significant interaction using the combined type of traumatic event variable, $F(2, 391) = .563$, $p = .570$, $\eta_p^2 = .003$.

However, there was a significant 3-way interaction between number, type, and trauma history, $F(4, 380) = 2.61$, $p = .035$, $\eta_p^2 = .027$. See Tables 12 and 13 for means and Figures 15 and 16. For the single recipient, there were no differences among the trauma groups for either genocide condition; however, in the natural disaster condition, those with a lower betrayal trauma donated more than the higher betrayal group ($p =$

.028). When making donations to a group, the lower betrayal trauma group donated more than those with no trauma history to people experiencing an external genocide (p = .012). No trauma group differences were found in the natural disaster condition or the internal genocide scenario.

Table 10. *Means and Standard Deviations of Amount Donated by Type of Traumatic Event and Trauma History in Study 1*.

Trauma History Group	Type of Traumatic Event		
	Natural Disaster	External Genocide	Internal Genocide
None	19.62 (15.2)	15.42 (13.0)	21.30 (17.7)
Lower	24.05 (18.7)	20.00 (14.5)	19.19 (16.9)
Higher	19.64 (15.3)	20.31 (15.2)	17.44 (14.2)

Note. Standard deviations in parentheses. N = 428.

Table 11. *Estimated Means and Standard Errors of Amount Donated by Type of Traumatic Event and Trauma History in Study 1*.

Trauma History Group	Type of Traumatic Event		
	Natural Disaster	External Genocide	Internal Genocide
None	20.30 (3.00)	17.20 (2.04)	21.48 (17.7)
Lower	23.34 (3.01)	21.02 (2.83)	16.88 (2.65)
Higher	19.49 (2.05)	20.43 (1.52)	16.58 (1.59)

Note. Standard errors in parentheses. N = 428.

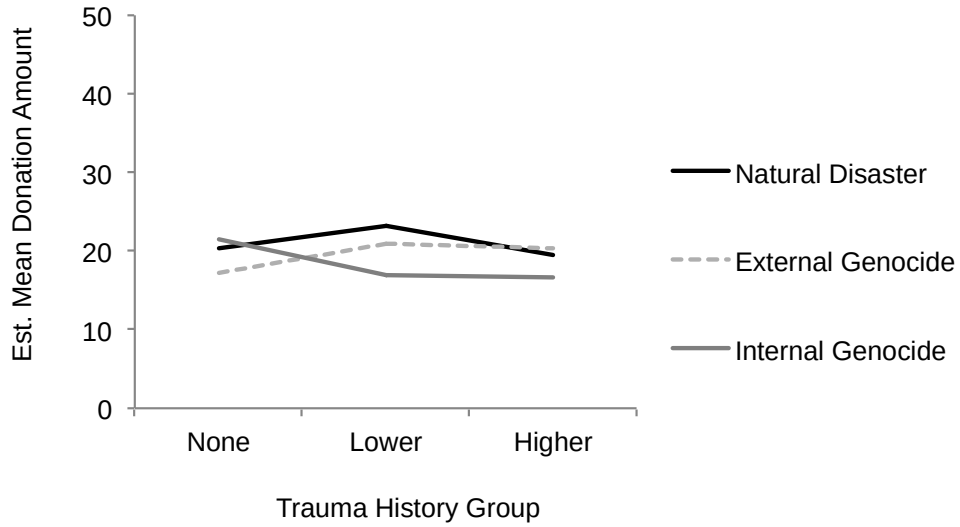

Figure 14. Estimated mean amount donated for trauma history by type of traumatic event in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history. Est. = estimated.

Table 12. *Means and Standard Deviations of Amount Donated by Type of Traumatic Event and Trauma History for both Single and Group Recipients in Study 1.*

	Single			Group		
Trauma History	Natural Disaster	External Genocide	Internal Genocide	Natural Disaster	External Genocide	Internal Genocide
None	18.9 (9.16)	18.7 (14.8)	20.8 (17.6)	20.4 (19.8)	12.4 (10.6)	21.5 (17.9)
Lower	30.5 (19.3)	14.6 (13.5)	19.6 (16.0)	17.0 (16.0)	24.6 (14.2)	19.0 (17.6)
Higher	18.9 (15.0)	21.2 (14.4)	12.3 (7.76)	20.4 (15.8)	19.4 (16.1)	19.9 (15.9)

Note. Standard deviations in parentheses. $N = 428$.

Table 13. *Estimated Means and Standard Errors of Amount Donated by Type of Traumatic Event and Trauma History for both Single and Group Recipients in Study 1.*

	Single			Group		
Trauma History	Natural Disaster	External Genocide	Internal Genocide	Natural Disaster	External Genocide	Internal Genocide
None	18.9 (4.05)[b]	19.3 (2.98)	21.3 (3.96)[b]	21.7 (4.35)	15.1 (2.79)[a]	21.7 (2.33)
Lower	30.0 (4.25)[ab]	14.9 (4.07)	14.3 (4.47)	16.7 (4.41)	27.1 (3.89)[a]	19.5 (2.72)
Higher	18.5 (2.83)[a]	20.6 (2.13)	12.9 (2.62)[b]	20.5 (2.87)	20.2 (2.18)	20.3 (1.79)

Note. Standard errors in parentheses. $N = 428$. Within columns: [a] $p < .05$. [b] $p < .10$.

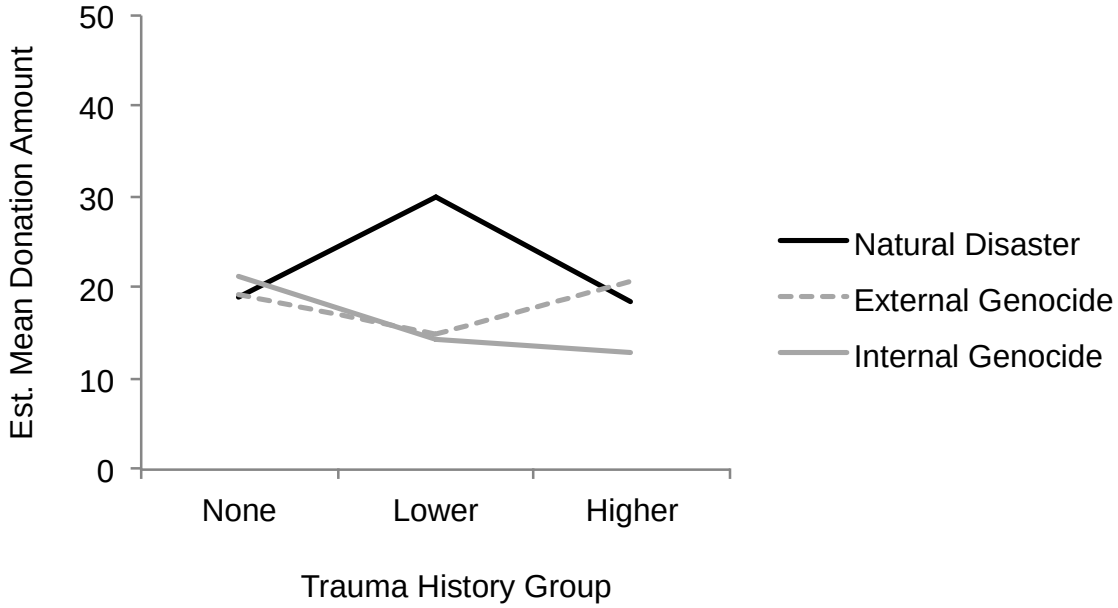

Figure 15. Estimated means of amount donated by type of traumatic event and trauma history for the single recipient of donation in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history. Est. = estimated.

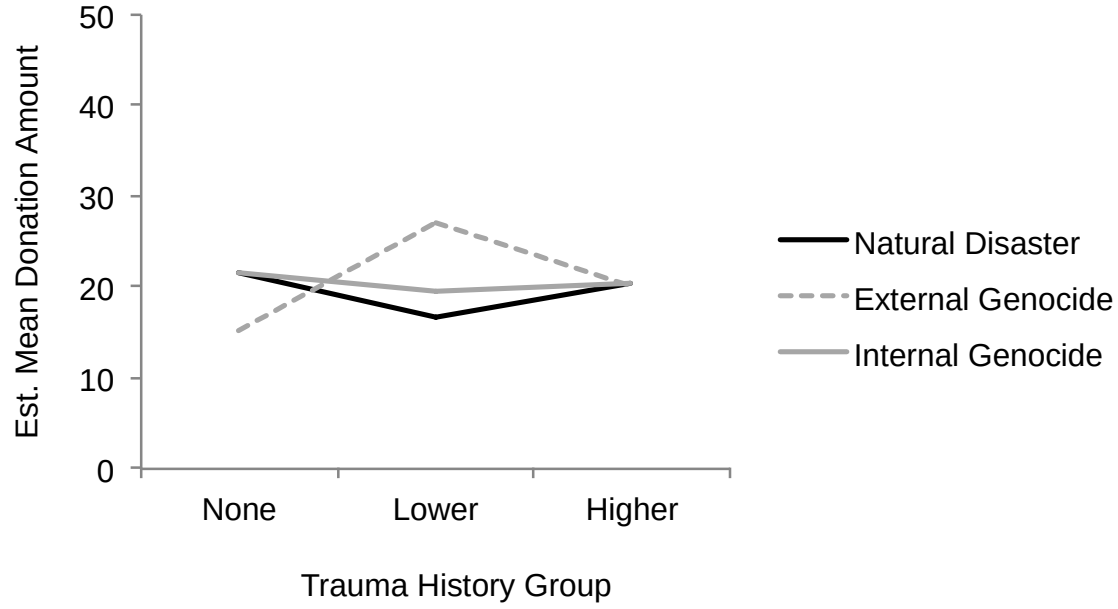

Figure 16. Estimated means of amount donated by type of traumatic event and trauma history for the group of recipients of donation in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history. Est. = estimated.

Research Question 5: Is There an Interaction Between the Different Emotional Responses and Number of Recipients?

The emotional variables categorized based on quartile values to reduce the number of groups. See Table 14 for quartile hinge values for each emotion.

Table 14. *Percentile Values for Emotional Response Variables in Study 1.*

		Percentiles						
		5	10	25	50	75	90	95
Emotions	Sad	2.00	3.00	4.00	5.00	6.00	7.00	7.00
	Sympathy	3.00	3.00	5.00	6.00	7.00	7.00	7.00
	Anger	1.00	2.00	3.00	4.00	5.00	7.00	7.00
	Guilty	1.00	2.00	3.00	5.00	6.00	7.00	7.00
	Betrayal	1.00	1.00	2.00	4.00	5.00	6.00	7.00

All of the emotions significantly interacted with number of recipients on willingness to donate: sad ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .245$), sympathy ($p = .006$, two-tailed Fisher's exact test, Cramer's $V = .217$), anger ($p = .040$, two-tailed Fisher's exact test, Cramer's $V = .191$), guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .324$), and betrayal ($p = .038$, two-tailed Fisher's exact test, Cramer's $V = .184$). For all the emotions, participants were less willing to donate to the group of recipients at lower levels of the emotions than expected. See Figure 17.

There were no significant interactions for amount donated between number of recipients and feelings of: sadness, $F(1, 380) = 0.23$, $p = .633$, $\eta_p^2 = .001$; sympathy, $F(1, 380) = 2.49$, $p = .115$, $\eta_p^2 = .007$; guilt, , $F(1, 380) = 1.15$, $p = .285$, $\eta_p^2 = .003$; and betrayal, $F(1, 380) = 0.82$, $p = .365$, $\eta_p^2 = .001$. However, there was a significant interaction between number and anger, $F(1, 380) = 5.32$, $p = .022$, $\eta_p^2 = .014$; see Figure

18. Those donating to a group of recipients show steeper positive slope across emotion ratings compared to those who were donating to an individual.

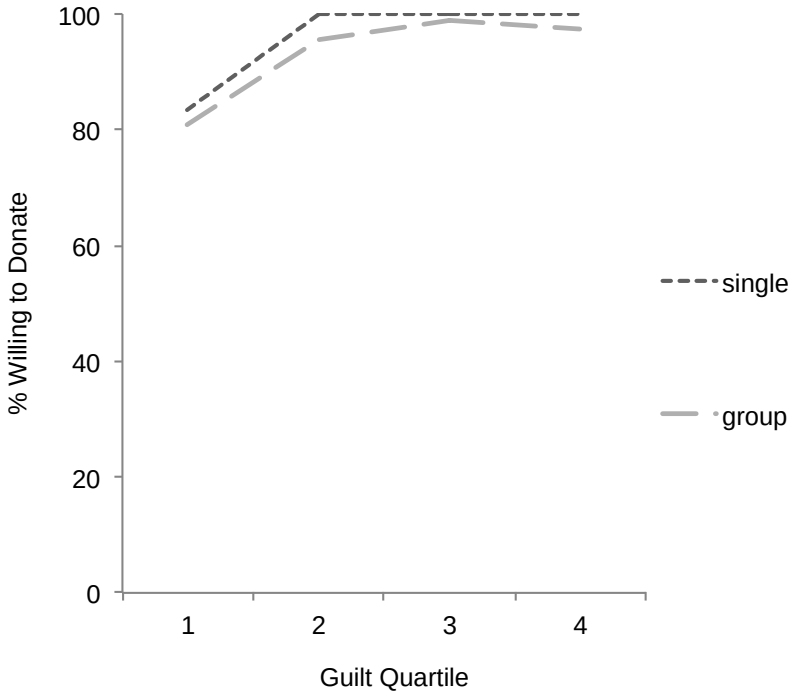

Figure 17. Percentage of participants willing to donate by guilt ranking and number of recipients in Study 1. Group = four children; Single = individual recipient of donation.

Research Question 6: Is There an Interaction Between the Different Emotional Responses and Type of Event?

There was not a significant interaction between type of event and feelings of anger on willingness to donate, $p = .171$, two-tailed Fisher's exact test, Cramer's $V = .193$. Yet, there were significant interactions with the other emotions: sadness ($p = .010$, two-tailed Fisher's exact test, Cramer's $V = .246$), sympathy ($p = .021$, two-tailed Fisher's exact test, Cramer's $V = .228$), betrayal ($p = .016$, two-tailed Fisher's exact test, Cramer's $V = .257$) and guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .346$).

When comparing the natural disaster condition to the combined genocide conditions, the same pattern emerges (except for betrayal). The interaction between betrayal rating and type was no longer significant when simply comparing the natural disaster condition to genocide, $p = .218$, two-tailed Fisher's exact test, Cramer's $V = .153$. As with the separated genocide conditions, there were significant interactions between type of event and sadness ($p = .003$, two-tailed Fisher's exact test, Cramer's $V = .241$), sympathy ($p = .005$, two-tailed Fisher's exact test, Cramer's $V = .217$), and guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .335$); the interaction between anger and type remained non-significant, $p = .062$, two-tailed Fisher's exact test, Cramer's $V = .185$). See Figure 19 for an example with the emotion guilt. Thus, at low levels of sadness, sympathy, and guilt, people are less willing to donate to both the genocide conditions. At lower levels of betrayal, people are less willing to donate to the internal genocide condition than expected. See Figure 20.

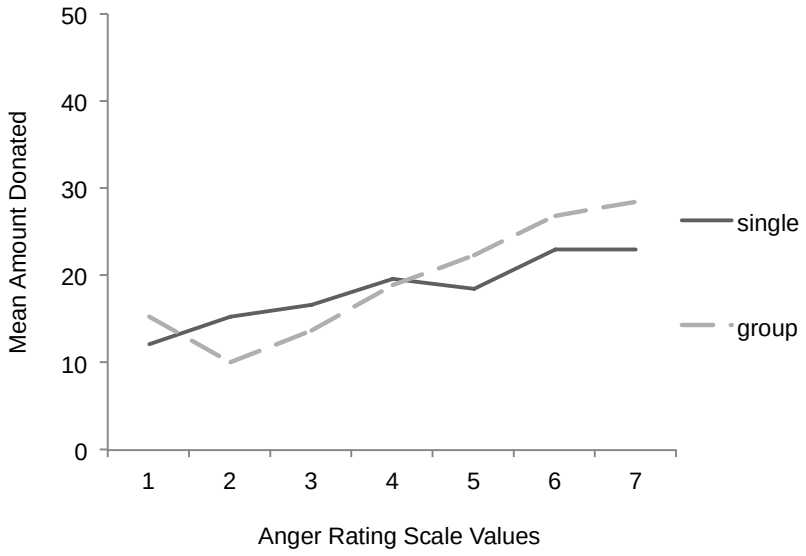

Figure 18. Average amount donated by number of recipients across anger values in Study 1. Group = four children; Single = individual recipient of donation.

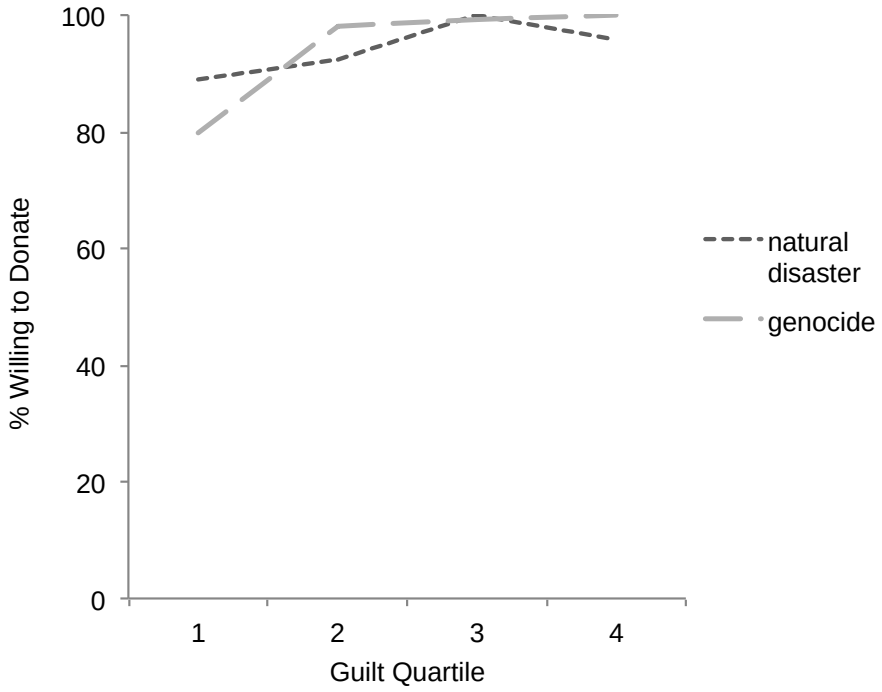

Figure 19. Percentage of participants willing to donate by guilt ranking and type of event in Study 1.

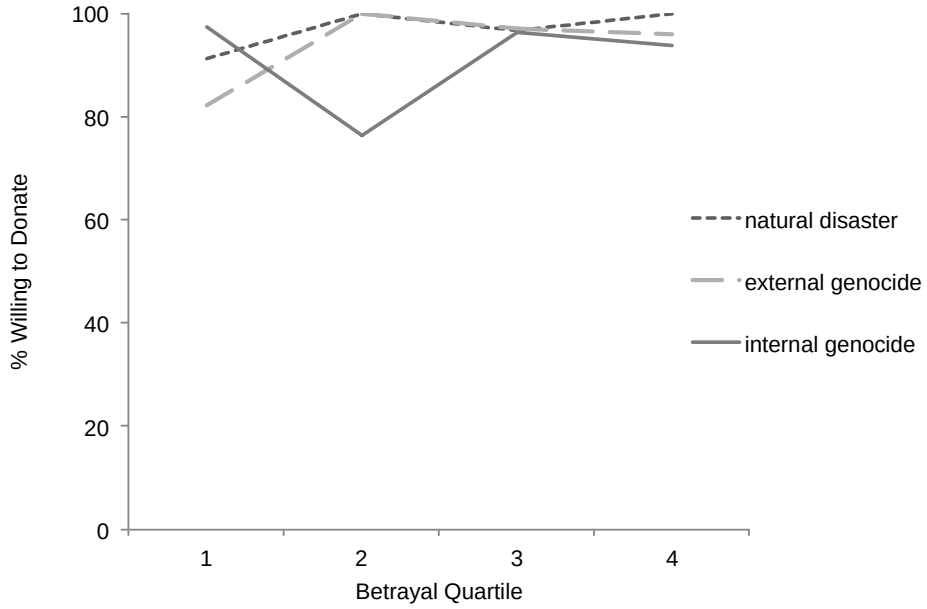

Figure 20. Percentage of participants willing to donate by betrayal ranking and type of event in Study 1.

Looking at the amount donated, there were no significant interactions for amount donated between type of event and emotional responses: sadness, $F(2, 380) = 0.28$, $p = .757$, $\eta_p^2 = .001$; sympathy, $F(2, 380) = 0.52$, $p = .593$, $\eta_p^2 = .003$; anger, $F(2, 380) = 0.57$, $p = .566$, $\eta_p^2 = .003$; guilt, , $F(2, 380) = 0.06$, $p = .942$, $\eta_p^2 < .001$; and betrayal, $F(2, 380) = 0.30$, $p = .743$, $\eta_p^2 = .002$.

Research Question 7: Is There an Interaction Between the Different Emotional Responses and Trauma History?

There was not a significant interaction between personal trauma history and levels of anger, $p = .051$, two-tailed Fisher's exact test, Cramer's $V = .203$. However, the other emotions did significantly interact with trauma history on willingness to donate: sympathy ($p = .003$, two-tailed Fisher's exact test, Cramer's $V = .248$), sadness ($p = < .001$, two-tailed Fisher's exact test, Cramer's $V = .267$), guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .362$), and betrayal ($p = .041$, two-tailed Fisher's exact test, Cramer's $V = .209$). Those who experienced higher betrayal traumas were less willing to donate than expected at the lower levels of the emotions. For guilt, this was also observed for those who had not experienced a betrayal trauma. See Figure 21.

There were no significant interactions for amount donated between trauma history and emotional responses: sadness, $F(2, 380) = 0.54$, $p = .584$, $\eta_p^2 = .003$; sympathy, $F(2, 380) = 0.21$, $p = .810$, $\eta_p^2 = .001$; anger, $F(2, 380) = 1.17$, $p = .313$, $\eta_p^2 = .006$; guilt, , $F(2, 380) = 0.41$, $p = .665$, $\eta_p^2 = .002$; and betrayal, $F(2, 380) = 0.09$, $p = .918$, $\eta_p^2 < .001$.

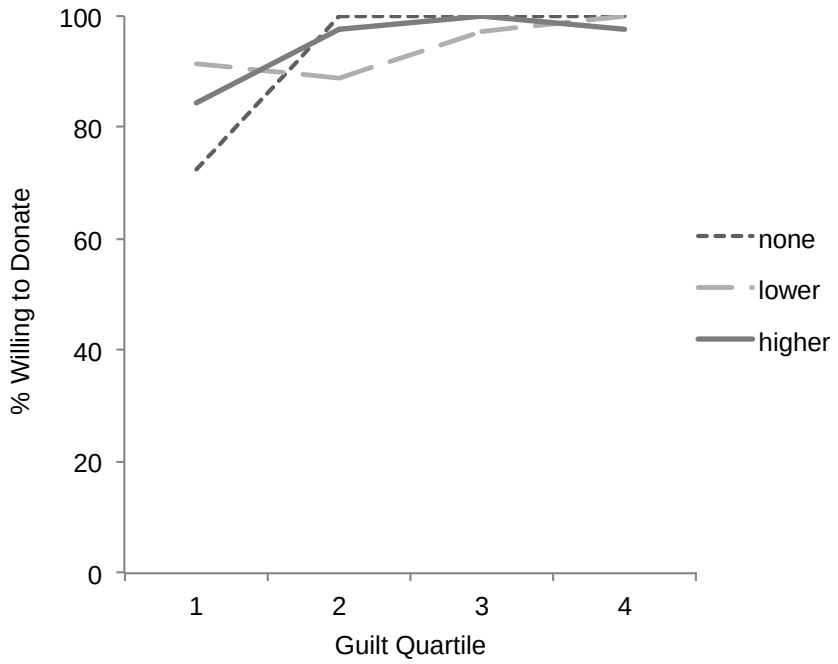

Figure 21. Percentage of participants willing to donate by guilt ranking and trauma history in Study 1. Higher = Higher betrayal trauma group; Lower = Lower betrayal trauma group; None = No betrayal trauma history.

Follow-Up Analyses

A one-way MANOVA was run to determine if there were significant differences in emotional responses based on the number of recipients. There was not a significant effect of number of recipients on emotional ratings, *Wilk's Λ* = .988, $F(5, 422) = 0.99$, $p = .426$, multivariate $\eta^2 = .012$. The results of the univariate ANOVAs are: sadness, $F(1, 426) = 3.51$, $p = .062$, $\eta^2 = .008$; sympathy, $F(1, 426) = 0.45$, $p = .502$, $\eta^2 = .001$; anger, $F(1, 426) = 2.05$, $p = .153$, $\eta^2 = .005$; guilt, $F(1, 426) = 1.79$, $p = .182$, $\eta^2 = .004$; and betrayal, $F(1, 426) = 0.89$, $p = .346$, $\eta^2 = .002$.

To determine if personal trauma history was associated with different levels of emotional responses, a one-way MANOVA was run. There was not a significant effect of trauma history on emotional ratings, *Roy's Largest Root* = 0.02, $F(5, 422) = 1.86$, $p =$

.100, multivariate η^2 = .022. The results of the univariate ANOVAs are: sadness, $F(2, 425) = 0.78$, $p = .459$, $\eta^2 = .004$; sympathy, $F(2, 425) = 0.14$, $p = .870$, $\eta^2 = .001$; anger, $F(2, 425) = 1.33$, $p = .265$, $\eta^2 = .006$; guilt, $F(2, 425) = 0.30$, $p = .744$, $\eta^2 = .001$; and betrayal, $F(2, 425) = 2.04$, $p = .132$, $\eta^2 = .010$.

CHAPTER V

DISCUSSION – STUDY 1

The purpose of this study was to explore further how trauma-related variables may be associated with helping behavior utilizing a betrayal trauma framework. Previous research (Frazier et al., 2013) demonstrated that people with a trauma history engaged in more daily helping behaviors and volunteer work. Utilizing a charitable donation paradigm, the hypothesis that trauma increases prosocial behavior was not supported; there not a significant difference in willingness to donate or in the amount donated across betrayal trauma backgrounds. Interestingly, the higher betrayal trauma group was less likely to donate at lower levels of sympathy, sadness, guilt, and betrayal. Therefore, people with a high betrayal trauma history needed to be more emotionally activated to be willing to donate.

This study also examined how charitable behavior may differ based on the betrayal level of the traumatic event. Work by Zagefka and colleagues (2011; 2012) showed that people reliably will offer less aid to survivors of humanly caused disasters. However, this study did not replicate their work. Participants were just as willing to donate and donated approximately the same amount to the genocide conditions as they did to the natural disaster. However, people were less willing to donate to the genocide conditions at low levels of the various emotions than expected. Thus, the genocide condition required a higher level of emotional reaction to receive the same amount of support as those suffering from a natural disaster.

Yet, there was a significant interaction between number of recipients, type of traumatic event, and personal trauma history on amount donated. The number of

recipients and the type of event differentially influenced people with a lower betrayal trauma history. When donating to a single survivor, the lower betrayal group donated the most to people who experienced a natural disaster. However, when presented with a group of survivors, they donated the most to the external genocide condition.

Looking at the effects of the emotions, interesting findings were obtained. Only sympathy and guilt were directly associated with a greater willingness to donate and larger amounts donated. Surprisingly, anger was positively, rather than negatively, associated with charitable behavior, although there was not a significant main effect once the other emotional responses were taken into account. This may have occurred because anger has been shown to activate an approach motivational system (Carver & Harmon-Jones, 2009). Haidt (2003) suggests anger is a moral emotion that can act as motivation to redress perceived injustices with prosocial behavior. Indeed, the contempt-anger-disgust (CAD) triad hypothesis proposed by Rozin, Lowery, Imada, and Haidt (1999) links anger with violations of individual rights. Research by Vitaglione and Barnett (2003) demonstrated that "empathic anger" on behalf of a suffering person increased desire to help. This was observed in the study in that people donated more money to the individual than the group at a greater magnitude when experiencing anger.

Analyses revealed there was no significant variation in emotional responses for the type of events (except for betrayal), trauma history, and number of recipients. This may explain the lack of observed group differences. Previous research (e.g., Dickert, Sagara, & Slovic, 2011; Small et al., 2007) has suggested the importance of emotional reactions in prosocial decision-making. If there are no differences in emotional reactions,

there is unlikely to be behavioral differences. For this reason, a repeated-measures design was used in Study 2.

CHAPTER VI

INTRODUCTION – STUDY 2

Study 2 was designed to build upon the findings of Study 1 and hopefully address some of the limitations found during that experiment. Two major advantages of this study were utilizing a repeated-measures design and incorporating additional correlates of prosocial behavior.

Added Constructs

Perceived Impact of Donation

Given the research previously discussed highlighting the salience of the proportion of lives saved rather than the absolute number on donation decision-making (e.g., Slovic, 2007), this suggests people are evaluating the impact their donation may have before deciding. That is, people will be more likely to, and will donate more, when they believe their donation can make a difference. Cheung and Chan (2000) showed that outcome efficacy (i.e., "the IRO [international relief organization] can help people more effectively than other overseas relief organizations") was directly predictive of donation intent to the IRO. Research using donation paradigms with vignettes have also found significant effects of perceived impact for likelihood of donation (Zagefka et al., 2012) and donation amounts (Dickert, Kleber, Peters, & Slovic, 2011)

Personality Characteristics

Conceptualizing personality using the Five Factor Model of personality (FFM; see McCrae & John, 1992; John, Naumann, & Soto, 2008), associations between the five factors (i.e., openness, conscientiousness, extraversion, agreeableness, and emotional stability) and prosocial behaviors have been explored. Work by Levy, Freitas, and

Salovey (2002) showed that higher levels of openness to experience related to increased donations to a local homeless shelter. Emotional stability and extraversion have been associated with increased charitable donations (Bekkers, 2006). Using a sample of college students, Kosek (1995) found positive correlations between extraversion, openness, and agreeableness with total prosocial behavior.

It appears that the factors with the most empirical support for a link with prosocial behavior are extraversion and agreeableness. Elshaug and Metzer (2001) showed that volunteers and paid workers differed on ratings of agreeableness and extraversion. Addition research has also found associations among extraversion, agreeableness, and volunteering (Carlo, Okun, Knight, de Guzman, 2005; Frazier et al., 2013). A study by Caprara, Alessandri, Di Giunta, Panerai, and Eisenberg (2010) demonstrated agreeableness played a "major role" in predicting self-reported prosocial behavior. Follow-up work by those researchers supported their hypothesis that agreeableness compared to the other personality traits is a strong predictor of prosociality (Caprara, Alessandri, & Eisenberg, 2012).

Trait Empathy

Empathy is "an affective state that stems from the apprehension of another's emotional state of condition, and that is congruent with it" (Eisenberg & Miller, 1987, p. 91). However, there is some agreement now that empathy consists of both an affective and a cognitive component (de Waal, 2008; Smith, 2006). Trait empathy has been shown to be positively associated with various prosocial behaviors, such as voluntarism (Penner & Finkelstein, 1998; Penner, 2002; Unger & Thumuluri, 1997) and helping behaviors (Conway, Rogelberg, & Pitts, 2009; Wilhelm & Bekkers, 2010). It has also predicted

charitable giving, both for the decision to donate and amount donated (Davis, 1983; Bekkers 2006; Verhaert & Van den Poel, 2011). While it is a well-documented association, a meta-analysis by Eisenberg and Miller (1987) describes the association between empathy and prosocial behavior as low to moderate.

Social Value Orientation

Social value orientation (SVO) reflects individual differences in how decision makers prioritize self versus other when distributing resources (see Bogaert, Boone, & Declerck, 2008 for a review). There are two general categories of orientation style, prosocial and proself. The proself grouping is further subdivided into two types, resulting in three social value orientations: cooperative/prosocial, individualistic, and competitive. A person with a cooperative/prosocial orientation will try to maximize outcomes for both self and other, while those with either the individualistic or competitive orientations will try to maximize outcomes for self either a) without respect to the "other" (i.e., greatest absolute value) or b) relative to the "other" (i.e., greatest difference value), respectively.

Much of the research on social value orientation has been conducted using social dilemma games. A recent meta-analysis revealed a small to medium effect size between social value orientation and cooperation, showing that prosocials cooperate more than proselfs and individualists more than competitors (Balliet, Parks, & Joireman, 2009). There has been limited research beyond social dilemma tasks associating a prosocial value orientation with prosocial behavior, such as agreeing to volunteer and charitable donations. McClintock and Allison (1989) reported that prosocials agreed to volunteer more hours than the proself orientations. Prosocial value orientation was associated with

increased donation amounts (Bekkers 2006). Further research by Van Lange, Bekkers, Schuyt, and Vugt (2007) found that prosocials had more acts of donation (i.e., different types of donations) and donated to greater number of organizations than the proself groups, especially to organizations providing aid to the poor and ill. While the proself groups did not differ in terms of the number of donations, individualists donated to a wider variety of organizations than competitors.

Prosocial Tendencies

Prosociality refers to "individuals' enduring tendencies to enact behaviors such as sharing, helping, caring, and empathy" (Caprara et al., 2012, p. 1289). Thus, it is describing dispositional prosocial behavior. Prosociality has been linked to both agreeableness and trait empathy (Caprara et al., 2010); however, this is the first study to directly examine how it relates to a behavioral measure of helping.

Emotion Regulation

"Emotion regulation is the process by which activation in one response domain [neurophysiological-biochemical, motor-expressive, experiential-cognitive] serves to alter, titrate, or modulate activation in another response domain" (Dodge, 1989, p. 340). Previous research has shown that people may actively avoid emotions (e.g., empathy) that will motivate them to provide help (Shaw, Batson, & Todd, 1994). As previously mentioned, Cameron and Payne (2011) demonstrated how this might explain the collapse of compassion, particularly by people who are skilled in emotion regulation.

Two commonly used emotion regulation strategies are cognitive reappraisal and expressive suppression (Gross & John, 2003). Cognitive reappraisal consists of thinking about the situation in a way that changes its emotional impact; with suppression, the

person inhibits his or her behavioral emotional reactions, such as keeping a poker face. Rubaltelli and Agnoli (2012) found that suppression was associated with choosing to donate to one woman (and thus providing a lower donation), whereas cognitive reappraisal was associated with supporting the program serving three women (and requiring a larger donation).

Social Desirability

Socially desirable responding is the tendency, either purposeful or unconscious, to answer items in a way that makes the respondent look "good" (Vispoel & Tao, 2013). Hardy (2006) found social desirability was associated with empathy and prosocial behavior. In a study exploring sympathy and distress on prosocial behavior, both self-reported emotional responses positively correlated with social desirability (Eisenberg, Fabes, et al., 1989). It has also been shown to predict willingness to provide help and donation behavior (Marjanovic, Struthers, & Greenglass, 2012). Because charitable giving can be considered a socially desirable action, it is possible participants may give artificially elevated prosocial responses.

Betrayal Awareness

Betrayal blindness refers to the lack of awareness and forgetting people exhibit towards betrayal (Freyd, 1996). While Gobin and Freyd (2009) did not find significant differences in overall betrayal awareness across trauma backgrounds, they did find that persons with a high betrayal trauma history had higher betrayal blindness for partner infidelity in romantic relationships. This is the first study to look at betrayal awareness using a behavioral measure of giving.

Summary of Purposes and Goals

Given the lack of differences observed between the scenarios in Study 1, the research design was changed to a repeated-measures approach in an effort to increase variability between the types of events. Participants were now presented with both types of scenarios, which allowed the use of difference scores as the unit of analysis. This approach also removes the effects of individual differences in the repeated variables. New to this study was the creation of scenarios reflecting varying betrayal levels of each type of event. As in Study 1, there were two versions of a genocide event: internal (high) and external (low). However, now two versions of the natural disaster were used: the flood was caused because of either heavy rain (low) or a poorly built bridge collapsed (high). Additionally, known correlates of charitable behavior were incorporated to reduce unexplained variance and increase the likelihood of finding significant effects. The goal remains the same as Study 1: to explore charitable behavior using a betrayal trauma framework.

Hypotheses and Research Questions

- Hypothesis 1: Willingness to donate and amount donated will be higher for the single, identified survivor.
- Hypothesis 2: Increased affect will be associated with greater willingness to donate and higher donation amounts; however, perceived betrayal would show a negative association.
- Hypothesis 3: Persons of a prosocial value orientation will donate more money.
- Hypothesis 4: Persons with increased agreeableness and extraversion will be more willing to donate and will donate more money.

- Hypothesis 5: People with higher social desirability will be more willing to donate and report higher donation amounts.
- Hypothesis 6: People who use suppression as an emotion regulation will report lower donation amounts, while those who use reappraisal will report higher amounts.
- Hypothesis 7: More empathetic people will be more willing to donate and report higher donation amounts.
- Hypothesis 8: Participants with higher prosocial scores will be more willing to donate and will donate more money.
- Hypothesis 9: Participants with lower betrayal awareness will be more willing to donate and will provide more money.
- Hypothesis 10: People will be more willing to donate, and donate more, to the flood condition than to the genocide condition.
- Hypothesis 11: People will be more willing to donate, and donate more, to the lower betrayal condition than to the higher betrayal condition.
- Hypothesis 12: Lower betrayal awareness will be associated with higher donations to a) the natural disaster condition and b) the lower betrayal conditions.
- Research Question 1: Does personal history of betrayal trauma relate to charitable donations in regards to willingness to donate as well as amount donated?
- Research Question 2: Is there an association between personal trauma history and number of recipients that impacts willingness to donate and amount donated?
- Research Question 3: Is there an interaction between the different emotional responses and number of recipients?

- Research Question 4: Is there an interaction between the different emotional responses and trauma history?
- Research Question 5: Are there interactions between the different emotional responses and social value orientation?
- Research Question 6: Is there an association between personal trauma history and type of event that impacts willingness to donate and amount donated?
- Research Question 7: Is there an association between personal trauma history and level of betrayal of event that relates to amount donated?
- Research Question 8: Do differences in emotional responses predict differences in donations to the genocide and flood conditions?
- Research Question 9: Do differences in emotional responses predict differences in donations to the high and low betrayal levels?
- Research Question 10: Does the number of recipients produce differences in a) donations to the two types of scenarios or b) donations to the two betrayal levels?
- Research Question 11: Does the effect of differences in emotional responses vary across trauma backgrounds producing differences in a) donations to the two types of scenarios or b) donations to the two betrayal levels?

CHAPTER VII

METHOD – STUDY 2

Participants

The sample consisted of 634 undergraduate students (69.4% women) recruited from the Human Subjects Pool at the University of Oregon. Ages of participants ranged from 18 to 52 (*M*=19.7, *SD*= 2.59). Approximately 72% of the sample identified solely as Caucasian and 93% identified as heterosexual; the most frequently endorsed religious affiliation was "other" (49.5%). Participants were recruited online with a blinded study registration process based on time availability to minimize self-selection bias. Participants earned research credit for a course requirement by completing some or all of the survey. Unique identification numbers were given to respondents to ensure anonymity. All variables had 3.6% or less missing data; however, only 361 of participants had complete data. Missing data for items within a scale or subscale (except for betrayal awareness) were replaced with individual mean values if either a) only 1 item was unanswered or b) if at least 90% of the items were answered. Less than 1% (n = 3) of original participants experienced none of the betrayal awareness events; therefore, because betrayal awareness could not be assessed, they were removed from the sample. Listwise deletion was used to handle any remaining missing data, resulting in a sample size of 513 participants.

Materials

Demographics Questionnaire

Demographic information was collected regarding gender, ethnicity, age, religious affiliation, and sexual orientation. The principal investigator for this study created the questions.

Big Five Inventory

Personality was measured using the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991). Comprised of 44 items, this is a self-report measure of the Big Five personality traits: openness (10 items; e.g., "is creative and inventive"), conscientiousness (9 items; e.g., "is a reliable worker"), extraversion (8 items; e.g., "is talkative"), agreeableness (9 items; e.g., "has a forgiving nature"), and emotional stability (8 items e.g., "can be tense"). Participants rated each short phrase on a 5-point Likert scale from *strongly disagree* to *strongly agree*. Scores were averaged across subscale items. John and Srivastava (1999) reported alpha reliabilities from .75 to .80 for the 5 subscales and 3-month test-retest reliabilities from .80 to .90. In this study, all 5 subscales had acceptable to good internal consistency: agreeableness ($\alpha = .78$), conscientiousness ($\alpha = .79$), emotional stability ($\alpha = .83$), extraversion ($\alpha = .87$), and openness ($\alpha = .81$).

Balanced Inventory of Desirable Responding

The Balanced Inventory of Desirable Responding (BIDR-6; Paulhus, 1991) is a 40-item social desirability measure consisting of 2 subscales: self-deceptive enchancement (SDE) and impression management (IM). The self-deception subscale looks at the person's tendency to accentuate positive, while minimizing negative, attributes. The impression management subscale assesses deliberate self-presentation to

others regarding performing desirable behaviors more frequently than undesirable actions. Participants indicated their level of agreement with each item on a 7-point scale (*not true* to *very true*). Typically, dichotomous scoring is used such that only extreme scores (i.e., *6* or *7*) are summed, creating a range of values from 0 to 20 per subscale. Paulhus (1991) reported good internal consistency for all 40 items (Cronbach's $\alpha = .83$), with αs ranging from .68 to .80 for the SDE subscale and .75 to .86 for the IM subscale; high test-retest reliability over a 5-week period has been also been demonstrated for both SDE ($r = .69$) and IM ($r = .65$). Comparing a continuous scoring method to the traditional dichotomous method, Stöber, Dette, & Musch (2002) found that the continuous approach produced higher Cronbach alpha coefficients and better convergent validity with other measures of social desirability. For this study, using a continuous scoring method, Cronbach's alpha was acceptable for both SDE ($\alpha = .69$) and IM ($\alpha = .76$), with a full-scale internal consistency of $\alpha = .78$.

Triple-Dominance Measure of Social Value Orientation

The 9-item Triple-Dominance Measure of Social Value Orientation (TDMSVO; see Van Lange, De Bruin, Otten, & Joireman, 1997) assesses a respondent's social value orientation. The TDMSVO is structured such that each participant selects among three alternative allocations of valuable points for himself or herself and the "other". Each of the allocations corresponds to either a cooperative/prosocial, individualistic, or competitive orientation. The measure's instructions provide the following example (with orientation type provided in parentheses for reference): 500 for both (prosocial), 550 to self and 300 for other (individualistic), or 500 to self and 100 for other (competitive).

Participants are classified as having a particular social value orientation if they consistently select one orientation style for at least 67% of the items.

A review by Au and Kwong (2004) determined that more people are classified as having a prosocial orientation (median = 46%) than the proself orientations of individualistic (median = 25%) and competitive (median = 13%). The median unclassified rate was 12%. Murphy, Ackermann, and Handgraaf (2011) demonstrated good test-rest reliability and convergent validity for this measure. Approximately 70% of participants were classified as having the same SVO at two different time periods (Goodman and Kruskal's gamma = 0.391). Additionally, Murphy and colleagues (2011) showed classification agreement with two other SVO measures, the Ring Measure (67%) and the Slider Measure (74%).

Emotion Regulation Questionnaire

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is a 10-item self-report measure consisting of two scales reflecting different emotion regulation strategies: cognitive reappraisal (six items) and expressive suppression (four items). An example reappraisal item is "I control my emotions by changing the way I think about the situation I'm in" while "I control my emotions by not expressing them" demonstrates suppression. The 10 items were rated on a 7-point-Likert scale from *strongly disagree* to *strongly agree*. Scores were averaged across subscale items. The ERQ has been shown to have both acceptable internal consistency (α = .79 for the reappraisal subscale and α = .73 for the suppression subscale) and a 2-month test-retest reliability of .69 (Gross & John, 2003). This study's Cronbach's alpha for both subscales were adequate with alphas of .72 and .83 for suppression and reappraisal, respectively.

Interpersonal Reactivity Index

Davis's (1980, 1983) Interpersonal Reactivity Index (IRI) is a 28-item measure that consists of four subscales: empathic concern (EC), fantasy (FS), personal distress (PD), and perspective taking (PT). The EC subscale measures a person's feelings of sympathy and compassion for others (e.g., "I often have tender, concerned feelings for people less fortunate than I am"). Fantasy refers to a person's ability to transpose oneself into fictional situations (e.g., "I really get involved with the feelings of the characters in a novel"). The PD subscale looks at the person's tendency to respond with distress to stressful situations experienced by others (e.g. "I sometimes feel helpless when I am in the middle of a very emotional situation"). Lastly, the PT subscale assesses a person's inclination to adopt another person's point of views spontaneously (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"). The measure provides five response options ranging from *does not describe me well* to *describes me very well*. Scores are summed across all items for a measure of trait empathy. The subscales also have acceptable internal consistency (range = .71 to .77) and test-retest reliabilities (range = .62 to .80) (Davis, 1980). The whole scale had a good Cronbach's alpha (α = .82), as did all the subscales (αs = .77 to .78).

Prosocialness Scale for Adults

Participants completed a 16-item scale to assess prosocial feelings and behaviors associated with four types of actions: sharing, helping, caring for, and responding empathetically to others' needs (Caprara, Steca, Zelli, & Capanna, 2005). For each item, respondents indicated the veracity of each statement on a 5-point Likert scale (*never true* to *almost always true*). Scores were averaged across all items. The scale has shown high

internal consistency (Cronbach's α = .91; Caprara et al., 2005). A follow-up study by Caprara et al. (2012) demonstrated both excellent internal consistency (Time 1α = .93, Time 2α = .94) and test-rest reliability (*r* = .72). For this study, Cronbach's alpha was .90.

Betrayal Detection Measure

To look at betrayal blindness tendencies in general, participations completed a shortened version of a betrayal detection scale developed by Gobin and Freyd (2009). The original scale included seven items, each consisting of three parts, that looked at romantic, emotional, and social betrayals committed by family members, friends, and romantic partners. The first part of each question asks how often the participant has experienced a similar betrayal to the one presented in the scenario (from never to more than 100 times). The second part looks at the participant's awareness of the betrayal, ranging from completely unaware (a score of 1) to completely aware (a score of 5). In the final section, participants indicate their reaction to the similar betrayal event they experienced. Response options assessed two components: whether they a) confronted (or not) the person and b) continued the relationship (or ended it). Gobin and Freyd (2009) reported adequate internal consistency of level of awareness for both support-related (*r* = .27) and betrayals in an intimate relationship (*r* = .50). In this study, only 5 items were used (i.e., the romantic partner items have been removed) and only the first two parts of each item were asked (i.e., not asking about their behavioral responses). Scores were averaged across all items that respondents endorsed experiencing at least once. For this study, Cronbach's alpha was .63, with inter-item correlations ranging from .09 to .46.

Brief Betrayal Trauma Survey

A modified version of the Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006) was used in this study. For each question, participants selected whether they had experienced each of the betrayal events for 3 different time periods: before the age of 12, between the ages of 12 and 17, and after the age of 18. Also, respondents checked *yes* or *no* that the event happened rather than indicating how frequently each item occurred.

Charitable Behavior Vignettes

Charitable behavior was measured using 8 vignettes (adapted from Small et al., 2007), representing two events. Event 1 is a natural disaster (i.e., a flood) and Event 2 is genocide. Within each event, there were two versions reflecting a lower or a higher betrayal level of the event. Within the flood condition, the flood was caused either by heavy rain (a lower betrayal) or a poorly build dam collapsing (a higher betrayal). Within the genocide condition, the persons attacking were either from outside the village (a lower betrayal) or within the village (a higher betrayal). As with Study 1, the donation was made to either a single child or a group of 4 children. Participants were randomly assigned to a condition consisting of two vignettes of the flood or genocide scenarios that differed in betrayal level. The order of the scenarios was counterbalanced. They were given a hypothetical $100, the vignettes and photos, and asked the amount to be donated to each scenario. They also indicated how much money they would like to keep for themselves. The sum of the three responses could not total more than 100. Participants also reported their emotional responses on a 7-point rating scale (*not at all* to *very much*) for the emotions of sadness, sympathy and compassion, anger, guilt, and perceived

betrayal of event. Additionally, they completed a question regarding their belief in the effectiveness of a donation to the situation on a 7-point rating scale ("not at all" to "very much").

Procedure

Human subjects approval was granted by Office for the Protection of Human Subjects at the University of Oregon prior to data collection. Measures were completed online via Qualtrics, an Internet-based survey program. The average time to complete the study was approximately 35 minutes. After providing informed consent, participants answered basic demographic questions. The order of presentation for the self-report measures was: the BFI, the BIDR, the Triple-Dominance Measure of Social Value Orientation, the Emotion Regulation Questionnaire, the IRI, the Prosocial Measure, the Betrayal Detection Measure, and the BBTS. When finished with the self-report measures, participants were randomly presented with the two charitable donation vignettes and questions. All participants were provided with an electronic version of the debriefing form onscreen available for downloading.

CHAPTER VIII

RESULTS – STUDY 2

Overall, 93% of the sample (n = 478) made a hypothetical donation, leaving a small sample size (n = 35) of those who did not donate. The average total amount donated was 65.7 (SD =32.7). The mean amounts donated to each scenario were: high betrayal genocide scenario (M = 34.8, SD = 17.9, SE = 1.11), high betrayal flood (M = 30.7, SD = 17.5, SE = 1.10), low betrayal genocide (M = 33.9, SD = 20.1, SE = 1.27), and low betrayal flood (M = 31.8, SD = 16.6, SE = 1.03). See Figure 22. Multivariate tests revealed significant differences among these means, *Wilk's* Λ = .961, $F(1, 511) = 20.9$, $p < .001$, multivariate $\eta^2 = .039$. People donated significantly more money to the high betrayal genocide condition than both the high and low betrayal flood conditions, p = .009 and p = .001, respectively. Donations were also higher for the low betrayal genocide condition compared to the high betrayal flood scenario, p = .001. However, there were significant order effects, so results should be interpreted cautiously.

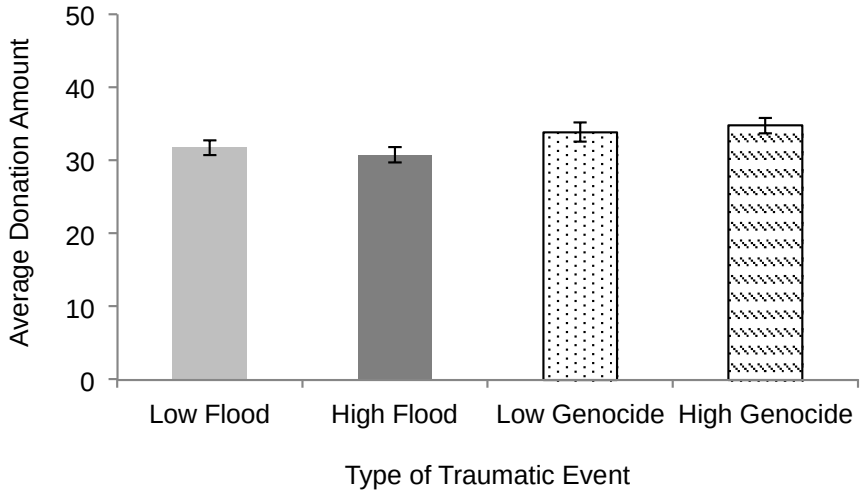

Figure 22. Estimated mean donation amounts for each scenario in Study 2. Low = low betrayal; High = high betrayal. Est. = estimated. Error bars represent standard errors.

Order Effects

There was not a significant difference in total amounts donated based on whether the participant was first presented the flood condition (estimated M = 61.0, SE = 2.35) or the genocide condition (estimated M = 64.5, SE = 2.46), $F(1, 377) = 1.58$, $p = .209$, $\eta_p^2 = .004$. However, there was a significant order effect for betrayal level of the event on total amount donated, $F(1, 377) = 9.94$, $p = .002$, $\eta_p^2 = .026$; overall, people donated more money when presented first with the lower betrayal event (estimated M = 67.2, SE = 2.42) than with the higher betrayal event (estimated M = 58.3, SE = 2.40). The interaction between the two order effects was not significant, $F(1, 377) = 0.46$, $p = .500$, $\eta_p^2 = .001$.

When comparing donation amounts for the genocide and flood conditions, there was a significant order effect for type of scenario, $F(1, 477) = 4.78$, $p = .029$, $\eta_p^2 = .010$. When presented with the flood condition first, people donated on average 32.4 (SE = 1.26) to the genocide condition and 31.3 (SE = 1.14) to the flood condition. However, when presented with the genocide condition first, people donated on average 35.2 (SE = 1.28) to the genocide condition and 31.1 (SE = 1.15) to the flood condition. Thus, the magnitude of the donation difference between genocide and flood conditions was larger when presented with the genocide condition first. There was not a significant order effect for presentation of betrayal level on type donations, $F(1, 477) = 0.89$, $p = .345$, $\eta_p^2 = .002$, nor for the interaction between the two order effects, $F(1,477) = 0.89$, $p = .345$, $\eta_p^2 = .002$. The influence of the order of presentation did not significantly vary across personal trauma history: the type order effect, $F(2, 477) = 0.03$, $p = .973$, $\eta_p^2 < .001$; the

betrayal order effect, $F(2, 477) = 0.56$, $p = .574$, $\eta_p^2 = .002$; or the interaction of the order effects, $F(2, 477) = 0.78$, $p = .461$, $\eta_p^2 = .003$.

Looking at donation amounts for the high and low betrayal conditions, the order effect for type of event was not significant on donations to the betrayal conditions, $F(1, 477) = 0.37$, $p = .544$, $\eta_p^2 = .001$. However, there was a significant order effect for betrayal level, $F(1, 477) = 4.93$, $p = .027$, $\eta_p^2 = .010$. People donated on average 33.1 (*SE* = 1.20) to the high condition and 34.7 (*SE* = 1.23) to the low condition when presented with the low condition first. However, when presented with the high betrayal condition first, people donated on average 31.9 (*SE* = 1.19) to the high condition and 30.3 (*SE* = 1.22) to the low condition. Thus, people donated more to the level of betrayal with which they were first presented. The interaction between the order effects was also significant, $F(1, 477) = 11.5$, $p = .001$, $\eta_p^2 = .024$; see Figure 23. Donations for the high genocide condition did not vary whether the scenario was shown before or after the low flood condition. However, for the other three conditions, donations increased if the low betrayal scenario was displayed first, as most markedly seen in the low genocide condition. That is, donations to the low genocide condition were higher if it preceded the high flood scenario but lower if it followed the high flood scenario. Persons of varying trauma history were not influenced differentially by the type order effect, $F(2, 477) = 0.18$, $p = .837$, $\eta_p^2 = .001$; the betrayal order effect, $F(2, 477) = 0.08$, $p = .921$, $\eta_p^2 < .001$; nor the interaction of the two order effects, $F(2, 477) = 1.28$, $p = .278$, $\eta_p^2 = .005$. Because these effects were significant, they were included in the model.

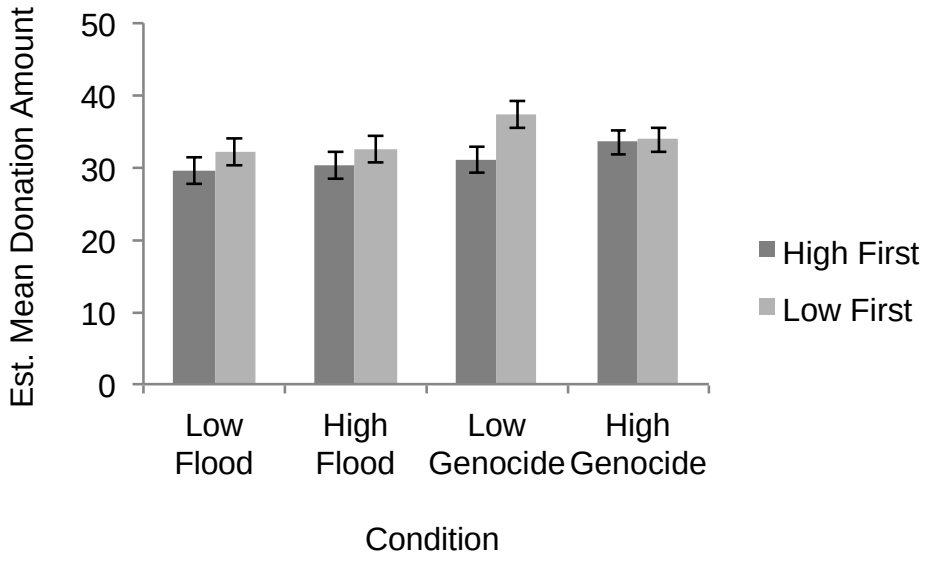

Figure 23. Estimated mean donation amounts for each scenario by first condition presented in Study 2. Low = low betrayal; High = high betrayal. Est. = estimated. Error bars represent standard errors.

Hypotheses and Research Questions

Hypothesis 1: Willingness to Donate and Amount Donated Will Be Higher for the Single, Identified Survivor.

There was not an association between number of recipients and willingness to donate, χ^2 (1, N = 513) = 0.10, p = .747, □ = .014. The average total amount donated to the single recipient was 64.8 (SD = 33.0, SE = 2.09), while the average amount donated to the group was 66.5 (SD = 32.4, SE =1.99). After controlling for the effects of the covariates, the mean estimated amount donated to the single recipient was 61.9 (SE = 2.75) and 63.7 (SE = 2.73) for the group of children; see Figure 24. This was not a significant difference, F(1, 377) = 0.11, p = .744, η_p^2 < .001.

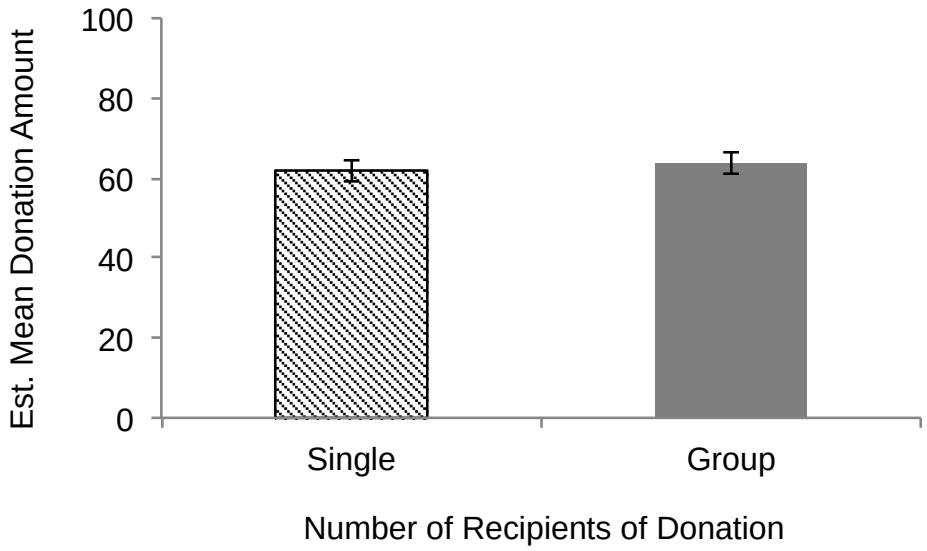

Figure 24. Estimated mean donation amounts by number of recipients in Study 2. Est. = estimated. Error bars represent standard errors.

Hypothesis 2: Increased Affect Will Be Associated With Greater Willingness to Donate and Higher Donation Amounts; However, Perceived Betrayal Would Show a Negative Association.

Point-biserial correlations revealed positive linear trends for all emotional variables on willingness to donate: sadness, $r(511) = .337$, $p < .001$, $r^2 = .114$; sympathy, $r(511) = .302$, $p < .001$, $r^2 = .091$; anger, $r(511) = .278$, $p < .001$, $r^2 = .077$; betrayal, $r(511) = .169$, $p < .001$, $r^2 = .029$; guilt, $r(511) = .475$, $p < .001$, $r^2 = .226$; and perceived impact of donation, $r(511) = .429$, $p < .001$, $r^2 = .184$. After controlling for the effects of the other variables, increased willingness to donate was only associated with increased ratings of: anger, $r(506) = .090$, $p = .042$, $r^2 = .008$; guilt, $r(506) = .253$, $p < .001$, $r^2 = .064$; and impact of donation, $r(506) = .185$, $p < .001$, $r^2 = .034$.

Table 15 shows the means and standard deviations for the total amount donated and the mean emotional response variables; it also includes the correlations among these

variables. See Figure 25 for a plot of the mean amounts donated by emotional response values. All emotional response variables were significantly positively correlated with amount donated, *p*s < .01.

Table 15. *Correlations among Emotional Response Variables and Total Amount Donated in Study 2.*

	1	2	3	4	5	6	7
1. Amount	-						
2. Sad	.366**	-					
3. Sympathy	.349**	.823**	-				
4. Anger	.300**	.619**	.603**	-			
5. Betrayal	.285**	.409**	.390**	.609**	-		
6. Guilt	.453**	.503**	.501**	.387**	.287**	-	
7. Impact	.480**	.459**	.474**	.303**	.277**	.620**	-
Mean	65.6	5.39	5.71	4.95	4.42	4.91	4.98
Standard deviation	32.7	1.33	1.18	1.48	1.48	1.93	1.73

Note. ** $p < .01$

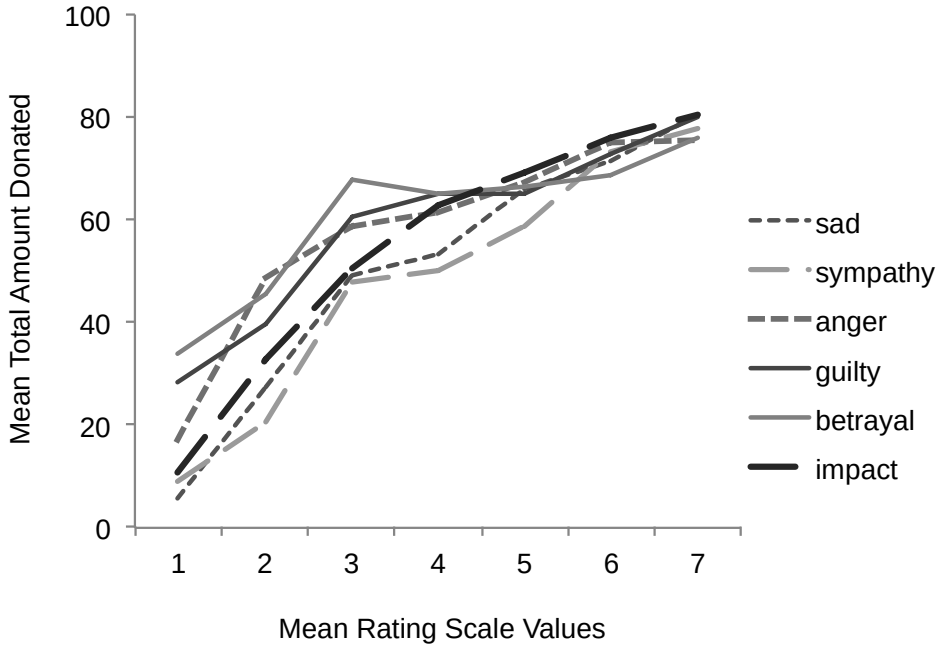

Figure 25. Average amount donated by emotional response ratings in Study 2.

After controlling for the effects of the covariates, only guilt and belief in the donation making a difference significantly predicted amount donated, such that increased feelings of guilt (p = .001) and a perceived higher impact (p = .023) were associated with higher donation amounts. See Table 16 for the results of the *F*-tests.

Table 16. *Results of Emotional Responses Predicting Amount Donated in Study 2.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Sad	39.6	1	39.6	0.05	.819	<.001
Sympathy	645.5	1	645.5	0.86	.355	.002
Anger	41.1	1	41.1	0.06	.815	<.001
Betrayal	863.3	1	863.3	1.15	.285	.003
Guilty	8197.2	1	8197.2	10.9	.001	.028
Impact	3909.8	1	3909.8	5.20	.023	.014
Error	283565.6	377	752.2			
Corrected Total	475435.3	444				

Research Question 1: Does Personal History of Betrayal Trauma Relate to Charitable Donations in Regards to Willingness to Donate as Well as Amount Donated?

Of the sample, 59% (n = 304) experienced a betrayal trauma; 46.4% (n = 238) endorsed at least one lower betrayal item and 39.4% (n = 202) survived a higher betrayal event. As in Study 1, three groups were created to represent trauma history: none (n = 209), lower betrayal (n = 102), and higher betrayal (n = 202). Of those with no trauma history, 93.8% made a donation; similarly, 93.1% of the lower — and 92.6% of the

higher — betrayal trauma groups donated. There was not an association between personal trauma history and willingness to donate, χ^2 (2, N = 513) = 0.24, p = .889, Cramer's V = .021.

The mean total amounts donated by trauma history: no betrayal history group (M = 68.0, SD = 31.9, SE = 2.20), lower betrayal group (M =63.6, SD = 33.2, SE = 3.29), and higher betrayal group (M =64.2, SD = 33.2, SE = 2.34). After controlling for the effects of the covariates, the average amounts donated by the groups became: the no betrayal history group (M =62.4, SE = 2.80), lower betrayal group (M =65.6, SE = 4.26), and higher betrayal group (M =60.2, SE = 2.89); see Figure 26. There was not a significant main effect of betrayal trauma history on total amount donated, F(2, 377) = 0.20, p = .817, η_p^2 = .001.

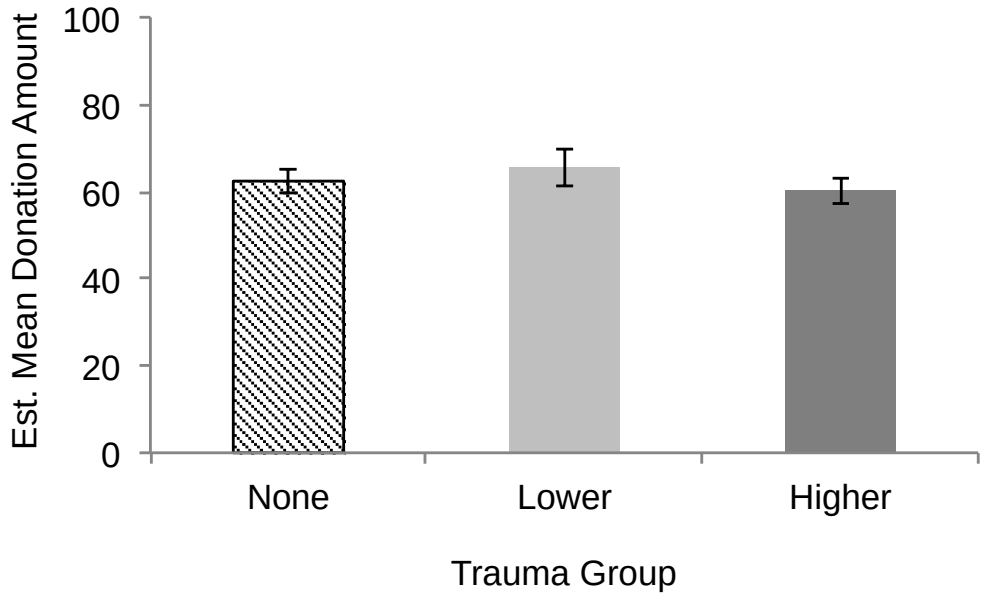

Figure 26. Estimated mean amount donated by history of betrayal trauma in Study 2. None = no betrayal trauma history; Lower = history of at least one lower betrayal trauma; Higher = history of at least one higher betrayal trauma. Est. = estimated. Error bars represent standard errors.

Research Question 2: Is There an Association Between Personal Trauma History and Number of Recipients That Impacts Willingness to Donate and Amount Donated?

For the single recipient, 91.6% of those with no trauma history, 96.1% of those in the low betrayal group, and 94.1% of the high betrayal trauma group made donations. To the group, 95.6% of the no trauma group, 90.2% of the low group, and 91% of the high group contributed. There was not an interaction between personal trauma history and number of recipients on willingness to donate, χ^2 (5, N = 513) = 3.72, p = .590, Cramer's V = .085.

See Table 17 for means and standard deviations of amount donated for the number of recipients by type of traumatic event interaction. After controlling for the effects of the covariates, the estimated means are shown in Table 18. There was not a significant interaction between number of recipients and trauma history on total amount donated, F(2, 377) = 0.49, p = .998, η_p^2 < .001.

Table 17. *Means and Standard Deviations of Amount Donated by Number of Recipients and Trauma History in Study 2.*

	Trauma History		
Number of Recipients	None	Lower	Higher
Single	66.29 (33.22)	63.98 (31.04)	63.72 (33.89)
Group	69.38 (30.76)	63.29 (35.53)	64.76 (32.67)

Note. Standard deviations in parentheses. N = 513.

Table 18. *Estimated Means and Standard Errors of Amount Donated by Number of Recipients and Trauma History in Study 2.*

	Trauma History		
Number of Recipients	None	Lower	Higher
Single	61.44 (4.21)	64.90 (5.53)	59.17 (4.36)
Group	63.34 (3.66)	66.36 (6.25)	61.32 (3.78)

Note. Standard errors in parentheses. $N = 445$.

Hypothesis 3: Persons of a Prosocial Value Orientation Will Donate More Money.

Most of the sample (51.7%, $n = 265$) was classified as having a prosocial value orientation. The next highest categorization was individualistic with 25.0% of the sample ($n = 128$) while the least frequent orientation was competitive (10.1%, $n = 52$). Approximately 13% ($n = 68$) of the sample did not endorse a consistent strategy, thus were considered unclassifiable, and were excluded from analyses. Of those with a prosocial orientation, 94.7% made a donation. For the individualistic and competitive orientations, 91.4% and 86.5% donated, respectively. Rate of donation did not vary across social value orientation, χ^2 (2, $N = 445$) = 4.89, $p = .087$, Cramer's $V = .105$.

In descending order, the average amounts donated by the groups were: 69.1 ($SD = 31.1$, $SE = 1.91$) by the prosocial group, 58.4 ($SD = 33.7$, $SE = 2.98$) by the individualistic group, and 57.1 ($SD = 35.0$, $SE = 4.86$) by the competitive group. After controlling for the effects of the covariates, the mean estimated amounts donated by the groups are as follows: prosocial ($M = 65.7$, $SE = 1.87$), individualistic ($M = 63.9$, $SE = 2.93$), and competitive ($M = 58.7$, $SE = 4.77$); see Figure 27. Amount donated did not vary based on social value orientation, $F(2, 377) = 0.22$, $p = .800$, $\eta_p^2 = .001$. There was

also not a significant interaction between social value orientation and number of recipients, $F(2, 377) = 0.76$, $p = .466$, $\eta_p^2 = .004$, nor for the interaction between social value orientation and trauma history, $F(4, 377) = 1.34$, $p = .257$, $\eta_p^2 = .014$. The three-way interaction between social value orientation, trauma history, and number was also non-significant, $F(4, 377) = 0.71$, $p = .585$, $\eta_p^2 = .007$.

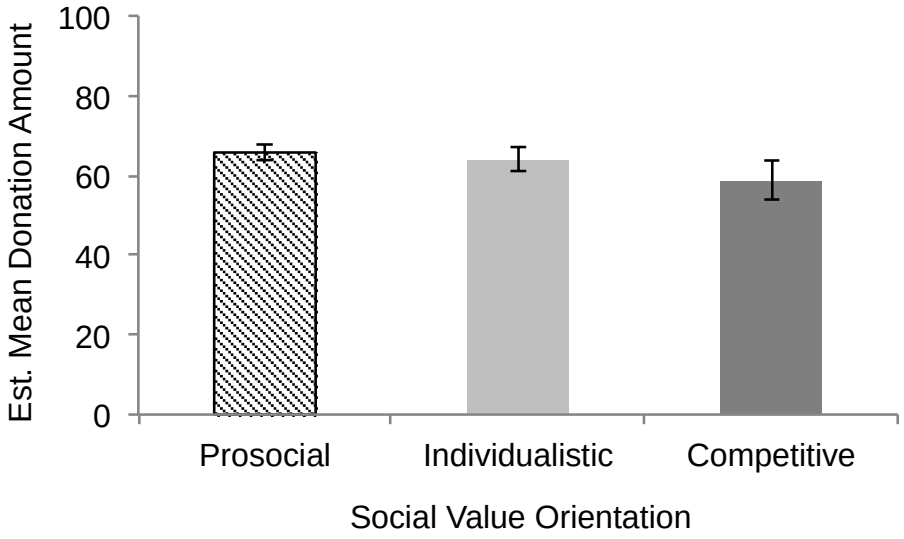

Figure 27. Estimated mean amount donated by social value orientation. Est. = estimated. Error bars represent standard errors in Study 2.

Hypothesis 4: Persons With Increased Agreeableness and Extraversion Will Be More Willing to Donate and Will Donate More Money.

Point-biserial correlations showed that people who scored higher on agreeableness were more likely to donate, $r(511) = .115$, $= .009$, $r^2 = .013$. There were no other personality differences associated with willingness to donate: extraversion, $r(511) = .063$, $p = .155$, $r^2 = .004$, conscientiousness $r(511) = .021$, $p = .637$, $r^2 < .001$, emotional stability $r(511) = .053$, $p = .231$, $r^2 = .003$, openness $r(511) = .027$, $p = .537$, r^2

= .001. However, when controlling for the effects of the emotional response variables, agreeableness was no longer related to willingness to donate, $r(505) = -.022$, $p = .624$, $r^2 < .001$.

The means, standard deviations, and correlations for the personality characteristics are provided in Table 19. Agreeableness was significantly correlated with amount donated, $r(511) = .111$, $p = .012$, $r^2 = .012$. See Figure 28 for a plot of the regression lines for the amounts donated by personality characteristics.

Table 19. *Correlations among Personality Characteristics and Total Amount Donated in Study 2.*

	1	2	3	4	5	6
1. Amount donated	-					
2. Extraversion	.048	(.87)				
3. Agreeableness	.111*	.143**	(.78)			
4. Conscientiousness	.051	.097*	.326**	(.79)		
5. Emotional stability	.006	-.233**	-.293**	-.125**	(.83)	
6. Openness	.004	.188**	.078	.051	-.009	(.81)
Mean	65.6	3.28	3.82	3.61	2.99	3.78
Standard deviation	32.7	0.82	0.61	0.64	0.75	0.58

Note. * $p < .05$, ** $p < .01$; Cronbach's αs reported on the diagonal.

However, none of the personality variables significantly predicted total amount donated after accounting for other factors: extraversion ($p = .850$), agreeableness ($p = .735$), conscientiousness ($p = .788$), emotional stability ($p = .788$), and openness ($p = .676$). See Table 20 for the results of the *F*-tests.

Table 20. *Results of Personality Variables Predicting Amount Donated in Study 2.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Extraversion	26.8	1	26.8	0.04	.850	<.001
Agreeableness	86.0	1	86.0	0.11	.735	<.001
Conscientiousness	27.0	1	27.0	0.04	.850	<.001
Emotional Stability	54.2	1	54.2	0.07	.788	<.001
Openness	131.3	1	131.3	0.18	.676	<.001
Error	283565.6	377	752.2			
Corrected Total	475435.3	444				

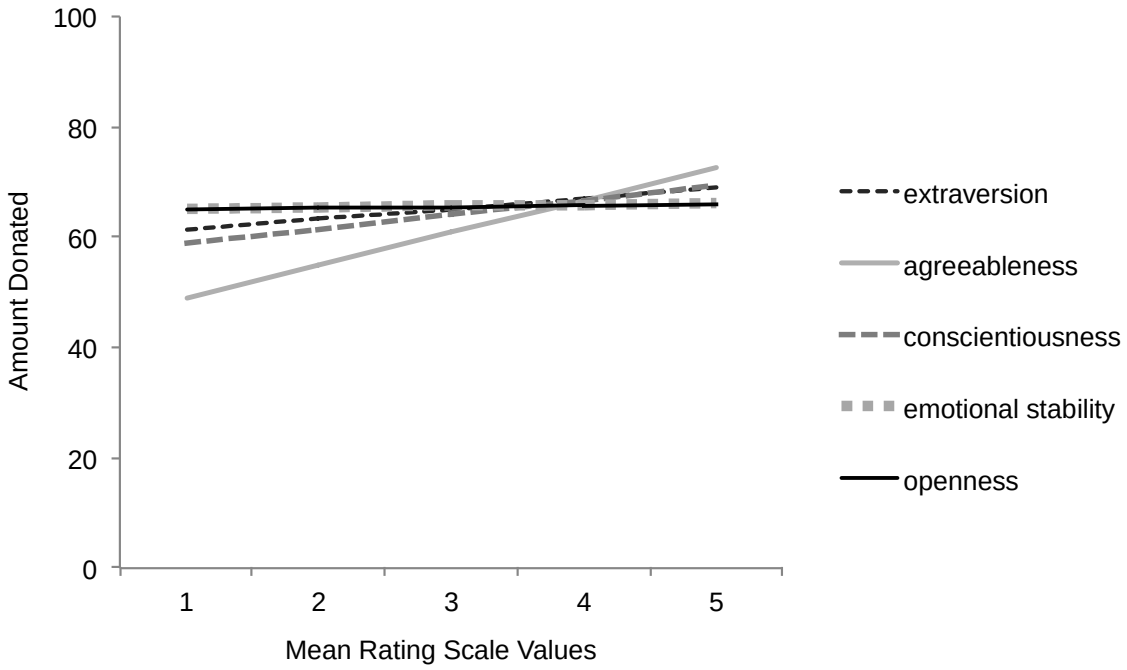

Figure 28. Regression fit lines for amount donated by personality characteristics scores in Study 2.

Hypothesis 5: People With Higher Social Desirability Will Be More Willing to Donate and Report Higher Donation Amounts.

The mean social desirability value was 4.02 (*SD* = 0.54, *SE* = 0.02). There was not a significant association between social desirability and willingness to donate, $r(511) = .067$, $p = .130$, $r^2 = .004$. Yet, the correlation between social desirability and total amount donated was significant, $r(511) = .088$, $p = .047$, $r^2 = .008$; see Figure 29. However, when included in the model, amount donated did not vary based on social desirability, $F(1, 377) = 0.15$, $p = .697$, $\eta_p^2 = <.001$.

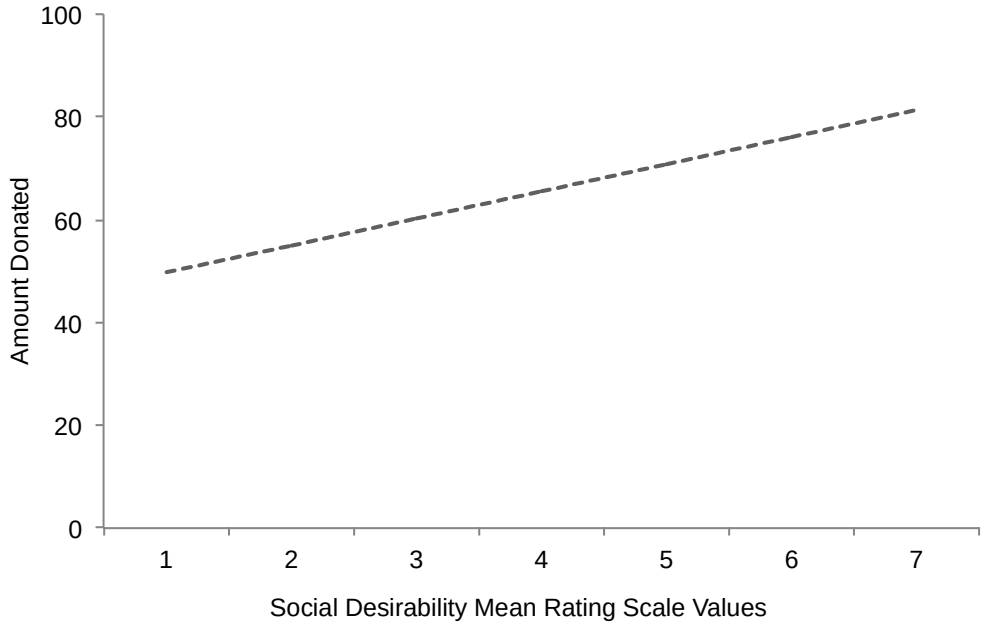

Figure 29. Regression fit line for amount donated by social desirability in Study 2.

Hypothesis 6: People Who Use Suppression as an Emotion Regulation Will Report Lower Donation Amounts, While Those Who Use Reappraisal Will Report Higher Amounts.

The mean reappraisal score was 4.95 (*SD* =1.01, *SE* = 0.45) and the mean suppression score was 3.64 (*SD* =1.21, *SE* = 0.53). Neither emotion regulation strategy was associated with willingness to make a donation: reappraisal $r(511) = .038$, $p = .386$, $r^2 = .001$, and suppression, $r(511) = -.036$, $p = .420$, $r^2 = .001$. However, there was a significant correlation between reappraisal and total amount donated, $r(511) = .089$, $p = .044$, $r^2 = .008$. The correlation between suppression and amount donated was not significant, $r(511) = -.024$, $p = .595$, $r^2 < .0001$; see Figure 30. Yet, when accounting for the other variables of interest, amount donated was not associated with either reappraisal, $F(1, 377) = 0.20$, $p = .658$, $\eta_p^2 = .001$, or suppression, $F(1, 377) = 0.27$, $p = .606$, $\eta_p^2 = .001$.

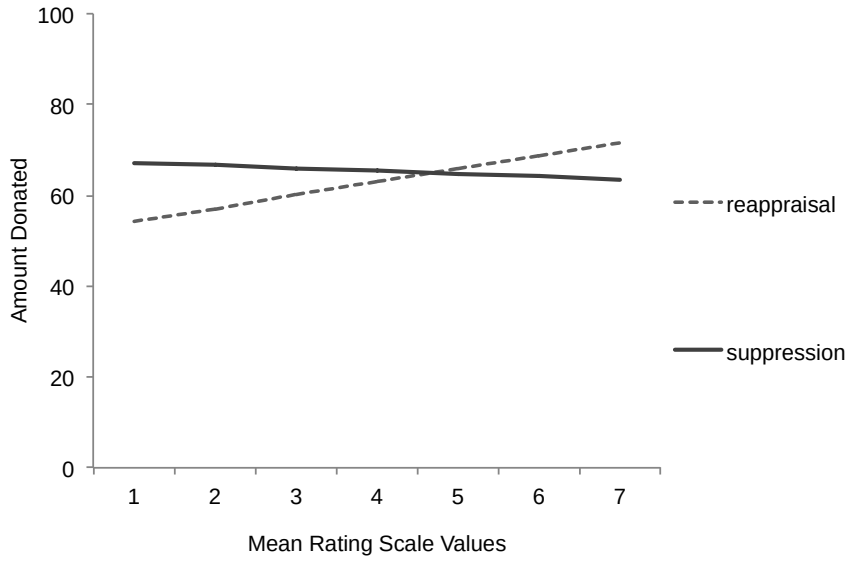

Figure 30. Regression fit line for amount donated by emotion regulation strategy in Study 2.

Hypothesis 7: More Empathetic People Will Be More Willing to Donate and Report Higher Donation Amounts.

The mean trait empathy score was 3.42 (*SD* = 0.43, *SE* = 0.02). Higher trait empathy was associated with both a greater willingness to donate, $r(511) = .158$, $p < .001$, $r^2 = .025$, and total amount donated, $r(511) = .167$, $p < .001$, $r^2 = .028$. See Figure 31. However, when accounting for the effects of the other variables, empathy was not associated with either greater willingness to donate, $r(505) = -.071$, $p = .108$, $r^2 = .005$, or total donation amount, $F(1, 377) = 0.97$, $p = .326$, $\eta_p^2 = .003$.

Figure 31. Regression fit line for amount donated by trait empathy in Study 2.

Hypothesis 8: Participants With Higher Prosocial Scores Will Be More Willing to Donate and Will Donate More Money.

The mean prosocial score was 3.71 (*SD* = 0.62, *SE* = 0.03). There was a significant correlation between prosocial scores and both willingness to donate, $r(511) =$

.147, p = .001, r^2 = .022, and total amount donated, $r(511)$ = .209, p < .001, r^2 = .044. See Figure 32. Yet, prosocialness was not associated with greater willingness to donate, $r(505)$ = -.082, p = .065, r^2 = .007, or total donation amount, $F(1, 377)$ = 1.03, p = .311, η_p^2 = .003, once the effects of the other variables were controlled.

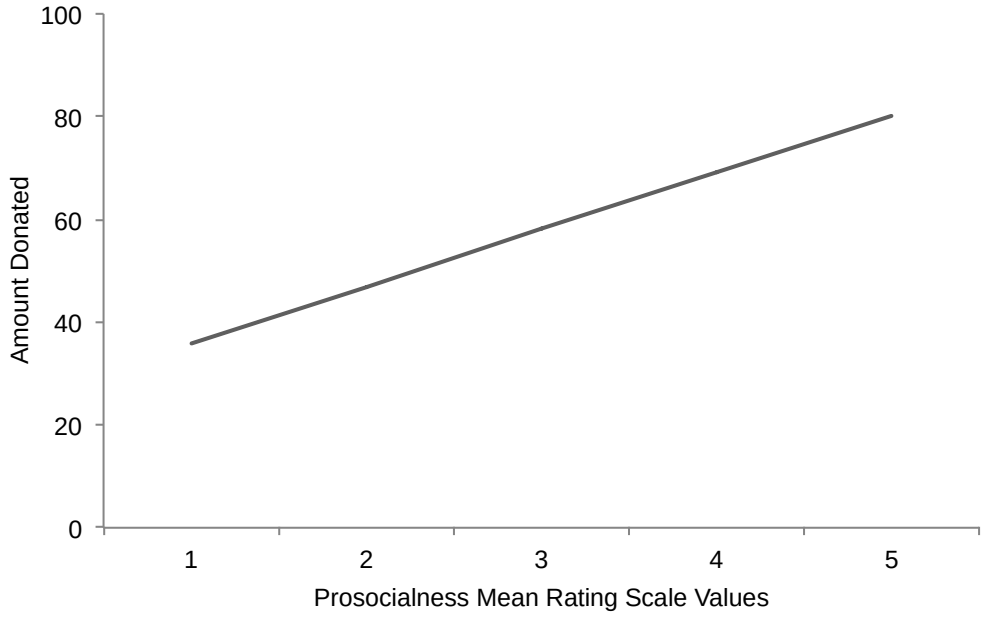

Figure 32. Regression fit line for amount donated by prosocialness in Study 2.

Hypothesis 9: Participants With Lower Betrayal Awareness Will Be More Willing to Donate and Will Provide More Money.

Approximate percentages of participants who experienced the different scenarios are as follows: shared secret (89%), lack of social support after traumatic event (67%), lack of social support after good news (77%), failure to keep promise (84%), and cheating at game (87%). Only 4.5% (n = 23) of the sample endorsed one item; 73% experienced four or more similar events to those described in the vignettes.

The mean betrayal awareness score was 3.84 (*SD* = 0.82, *SE* = 0.04). Betrayal awareness was not associated with willingness to donate, $r(511) = -.006$, $p = .890$, $r^2 < .001$. There was a non-significant correlation between betrayal awareness and total amount donated, $r(511) = -.002$, $p = .971$, $r^2 < .001$; see Figure 33. Unsurprisingly, when included in the model, betrayal awareness was not associated with total donation amount, $F(1, 377) = 0.01$, $p = .971$, $\eta_p^2 < .001$.

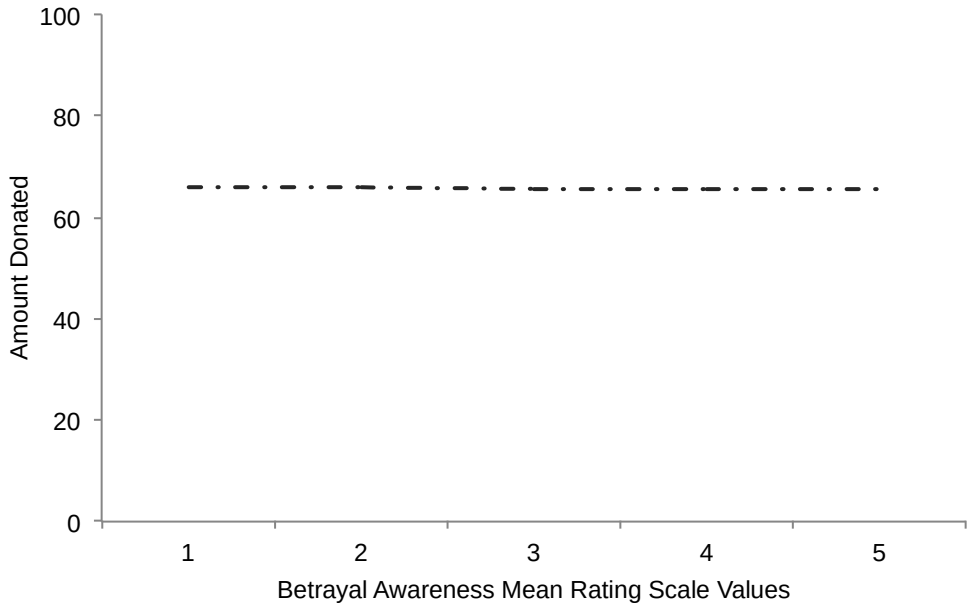

Figure 33. Regression fit line for amount donated by betrayal awareness in Study 2.

Research Question 3: Is There an Interaction Between the Different Emotional Responses and Number of Recipients?

As in Study 1, the emotional variables were split into quartile groups. Table 21 provides the quartile hinge values for each emotion.

Table 21. *Percentile Values for Emotional Response Variables in Study 2.*

		Percentiles						
		5	10	25	50	75	90	95
Emotions	Sad	3.00	3.70	4.50	5.50	6.50	7.00	7.00
	Sympathy	3.50	4.00	5.00	6.00	7.00	7.00	7.00
	Anger	2.00	3.00	4.00	5.00	6.00	7.00	7.00
	Betrayal	2.00	2.50	3.50	4.50	5.50	6.50	7.00
	Guilty	1.00	2.00	4.00	5.00	7.00	7.00	7.00
	Impact	2.00	2.00	4.00	5.00	7.00	7.00	7.00

All of the emotions significantly interacted with number of recipients on willingness to donate: sad ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .309$); sympathy ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .306$); anger ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .283$); guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .463$); betrayal ($p = .032$, two-tailed Fisher's exact test, Cramer's $V = .181$); and impact ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .425$). As in Study 1, at the lower emotion ratings, participants were less willing to donate to the group of recipients than expected.

There were no significant interactions for total amount donated between number of recipients and feelings of: sadness, $F(1, 377) = 0.12$, $p = .733$, $\eta_p^2 < .001$; sympathy, $F(1, 377) = 0.21$, $p = .650$, $\eta_p^2 = .001$; betrayal, $F(1, 377) = 1.39$, $p = .240$, $\eta_p^2 = .004$; and guilt, $F(1, 377) = 2.22$, $p = .137$, $\eta_p^2 = .006$. Unlike in Study 1, the interaction between number and anger was *not* significant, $F(1, 377) = 2.04$, $p = .154$, $\eta_p^2 = .005$.
Also, the slopes were parallel for the interaction between belief in the donation making a difference and number of recipients on amount donated, $F(1, 377) = 2.72$, $p = .100$, $\eta_p^2 = .007$.

Research Question 4: Is There an Interaction Between the Different Emotional Responses and Trauma History?

Perceived impact interacted with trauma history on willingness to donate ($p <$ .001, two-tailed Fisher's exact test, Cramer's $V = .408$). Unlike Study 1, there was a significant interaction between personal trauma history and levels of anger ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .299$), but the interaction between trauma history and betrayal ($p = .187$, two-tailed Fisher's exact test, Cramer's $V = .178$) was not significant. As found in Study 1, the other emotions also significantly interacted with trauma history on willingness to donate: sympathy ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .286$); sadness ($p = < .001$, two-tailed Fisher's exact test, Cramer's $V =$ .295); and guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .466$). Participants with no trauma background and those with higher betrayal histories were less willing to donate than expected at the lower levels of the emotions.

The interactions for total amount donated between trauma history and emotional responses were not significant: sadness, $F(2, 377) = 1.84$, $p = .160$, $\eta_p^2 = .010$; sympathy, $F(2, 377) = 1.59$, $p = .204$, $\eta_p^2 = .008$; anger, $F(2, 377) = 0.17$, $p = .840$, $\eta_p^2 = .001$; betrayal, $F(2, 377) = 0.12$, $p = .890$, $\eta_p^2 = .001$; guilt, $F(2, 377) = 2.09$, $p = .126$, $\eta_p^2 =$ .011; and impact, $F(2, 377) = 0.29$, $p = .748$, $\eta_p^2 = .002$.

Research Question 5: Are There Interactions Between the Different Emotional Responses and Social Value Orientation?

Willingness to donate varied across the emotion levels differentially for the types of social value orientation. Those with either an individualistic orientation or a prosocial orientation were less willing to donate than expected at lower levels of: sadness ($p < .001$,

two-tailed Fisher's exact test, Cramer's $V = .337$); sympathy ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .308$); anger ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .337$); guilt ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .498$); betrayal ($p = .004$, two-tailed Fisher's exact test, Cramer's $V = .227$); and impact ($p < .001$, two-tailed Fisher's exact test, Cramer's $V = .440$). See Figure 34 for an example using guilt.

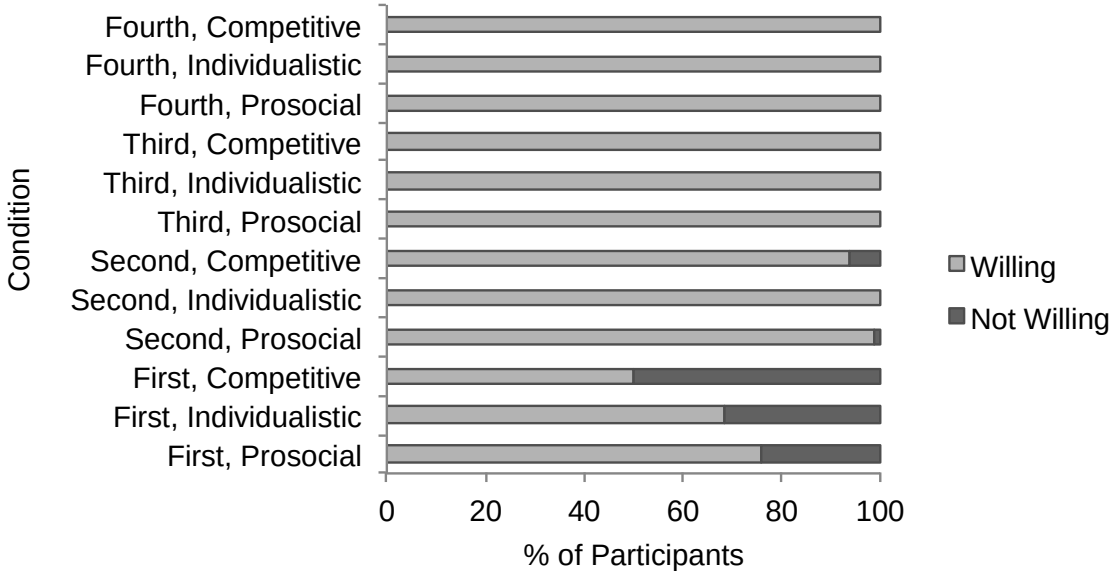

Figure 34. Willingness to donate by social value orientation across quartiles of guilt in Study 2. First = first quartile, second = second quartile, third = third quartile, fourth = fourth quartile.

The interactions for amount donated between social value orientation and emotional responses were not significant: sadness, $F(2, 377) = 0.55$ $p = .578$, $\eta_p^2 = .003$; sympathy, $F(2, 377) = 0.04$, $p = .962$, $\eta_p^2 < .001$; anger, $F(2, 377) = 1.29$, $p = .277$, $\eta_p^2 = .007$; betrayal, $F(2, 377) = 0.51$, $p = .600$, $\eta_p^2 = .003$; guilt, $F(2, 377) = 2.73$, $p = .066$, $\eta_p^2 = .014$; and impact, $F(2, 377) = 2.24$, $p = .108$, $\eta_p^2 = .012$.

Hypothesis 10: People Will Be More Willing to Donate, and Donate More, to the Flood Condition Than to the Genocide Condition.

Looking at willingness to donate, 91.4% of the sample (n = 468) made donations to both conditions. Only 1.8% of the sample (n = 9) made a donation to the genocide condition, but did not contribute to the flood condition; 1 participant did the reverse. McNemar's chi-square test with continuity correction showed this was a significant difference, χ^2 (1, N = 513) = 4.90, p = .027, odds ratio = 0.11. Thus, people were more willing to make a donation to the genocide conditions than the flood conditions.

The mean amount donated to the genocide scenario was 34.4 (SD =19.0, SE = 0.84) and to the natural disaster condition was 31.3 (SD =17.0, SE = 0.75). After controlling for the effects of the covariates, there was not a significant difference in the average amount donated to the genocide group (M = 33.8, SE = 0.89) compared to the natural disaster group (M = 31.2, SE = 0.80), F(1, 477) = 0.93, p = .337, η_p^2 = .002; see Figure 35.

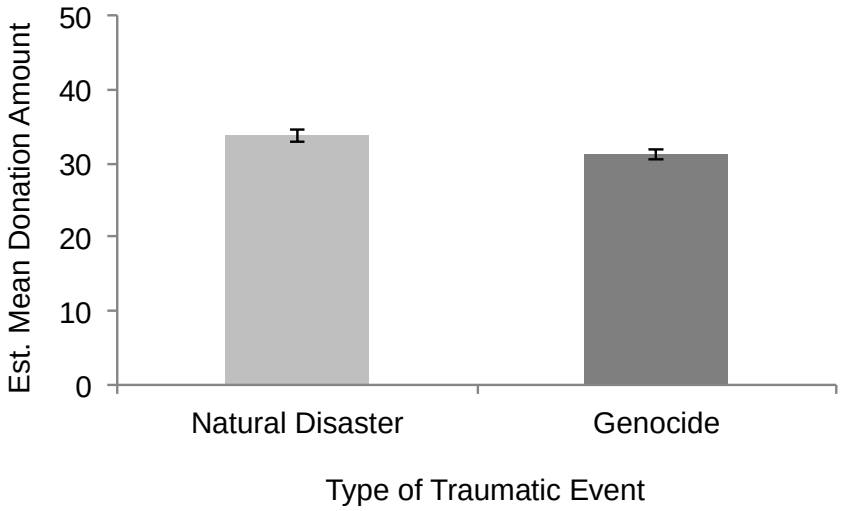

Figure 35. Estimated mean amount donated for each type of traumatic event in Study 2. Est. = estimated. Error bars represent standard errors.

Hypothesis 11: People Will Be More Willing to Donate, and Donate More, to the Lower Betrayal Condition Than to the Higher Betrayal Condition.

Looking at betrayal level of event on willingness to donate, 0.8% of the sample (n = 4) made a donation to the high betrayal condition, but did not donate to the low betrayal condition; 1.2% (n = 6) of the sample showed the opposite pattern. McNemar's chi-square test with continuity correction showed there was no difference in willingness to donate based on betrayal level, χ^2 (1, N = 513) = 0.10, p = .752, odds ratio = 0.67.

To the high betrayal conditions, participants donated on average 32.9 (SD =17.8, SE = 0.79); the average amount donated to the low betrayal conditions was 32.8 (SD =18.4, SE = 0.81). After controlling for the effects of the covariates, there was not a difference in donation amounts for the high betrayal conditions (M = 32.5, SE = 0.84) compared to the low betrayal conditions (M = 32.5, SE = 0.86), F(1, 477) = 3.33, p = .068, η_p^2 = .007; see Figure 36.

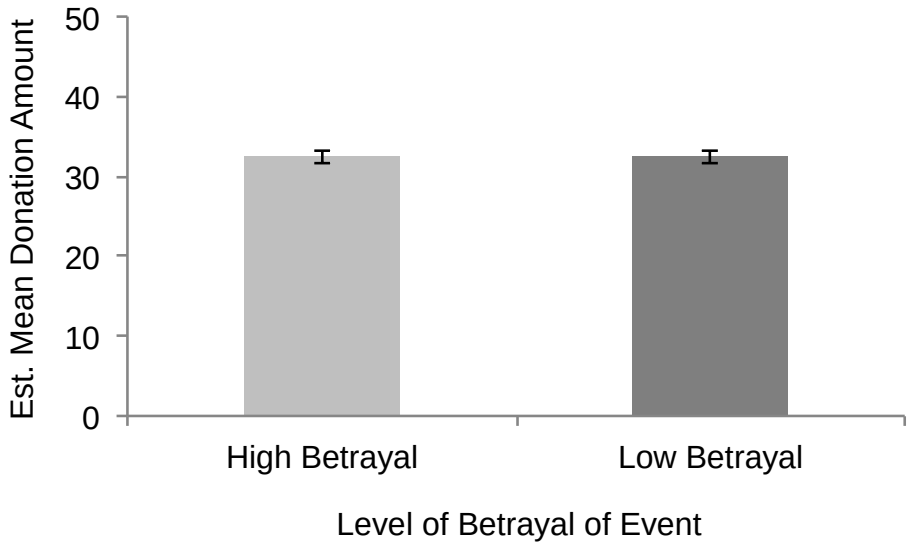

Figure 36. Estimated mean amount donated for each level of betrayal of the traumatic event in Study 2. Est. = estimated. Error bars represent standard errors.

Manipulation Check

Participants rated the genocide vignette (M = 5.02, SD = 1.70, SE = 0.08) significantly higher in betrayal than the natural disaster condition (M = 3.82, SD = 2.17, SE = 0.10), $F(1, 512) = 114.9$, $p < .001$, $\eta_p^2 = .183$. Within scenarios, participants were able to differentiate the levels of betrayal. The high betrayal genocide condition (M = 5.32, SD = 1.53, SE = 0.09) was considered more of a betrayal than the low betrayal genocide condition (M = 4.71, SD = 1.81, SE = 0.11), $t(489.02) = 4.07$, $p < .001$, d = 0.37. The low flood condition (M = 2.64, SD = 1.83, SE = 0.11) was seen as less of a betrayal than the high flood scenario (M = 5.06, SD = 1.76, SE = 0.11), $t(511) = 15.3$, $p <$ .001, d = 1.35.

Research Question 6: Is There an Association Between Personal Trauma History and Type of Event That Impacts Willingness to Donate and Amount Donated?

Of those with no trauma history, 93.8% made a donation to the genocide conditions; similarly, 93.1% of the lower — and 92.1% of the higher — betrayal trauma groups donated. There was not an association between personal trauma history and willingness to donate for the genocide conditions, χ^2 (2, N = 513) = 0.46, p = .795, Cramer's V = .030. For the flood conditions, 90.9% of the no trauma history group contributed; for the two trauma groups, 92.2% and 91.6% of the lower and higher betrayal trauma groups donated, respectively. Willingness to donate for the flood conditions did not vary across trauma history, χ^2 (2, N = 513) = 0.15, p = .929, Cramer's V = .017.

See Table 22 for means and standard deviations of amount donated for the interaction between type of event and trauma history. After controlling for the effects of the covariates, the estimated means are shown in Table 23 and Figure 37. Personal trauma history was not associated with differences in donations to the genocide and natural disaster conditions, $F(2,477) = 0.22$, $p = .807$, $\eta_p^2 = .001$.

Table 22. *Means and Standard Deviations of Amount Donated by Type of Traumatic Event and Trauma History in Study 2.*

	Trauma History		
Type of Event	None	Lower	Higher
Genocide	35.58 (19.6)	32.52 (17.8)	34.0 (18.9)
Natural Disaster	32.39 (17.2)	31.12 (17.2)	30.20 (16.8)

Note. Standard deviations in parentheses. $N = 513$.

Table 23. *Estimated Means and Standard Errors of Amount Donated by Type of Traumatic Event and Trauma History in Study 2.*

	Trauma History		
Type of Event	None	Lower	Higher
Genocide	35.57 (1.31)	31.69 (1.90)	34.06 (1.33)
Natural Disaster	32.31 (1.19)	31.27 (1.72)	30.07 (1.20)

Note. Standard errors in parentheses. $N = 513$.

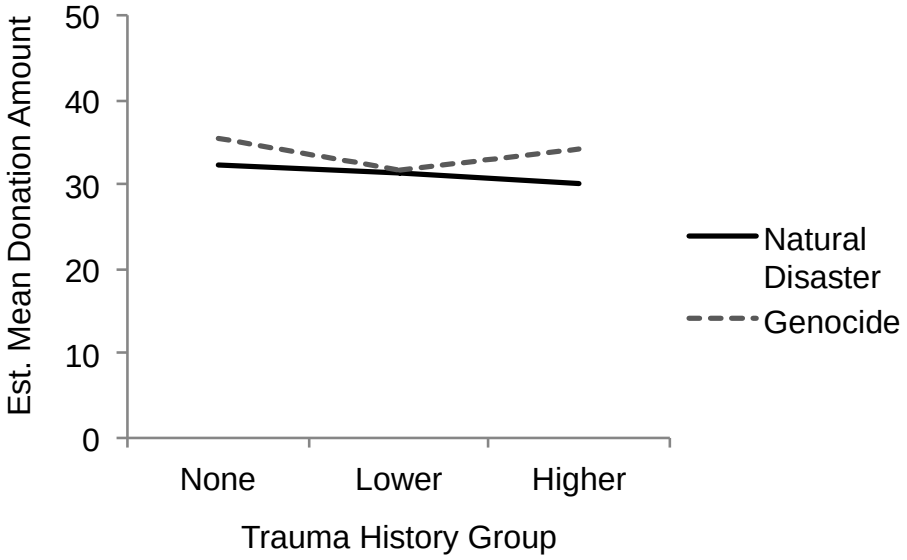

Figure 37. Estimated mean amount donated for type of event by trauma history in Study 2. None = no betrayal trauma history; Lower = history of at least one lower betrayal trauma; Higher = history of at least one higher betrayal trauma. Est. = estimated.

Research Question 7: Is There an Association Between Personal Trauma History and Level of Betrayal of Event That Relates to Amount Donated?

Of those with no trauma history, 91.9% and 92.8% made donations to the high and low betrayal conditions, respectively. For those with a lower betrayal trauma history, 92.2% and 93.1% made donations to the high and low betrayal conditions, respectively. Lastly, for those who had experienced a high betrayal trauma, 91.6% donated to the low betrayal and 92.1% donated to the high betrayal event. Willingness to donate did not vary across trauma groups for either the high betrayal versions, χ^2 (2, N = 513) = 0.10, p = .995, Cramer's V = .004, or for the low betrayal versions, χ^2 (2, N = 513) = 0.32, p = .851, Cramer's V = .025.

See Table 24 for means and standard deviations of amount donated for the interaction between type of event and trauma history. After controlling for the effects of

the covariates, the estimated means are shown in Table 25 and Figure 38. There were no differences in donations to the high and low betrayal conditions across trauma groups, $F(2, 477) = 0.75$, $p = .471$, $\eta_p^2 = .003$.

Table 24. *Means and Standard Deviations of Amount Donated by Betrayal Level of Event and Trauma History in Study 2*.

	Trauma History		
Betrayal Level	None	Lower	Higher
High	35.58 (19.6)	32.52 (17.8)	34.0 (18.9)
Low	32.39 (17.2)	31.12 (17.2)	30.20 (16.8)

Note. Standard deviations in parentheses. $N = 513$.

Table 25. *Estimated Means and Standard Errors of Amount Donated by Betrayal Level of Event and Trauma History in Study 2*.

	Trauma History		
Betrayal Level	None	Lower	Higher
High	33.85 (1.24)	31.01 (1.80)	32.62 (1.26)
Low	34.04 (1.27)	31.95 (1.85)	31.52 (1.29)

Note. Standard errors in parentheses. $N = 513$.

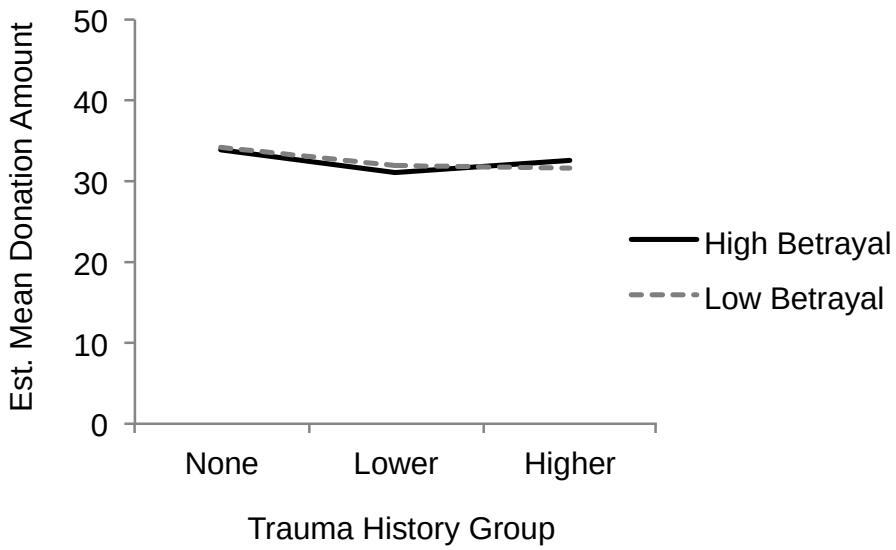

Figure 38. Estimated mean amount donated for betrayal level of event by trauma history in Study 2. None = no betrayal trauma history; Lower = history of at least one lower betrayal trauma; Higher = history of at least one higher betrayal trauma. Est. = estimated.

Research Question 8: Do Differences in Emotional Responses Predict Differences in Donations to the Genocide and Flood Conditions?

Of those who donated to only one scenario, 40% had the same values for sadness for both conditions, 50% had the same values for sympathy, 50% for anger, 30% for guilty, 20% for betrayal, and 50% for impact of donation.

Given the small sample sizes of those who were discordant in their donation decisions for the type of event (n =10), analyses looking at emotional differences to account for these differences were not undertaken out of concern of inadequate power.

Table 26 shows the means and standard deviations for the differences in amounts donated for the two scenarios and the differences in emotional response variables; it also includes the correlations among these variables. All emotional response variables were

significantly positively correlated with differences in amount donated, *p*s < .05; see Figure 39.

Table 26. *Correlations among Differences in Emotional Response Variables and Differences in Amount Donated for Genocide and Natural Disaster Conditions in Study 2.*

	1	2	3	4	5	6	7
1. Δ Amount	-						
2. Δ Sad	.144**	-					
3. Δ Sympathy	.144**	.583**	-				
4. Δ Anger	.092*	.275**	.211**	-			
5. Δ Betrayal	.121**	.105*	.110*	.572**	-		
6. Δ Guilt	.309**	.267**	.217**	.152**	.136**	-	
7. Δ Impact	.211**	.053	.006	-.091*	-.104*	.239**	-
Mean Δ	3.09	0.08	0.05	0.70	0.04	1.20	-0.08
Standard deviation	15.3	0.97	0.82	1.57	0.74	2.53	0.84

Note. * $p < .05$, ** $p < .01$

After controlling for the effects of the covariates, only differences in guilt and belief in the donation making a difference significantly predicted amount donated; people donated more money to the scenario they had higher feelings of guilt about and higher belief the donation would make a difference, *p*s < .001. See Table 27 for the results of the *F*-tests.

Research Question 9: Do Differences in Emotional Responses Predict Differences in Donations to the High and Low Betrayal Levels?

As with donations, because of the small sample size (n =10), analyses looking at changes in emotional responses to account for the differences in willingness to donate were not undertaken because of inadequate power.

Table 27. *Results of Differences in Emotional Responses Predicting Differences in Amount Donated for Genocide and Natural Disaster Conditions in Study 2.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Δ Sad	27.3	1	27.3	0.27	.604	.001
Δ Sympathy	77.8	1	77.8	0.77	.381	.002
Δ Anger	0.7	1	0.7	<0.01	.932	<.001
Δ Betrayal	345.4	1	345.4	3.42	.065	.007
Δ Guilty	2045.3	1	2045.3	20.23	<.001	.041
Δ Impact	1737.6	1	1737.6	17.18	<.001	.035
Error	48232.9	477	101.1			

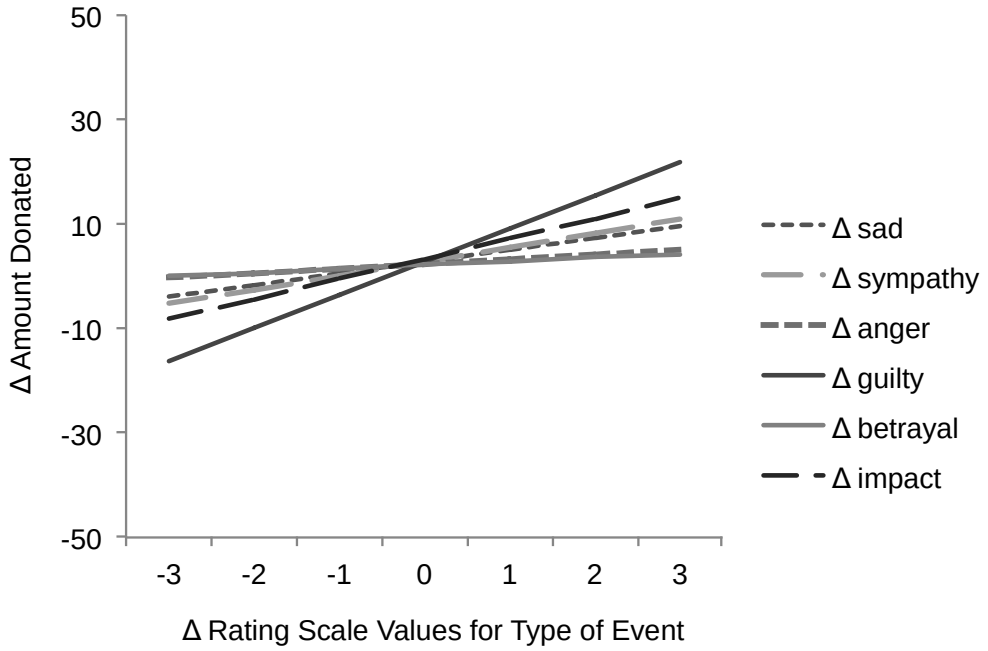

Figure 39. Regression fit line for differences in amount donated for type of event by differences in emotional responses in Study 2. Positive numbers indicate larger values for the genocide scenarios; negative numbers indicate larger values for the flood scenarios.

Correlations, with means and standard deviations, for differences in amounts donated for the two betrayal levels and emotional responses are shown in Table 28. All emotional response variables were significantly positively correlated with differences in amount donated, *p*s < .01; see Figure 40. However, when included in the model, only differences in guilt significantly predicted differences in amount donated, $p < .001$. See Table 29 for the results of the *F*-tests.

Table 28. *Correlations among Differences in Emotional Response Variables and Differences in Amount Donated for Genocide and Natural Disaster Conditions in Study 2.*

	1	2	3	4	5	6	7
1. Δ Amount	-						
2. Δ Sad	.157**	-					
3. Δ Sympathy	.154**	.587**	-				
4. Δ Anger	.172**	.288**	.243**	-			
5. Δ Betrayal	.229**	.130*	.172**	.585**	-		
6. Δ Guilt	.315**	.270**	.221**	.161**	.155**	-	
7. Δ Make Difference	.190**	.050	-.004	-.087*	-.085	.237**	-
Mean Δ	0.02	0.04	-0.03	0.58	1.54	0.03	-0.10
Standard deviation	15.6	0.98	0.82	1.62	2.34	0.75	0.84

Note. * $p < .05$, ** $p < .01$

Research Question 10: Does the Number of Recipients Produce Differences in a) Donations to the Two Types of Scenarios or b) Donations to the Two Betrayal Levels?

Willingness to donate did not vary across number of recipients for type of event, ($p = .570$, two-tailed Fisher's exact test, Cramer's $V = .066$) or for betrayal levels, ($p = .305$, two-tailed Fisher's exact test, Cramer's $V = .087$).

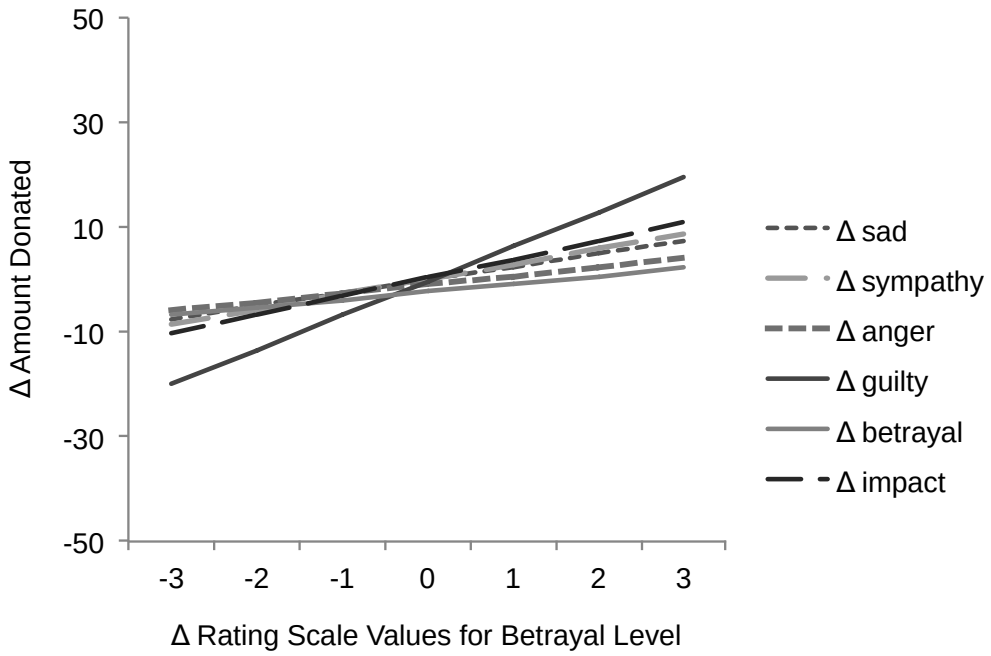

Figure 40. Regression fit line for differences in amount donated for betrayal levels by differences in emotional responses in Study 2. Positive numbers indicate larger values for the high betrayal versions; negative numbers indicate larger values for the low betrayal versions.

Table 29. *Results of Differences in Emotional Responses Predicting Differences in Amount Donated for High and Low Betrayal Levels in Study 2.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Δ Sad	51.5	1	51.5	0.48	.491	.001
Δ Sympathy	166.6	1	166.6	1.54	.215	.003
Δ Anger	29.6	1	29.6	0.27	.601	.001
Δ Betrayal	25.6	1	25.6	0.24	.627	<.001
Δ Guilty	1236.9	1	1236.9	11.43	.001	.023
Δ Make Difference	292.4	1	292.4	2.70	.101	.006
Error	51629.0	477				

There was also not significant interactions between trauma history and number of recipients on willingness to donate for type of event, (p = .644, two-tailed Fisher's exact test, Cramer's V = .088), or for betrayal levels, (p = .737, two-tailed Fisher's exact test, Cramer's V = .089).

There was not a significant main effect for number of recipients on differences in donations for the type of event, $F(1, 477) = 0.58$, p = .447, η_p^2 = .001, nor for differences in donations to the betrayal levels, $F(2, 477) = 1.43$, p = .232, η_p^2 = .003. There were also not significant interactions between number of recipients and trauma history when comparing the type of event, $F(2, 477) = 0.63$, p = .531, η_p^2 = .003, or the betrayal level, $F(2, 477) = 0.65$, p = .525, η_p^2 = .003.

Research Question 11: Does the Effect of Differences in Emotional Responses Vary Across Trauma Backgrounds Producing Differences in a) Donations to the Two Types of Scenarios or b) Donations to the Two Betrayal Levels?

There were no significant interactions between trauma history and emotional response on differences in donations amounts for the two types of events with: sadness, $F(2, 477) = 0.05$, p = .955, η_p^2 < .001; sympathy, $F(2, 477) = 0.78$, p = .457, η_p^2 = .003; anger, $F(2, 477) = 0.54$, p = .581, η_p^2 =.002; betrayal, $F(2, 477) = 1.51$, p = .222, η_p^2 = .006; and belief the donation will make a difference, $F(2, 477) = 0.90$, p = .409, η_p^2 = .004. There was a significant interaction between trauma history and feelings of guilt, $F(2, 477) = 4.62$, p = .010, η_p^2 = .019; see Figure 41. For people with no betrayal trauma history, as the differences in feelings of guilt increased, the differences in donation amounts to the two types of events widened compared to the other trauma groups. This

suggests that those with no trauma history were more affected by differences in feelings of guilt that in turn influenced how much they donated.

The same pattern is found for donations to the high and low betrayal levels as well. There were no significant interactions for: sadness, $F(2, 477) = 0.33$, $p = .718$, $\eta_p^2 = .001$; sympathy, $F(2, 477) = 0.36$, $p = .698$, $\eta_p^2 = .002$; anger, $F(2, 477) = 0.97$, $p = .379$, $\eta_p^2 = .004$; betrayal, $F(2, 477) = 0.42$, $p = .660$, $\eta_p^2 = .002$; and belief the donation will make a difference, $F(2, 477) = 2.97$, $p = .052$, $\eta_p^2 = .012$. Yet, there was a significant interaction between trauma history and feelings of guilt, $F(2, 477) = 7.42$, $p = .001$, $\eta_p^2 = .030$; see Figure 42. Again, the group with no trauma history was more influenced by differences in feelings of guilt when making donations than the other trauma groups.

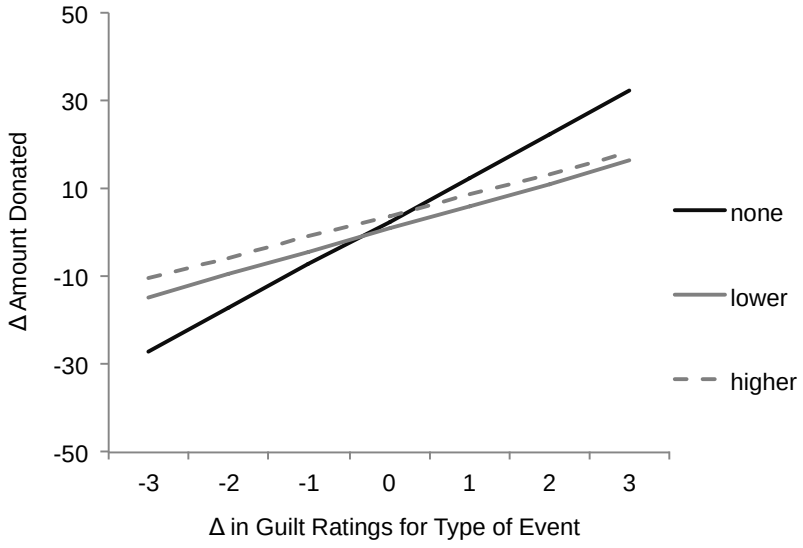

Figure 41. Regression fit line for differences in amount donated to the type of events by differences in feelings of guilt for the three trauma groups in Study 2. Positive numbers indicate larger values for the genocide conditions; negative numbers indicate larger values for the natural disaster conditions.

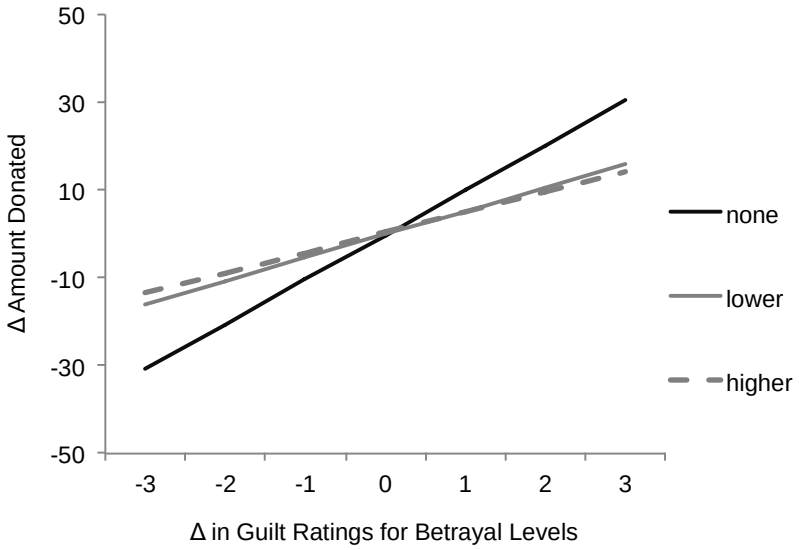

Figure 42. Regression fit line for differences in amount donated to betrayal level of events by differences in feelings of guilt for the three trauma groups in Study 2. Positive numbers indicate larger values for the high betrayal levels; negative numbers indicate larger values for the low betrayal levels.

Hypothesis 12: Lower Betrayal Awareness Will Be Associated With Higher Donations to a) the Natural Disaster Condition and b) the Lower Betrayal Conditions.

Betrayal awareness was not correlated with willingness to donate to either genocide, $r(511) = -.011$, $p = .798$, $r^2 < .001$ or the natural disaster, $r(511) = .037$, $p = .397$, $r^2 = .001$. It was also not associated with willingness to donate to the high version, $r(511) = .043$, $p = .331$, $r^2 = .002$, or low version of events, $r(511) = -.015$, $p = .730$, $r^2 < .001$.

The correlation between betrayal awareness and differences between the two types of events was not significant, $r(511) = .010$, $p = .815$, $r^2 < .001$; however, there was a relationship between betrayal awareness and differences in donations to the different

betrayal levels, $r(511) = .110$, $p = .012$, $r^2 = .012$; see Figure 43. As betrayal awareness increased, donations increased for the higher betrayal conditions.

When included in the model, unsurprisingly, betrayal awareness did not predict differences in donations for the two types of events, $F(1, 477) = 0.21$, $p = .650$, $\eta_p^2 < .001$. Additionally, there was not an interaction of trauma history and betrayal awareness on differences in donations for the flood or genocide conditions, $F(2, 477) = 0.18$, $p = .839$, $\eta_p^2 = .001$. The main effect of betrayal awareness on differences in donation amounts for the betrayal levels of the events was no longer significant when in the model, $F(1, 477) = 3.70$, $p = .055$, $\eta_p^2 = .008$. The interaction between betrayal awareness and trauma group was not significant either, $F(2, 477) = 1.37$, $p = .256$, $\eta_p^2 = .006$.

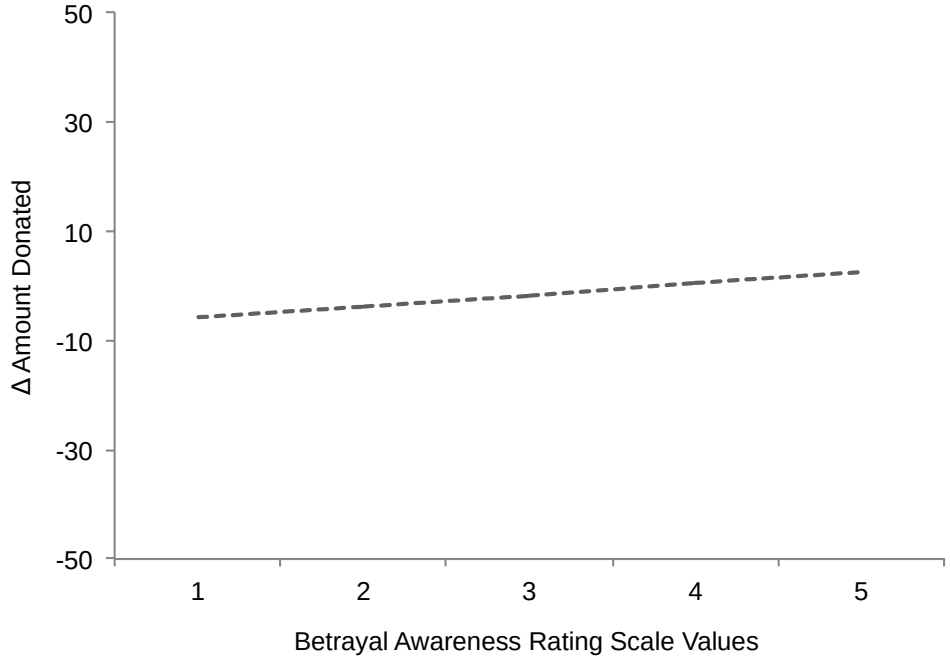

Figure 43. Regression fit line for differences in amount donated to betrayal level of events by differences by betrayal awareness in Study 2. Positive numbers indicate larger values for the high betrayal levels; negative numbers indicate larger values for the low betrayal levels.

Follow-Up Analyses

As in Study 1, there was not a significant effect of number of recipients on average emotional ratings, *Wilk's Λ* = .988, $F(6, 506) = 0.49$, $p = .487$, multivariate $\eta^2 = .011$. The results of the univariate ANOVAs are: sadness, $F(1, 511) = 2.26$, $p = .134$, $\eta^2 = .004$; sympathy, $F(1, 511) = 1.30$, $p = .254$, $\eta^2 = .003$; anger, $F(1, 511) = 3.12$, $p = .079$, $\eta^2 = .006$; guilt, $F(1, 511) = 0.02$, $p = .891$, $\eta^2 < .001$; impact, $F(1, 511) = 0.70$, $p = .402$, $\eta^2 = .001$; and betrayal, $F(1, 511) = 3.38$, $p = .067$, $\eta^2 = .007$.

There was also not a significant effect of trauma history on emotional ratings, *Roy's Largest Root* = 0.02, $F(6, 506) = 1.33$, $p = .240$, multivariate $\eta^2 = .016$. The results of the univariate ANOVAs are: sadness, $F(2, 510) = 0.51$, $p = .601$, $\eta^2 = .002$; sympathy, $F(2, 510) = 1.01$, $p = .366$, $\eta^2 = .004$; anger, $F(2, 510) = 1.63$, $p = .196$, $\eta^2 = .006$; guilt, $F(2, 510) = 0.13$, $p = .880$, $\eta^2 = .001$; impact, $F(2, 510) = 0.01$, $p = .992$, $\eta^2 < .001$; and betrayal, $F(2, 510) = 1.53$, $p = .217$, $\eta^2 = .006$.

Between-Subjects Approach

Given the significant order effects, a secondary analysis was conducted taking a between-subjects approach using the first condition presented to better understand any differences between the types, and betrayal levels, of the events. Overall, 92% of the sample ($n = 474$) donated an average 33.5 ($SD = 18.9$).

Hypothesis 1: Donations Will Be Lower for a) the Genocide Events and b) the High Betrayal Version of Scenarios.

Overall, 92% of the sample ($n = 474$) made a hypothetical donation, leaving a small sample size ($n = 39$) of those who did not donate. Approximately the same

percentages of participants made donations to the genocide (91.3%) and flood (93.4%) scenarios, χ^2 (1, N = 513) = 0.80, p = .370, □ = .040. There was not a difference in willingness to donate for the high (92.2%) and low (92.6%) betrayal levels, χ^2 (1, N = 513) = 0.04, p = .838, □ = .009.

See Table 30 for means and standard deviations of amount donated for both type of event and betrayal level. Table 31 provides the estimated marginal means and standard errors after controlling for the effects of the covariates. There was not a main effect for type of event, F(1, 502) = 3.06, p = .081, η_p^2 = .006. However, the main effect for betrayal level was significant, F(1, 502) = 14.5, p < .001, η_p^2 = .028; people donated significantly more money to the lower betrayal versions of events; see Figure 44. The interaction between type of event and betrayal level was not significant, F(1, 502) = 0.48, p = .488, η_p^2 = .001.

Table 30. *Means and Standard Deviations of Amount Donated by Type and Betrayal Level of Events in Study 2.*

	Type of Event		
Betrayal Level	Genocide	Natural Disaster	Mean Betrayal
High	33.98 (19.0)	29.29 (16.9)	31.67 (18.1)
Low	37.58 (21.7)	33.02 (16.8)	35.23 (19.4)
Mean Type	35.75 (20.4)	31.21(16.9)	

Table 31. *Estimated Means and Standard Errors of Amount Donated by Type and Betrayal Level of Events in Study 2.*

	Type of Event		
Betrayal Level	Genocide	Natural Disaster	Mean Betrayal
High	32.25 (1.48)	28.55 (1.48)	30.40 (1.08)
Low	37.29 (1.46)	35.67 (1.62)	36.48 (1.07)
Mean Event	34.77 (1.05)	32.11(1.04)	

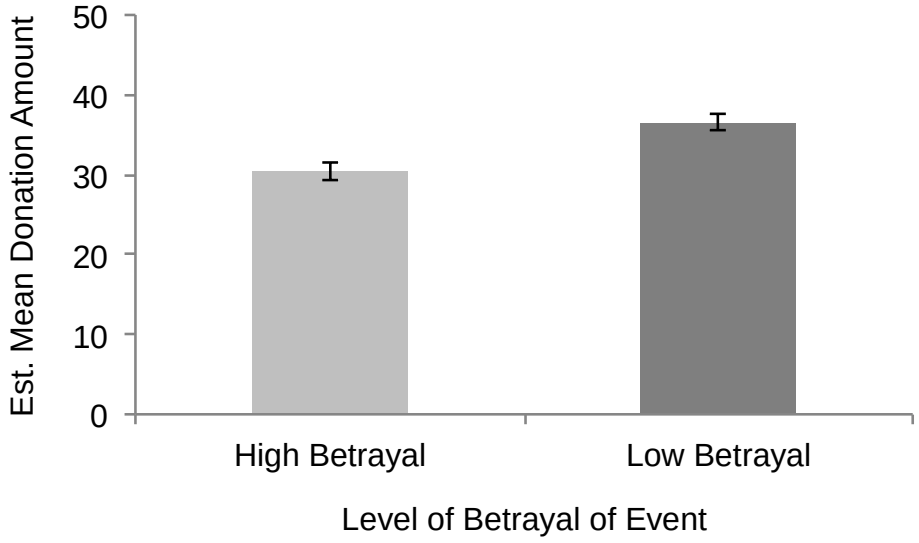

Figure 44. Estimated mean amount donated for the betrayal levels of the traumatic events for the between-subjects analysis in Study 2. Est. = estimated.

Hypothesis 2: Increased Affect Will Be Associated With Higher Donation Amounts; However, Perceived Betrayal Would Show a Negative Association With Amount Donated.

All emotional variables showed positive linear trends for willingness to donate: sadness, $r(511) = .323$, $p < .001$, $r^2 = .104$; sympathy $r(511) = .290$, $p < .001$, $r^2 = .084$; anger $r(511) = .235$, $p < .001$, $r^2 = .055$; betrayal $r(511) = .141$, $p = .001$, $r^2 = .020$; guilt

$r(511) = .476$, $p < .001$, $r^2 = .227$; and impact, $r(511) = .437$, $p < .001$, $r^2 = .191$. Partial correlations for feelings of guilt, $r(506) = .264$, $p < .001$, $r^2 = .070$, and impact, $r(506) = .205$, $p < .001$, $r^2 = .042$, remain significant after controlling for the effects of the other emotions.

Table 32 shows the means and standard deviations for the amount donated in the first condition and the emotional response variables; it also includes the correlations among these variables. See Figure 45 for a plot of the mean amounts donated by emotional response values. All emotional response variables were significantly positively correlated with amount donated to the first condition, ps < .01.

Table 32. *Correlations among Emotional Response Variables and Amount Donated in First Condition Presented in Study 2.*

	1	2	3	4	5	6	7
1. Amount	-						
2. Sad	.338**	-					
3. Sympathy	.318**	.801**	-				
4. Anger	.243**	.503**	.457**	-			
5. Betrayal	.221**	.283**	.252**	.583**	-		
6. Guilt	.413**	.478**	.491**	.317**	.232**	-	
7. Impact	.439**	.462**	.482**	.212**	.184**	.600**	-
Mean	33.5	5.33	5.70	4.84	4.38	4.91	4.96
Standard deviation	18.9	1.41	1.22	1.66	1.96	1.97	1.80

Note. ** $p < .01$

As before, guilt and belief in the donation making a difference significantly predicted amount donated, such that increased feelings of guilt ($p < .001$) and a higher impact of donation belief ($p < .001$) were associated with higher donation amounts. Betrayal rating also significantly was associated with amount donated, ($p = .011$). See Table 33 for the results of the *F*-tests.

Table 33. *Results of Emotional Responses Predicting Amount Donated to the First Condition Presented in Study 2.*

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Sad	640.1	1	640.1	2.44	.119	.005
Sympathy	124.2	1	124.2	0.47	.492	.001
Anger	180.4	1	180.4	0.69	.407	.001
Betrayal	1717.7	1	1717.7	6.55	.011	.013
Guilty	3674.0	1	3674.0	14.0	<.001	.027
Impact	7198.6	1	7198.6	27.4	<.001	.052
Error	283565.6	502	262.4			
Corrected Total	475435.3	512				

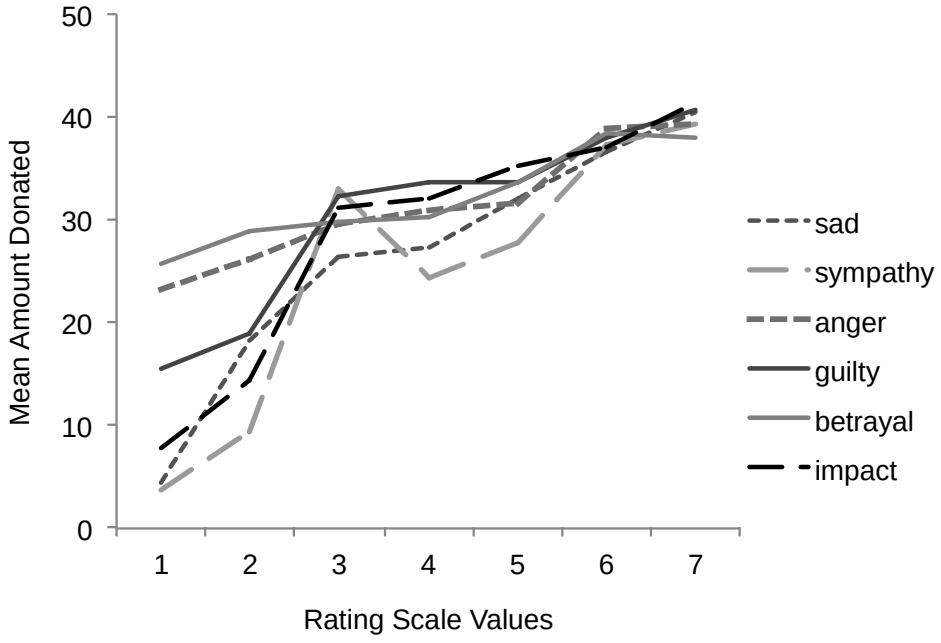

Figure 45. Average amount donated to the first condition presented by emotional response ratings in Study 2.

Hypothesis 3: Participants with Lower Betrayal Awareness Will Donate More Money.

There was a non-significant correlation between betrayal awareness and both willingness to donate, $r(511) = .022$, $p = .613$, $r^2 < .001$, and total amount donated, $r(511) = .025$, $p = .565$, $r^2 < .001$. Unsurprisingly, when included in the model, betrayal awareness was not associated with first condition donation amount, $F(1, 502) = 0.25$, $p = .621$, $\eta_p^2 < .001$.

CHAPTER IX

DISCUSSION – STUDY 2

The purpose of this study was to further explore helping behavior within a betrayal trauma framework. Unlike Study 1, this experiment utilized a repeated-measures design. Interestingly, there were significant order effects observed. People donated much more to the genocide conditions when presented with it first compared to when it followed the flood scenario. There was also a significant order effect on donation differences between betrayal levels; people donated more to the low genocide condition when it was presented first.

Results from Marjanovic et al. (2012) may explain this. Participants were asked to explain the factor they believe was "most responsible for causing the natural disaster in New Orleans" (p. 258) and their responses were then coded for human responsibility. They found that those who attributed more of the blame on human causes, that is, neglectful government or destructive social phenomena like prejudice, were more willing to help and hypothetically donated more. It should be noted that none of the blame was laid at the feet of the citizens themselves. The authors suggest this may happen because donors might believe that human agency can fix a problem human agency caused and so may be more willing to help. Perhaps the order of the scenarios highlighted the human responsibility factor of the genocide conditions. This would also explain the greater willingness to donate to the genocide scenarios observed. However, because of the significant order effects, results should be interpreted with caution.

Taking a between-subjects approach using the first condition presented, no significant differences were found in terms of willingness to donate or amount donated

for the type of event. Yet, there was a significant effect for betrayal level; people donated significantly more money to the lower betrayal versions of the events. This is predicted by BTT and contradicts the results from Marjanovic et al. (2012). In their study, perceived responsibility was not experimentally manipulated but rather was self-reported. Thus, people who are able to verbalize human culpability in natural disaster events are likely to be highly consciously aware of betrayal. Yet, in this study, responsibility was clearly delineated. Interestingly, participants clearly recognized the varying betrayal levels (as the higher betrayal events had higher betrayal ratings) and yet still donated more to the lower conditions. Thus, the process of betrayal blindness may occur unconsciously when making charitable decisions. Also, general betrayal awareness was not associated with charitable giving, either in total amount donated or differences in donations. This suggests betrayal awareness may be a state construct that is activated under certain conditions rather than a general tendency.

Charitable behavior did not differ across personality traits. While much research has demonstrated a connection (Caprara et al., 2010; Kosek, 1995), other research has shown no effect. Personality variables, albeit not assessed using the Big Five framework, did not distinguish between donors and non-donors to the United Way (Yavas, Riecken, & Parameswaran, 1981). Exline and Hill (2012) found that none of the five factors predicted amount donated to a charity. Mlčák and Záškodna (2008) argue that the relationships between personality traits and prosocial behavior are better explained as a mediated process via cognitive and emotional empathy; thus, personality characteristics by themselves are not adequate explanatory factors of prosocial behavior.

Reappraisal and suppression strategies of emotion regulation were not predictive of willingness to donate or donation amount. Previous research has shown a link between emotion regulation and acting prosocially (Cameron & Payne, 2011; Rubaltelli & Agnoli, 2012; Shaw et al., 1994). However, in these studies, participants were expressly told they would have the opportunity to help before responding to the scenarios. Their findings suggest that it is a motivated proactive down-regulation of emotion that inhibits helping behavior. In this study, participants were emotionally activated before they knew of potential donations they could provide. Thus, general tendencies for emotion regulation may not be as important as the provocation of their use.

None of the trait measures of prosocial predisposition (i.e., social value orientation, empathy, prosociality) were positively associated with charitable behavior. Given the predictive strength of the state emotional responses, this may be evidence that transient emotional reactions may contribute more to prosocial behavior than general prosocial tendencies. Snyder and Ickes (1985) propose that "strong" environments (e.g., experimental designs) can shift the cause of the behavior from a dispositional factor to a situational characteristic. Thus, in this "strong" study with its stimuli manipulation and potential demand characteristics, the emotional state reactions may have overshadowed any personal proclivities. This may also explain why participants with a prosocial orientation were less willing to donate at the lower levels of the emotional responses. In a study by Batson, Bolen, Cross, and Neuringer-Benefiel (1986), higher ratings on altruistic personality measures were associated with a greater likelihood of providing aid, but only when escape was difficult. When escape was easy, the correlations were no longer significant. Escape was easy (i.e., they would not be reminded of their failure to

help) in this study, which may also account for the non-significant findings. Marjanovic et al. (2012) provide another explanation; they demonstrated that, although the zero order correlations were strong between the trait and helping variables, the predictors offered minimal explanatory variance once control variables were also included in the model. The authors suggest that trait constructs may be most powerful when the recipients are perceived as responsible for the event, as helping seems to occur at consistent rates across the levels when victims are not blamable.

While using the first condition of this study due to the significant order effects is a valid approach, it does not reflect a true between-subjects design in this instance. The donation questions were asked after both scenarios had been given to the participants. Thus, there may still be some carry-over effects in the between-subjects results. Also, while the presentation of scenarios was counterbalanced, the photos associated with the scenarios were not; that is, the photos were nested in the event type condition. However, a separate sample of similar demographics compared the photos and showed no preference for donation behavior based simply on picture. Plus, there were no significant differences observed between the types of events. Additionally, the high flood scenarios stated a bridge collapsing caused the flood; this is rather nonsensical and was due to experimenter error. However, betrayal ratings were significantly higher for this condition, suggesting the error had no impact on interpretation.

CHAPTER X

GENERAL DISCUSSION

The purpose of this dissertation was to utilize betrayal trauma theory to better understand helping behavior. Two studies were conducted, both using college samples, to explore how betrayal trauma history and the betrayal level of events relate to hypothetical donations. This is the first study to simultaneously look at the effects of trauma background and event type on charitable behavior. See Table 34 for a summary of the findings for both studies.

Both studies attempted to replicate previous work showing that donations are higher for an individual recipient than for a group, the singularity effect. However, neither of the experiments revealed a significant main effect for number of recipients on charitable behavior. Yet, there was a significant interaction between emotional response levels and number of recipients on willingness to donate. Rates of donation to groups were lower at lower emotional activation levels. This partially supports the collapse of compassion explanation for lower helping behavior for groups. While there were no overall differences in emotional responses for number of recipients, it does appear that people are willing to provide equal assistance to a larger number of recipients when at the higher levels of emotional arousal.

An interesting interaction was observed between number of recipients and anger on donation amount; people donated more money to the group at an accelerated pace as they became more angry. A possible explanation is that the group of children was perceived as a single entity (i.e., a family) rather than a collection of single individuals. Work by Smith, Faro, and Burson (2013) showed that donations for groups increase

when the group is viewed as single, coherent unit. Consequently, helping behavior may have increased for the group as anger increased because participants were donating to a perceived single entity, a family. However this emotional interaction was not observed in Study 2, which may be attributable to the repeated-measures design of the study. The average anger rating was higher in the second study because it was the combination of two emotional responses from two sources of anger. The result from Study 1 may also be a Type I error, as the effect size is small.

Previous research (Zagefka et al., 2011; Zagefka et al., 2012) demonstrated that people were less helpful to survivors of humanly caused disasters than natural disasters. While there was not a significant main effect of type in Study 1, people did show reduced willingness to donate to the genocide conditions at low levels of the emotional reactions. Zagefka and colleagues (2011; 2012) suggest that differences in emotional and cognitive reactions are responsible for the discrepant helping behavior. In contrast, participants in Study 2 were more willing to donate to the genocide conditions; however, significant order effects were found in this study so results should be evaluated cautiously. Previous research (Kogut & Ritov, 2005b) demonstrated that the joint evaluation of two donation scenarios produced equal contributions. In their study, which compared the number of recipients, 54% of the sample donated the same amount; in this case, 91% made uniform donations. Thus, people seemed to be operating under the arithmetic equality social justice judgment (Sabbagh, Dar, Resh, 1994); they allocated equal resources to both scenarios regardless of personal traits and situational cues.

Still, when a between-subjects approach was used taking the first condition presented, no differences were found between event types for either likelihood of

donation or amount. Consequently, both studies demonstrated no differences in donation amounts for the type of event. This is contrary to what BTT would predict: donations would be lower for the higher betrayal events, the genocide conditions. This was predicted because of hypothesized betrayal blindness in order to preserve a necessary attachment to human social relationships. Perhaps the scenario stimuli were qualitatively distinct from our participants' personal experiences and schemas so that the events did not threaten the "necessary relationship"; hence, betrayal blindness was not necessary. Future research should address this potential limitation by using more local disasters and recipients more similar to the participants. Yet, the between-subjects results did show increased generosity for the lower betrayal versions of the events, as predicted.

Across both investigations, personal trauma was not directly associated with charitable giving. This contradicts the results of Frazier et al. (2013) who found that more trauma exposure was associated with increased prosocial behaviors. However, their study was correlational in design, relying on self-report measures of helping behaviors and volunteer activities. Previous research by Gobin (2012) using the Trust Game (Berg, Dickhaut, & McCabe, 1995) also demonstrated no effect of trauma history. The Trust Game has been used by some researchers (e.g., Piff et al., 2010) as a measure of prosocial behavior. Thus, there is some evidence that betrayal trauma history is not directly associated with prosocial behavior.

While there was not a significant main effect of trauma, both dissertation studies revealed a significant interaction between emotional response levels and trauma history on willingness to donate. Those with a higher betrayal trauma history were less likely to donate at lower levels of the emotional reactions. This is consistent with what is

suggested in the literature on the associations of prosocial behavior with correlates of betrayal trauma. Future research should include these correlates to help tease apart any direct and indirect effects of betrayal trauma history. Partially supporting Frazier et al. (2013), those with no trauma history were also less willing to donate with less emotional activation. The events reported in the Frazier et al. (2013) study suggest most of the trauma histories would be considered lower betrayal traumas. Thus, their study likely compared a no betrayal trauma group to a lower betrayal trauma group. This may also explain the discrepancies in results between these studies and the Frazier et al. (2013) research.

Study 1 revealed a significant interaction between trauma history, number, and type of event. Those with a low betrayal history donated significantly more to a single survivor of a natural disaster; however, they donated significantly more to a group of survivors from the external genocide condition. This suggests there may have been some similarity effect occurring at the individual level. However, this interaction was not observed in Study 2. This may be due to the repeated-measures design of the study in that, when presented with two scenarios, the equality social justice judgment may have overpowered any perceived similarities between donor and recipient.

Higher levels of emotional responses predicted increased giving. In Study 1, sympathy and guilt were associated with both greater willingness to donate and more generous donations. Furthermore, Study 2 also showed a main effect for guilt, as well as a main effect for perceived impact of donation for both measures of charitable behavior. Similarly, increased anger was related to higher rates of donation in this experiment. When comparing the conditions to each other, people consistently donated more money

to the scenarios producing higher levels of guilt. Interestingly, people with no betrayal trauma history were particularly impacted by differences in guilt responses compared to the other trauma groups. These findings highlight the importance of the emotion guilt on promoting prosocial behavior and are consistent with previous research (Miller, 2010).

Limitations and Future Directions

The results from these two studies provide interesting avenues of exploration in understanding how betrayal trauma is associated with charitable behavior. However, it is important to note the limitations of the study to place the study findings in context. Both studies utilized a college-aged sample that was predominantly Caucasian women. Thus, findings may not generalize to samples with differing characteristics. Future research should be conducted using more diverse samples, particularly because prosocial behavior has been shown to vary across these demographic factors (Bekkers & Wiepking, 2011; Wiepking & Bekkers, 2012).

A high percentage of participants in both studies (94%, 93% in Study 1 and Study 2, respectively) made a hypothetical donation; yet, studies that utilize real donations typically show lower rates of actual contributions (Kogut & Ritov, 2007; Dickert, 2008). Although there is some evidence that suggests self-reported donations are highly associated with actual donations (Zagefka et al., 2011), future research should address this using either real donations or at least asking a certainty question following the hypothetical donation (see Champ & Bishop, 2001). Furthermore, the donation questions were asked at the end of the study; thus, participants may have been primed to act prosocially after completing the prosocial tendency questionnaires. This may have artificially inflated helping. A corollary of this limitation was a need to use multiple

nonparametric tests, rather than logistic regression, to explore the factors associated with likelihood of donation. This statistical approach may have overestimated the effects of the predictors, as it did not allow for statistical controlling of the effects of the other constructs. Future research can address this limitation by oversampling those who are unlikely to donate.

Both studies were completed online. While this was done to hopefully reduce demand characteristics, this may have also resulted in biased findings. Participants completed the measures unsupervised on their own time, limiting experimental control over environmental conditions. It is possible that distractions may have interrupted or interfered with survey completion. Additionally, responses may differ if obtained by tradition paper/pencil format compared to online data collection. In a survey of Dutch adolescents, van de Looij-Jansen and de Wilde (2008) found significant differences in self-reported prosocial behavior based type of survey administration method. Participants had higher prosocial behavior scores when completing the survey using paper-and-pencil surveys. Thus, results may have differed if the survey was completed in a lab session rather than at-home. Additional research designs can explore this potential confounding factor to see if it applies to college-aged samples.

To truly understand how trauma history relates to prosocial behavior, longitudinal prospective research is warranted. While there is a large literature on prosocial development (see Eisenberg, Fabes, & Spinrad, 2006), only one study (Koening et al., 2004) has evaluated trauma history in a child sample. Therefore, it is imperative additional research exploring trauma history, particularly betrayal trauma history, be conducted.

Summary and Conclusions

This dissertation examined charitable behavior within the context of betrayal trauma theory. Both personal trauma history and betrayal levels of traumatic events were explored as possible correlates of help giving. This research highlighted the import role emotional responses, particularly guilt, have on charitable giving and suggested methods to counteract the singularity effect and bias against humanly caused disasters. By presenting both conditions simultaneously, there were no differences observed in donation amounts. Minimizing perceived betrayal aspects of the events might also further increase donation amounts. Findings also suggest that persons who have experienced low betrayal traumas may be a valuable target group for donations, as those without a trauma history or a high betrayal trauma history appear to be less willing to donate unless maximally emotionally activated. These findings provide an important first step in understanding how betrayal trauma may impact prosocial behavior.

Table 34. *Summary of Findings.*

Hypothesis/Question	Study 1 Result	Study 1 Finding	Study 2 Result	Study 2 Finding
Number of recipients	NS	No difference in willingness or amount donated to single versus group	NS	No difference in willingness or amount donated to single versus group
Increased affect on total amount donated	*	Sympathy and guilt associated with greater willingness to donate and increased amount donated	*	Anger, guilt, & impact were associated with greater willingness to donate; guilt & impact predicted total amount donated
Type of event	NS	Willingness and amount did not vary across type of events	*	People more willing to donate to genocide; no difference in amount donated. Between subjects approach showed no differences in willingness or amount donated.
Betrayal level of event	—	—	*	No difference in willingness to donate or amount donated. Between subjects approach found no difference in willingness but donated less to the high betrayal levels
Personal Trauma History	NS	All trauma backgrounds had similar rates and amounts of donation	NS	No differences in willingness to donate or amount donated across trauma groups
Interaction between number of recipients and type of event	NS	Willingness and amount did not vary across types and number of recipients	NS	No differences in willingness to donate or differences in amount donated based on number of recipients

Hypothesis/Question	Study 1 Result	Study 1 Finding	Study 2 Result	Study 2 Finding
Interaction between trauma history and number of recipients	NS	No differences in trauma groups for willingness or amount based on the number of recipients	NS	Willingness to donate was the same across trauma histories for number of recipients; non-significant interaction on amount donated
Interaction between trauma history and type of event	NS	People with divergent trauma histories did not respond differently to the types of events in terms of willingness to donate or amount donated	NS	Willingness to donate and amount donated to the two scenarios did not vary across trauma backgrounds
Interaction between trauma history and betrayal level of event	—	—	NS	Trauma history did not result in differences in willingness to donate or amount donated for the low or high betrayal versions of the events
Interaction between number, type, and trauma history	*	Low betrayal trauma group donated significantly more to the single, natural disaster survivor; low betrayal trauma group donated more to the group, external genocide	NS	There were not differences in the amounts donated to the two scenarios based on trauma history and number of recipients
Interaction between emotional responses and number of recipients	*	People less willing to donate to the group of recipients at lower levels of the emotions; people donate more money to the group than the individual at a more accelerated pace when experiencing anger	*	Replicates study 1 findings on willingness to donate; no significant interactions between number and emotion ratings on amount donated
Interaction between emotional responses and type of event	*	Less willing to donate to genocide conditions at low levels of the emotions; no differences in amount donated	—	—

Hypothesis/Question	Study 1 Result	Study 1 Finding	Study 2 Result	Study 2 Finding
Interaction between emotional response and trauma history	*	Higher trauma group less willing to donate at lower levels of sympathy, sadness, guilt, and betrayal; no trauma history less willing to donate at lower levels of guilt; no interactions with amount donated;	*	Higher and no trauma history less willing to donate at lower levels of anger, sympathy, sadness, guilt, and impact; donation amounts not associated with these interactions
Social value orientation	—	—	NS	Those with a prosocial orientation were not more willing to donate and did not donate more
Personality differences	—	—	NS	No differences in willingness to donate or amount donated for personality characteristics
Social desirability	—	—	NS	Persons with higher social desirability did not donate larger amounts and were not more willing to donate
Emotion regulation	—	—	NS	No differences in willingness to donate or amount donated based on endorsement of emotion regulation strategies
Empathy	—	—	NS	Higher empathy was not associated with increased willingness to donate or amount donate
Prosocialness	—	—	NS	Increased prosociality did not result in more willingness to donate or larger donation amounts

Hypothesis/Question	Study 1 Result	Study 1 Finding	Study 2 Result	Study 2 Finding
Betrayal awareness	—	—	NS	Reduced betrayal awareness was not associated with lower willingness to donate or lower amounts donated
Interaction between emotional responses and social value orientation	—	—	*	Those with prosocial and individualistic orientations less willing to donate at lower levels of all emotional response variables and impact
Changes in emotional responses with differences in charitable behavior for type of event	—	—	*	Low power for willingness to donate; people donated more money to the conditions producing more guilt and impact
Changes in emotional responses with differences in charitable behavior for betrayal level of event	—	—	*	Low power for willingness to donate; people donated more money to the betrayal level evoking more feelings of guilt
Differences in donation amounts based on interaction between emotional response and trauma history	—	—	*	People with no trauma history donated more to one condition when there was a larger difference in guilt than the other trauma groups
Betrayal awareness and type/betrayal level of event	—	—	NS	Betrayal awareness not associated with willingness to donate to any conditions; also, it was not associated with differences in donations to either type or betrayal level

Note. NS = nonsignificant finding; * = statistically significant finding.

APPENDIX A

STUDY 1 MATERIALS

Demographics Questionnaire

Please answer the following questions.

1) What is your age?

2) What is your gender?
   i) Male
   ii) Female

3) What is your race/ethnicity?
   i) American Indian or Alaska Native
   ii) Asian
   iii) African American
   iv) Native Hawaiian or Other Pacific Islander
   v) Caucasian
   vi) Other

For each question, participants have an option of selecting "I prefer not to respond" as well.

Brief Betrayal Trauma Survey (BBTS)

For each item below, please mark one response for the question labeled "Before Age 18" and one response for the question labeled "Age 18 and older."

Listed below are questions for this section of the survey. **Please provide a response for every question.** If you are given the option to decline to answer a question, then declining to answer is considered a response.

1. You were in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

2. You were in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

3. You witnessed someone with whom you were very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

4. You witnessed someone with whom you were not so close undergoing a similar kind of traumatic event.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

5. You witnessed someone with whom you were very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

6. You witnessed someone with whom you were not so close deliberately attack a family member that severely.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

7. You were deliberately attacked that severely by someone with whom you were very close.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

8. You were deliberately attacked that severely by someone with whom you were not close.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

9. You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

10. You were made to have such sexual contact by someone with whom you were not close.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

11. You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close (such as a parent or lover).

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

12. You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not close.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

13. Experienced the death of one or more of your own children.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

14. Experienced a seriously traumatic event not already covered in any of these questions.

Before age 18

i) Never
ii) One or two times
iii) More than that

Age 18 and older

i) Never
ii) One or two times
iii) More than that

Charitable Donation Scenarios

Natural Disaster Condition – Single Recipient

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Rokia, a young girl from Africa.

Rokia, 7 years old

Rokia's village recently experienced severe flooding, devastating their crops. Like many members of her community, Rokia is having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide her with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save her life.

1. Would you be willing to donate money to help save Rokia? [Check one box.]

   ☐ Yes ☐ No

2. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about her situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading her story, I felt sad	1	2	3	4	5	6	7
4. I felt sympathy and compassion towards her	1	2	3	4	5	6	7

5.	I felt angry about her situation	1	2	3	4	5	6	7
6.	I would feel guilty if I did not donate money to her	1	2	3	4	5	6	7
7.	I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Natural Disaster Condition – Group of Recipients

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Munene, Rokia, Adesola, and Radhi, children from Africa.

Munene, Rokia, Adesola, and Radhi

Munene, Rokia, Adesola, and Radhi ‘s village recently experienced severe flooding, devastating their crops. Like many members of their community who survived, they are having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide the children with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives.

Would you be willing to donate money to help save Munene, Rokia, Adesola, and Radhi? [Check one box.]

☐ Yes ☐ No

1. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading their story, I felt sad	1	2	3	4	5	6	7
4. I felt sympathy and compassion towards them	1	2	3	4	5	6	7
5. I felt angry about their situation	1	2	3	4	5	6	7
6. I would feel guilty if I did not donate money to them	1	2	3	4	5	6	7
7. I believe what they experienced is a betrayal	1	2	3	4	5	6	7

External Genocide Condition – Single Recipient

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Rokia, a young girl from Africa.

Rokia, 7 years old

Members of a different village, who were intent on murdering the whole town, recently attacked Rokia's home. Like many members of her community who survived, Rokia is having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide her with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save her life.

1. Would you be willing to donate money to help save Rokia? [Check one box.]

   ☐ Yes ☐ No

2. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about Rokia's situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading her story, I felt sad	1	2	3	4	5	6	7
4. I felt sympathy and compassion towards her	1	2	3	4	5	6	7

5.	I felt angry about her situation	1	2	3	4	5	6	7
6.	I would feel guilty if I did not donate money to her	1	2	3	4	5	6	7
7.	I believe what she experienced is a betrayal	1	2	3	4	5	6	7

External Genocide Condition – Group of Recipients

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Munene, Rokia, Adesola, and Radhi, children from Africa.

Munene, Rokia, Adesola, and Radhi

Members of a different village, who were intent on murdering the whole town, recently attacked Munene, Rokia, Adesola, and Radhi's home. Like many members of their community who survived, they are having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide the children with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives.

1. Would you be willing to donate money to help save Munene, Rokia, Adesola, and Radhi? [Check one box.]

   ☐ Yes ☐ No

2. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading their story, I felt sad	1	2	3	4	5	6	7

4. I felt sympathy and compassion towards them	1	2	3	4	5	6	7
5. I felt angry about their situation	1	2	3	4	5	6	7
6. I would feel guilty if I did not donate money to them	1	2	3	4	5	6	7
7. I believe what they experienced is a betrayal	1	2	3	4	5	6	7

Internal Genocide Condition – Single Recipient

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Rokia, a young girl from Africa.

Rokia, 7 years old

Rokia (and her family) are members of the Abaka tribe, who have lived peacefully with the Masaba tribe in the same villages for generations. However, a civil war has recently erupted and Masabas, intent on murdering all Abakans, recently began attacking their neighbors. Like many members of the Abakan community who survived, Rokia is having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide her with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives.

1. Would you be willing to donate money to help save Rokia? [Check one box.]

   ☐ Yes ☐ No

2. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about Rokia's situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading her story, I felt sad	1	2	3	4	5	6	7
4. I felt sympathy and compassion towards her	1	2	3	4	5	6	7

5.	I felt angry about her situation	1	2	3	4	5	6	7
6.	I would feel guilty if I did not donate money to her	1	2	3	4	5	6	7
7.	I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Internal Genocide Condition – Group of Recipients

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $50 (10 five-dollar bills). On your way out of the experiment you are given the opportunity to donate any amount of your $50 to charity.

Specifically, any money you donate will go to Munene, Rokia, Adesola, and Radhi, children from Africa.

Munene, Rokia, Adesola, and Radhi

Munene, Rokia, Adesola, and Radhi's family are members of the Abaka tribe, who have lived peacefully with the Masaba tribe in the same villages for generations. However, a civil war has recently erupted and Masabas, intent on murdering all Abakans, recently began attacking their neighbors. Like many members of the Abakan community who survived, they are having difficulty getting enough food and water to survive. With your support, *Save the Children* will provide the children with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives.

1. Would you be willing to donate money to help save Munene, Rokia, Adesola, and Radhi? [Check one box.]

   ☐ Yes ☐ No

2. If so, how much money would you be willing to donate?

   [Circle one amount.]

   $5 $10 $15 $20 $25 $30 $35 $40 $45 $50

   For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
3. After reading their story, I felt sad	1	2	3	4	5	6	7
4. I felt sympathy and compassion towards them	1	2	3	4	5	6	7
5. I felt angry about their situation	1	2	3	4	5	6	7
6. I would feel guilty if I did not donate money to them	1	2	3	4	5	6	7
7. I believe what they experienced is a betrayal	1	2	3	4	5	6	7

*Photo, entitled Temne children in Kabala, Sierra Leone (West Africa), taken by John Atherton in 1968. Photo publicly available via Flickr account *gbaku*: http://www.flickr.com/photos/gbaku/491589501/

APPENDIX B

STUDY 2 MATERIALS

Demographics Questionnaire

Please answer the following questions.

1) What is your gender?
   i) Male
   ii) Female
   iii) Transgender

2) What is your ethnicity? Check all that apply.
   i) Caucasian
   ii) Hispanic
   iii) African-American/Black
   iv) Asian-American
   v) Native-American
   vi) Jamaican
   vii) Asian
   viii) Other

3) What is your age (in years)?

4) What is your religion?
   i) Catholic
   ii) Jewish
   iii) Methodist
   iv) Protestant
   v) Nondenominational
   vi) Baptist
   vii) Other

5) What is your sexual orientation?
   i) Heterosexual
   ii) Homosexual
   iii) Bisexual
   iv) Queer
   v) Questioning
   vi) None of the above

Big Five Inventory (BFI)

Here are some statements that may or may not describe what you are like. Select the option that shows how much you agree or disagree that it describes you. For example, do you agree that you are someone who *is bossy*?

1 Disagree Strongly	**2** Disagree a little	**3** Neither agree nor disagree	**4** Agree a little	**5** Agree strongly

I see myself as someone who…

____1. Is talkative

____2. Tends to find fault with others

____3. Does things carefully and completely

____4. Is depressed, blue

____5. Is original, comes up with new ideas

____6. Reserved; keeps thoughts and feelings to self

____7. Is helpful and unselfish with others

____8. Can be somewhat careless

____9. Is relaxed, handles stress well.

____10. Is curious about many different things

____11. Is full of energy

____12. Starts quarrels with others

____13. Is a reliable worker

____14. Can be tense

____15. Is clever, thinks a lot

____16. Generates a lot of enthusiasm

____17. Has a forgiving nature

____18. Tends to be disorganized

____19. Worries a lot

____20. Has an active imagination

____21. Tends to be quiet

____22. Is generally trusting

____23. Tends to be lazy

____24. Doesn’t get easily upset, emotionally stable

____25. Is creative and inventive

____26. Takes charge, has an assertive personality

____27. Can be cold and distant with others

____28. Keeps working until things are done

____29. Can be moody

____30. Likes artistic and creative experiences

____31. Is sometimes shy, inhibited

____32. Is considerate and kind to almost everyone

____33. Does things efficiently (quickly and correctly)

____34. Stays calm in tense situations

____35. Likes work that is the same every time (routine)

____36. Is outgoing, sociable

____37. Is sometimes rude to others

____38. Makes plans and sticks to them

____39. Gets nervous easily

____40. Likes to think and play with ideas

____41. Doesn’t like artistic things (plays, music)

____42. Likes to cooperate; goes along with others

____43. Is easily distracted; has trouble paying attention

____44. Knows a lot about art, music, or books

____45. Is the kind of person almost everyone likes

____46. People really enjoy spending time with

Balanced Inventory of Desirable Responding (BIDR)

Please indicate how much you agree with each statement.

1----------2----------3----------4----------5----------6----------7
Not Somewhat Very
True True True

____ 1. My first impressions of people usually turn out to be right.

____ 2. It would be hard for me to break any of my bad habits.

____ 3. I don't care to know what other people really think of me.

____ 4. I have not always been honest with myself.

____ 5. I always know why I like things.

____ 6. When my emotions are aroused, it biases my thinking.

____ 7. Once I've made up my mind, other people can seldom change my opinion.

____ 8. I am not a safe driver when I exceed the speed limit.

____ 9. I am fully in control of my own fate.

____ 10. It's hard for me to shut off a disturbing thought.

____ 11. I never regret my decisions.

____ 12. I sometimes lose out on things because I can't make up my mind soon enough.

____ 13. The reason I vote is because my vote can make a difference.

____ 14. My parents were not always fair when they punished me.

____ 15. I am a completely rational person.

____ 16. I rarely appreciate criticism.

____ 17. I am very confident of my judgments

____ 18. I have sometimes doubted my ability as a lover.

____ 19. It's all right with me if some people happen to dislike me.

____ 20. I don't always know the reasons why I do the things I do.

____ 21. I sometimes tell lies if I have to.

____ 22. I never cover up my mistakes.

____ 23. There have been occasions when I have taken advantage of someone.

____ 24. I never swear.

____ 25. I sometimes try to get even rather than forgive and forget.

____ 26. I always obey laws, even if I'm unlikely to get caught.

____ 27. I have said something bad about a friend behind his/her back.

____ 28. When I hear people talking privately, I avoid listening.

____ 29. I have received too much change from a salesperson without telling him or her.

____ 30. I always declare everything at customs.

____ 31. When I was young I sometimes stole things.

____ 32. I have never dropped litter on the street.

____ 33. I sometimes drive faster than the speed limit.

____ 34. I never read sexy books or magazines.

____ 35. I have done things that I don't tell other people about.

____ 36. I never take things that don't belong to me.

____ 37. I have taken sick-leave from work or school even though I wasn't really sick.

____ 38. I have never damaged a library book or store merchandise without reporting it.

____ 39. I have some pretty awful habits.

____ 40. I don't gossip about other people's business.

Triple-Dominance Measure of Social Value Orientation (TDMSVO)

In this task we ask you to imagine that you have been randomly paired with another person, whom we will refer to simply as the "Other." This other person is someone you do not know and that you will not knowingly meet in the future. Both you and the "Other" person will be making choices by circling either the letter A, B, or C. Your own choices will produce points for both yourself and the "Other" person. Likewise, the other's choice will produce points for him/her and for you. Every point has value: The more points you receive, the better for you, and the more points the "Other" receives, the better for him/her.

Here's an example of how this task works:

	A	B	C
You get	500	500	550
Other gets	100	500	300

In this example, if you chose A you would receive 500 points and the other would receive 100 points; if you chose B, you would receive 500 points and the other 500; and if you chose C, you would receive 550 points and the other 300. So, you see that your choice influences both the number of points you receive and the number of points the other receives.

Before you begin making choices, please keep in mind that there are no right or wrong answers—choose the option that you, for whatever reason, prefer most. Also, remember that the points have value; the more of them you accumulate, the better for you. Likewise, from the "other's" point of view, the more points s/he accumulates, the better for him/her.

For each of the nine choice situations, select A, B, or C, depending on which column you prefer most.

1.

	A	B	C
You get	480	540	480
Other gets	80	280	480

2.

	A	B	C
You get	560	500	500
Other gets	300	500	100

3.

	A	B	C
You get	520	520	580
Other gets	520	120	320

4.

	A	B	C
You get	500	560	490
Other gets	100	300	490

5.

	A	B	C
You get	560	500	490
Other gets	300	500	90

6.

	A	B	C
You get	500	500	570
Other gets	500	100	300

7.

	A	B	C
You get	510	560	510
Other gets	510	300	110

8.

	A	B	C
You get	550	500	500
Other gets	300	100	500

9.

	A	B	C
You get	480	490	540
Other gets	100	490	300

Emotion Regulation Questionnaire (ERQ)

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways.

Select one response to indicate your agreement or disagreement for each item.

1----------2----------3----------4----------5----------6----------7
Strongly Disagree | Neutral | Strongly Agree

____ 1. When I want to feel more *positive* emotion (such as joy or amusement), I *change what I'm thinking about*.

____ 2. I keep my emotions to myself.

____ 3. When I want to feel less *negative* emotion (such as sadness or anger), I *change what I'm thinking about*.

____ 4. When I am feeling positive emotions, I am careful not to express them.

____ 5. When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.

____ 6. I control my emotions by *not expressing them*.

____ 7. When I want to feel more *positive* emotion, I *change the way I'm thinking* about the situation.

____ 8. I control my emotions by *changing the way I think* about the situation I'm in.

____ 9. When I am feeling *negative* emotions, I make sure not to express them.

____ 10. When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.

Interpersonal Reactivity Index (IRI)

Please read each statement carefully and consider how well or poorly it describes you as a person. Then respond to the statement as accurately as possible using the following scale. Choose the response that best indicates the degree to which each statement describes you.

a. Does Not Describe Me Very Well	**b.**	**c.**	**d.**	**e.** Describes Me Very Well

____ 1. I daydream and fantasize, with some regularity, about things that might happen to me.

____ 2. I often have tender, concerned feelings for people less fortunate than I am.

____ 3. I sometimes find it difficult to see things from the "other guy's" point of view.

____ 4. Sometimes I don't feel very sorry for other people when they're having problems.

____ 5. I really get involved with the feelings of the characters in a novel.

____ 6. In emergency situations, I feel apprehensive and ill-at-ease.

____ 7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.

____ 8. I try to look at everybody's side of a disagreement before I make a decision.

____ 9. When I see someone being taken advantage of, I feel kind of protective towards them.

____ 10. I sometimes feel helpless when I am in the middle of a very emotional situation.

____ 11. I sometimes try to understand my friends better by imagining how things look from their perspective.

____ 12. Becoming extremely involved in a good book or movie is somewhat rare for me.

____ 13. When I see someone get hurt, I tend to remain calm.

____ 14. Other people's misfortunes do not usually disturb me a great deal.

____ 15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

____ 16. After seeing a play or a movie, I have felt as though I were one of the characters.

____ 17. Being in a tense emotional situation scares me.

____ 18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

____ 19. I am usually pretty effective in dealing with emergencies.

____ 20. I am often quite touched by things that I see happen.

____ 21. I believe there are two sides to every question and I try to look at them both.

____ 22. I would describe myself as a pretty soft-hearted person.

____ 23. When I watch a good movie, I can very easily put myself in the place of a leading character.

____ 24. I tend to lose control during emergencies.

____ 25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

____ 26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

____ 27. When I see someone who badly needs help in an emergency, I go to pieces.

____ 28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Prosocialness Scale for Adults

The following statements describe a large number of common situations. There are no "right" or "wrong" answers; the best answer is the immediate, spontaneous one. Read carefully each phrase and mark the answer that reflects your first reaction.

1	**2**	**3**	**4**	**5**
Never True	Occasionally True	Sometimes True	Often True	Almost Always True

___1. I am pleased to help my friends/colleagues in their activities

___2. I share the things that I have with my friends

___3. I try to help others

___4. I am available for volunteer activities to help those who are in need

___5. I am empathetic with those who are in need

___6. I help immediately those who are in need

___7. I do what I can to help others avoid getting into trouble

___8. I intensely feel what others feel

___9. I am willing to make my knowledge and abilities available to others

___10. I try to console those who are sad

___11. I easily lend money or other things

___12. I easily put myself in the shoes of those who are in discomfort

___13. I try to be close to and take care of those who are in need

___14. I easily share with friends any good opportunity that comes to me

___15. I spend time with those friends who feel lonely

___16. I immediately sense my friends' discomfort even when it is not directly communicated to me

Betrayal Detection Measure

We are interested in how often you have experienced situations similar to the ones listed below and how you reacted to these situations. Read each statement below carefully and respond to each item honestly.

1) You tell your close friend, Amy, a deep secret that you have not shared with anyone else. She promises to keep your secret. A few weeks later, you discover that Amy has shared your secret with other individuals. How many times has a situation similar to the one described above happen to you?

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

How aware were you that you had been betrayed by your friend?

a) Completely unaware.
b) Somewhat unaware.
c) I could have been aware if I wanted to be.
d) Somewhat aware.
e) I was completely aware.
f) Other (please explain)_____

2) You experience a traumatic event in your life (i.e., a death in the family, a major disappointment, a car accident). You go to your friend seeking social support. Your friend does not respond with the social support you were hoping for. How many times has this happen to you?

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

How aware were you that you had been betrayed by your friend?

a) Completely unaware.
b) Somewhat unaware.
c) I could have been aware if I wanted to be.
d) Somewhat aware.
e) I was completely aware.
f) Other (please explain)_____

3) You get an award for your outstanding academic, athletic, or community service achievements. You are excited to share the news with your close friend Scott. When you tell Scott he reacts as if he doesn't care at all about your good news. How many times has something like this happen to you?

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

How aware were you that you had been betrayed by your friend?

a) Completely unaware.
b) Somewhat unaware.
c) I could have been aware if I wanted to be.

d) Somewhat aware.
e) I was completely aware.
f) Other (please explain)_____

4) A family member promised you something very important to you, but never delivered on his/her promise. How many times has this happen to you?

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

How aware were you that you had been betrayed by your friend?

a) Completely unaware.
b) Somewhat unaware.
c) I could have been aware if I wanted to be.
d) Somewhat aware.
e) I was completely aware.
f) Other (please explain)_____

5) You played a card game or board game with a friend and your friend won by cheating. How many times has someone cheated you in order to win a game?

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

How aware were you that you had been betrayed by your friend?

a) Completely unaware.
b) Somewhat unaware.
c) I could have been aware if I wanted to be.
d) Somewhat aware.
e) I was completely aware.
f) Other (please explain)_____

Brief Betrayal Trauma Survey (BBTS)

We hope that you trust us to keep your responses in complete confidence and privacy; this is the reason that we ask you not to include your name on any of our questionnaires. Nonetheless, if you feel uncomfortable answering any of the more intimate questions in this section, just skip them, and go on to the next section. For each item below, please mark one response in the columns labeled "Before Age 12," one response in the columns labeled "Age 12 through 17," AND one response in the columns labeled "Age 18 and Older."

Have each of the following events happened to you?

	Before Age 12		Age 12 through 17		Age 18 and older	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death (1)	O	O	O	O	O	O
Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences (2)	O	O	O	O	O	O
Personally witnessed someone with whom YOU WERE VERY CLOSE (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat (3)	O	O	O	O	O	O
Personally witnessed someone with whom you were NOT so close undergoing a similar kind of traumatic event (4)	O	O	O	O	O	O
Personally witnessed someone with whom YOU WERE VERY CLOSE deliberately attack one of your family members so severely as to result in marks, bruises, blood, broken bones, or broken teeth (5)	O	O	O	O	O	O
Personally witnessed someone with whom you were NOT so close deliberately attack a member of your family that severely (6)	O	O	O	O	O	O

You were deliberately attacked that severely by someone with whom YOU WERE VERY CLOSE (7)	O	O	O	O	O	O
You were deliberately attacked that severely by someone with whom you were NOT so close (8)	O	O	O	O	O	O
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom YOU WERE VERY CLOSE (such as a parent or lover) (9)	O	O	O	O	O	O
You were made to have such sexual contact by someone with whom you were NOT so close (10)	O	O	O	O	O	O
You were emotionally or psychologically mistreated over a significant period of time by someone with whom YOU WERE VERY CLOSE (such as a parent or lover) (11)	O	O	O	O	O	O
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were NOT close (12)	O	O	O	O	O	O
Experienced the death of one or more of your own children (13)	O	O	O	O	O	O
Experienced a seriously traumatic event not already covered in any of these questions (please specify below) (14)	O	O	O	O	O	O

Please specify any seriously traumatic events NOT COVERED by the previous questions.

Charitable Donation Scenarios

High Flood versus Low Genocide – Single Recipient

Rokia

After a poorly built bridge collapsed, Rokia's village recently experienced massive flooding, devastating their crops. Despite previous warnings to trusted local officials of its instability, they chose to direct funds to building a resort rather than fixing the bridge. Like many members of her community who survived, Rokia is having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about her situation. [Circle one number for each item.]

	Not at all						Very much
After reading her story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards her	1	2	3	4	5	6	7
I feel angry about her situation	1	2	3	4	5	6	7
I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Faida

Members of a different village, who were intent on murdering the whole town, recently attacked Faida's home. Like many members of her community who survived, Faida is having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about her situation. [Circle one number for each item.]

	Not at all						Very much
After reading her story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards her	1	2	3	4	5	6	7
I feel angry about her situation	1	2	3	4	5	6	7
I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $100 On your way out of the experiment you are given the opportunity to donate any amount of your $100 to charity to help the children from the previous 2 scenarios. With your support, *Save the Children* will provide Rokia and Faida with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives. The sum of the next 3 questions must equal 100.

How much would you be willing to donate to Rokia, whose village was destroyed by a flood (0 to 100)?

How much would you be willing to donate to Faida, whose village was attacked by members of another village (0 to 100)?

How much would you like to keep for yourself (0 to 100)?

I would feel guilty if I did not donate money to Rokia

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Rokia will make a difference

Not at all Very much

1 2 3 4 5 6 7

I would feel guilty if I did not donate money to Faida

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Faida will make a difference

Not at all Very much

1 2 3 4 5 6 7

Low Flood versus High Genocide – Single Recipient

Rokia

After a long period of heavy rain, Rokia's village recently experienced massive flooding, devastating their crops. Like many members of her community who survived, Rokia is having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about her situation. [Circle one number for each item.]

	Not at all						Very much
After reading her story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards her	1	2	3	4	5	6	7
I feel angry about her situation	1	2	3	4	5	6	7
I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Faida

Faida (and her family) are members of the Abaka tribe, who have lived peacefully with the Masaba tribe in the same villages for generations. Members of the Abaka and Masaba have even married and started families together. However, a civil war has recently erupted and Masabas, intent on murdering all Abakans, recently began attacking their neighbors and Abakan family members. The government is making no effort to stop the attacks. Like many members of the Abakan community who survived, Faida is having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about her situation. [Circle one number for each item.]

	Not at all						Very much
After reading her story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards her	1	2	3	4	5	6	7
I feel angry about her situation	1	2	3	4	5	6	7
I believe what she experienced is a betrayal	1	2	3	4	5	6	7

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $100 On your way out of the experiment you are given the opportunity to donate any amount of your $100 to charity to help the children from the previous 2 scenarios. With your support, *Save the Children* will provide Rokia and Faida with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives. The sum of the next 3 questions must equal 100.

How much would you be willing to donate to Rokia, whose village was destroyed by a flood (0 to 100)?

How much would you be willing to donate to Faida, who is being attacked by neighbors and family members (0 to 100)?

How much would you like to keep for yourself (0 to 100)?

I would feel guilty if I did not donate money to Rokia

Not at all						Very much
1	2	3	4	5	6	7

I believe a donation to Rokia will make a difference

Not at all						Very much
1	2	3	4	5	6	7

I would feel guilty if I did not donate money to Faida

Not at all						Very much
1	2	3	4	5	6	7

I believe a donation to Faida will make a difference

Not at all						Very much
1	2	3	4	5	6	7

High Flood versus Low Genocide – Group of Recipients

Munene, Rokia, Adesola, and Radhi

After a poorly built bridge collapsed, Munene, Rokia, Adesola, and Radhi ‘s village recently experienced massive flooding, devastating their crops. Despite previous warnings to trusted local officials of its instability, they chose to direct funds to building a resort rather than fixing the bridge. Like many members of their community who survived, Munene, Rokia, Adesola, and Radhi are having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
After reading their story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards them	1	2	3	4	5	6	7
I feel angry about their situation	1	2	3	4	5	6	7
I believe what they experienced is a betrayal	1	2	3	4	5	6	7

Abla, Faida, Jenebi, and Nnamdi

Members of a different village, who were intent on murdering the whole town, recently attacked Abla, Faida, Jenebi, and Nnamdi's homes. Like many members of their community who survived,
Abla, Faida, Jenebi, and Nnamdi are having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
After reading their story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards them	1	2	3	4	5	6	7
I feel angry about their situation	1	2	3	4	5	6	7
I believe what they experienced is a betrayal	1	2	3	4	5	6	7

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $100 On your way out of the experiment you are given the opportunity to donate any amount of your $100 to charity to help the children from the previous 2 scenarios. With your support, *Save the Children* will provide the children with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives. The sum of the next 3 questions must equal 100.

How much would you be willing to donate to Munene, Rokia, Adesola, and Radhi, whose village was destroyed by a flood (0 to 100)?

How much would you be willing to donate to Abla, Faida, Jenebi, and Nnamdi, whose village was attacked by members of another village (0 to 100)?

How much would you like to keep for yourself (0 to 100)?

I would feel guilty if I did not donate money to Munene, Rokia, Adesola, and Radhi

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Munene, Rokia, Adesola, and Radhi will make a difference

Not at all Very much

1 2 3 4 5 6 7

I would feel guilty if I did not donate money to Abla, Faida, Jenebi, and Nnamdi

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Abla, Faida, Jenebi, and Nnamdi will make a difference

Not at all Very much

1 2 3 4 5 6 7

Low Flood versus High Genocide – Group of Recipients

Munene, Rokia, Adesola, and Radhi

After a long period of heavy rain, Munene, Rokia, Adesola, and Radhi‘s village recently experienced massive flooding, devastating their crops. Like many members of their community who survived, Munene, Rokia, Adesola, and Radhi are having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
After reading their story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards them	1	2	3	4	5	6	7
I feel angry about their situation	1	2	3	4	5	6	7
I believe what they experienced is a betrayal	1	2	3	4	5	6	7

Abla, Faida, Jenebi, and Nnamdi

Abla, Faida, Jenebi, and Nnamdi‘s families are members of the Abaka tribe, who have lived peacefully with the Masaba tribe in the same villages for generations. Members of the Abaka and Masaba have even married and started families together. However, a civil war has recently erupted and Masabas, intent on murdering all Abakans, recently began attacking their neighbors and Abakan family members. The government is making no effort to stop the attacks. Like many members of the Abakan community who survived, Abla, Faida, Jenebi, and Nnamdi are having difficulty getting enough food and water to survive.

For the questions below, please circle the appropriate number to indicate how you feel about their situation. [Circle one number for each item.]

	Not at all						Very much
After reading their story, I feel sad	1	2	3	4	5	6	7
I feel sympathy and compassion towards them	1	2	3	4	5	6	7
I feel angry about their situation	1	2	3	4	5	6	7
I believe what they experienced is a betrayal	1	2	3	4	5	6	7

Imagine you have taken part in a 4-hour psychology experiment for which you have just been paid $100 On your way out of the experiment you are given the opportunity to donate any amount of your $100 to charity to help the children from the previous 2 scenarios. With your support, *Save the Children* will provide the children with the basic necessities, i.e., food, water, basic medical care, and hygiene. Your financial gift could help save their lives. The Sum of the next 3 questions must equal 100.

How much would you be willing to donate to Munene, Rokia, Adesola, and Radhi, whose village was destroyed by a flood (0 to 100)?

How much would you be willing to donate to Abla, Faida, Jenebi, and Nnamdi, who are being attacked by neighbors and family members (0 to 100)?

How much would you like to keep for yourself (0 to 100)?

I would feel guilty if I did not donate money to Munene, Rokia, Adesola, and Radhi

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Munene, Rokia, Adesola, and Radhi will make a difference

Not at all Very much

1 2 3 4 5 6 7

I would feel guilty if I did not donate money to Abla, Faida, Jenebi, and Nnamdi

Not at all Very much

1 2 3 4 5 6 7

I believe a donation to Abla, Faida, Jenebi, and Nnamdi will make a difference

Not at all Very much

1 2 3 4 5 6 7

*Photo, entitled Temne children in Kabala, Sierra Leone (West Africa), taken by John Atherton circa 1968. Photo publicly available via Flickr account *gbaku*: http://www.flickr.com/photos/gbaku/491589501/

*Photo, #07-1068, taken by John Gordon on 11/05/2007. Altered to black-and-white. Photo publicly available via United Methodist News Service (UMNS): http://tinyurl.com/9wa2jjc

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