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SWEET MERCY: A SCIENTIFIC INVESTIGATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

by

AUBREY GARTNER

M.S., Virginia Commonwealth University, 2009

B.A., Denison University, 2006

Director: Everett L. Worthington, Jr.
Professor, Department of Psychology

Virginia Commonwealth University
Richmond, VA
May, 2012

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ABSTRACT

SWEET MERCY: A SCIENTIFIC INVESTIGATION

By Aubrey L. Gartner, Ph.D

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2012

Major Director: Everett L. Worthington, Jr., Professor, Psychology

The purpose of the following studies is to understand the factors that are related to and influence a person's merciful behavior toward an offender. I define mercy as an act by a person who has the authority to do so that administers or recommends less negative consequence or punishment than is deserved by someone justly deserved. In Study 1, undergraduate students ($N = 400$) completed the Mercy Meter, a self-report measure of mercy. The Mercy Meter's scale

structure and psychometric properties were examined using Item Response Theory Rasch Analysis. A 14-item, 2-factor scale was established with good psychometric properties. Evidence for the construct validity of the Mercy Meter was also found. In Study 2, I examined the effect of group status and empathy on a participant's merciful behavior towards an offender who is being punished. Undergraduate students ($N = 77$) participated in a laboratory experiment in which they watched another student confess to an offense, receive a punishment sentence from a second student, and carry out the prescribed punishment. Participants' level of mercy was measured by the length of time that they allowed the punishment to continue. Results suggest that the offender's group status, but not the participant's empathy towards the offender, had a direct effect on mercy. Implications, next steps for future research, and limitations of the current study are discussed.

Sweet Mercy: A Scientific Investigation

The concept of justice appears to be a basic human value. The belief in a just world, that people get what they deserve, is a strong motivational influence when people are faced with injustice (Lerner, 1980). Specifically, people will react and respond in ways that maintain or restore justice to situations of actual or threatened injustice (Lerner, 2003). This belief, and the motive to maintain, has been coined the “justice motive” (Lerner, 1980).

There are several theories that suggest the psychological principles underlying the justice motive. For example, equity theory, that the ratio of a person’s outcomes to his or her efforts matches the ratio of a similar other’s outcomes to efforts, was an effort to explain distributive justice (Adams, 1965). Distributive justice is primarily concerned with the outcomes that a person receives, whereas procedural justice is concerned with the decisions involved that determine the outcomes (Kazemi & Törnblom, 2008). In other words, procedural justice involves the treatment of the parties in the justice decision.

One theory of procedural justice was presented in terms of social identity theory (Tajfel & Turner, 1986). Tyler and Lind (1992) suggest that how a person is treated in justice decisions is indicative of his or her membership status within the social group. Other theories suggest that justice maintains predictability and therefore a sense of control in the social world (Mikula, 1984), or that procedural justice is a way to control and maximize a person’s own outcomes (Thibaut & Walker, 1978).

The effects of the justice motive have also been extensively researched in the field of psychology. In a seminal study, Lerner and Simmons (1966) found that participants, when unable to assuage the suffering an innocent victim, defamed the victim’s character in an attempt to explain the victim’s “undeserved” victimization. Callan, Kay, Davidenko, and Ellard (2009)

found that the justice motive influenced what people remembered about the past so that the recalled past experiences were more consistent with the belief in a just world.

Many studies have used game theories to study justice in non-Western cultures. For example, studies have shown that, in an ultimatum game, participants from tribal communities will punish another participant who unfairly distributes resources even at a cost to himself or herself (Bernhard, Fischbacher, & Fehr, 2006; Marlowe, 2009). The feeling or sense of injustice has been linked to different negative emotions including anger, shame, guilt, resentment, sadness, and fear (e.g., Mullen, 2007).

Mercy—An Alternative Response to Injustice

Despite the strong motivation towards justice, there is another potential response to injustice. Mercy is most discussed in the religious (i.e., Funk, 1974; Peacock, 1980) and criminal justice (i.e., Muller, 1993; Murphy, 1988) literatures, and has been under-investigated in the psychology literature (Worthington, 2009). Specifically, a person could respond to a perceived injustice, either against himself or herself or against someone else, not with an eye for punishment but rather with an act of mercy. I define *mercy* as an act by a person who has the authority to do so that administers or recommends less negative consequence or punishment than is deserved by someone justly deserved. A merciful act may be doing something active or not administering (or recommending) expected and deserved consequences. Authority is based on a person's position (i.e., judge, jury member, parent) or is acquired by virtue of having been offended or hurt. Therefore mercy could be considered a form of prosocial behavior, or behavior that benefits another person.

Yet the question remains, why would a person respond to an injustice with an act of mercy rather than an act of justice? In other words, how might one overcome a justice motive

once it is aroused? There are several theories of prosocial behavior that could be applied to help explain why a person might respond to an injustice with an act of mercy rather than an act of justice. I will briefly describe three such theories here, though it is likely that other theories could also be used to explain the process.

Potential Theoretical Explanations for Mercy

Evolutionary theory. One explanation of how a person might overcome justice motivations could be derived from evolutionary theory. Explaining prosocial behaviors from an evolutionary perspective encompasses the more specific evolutionary theories of natural selection, inclusive fitness, reciprocal altruism, group selection, and gene-culture co-evolution (Simpson & Beckes, 2010). For example, reciprocal altruism is defined by Trivers (1971) as, “behavior that benefits another organism, not closely related, while being apparently detrimental to the organism performing the behavior, benefit and detrimental being defined in terms of contribution to inclusive fitness” (p. 35). In other words, Joe will help out Bob, even at a cost to Joe, because Bob will then help out Joe at a later date. In terms of mercy, it would be beneficial to Joe’s survival to act mercifully towards Bob the offender, with the understanding that when Joe offends someone in the future, he will be met with mercy rather than revenge or justice. Simpson and Beckes (2010) suggest that it is likely that the most reproductively successful people were the most cooperative and helping members within their groups.

Gray’s Theory of Behavioral Inhibition and Behavioral Activation Systems

Another theory that could be used to understand why a person may act mercifully rather than with justice is the behavioral inhibition system. Gray (1982, 1994) posits two brain-behavior systems that regulate behavior: the behavioral approach system and the behavioral inhibition system. There are two classes of virtues. Warmth based virtues include empathy,

compassion, forgiveness, love, sympathy, gratitude, kindness, and mercy (Worthington, 2006). Conscientiousness-based virtues, on the other hand, include self-control, responsibility, honesty, obedience, faithfulness, and justice (Worthington). Conscientiousness based virtues are suggested to be related to the behavioral inhibition system, whereas the warmth-based virtues are related to the behavioral approach system (Berry, Worthington, Wade, Witvliet, & Kiefer, 2005). Therefore, when placed in an injustice situation where a person has to make a judgment, if the behavioral approach system is activated instead of the behavioral inhibition system, it may lead the person to respond with mercy (a warmth based virtue) instead of justice (a conscientiousness-based virtue).

Empathy and prosocial behavior. Vast amounts of psychological research support the idea that emotion, and specifically empathy, plays a role in prosocial behavior. However, there is not a consensus in the field on nature of the relationship between empathic arousal and prosocial behavior. There are two main camps that suggest how empathy promotes prosocial behavior. Cialdini, Schaller, Houlihan, Arps, and Fultz (1987) suggest that prosocial behavior is egoistically motivated by the helper to reduce his or her own feelings of distress that empathizing with the person needing help causes. Batson (1991) instead promotes the empathy-altruism hypothesis. The empathy-altruism hypothesis states that empathic emotion for another person promotes altruistic motivation to benefit the other person (Batson, 1991). This hypothesis is rooted in the notion of empathy as an other-focused emotion, based on imagining or observing another person's affective state (Batson, 1991).

Mercy, as defined above, may be considered a form of altruism in the unique context of responding to an offender's suffering. Altruism is defined as, "a motivational state with the ultimate goal of increasing another's welfare" (Batson, 2010, p. 16). One difference between

mercy and altruism is that altruism can be targeted towards anyone regardless of his or her circumstance. For example, Van Lange (2008) suggests that empathy evokes altruism in situations where the person receiving empathy is not in a position of need. Mercy, on the other hand, is shown to an offender who justly deserves punishment. Another difference between mercy and altruism is that, in the present study, mercy is defined as a behavior, whereas altruism is defined as a motivational state. Nonetheless, mercy can be considered as related to altruism in that the behavior will increase the offender's welfare.

Van Lange (2008) examined several interpersonal motivations that may be evoked by empathy. Specifically, the author examined altruism, which was defined as concern for another person's outcome, selflessness, or decreased concern for one's own outcome, or egalitarianism, an increased concern in the equality of outcomes. Participants ($N = 84$) were randomly assigned to either a high- or low-empathy or control condition, and were informed that they were playing a game with another "participant" in the other room. The game comprised of making choices between alternatives that represent various combinations of outcomes for the self and the other person. Van Lange found that those participants in the high- and low-empathy conditions had greater concern for other's outcomes (altruism) than those participants in the control condition. There was no effect of empathy condition found on concern for one's own outcomes (selflessness) or concern for equality of outcomes (egalitarianism). Van Lange suggested that empathy only triggers altruistic motivation, which may add to the motivations for selfishness and egalitarianism that are likely "default" motivations that we experience (p. 772). In regards to mercy, these findings suggest that empathy may promote mercy for an individual who justly deserves punishment.

To assess the relationship between empathy and justice, Batson, Klein, Highberger, and Shaw (1995) conducted two studies. In the first study, undergraduate psychology students ($N = 60$) were assigned to a no empathy, low empathy, or high empathy condition. Participants were instructed to assign tasks to workers and reported their motivations for their assignment decisions. The authors found that participants in the high-empathy condition had increased empathy for the worker and assigned tasks based on increasing welfare for the worker despite reporting that a random method was the most fair. Thus, the authors concluded that inducing empathy would increase benefits for another person, at the cost of others, might be in conflict with justice, and at times override justice motivations.

In Batson et al.'s (1995) second study, introductory psychology students ($N = 60$) listened to an audio recordings of a terminally ill child and were asked take either a low-empathy or high-empathy perspective in their decision to move the child onto a charity's help list or wait list. The results showed that participants in the high-empathy condition, compared to the low-empathy condition, were more likely to place the child on the charity's help list ahead of other children who had greater need, had been waiting longer, and had less time to live.

Batson et al. (1995) concluded that empathy-induced altruism and justice are independent prosocial motivations, and that when a person feels empathy for an individual in need, he or she may forsake justice in order to benefit the person for whom they felt empathy.

In a laboratory study, Johnson et al. (2002) assessed the impact of empathy towards a criminal defendant on punishment assignment. The researchers found that participants who were induced to feel high empathy towards the defendant, as compared to no- or low-empathy, assigned more lenient punishments for the defendant. These findings lend further support that

those individuals who feel more empathy for an offender may forsake the justice motive to punish the offender in order to show mercy.

Is There a Direct Link between Emotion and Behavior?

While the direct causal link between emotion and behavior is often cited both in psychological literature (e.g., Loewenstein, Weber, Hsee, & Welch, 2001) as well as our lay concepts of explaining why we do what we do (e.g., “I was angry so I hit him”), the evidence support this direct link is less than conclusive. (Note that cognitive theories of psychotherapy have argued this point for years [e.g., Beck, Rush, Shaw, & Emery, 1979]. However, their demonstrations of cognitive therapy do not bear directly on how people normally act, but instead rely on therapeutic intervention to persuade clients of the usefulness of modifying cognition to change both behavior and emotion.) Baumeister, Vohs, DeWall, and Zhang (2007), writing toward a theory of normal (i.e., non-therapeutic) behavior and emotion, suggest that, rather than a simple direct causal link, emotion affects behavior through a feedback system. Specifically, Baumeister et al. describe the role of emotion as influencing cognitive processes, which in turn affect our decision and behavior regulation processes. In the model (see Figure 1), emotion is defined as “a state of conscious feeling, typically characterized by physiological changes such as arousal” (p. 168). Affect, on the other hand, is described as conscious or unconscious automatic processes that are quick feelings of dislike or like for something. Furthermore, emotion is considered to arise and dissipate slowly, whereas affect occurs much more quickly.

In sum, Baumeister and colleagues describe their model of how emotions shape behavior:

Conscious emotions provide feedback about behaviors, stimulate cognitive analysis, and promote revisions of the programming on which people react to events [see Figures 1 and 2]. Conscious emotions can also be anticipated and so

people behave in ways that will pursue desired emotional outcomes automatic affective responses preserve these lessons, facilitate acting on the basis of revised if-then rules, and serve as signals of warning or promise about impending emotional outcomes [see Figure 3] (p. 175).

Application of Baumeister, Vos, DeWall, and Zhang (2007) to Mercy

To consider how empathy shapes merciful behavior, it may be that Time 1 behaviors [Figure 1] are offenses that the person granting mercy has committed at some time. The person granting mercy thus offends a person (i.e., lies to partner), which leads to a negative outcome (i.e., damaged or broken relationship). This outcome causes an emotional arousal (i.e., guilt, remorse, sadness), which leads to both cognitive analyses (i.e., “if I didn’t lie to my partner, he would not have broken up with me,” or “the circumstances made me lie to him”) and a subsequent lesson (i.e., “I will not lie to my partner”) and a new or modified if-then rule for future behavior (i.e., “if I lie to a partner, I will get dumped”). The emotional arousal, cognitive analyses, and new or modified if-then rules all contribute to the person’s affective residue (disliking or liking of the behavior). In our example, we might suspect that the person learns to dislike lying to her partner.

Figure 2 then demonstrates how past emotions influence subsequent behavior. Some time after the Time 1 behavior and subsequent emotion created a new rule for future behavior, a person may be in a situation to perform the Time 1 behavior again. In a straightforward example, at Time 2 a person is positioned with the opportunity to perform the Time 1 behavior again (i.e., lie to partner again). This will elicit the memory of the Time 1 behavior and outcome (i.e., “I lied before and got dumped” which will lead to affective residue (disliking or liking the behavior)

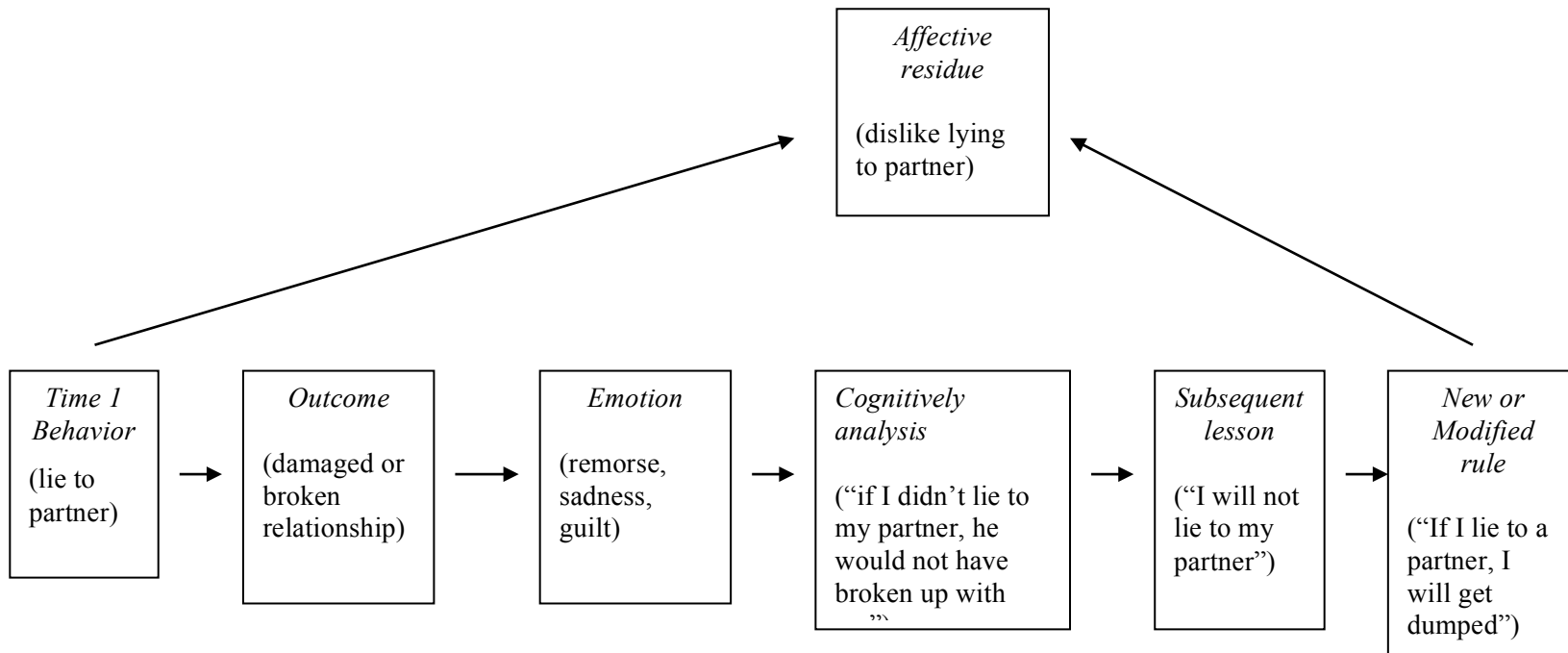


Figure 1. How emotion shapes future behavior. Italics represent theory as presented by Baumeister et al. (2007). Parentheses demonstrate how Baumeister et al.'s theory can be applied to the relationship between empathy and merciful behavior.

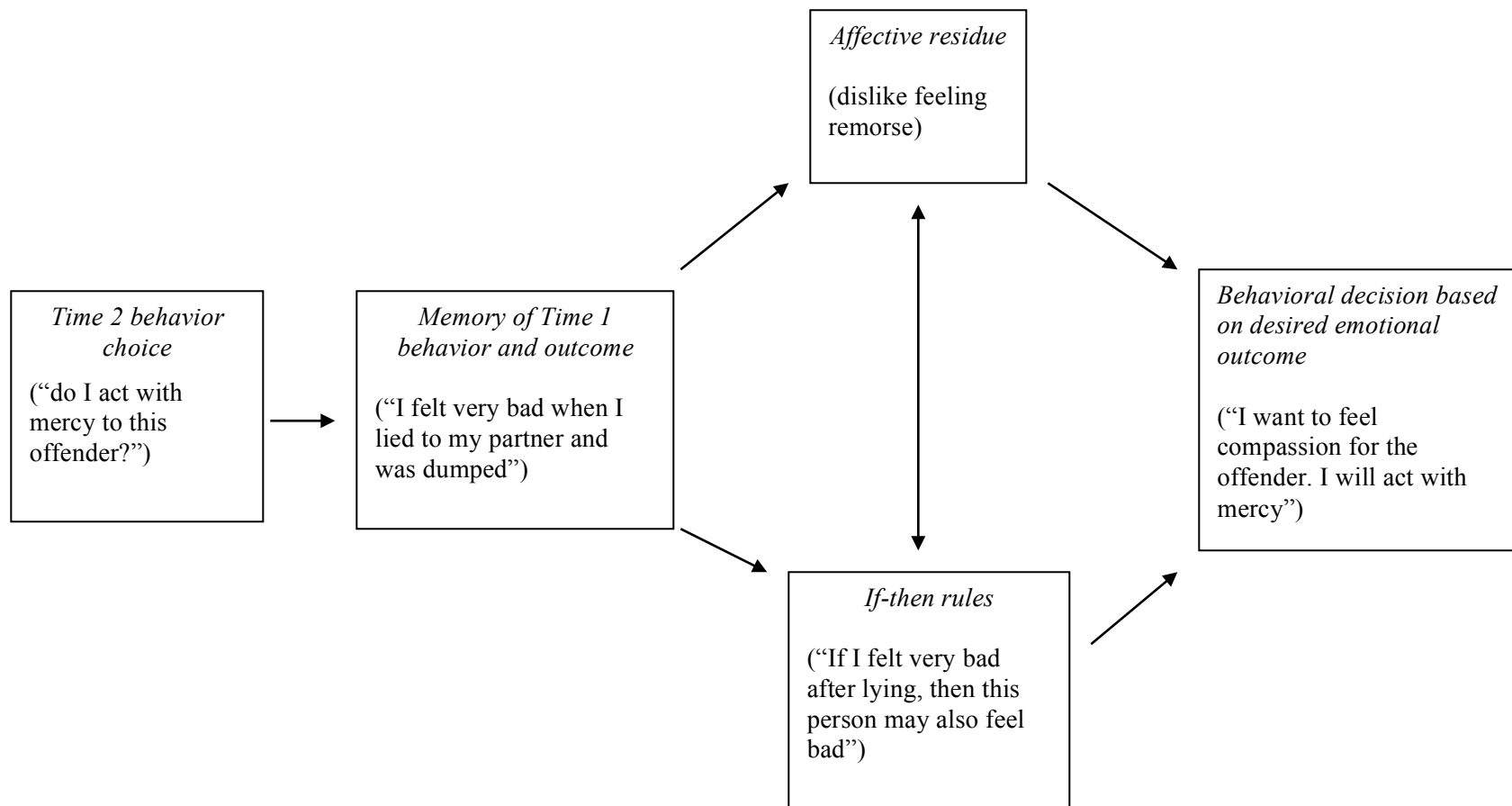


Figure 2. How past emotion shapes subsequent behavior. Italics represent theory as presented by Baumeister et al. (2007). Parentheses demonstrate how Baumeister et al.’s theory can be applied to the relationship between empathy for the offender and merciful behavior.

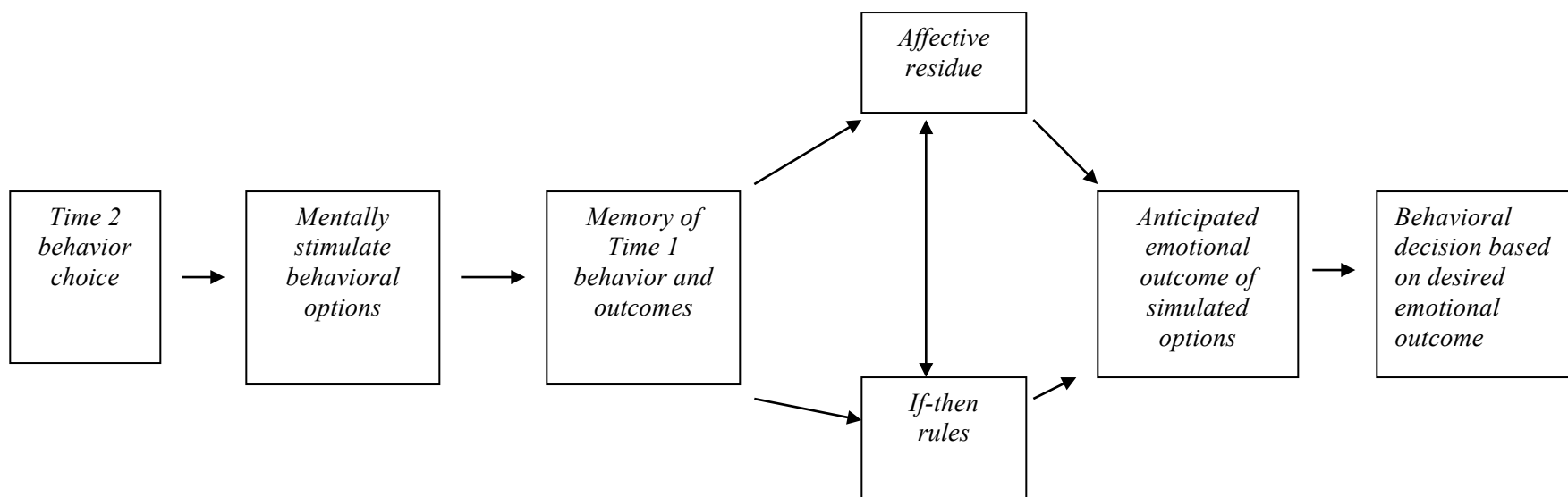


Figure 3. How anticipated emotional outcome shapes subsequent behavior. Taken from Baumeister et al. (2007).

and If-then rules (i.e., “if I lie, I will get dumped). The person then decides how to behave based on his or her desired emotional outcome (i.e., “I don’t want to feel guilty, so I will not lie”).

While the above example demonstrates how we might consider people learning from their past emotions to shape their current behavior, the model may also be applied to understand how a person might use empathy to behave mercifully.

Take again the example about lying to one’s partner at Time 1. Time 2 rolls around, only this time the choice point is not “do I lie again or not?” but rather, “do I act with mercy to this offender?” A memory of one’s own behavior as an offender at Time 1, along with the negative consequences, may elicit an If-then rule such as, “If I felt very bad after lying, then this person may also feel bad,” or, “If extenuating circumstances impacted by decision to lie, then extenuating circumstances may have also affected the offender.” This might be associated with affective residue including experiencing the offender’s remorse. The person then may decide how to act based on his or her desired emotional outcome. Perhaps the desired emotional outcome is to feel love or compassion for the offender. Thus, the person may decide to behave mercifully to achieve this emotional outcome.

In contrast, if at the Time 2 choice point of deciding whether or not to act mercifully, a person recalls a memory of the consequences for the victim being offended (either by the person as the offender or the person recalling a time that they were offended by another person) different affective residues and if-then rules may be elicited. For example, a person recalling a time that he hurt his spouse, and how much pain he caused his spouse; he may have a negative affective residue and if-then rules that include justice and revenge motivations (i.e., “if his victim hurts, then he should also hurt” or “if he committed the offense, then he should pay the price”).

This may lead to less merciful behaviors when empathy directed towards the victim is recalled and elicited.

In sum, a person acts mercifully when he or she recalls a time that he or she was the offender, which conjures empathy for the current offender, cognitively in the if-then rules component, and affectively in the affective residues. These processes in turn influence the person's decision to act mercifully.

Group Status for Person Granting and Receiving Mercy

Another process that might influence how a person experiences empathy for an offender and responds with an act of mercy is the relative group status of the offender and the person granting mercy. As stated above, there is an evolutionary component towards prosocial behavior. Tajfel and Turner's (1979) social identity theory suggests that people are willing to benefit fellow in-group members with valuable resources at the expense of out-group members. This relationship also applies to punishment situations. For example, in a study that manipulated the social categories of the victim and the offender, Lieberman (2007) found that participants gave lighter penalties to in-group offenders compared to out-group offenders, even though their ratings of the moral wrongness of the offense did not differ.

Offering a slightly different perspective, in a laboratory experiment, O'Gorman and colleagues (2005) found that participants are more likely to pay money to help another person if that person is related compared to a stranger. However, participants were equally angry and desiring to punish a relative as compared to stranger. This finding suggests that while people are more willing to help a relative compared to a stranger, relative group status did not affect a person's anger or desire to punish. Thus while there is much research to suggest that a

person would be more merciful towards an ingroup member than an outgroup member, research is needed to provide evidence for this relationship.

In this present dissertation proposal, I intend to present a theory-based study of mercy. In Chapter 2, I offer a general statement of the problem surrounding the scientific study of mercy, and I propose both a correlational design and an experimental design to study the factors that influence a person's merciful behavior. Specifically, in Study 1 I will develop a self-report measure of merciful behavior and assess the construct validity of the measure. In study 2 I will experimentally manipulate the degree of empathy and the relative group status of the participant and the offender, and assess the amount of mercy granted towards the offender.

GENERAL STATEMENT OF THE PROBLEM

The concept of mercy has rich and deep roots in many of the world's major religions. However, the concept of mercy has yet to be scientifically explored. For example, a PsycINFO search with "mercy" in the title of peer reviewed and English publications produces 23 results. Of those 23 results, 11 articles do not include mercy as a focus of the article, 11 articles refer to "mercy killing", and 1 article discusses mercy in the context of divine mercy. However, no peer reviewed publications that focus on the scientific study of mercy exist. Furthermore, no scientific definitions of mercy, as a virtue, exist. The present research proposal seeks to offer a scientific definition of mercy and apply psychological theory to understand how mercy is facilitated.

I define *mercy* as an act by a person who has the authority to do so that administers or recommends less negative consequence or punishment than is deserved by someone justly deserved. A merciful act may be doing something active or not administering (or recommending) expected and deserved consequences. Authority is based on a person's position (i.e., judge, jury member, parent) or is acquired by virtue of having been offended or hurt.

Mercy might best be understood as a prosocial behavior that is an alternative response to justice in injustice situations. Therefore one way to understand how a person might respond to an injustice situation with mercy, as opposed to justice, is to examine the motivations that a person has for prosocial behavior. One of the most well established psychological theories explaining

prosocial behavior is Batson's Empathy Altruism Hypothesis (Batson, 1991). Simply put, empathic emotion for another person promotes altruistic motivation to benefit the other person. Another well-established theory of why people help others is based on their relative group status. People are more willing to help in-group members than out-group members (for review, see Saucier, McManus, & Smith, 2010).

The purpose of the following studies is to understand the factors that are related to and influence a person's merciful behavior toward an offender. In Study 1, I will report the creation of the Mercy Meter (MM) and assess its psychometric properties using Item Response Theory and correlational analyses. In Study 2, I will use the theories of prosocial behavior described above to examine the factors that promote merciful behavior towards an offender who is being punished. I hypothesize that participants will be most merciful towards offenders whom they empathize with, and with offenders identified as in-group members. I also predict participants will be least merciful towards offenders when they empathize with the offender's victim, and the offenders identified as out-group members.

STUDY 1: PSYCHOMETRIC RESEARCH ON THE MERCY METER

I report a study that develops a self-report scale that measures a person's merciful behavior towards an offender for a specific incident using item response theory. Furthermore, this study explores the relationships among mercy and other measures of virtues and prosocial variables.

Method

Participants

Undergraduate students ($N = 400$) from a large Mid-Atlantic urban university were recruited from undergraduate psychology classes and participated as part of a course requirement or in exchange for a small amount of class credit (i.e., less than 0.2% of the class grade). However, initial review of the completed surveys revealed that two participants appeared to respond in a biased way. Therefore those cases were eliminated from the analyses, which resulted in a sample of $N = 398$. Demographic data for the participating sample ($N = 398$) are summarized in Table 1.

Design

This study used a cross-sectional, correlational design.

Table 1 *Descriptive Data for Demographics of Participants in Each Study*

Demographic	Study 1	Study 2
N	398	71
Age (years)		
M	19.51	19.25
Range	17-40	18-37
Ethnicity		
Asian/Pacific Islander	16.1	8.5
Black/African-American	19.1	33.8
Latino/Hispanic	5.4	8.5
Middle Eastern	0.7	4.2
White/Caucasian	49.7	39.4
Other (or did not report)	4.0	5.6
Gender		
Male	29.2	0.0
Female	70.1	100.0
Religious Orientation		
Christian	63.7	62.0
Muslim	2.7	4.2
Buddhist	3.4	8.5
Hindu	3.1	2.8
Jewish	0.8	1.4
Agnostic	5.3	1.4
None or Other	21.0	19.7

Note. Ethnicity, gender, and religious orientation are reported as a percentage of the total sample size for that study.

Statistical Design

The Mercy Meter's scale construction and psychometric properties will be assessed using item response theory's Rasch analyses. The construct validity analyses will be analyzed using Pearson-*r* bivariate correlations.

Measures

Demographic Data Sheet. Demographic information, including gender, ethnicity, and religious affiliation, was collected from each participant (see Appendix A for all measures).

Mercy Meter (MM). Items ($N = 43$; MM-43) to measure one's merciful behavior were created for the present study. The items (on a rating scale from 1 = *Not at all* to 5 = *Completely*) measure the degree that one responded to a specific offense with mercy (see Appendix A for the initial list of items in the MM-43). Higher scores indicate higher mercy. The results report subsequent development and psychometric properties of the MM-43.

Measures to Provide Construct Validity

Forgiveness Measures

Emotional Forgiveness Scale (EFS; Worthington, Hook, Utsey, Williams, & Neil, 2007). The EFS consists of eight items that measure the degree to which one has experienced emotional forgiveness and peace for a specific offense. Participants indicate their agreement with each item on a 5-point rating scale from 1 = *strongly disagree* to 5 = *strongly agree*. Scores on the EFS in multiple samples of college students have shown evidence of internal consistency, with Cronbach's alpha coefficients ranging from .69 to .83 (Worthington, Hook et al., 2007). The 3-week temporal stability coefficient was .73 (Worthington, Hook et al., 2007). Scores on the EFS have also shown evidence of construct validity and were correlated with other measures of state forgiveness, trait forgivingness, forgiveness-related constructs such as empathy,

rumination, anger, and a behavioral measure of forgiveness (Worthington, Hook et al., 2007). For the current sample, the Cronbach's alpha was .95 (95% CI = .94 to .96).

Decisional Forgiveness Scale (DFS; Worthington et al., 2007). The DFS consists of four items that measure the degree to which one has made a decision to forgive someone of a specific offense. Participants indicate their agreement with each item on a 5-point rating scale from 1 = *strongly disagree* to 5 = *strongly agree*. Scores on the DFS and subscales in multiple samples of college students have shown evidence of internal consistency, with Cronbach's alpha coefficients ranging from .78 to .83 (Worthington, Hook et al., 2007). The 3-week temporal stability coefficient was .72 for the Prosocial Intentions subscale (Worthington, Hook et al., 2007). Scores on the DFS have also shown evidence of construct validity and were correlated with other measures of state forgiveness, trait forgivingness, forgiveness-related constructs such as empathy and anger, and a behavioral measure of forgiveness (Worthington, Hook et al., 2007). For the current sample, the Cronbach's alpha was .81 (95% CI = .78 to .84).

Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough et al., 1998; McCullough & Hoyt, 2002). The TRIM consists of 19 items that measure motivations toward a particular offender. Participants reported their motivations toward the person who wounded them by indicating their agreement with each item on a 5-point rating scale from 1 = *Strongly disagree* to 5 = *Strongly agree*. Higher scores indicated higher motivations. The TRIM consists of three subscales; one measures avoidance motivations (seven items; i.e., "I keep as much distance between us as possible"), one measures revenge motivations (five items; i.e., "I'll make him/her pay"), and one measures benevolence motivations (seven items; i.e., "I have released my anger so I could work on restoring our relationship to health"). The TRIM has Cronbach's alphas ranging from .84 to .93 for the avoidance and revenge subscales (McCullough

et al., 1998) and .86 to .96 for the benevolence subscale (McCullough & Hoyt, 2002). Estimated eight-week temporal stability was between .44 and .86 for the avoidance and revenge subscales (McCullough et al., 1998). The scale shows evidence supporting construct validity; it was found to be positively correlated with other measures of forgiveness, relationship satisfaction, and commitment (McCullough et al., 1998). For the current sample, the avoidance subscale had a Cronbach's alpha of .95 (95% CI = .94 to .96); the revenge subscale had a Cronbach's alpha of .89 (95% CI = .86 to .90); and the benevolence subscale had a Cronbach's alpha of .92 (95% CI = .91 to .94). The total scale had a Cronbach's alpha of .93 (95% CI = .92 to .94).

Anger and Aggression

State Anger Scale (SAS; Spielberger, Jacobs, Russell, & Crane, 1983). The SAS consists of 10 items that measure the current level of anger a participant is experiencing (e.g. "I feel angry" or "I feel like swearing"). Participants indicate their current feelings toward the offender on a 4-point rating scale from 1 = *not at all* to 4 = *very much so*. Higher scores indicate higher levels of anger. The scale shows evidence supporting its construct validity, and has positive correlations with state anxiety, hostility, and neuroticism (Spielberger et al., 1983). In the present study, the Cronbach's alpha was .93 (95% CI = .92 to .95).

Trait Anger Scale (TAS; Spielberger, Jacobs, Russell, & Crane, 1983). The TAS consists of 10 items that measure participants' general tendency to be angry. Participants indicate their agreement with each dispositional anger statement (i.e., "I am a hotheaded person") on a 4-point rating scale from 1 = *not at all* to 4 = *very much so*. Higher scores indicate higher levels of anger. The scale shows evidence supporting its construct validity, and has positive correlations with trait anxiety, neuroticism, and psychoticism (Spielberger et al., 1983). In the present study, the Cronbach's alpha was .88 (95% CI = .85 to .90).

Aggression Questionnaire (AQ; Buss & Perry, 1992). The AQ consists of 29 items that measure participants' general tendency towards aggression. Participants indicate their agreement with each dispositional aggression statement (i.e., "Sometimes I fly off the handle for no good reason") on a 5-point rating scale from 1 = *Extremely uncharacteristic of me* to 5 = *Extremely characteristic of me*. Higher scores indicate higher levels of aggression. The scale shows evidence supporting its construct validity, and has positive correlations with emotionality, impulsiveness, assertiveness, and competitiveness (Buss & Perry, 1992). In the present study, the Cronbach's alpha was .91 (95% CI = .89 to .92).

Self-reported Altruistic Behavior

Self-Report Altruism Scale (SRA scale; Rushton, Chrisjohn, & Fekken, 1981). The self-report measure of altruism consists of 20 items that measure the frequency with which the participant has engaged in altruistic acts. Items are rated on a 5-point rating scale from 1 = *never* to 5 = *very often*. Example items include "I have given directions to a stranger" and "I have delayed an elevator and held the door open for a stranger." Rushton et al. found evidence of strong estimated internal consistency, with alphas ranging from .78 to .86. The authors also found that the SRA scale correlated positive with measures of social responsibility, empathy, and nurturance, a person's values of equality and helpfulness, and higher levels of moral reasoning. In the present study, the Cronbach's alpha was .84 (95% CI = .82 to .87).

Empathy Measures

Affective empathy (Batson Affective Empathy, BEA; Coke, Batson, & McDavis, 1978; Toi & Batson, 1982). The affective empathy measure used by Batson and colleagues consists of eight affect adjectives (sympathetic, empathic, concerned, moved, compassionate, softhearted, warm, and tender). Participants reported the degree to which they felt each affect toward their

offender on a 6-point rating scale from 0 = *Not at all* to 5 = *Often*. The BEA has strong estimated internal consistency, with Cronbach's alphas ranging from .79 to .95 (Batson et al., 1983; Coke et al., 1978; Toi & Batson, 1982). The BEA shows evidence of construct validity; it was found to be positively correlated with measures of dispositional empathy, perspective taking, and helping behavior (Batson et al., 1986). In the present study, the Cronbach's alpha was .94 (95% CI = .93 to .95).

Interpersonal Reactivity Inventory – Brief (IRI; Davis, 1983). The IRI is a self-report instrument measuring cognitive and emotional aspects of trait empathy. The current study will use 14 items from the 28 items of the original scale to measure the two subscales of assessing perspective-taking (ability to adopt the perspectives of other people) and empathic concern (feelings of warmth and compassion for others). An example item from the perspective-taking subscale is, "I try to look at everybody's sides of a disagreement before I make a decision." An example item from the empathic concern subscale is, "I often have tender, concerned feelings for people less fortunate than me." Items are rated on a 5-point scale from 1 = *Not at all characteristic of me* to 5 = *Extremely characteristic of me*. The perspective-taking subscale was found to be positively correlated with self-esteem, and sensitivity to other's feelings, and negatively correlated with measures of shyness, loneliness, anxiety, and insecurity, The empathic concern subscale was positively correlated with shyness, anxiety, self-esteem, insecurity, and sensitivity to others, and negatively correlated with loneliness. Estimated internal consistencies of the IRI subscales ranged from alpha = .71 to .77. In the present study, the empathic concern subscale had a Cronbach's alpha of .76 (95% CI = .72 to .80); the perspective-taking subscale had a Cronbach's alpha of .76 (95% CI = .72 to .80); and the total scale had a Cronbach's alpha of .81 (95% CI = .77 to .84).

Interpersonal Judgments

Interpersonal Judgments Scale (IJS; Byrne & Nelson, 1965). The IJS is a 4-item scale that measures the participant's evaluations of the offender in terms of intelligence, morality, liking, and desirability as a work partner (i.e., I believe that I would like this person). Participants rated their judgments about the offender on a 7-point scale from 1 = *Strongly disagree* to 7 = *Strongly agree*. Higher scores indicate a participants' hold a more positive judgment of the offender. In the present study, the IJS had a Cronbach's alpha of .85 (95% CI = .82 to .88).

Attribution of Blame

Attribution of Blame Scale (ABS; Loza & Clements, 1991). Participants' tendency to blame the victim or blame the offender for an offense was measured using two subscales (Victim Blame and Offender Blame) of the ABS. The Victim Blame subscale (ABS-V) consists of seven items (e.g., "Victims of crime nearly always deserve what they get"). The Offender Blame subscale (ABS-O) consists of seven items (e.g., "when a crime occurs, it is the offender's fault"). Participants rated the degree to which they agreed with each item using a 6-point rating scale from 1 = *strongly disagree* to 6 = *strongly agree*. Higher scores on the ABS-V indicate a greater tendency to blame victims of crimes; higher scores on the ABS-O indicate a greater tendency to blame offenders of crimes. The ABS has strong estimated internal consistency, with Cronbach's alphas of .78 for the ABS-V and .74 for the ABS-O. In the present study, the ABS-V and ABS-O had Cronbach's alphas of .79 (95% CI = .75 to .83) and .71 (95% CI = .66 to .76), respectively.

Social-Desirability

Marlowe-Crowne – Short Form (MC-13; Reynolds, 1982). This shortened version of the Marlowe-Crowne Social Desirability Scale (M-C SDS) consists of 13 items that measure the desire of individuals to present themselves in a favorable manner. The MC-13 was used in the

present study to assess whether there may be any reporting bias by participants. Participants read statements concerning personal attributes and traits, and indicate whether each statement is true or false for them personally. Responses are given a score of either 0 = *Socially desirable* or 1 = *Not socially desirable*, and then summed to result in a total score that ranges from 0 (all socially desirable responses) to 13 (no socially desirable responses). Higher scores indicate lower levels of social desirability. The estimated internal consistency coefficient of the MC-13 using the Kuder–Richardson formula 20 is 0.76 (Reynolds, 1982). Alphas for the scale range from .62 to .89 (Aosved, & Long, 2006; Barger, 2002). The MC-13 is highly correlated ($r = .93$) with the standard form of the M-C SDS (Reynolds, 1982). Silverstein (1983) found that the MC-13 is an adequate substitute to the original test, with a high-corrected validity ($r = .80$). The MC-13 had a Cronbach's alpha of .67 (95% CI = .61 to .72) for the present study.

Procedure

Participants were recruited from undergraduate psychology classes with their participation counting towards a course requirement or in exchange for a small amount of class credit. Participants completed the study online through the SONA system. Participants first read a page explaining the study's procedures. Participants were then shown a page of consent asking for their agreement to participate in the study before proceeding. After completing a short demographics survey, participants wrote in a few sentences about a time where they had the opportunity to punish someone who had harmed another person. They rated the transgression's hurtfulness and estimated the time since its occurrence. After thinking about and writing about the particular offense, participants then completed a series of questionnaires, including the Mercy Meter and a series of other scales to test evidence for the validity of the Mercy Meter. After

completing the questionnaires, participants were debriefed and received course credit for their participation.

Hypotheses and Analyses

Hypothesis #1.

Statement. The Mercy Meter will consist of two moderately correlated subscales that demonstrate good psychometric properties.

Justification. The Mercy Meter is a self-report measure of merciful behavior. I define *mercy* as an act by a person who has the authority to do so that administers or recommends less negative consequence or punishment than is deserved by someone justly deserved. A merciful act may be doing something active or not administering (or recommending) expected and deserved consequences. Thus, I define mercy as either doing something prosocial, or restraining punishment. Therefore I predict that the Mercy Meter will have two facets – a warmth-based action facet, and a justice-restraint facet.

Analysis. A Rasch rating scale analysis was conducted on all initial items of the MM-43. I sought item infit statistics of 1.50 or less, person-separation reliabilities above .80, and item-separation reliabilities above .90. Any items that did not meet fit criteria initially were included in a second analysis to determine the presence of additional subscales.

Hypothesis #2.

Statement. The Mercy Meter will correlate positively with state measures of forgiveness and benevolence motivations.

Justification. The Mercy Meter is a self-report measure of merciful behavior in response to an offense or injustice. Theoretically, mercy can be considered a warmth-based virtue, like

forgiveness (Worthington, 2006), and therefore should be related to other positive responses towards a person surrounding a transgression.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and other measures of state forgiveness and benevolence motivations, including the EFS, DFS, and TRIM-B.

Hypothesis #3.

Statement. The Mercy Meter will correlate negatively with state unforgiveness motivations.

Justification. The Mercy Meter is a self-report measure of merciful behavior in response to an offense or injustice. Theoretically, mercy can be considered a warmth-based virtue, like forgiveness (Worthington, 2006), and therefore should be related to other positive responses towards a person surrounding a transgression. Likewise, mercy should be negatively related to negative responses towards a person after a transgression.

Furthermore, mercy is theoretically conflicted with justice motivations. Revenge is one method of achieving justice. Thus, we would expect that mercy would be negatively related to revenge motivations.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the avoidance and revenge subscales of the TRIM.

Hypothesis #4.

Statement. The Mercy Meter will correlate negatively with state and trait measures of anger and aggression.

Justification. There is a robust negative relationship between both state and forgiveness of a specific event (Fehr, Gelfand, & Nag, 2010). Furthermore, anger has also been shown to

increase levels of punishment of a third party (Nelissen & Zeelenberg, 2009). Trait anger has also been negatively associated with trait forgivingness (e.g., Berry et al., 2005). Thus we would assume that both trait and state anger might also be negatively related to mercy. Furthermore, in a laboratory experiment, a participant's trait aggressiveness has been shown to be positively related to increased punishments towards another participant (Anderson, Buckley, & Carnagey, 2008). Thus we would expect that trait aggression would be inversely related to merciful behavior.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the SAS, TAS, and AQ.

Hypothesis #5.

Statement. The Mercy Meter will correlate positively with self-reported altruistic behavior.

Justification. Theoretically, we are defining mercy as a type of altruistic behavior. To the extent that our theorizing is correct, we expect a positive relationship between self-reported mercy and self-reported altruism.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the SRA.

Hypothesis #6.

Statement. The Mercy Meter will correlate positively with state empathy.

Justification. There is a robust relationship between empathy and altruism (Batson et al., 1995). I expect this relationship to transfer to merciful behavior. For example, in a laboratory study participants in a high-empathy condition assigned more lenient punishments to offender

than in no- and low-empathy conditions (Johnson et al., 2002). Therefore, I predict that participants who endorse higher levels of empathy will also endorse higher levels of mercy.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the BEA.

Hypothesis #7.

Statement. The Mercy Meter will correlate positively with trait empathy.

Justification. The relationship between empathy and altruism is well-established (Batson et al., 1995). Thus, I predict a person who has a greater tendency to experience empathy – as empathic concern of others and taking other people’s perspectives – would be more likely to act with mercy than a person who is less likely to experience empathy.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the subscales of the IRI.

Hypothesis #8.

Statement. The Mercy Meter will be negatively correlated with one’s tendency to blame the offender, and positively correlated with one’s tendency to blame the victim.

Justification. Following interpersonal offense, blaming the offender is related to increased retaliation (Zechmeister, Garcia, Romero, & Vas, 2004). Thus I predict that a tendency to blame the offender would be negatively related to acting mercifully towards the offender.

Research has shown that a person’s appraisal of how much punishment an offender deserves depends on how much blame is allotted to the victim of the crime. Specifically, perceiving the more culpable the victim is related to assigning less punishment to the offender

(e.g., Idisis, Ben-David, & Ben-Nachum, 2007). Therefore I expect that a person's tendency to blame the victim is positively related to mercy towards the offender.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the Victim-blame and Offender-blame subscales of the ABS.

Hypothesis #9.

Statement. The Mercy Meter will correlate positively with positive general interpersonal judgments of the offender.

Justification. Past research has shown that individuals who are liked receive less negative evaluations and less severe disciplinary actions (e.g., Dobbins & Russel, 1986; Fandt, Labig, & Urich, 1990). Furthermore, in court settings defendant likability was associated with more lenient punishments (Michelini & Snodgrass, 1980). Therefore I predict that more positive interpersonal judgments of the offender will be associated with higher levels of mercy.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the IJS.

Hypothesis #10.

Statement. The AFS will be uncorrelated with the short form of the Marlowe-Crowne Social Desirability Scale (i.e., MC-13).

Justification. Participants may report that act mercifully because the idea of mercy is a socially desirable behavior. To the extent that the Mercy Meter measures actual merciful behavior and not simply the tendency to self-report socially desirable behavior, the Mercy Meter and its subscales should be uncorrelated with the MC-13.

Analysis. The Pearson product moment correlation will be computed between the Mercy Meter and the MC-13.

Results

In the results, I report the development of the Mercy Meter (MM) scale using item response theory (Rasch analysis). The MM was ultimately composed of two 7-item subscales that were moderately correlated—the MM-Warmth and MM-Restraint subscales. I then report data bearing on the construct validity of the MM scale and its two subscales.

Rasch Analyses to Develop the Mercy Meter Scale

Scores on all 43 initial items of the Mercy Meter-43 were assessed for missing data, normality, and the presence of outliers. No cases were removed for missing data. Of the 43 items, responses to 41 items were normally distributed. Two items more severely violated the assumption of normality, with skewness or kurtosis values greater than 1.5. However, Rasch rating scale analysis is not affected by non-normality, and therefore all items were included in the present analyses. There were no outliers.

The Mercy Meter was analyzed using Rasch rating scale analysis (Andrich, 1978). Rasch scaling uses both (a) the degree to which the person possesses the trait being measured (person measures) and (b) the difficulty of endorsing the item to estimate a person's probable response to a test item (item difficulties). Thus, Rasch scaling places each test item on a standard linear yardstick that measures a person's response on a variable of interest. Items were first assessed using weighted mean-square fit indices (infit). The mean-square fit statistic estimates the degree to which each item contributes to the overall scale.

All 43 items were included in the initial analysis, and each item's infit statistics were assessed. Items were kept in the scale if their mean-square fit statistic was less than 1.50, which is a criterion recommended by Linacre (2003). Although the initial reliabilities for the full 43-item scale were adequate, there were many misfitting items. I conducted a principal components

analysis of the residuals from the Rasch model, and the results suggested that the 43 items might contain more than one dimension. The Rasch model accounted for only 35% of the data, which is lower than the 60% recommended by Linacre (2003) as indicating a good fit. The residuals formed two contrasts: one based on 22 items, the other based on 21 items.

I next conducted the Rasch analysis on these two groups of items separately. First I examined the 22-item set for mean-square fit statistics; only one item had an infit greater than 1.50 and was removed, leaving 21 items with fit statistics below 1.50. I will call this the MM-21.

The MM-21 scale was then assessed for person separation reliability and item separation reliability. The Rasch person separation reliability describes the ceiling for the proportion of person variance (of the test variable that is being measured) that is not attributed to measurement error (Berry et al., 2001). The person separation reliability can be interpreted similarly to Cronbach's alpha coefficient. For the MM-21, the Rasch person separation reliability was .94.

The MM-21 was then assessed for item separation reliability, which estimates the proportion of true item variance within the scale. Item separation reliabilities larger than .90 suggest that items are sufficiently separated in terms of difficulties and have acceptably small standard errors (Berry et al, 2001). The item separation reliability for the MM-21 was .97. Together, the 21-item scale seemed to account for positive, other-oriented merciful responses towards an offender. These were considered to be "warmth-oriented" merciful responses. Ultimately, a seven-item version was called the Mercy Meter-Warmth (MM-W) subscale.

The remaining set of 21 items that formed the second contrast in the residual analysis was included in another Rasch analysis to assess whether they could explain a second dimension of Mercy. Ten of those items had adequate infit indices below 1.50, and together the 10-item scale had adequate person separation reliability (.82) and item separation reliability (.95). Together,

the 10-item scale seemed to account for inhibiting negative justice responses towards an offender. Ultimately, a seven-item version was called the Mercy Meter Restraint (MM-Restraint) subscale. At this point, it appeared that I had two subscales of the Mercy Meter, each of which had adequate psychometric properties. However, additional examination of the MM-21 warmth items and 10-item restraint items was warranted.

Upon examining the items included in each subscale, there was substantial redundancy in the items. For example, on the MM-21 warmth subscale, one item stated, “I showed forgiveness to him/her” and another item stated, “I acted with forgiveness to him/her.” Thus, I ran a Rasch analysis again using the MM-21 warmth subscale in an attempt to maintain the best-fitting items in the scale yet winnow the redundant items. Items with the smallest infit statistics (e.g., the strongest items) that were not content-redundant were maintained. Seven non-redundant items with infit statistics that ranged from .83 to 1.27 were selected for the final subscale (see Appendix B for the items in the final version of the scale). The 7-item subscale was named the Mercy Meter-Warmth subscale. It was then assessed for person separation reliability (.84) and item separation reliability (.97). The MM-Warmth subscale was considered to have acceptable characteristics according to item-response theory Rasch analysis.

A Rasch analysis was also rerun on the 10-item restraint subscale to determine the best-fitting items in the scale yet winnow redundant items (e.g., “I punished the person” and “I punished him/her.” Seven non-redundant items with infit statistics that ranged from .85 to 1.22 were selected for the final scale. The 7-item subscale was named the Mercy Meter-Restraint subscale. The MM-Restraint subscale also had adequate person separation reliability (.78) and item separation reliability (.95). The MM-Restraint subscale was deemed to have acceptable characteristics according to item-response theory Rasch analysis.

The MM-Warmth and MM-Restraint subscales were likely two subscales of a single scale. The full 14 items were combined in a single Rasch analysis to determine whether the items could be used to form a single dimension (albeit with the potential for subscale analysis). For the full 14-item Mercy Meter, item fit statistics ranged from .77 to 1.41. Person separation reliability was .86, and item separation reliability was .99. A principal components analysis of residuals indicated that the Rasch model accounted for 59.5% of the variance in responses, indicating that the full 14-item scale was usefully unidimensional. I also conducted assessments of differential item functioning (DIF) by gender and ethnicity to determine whether any items were potentially biased by group membership. Differences in item difficulties between groups (males versus females, or between ethnic groups) greater than .50 logits are taken as evidence for possible item bias. There was no evidence of DIF by gender or ethnicity for the full 14-item Mercy Meter or for the separate subscales. My decision was to investigate the validity of the total scale and of each of the subscales to see whether the MM-Warmth and MM-Restraint subscales provided differential information from each other and from the full-scale score of the MM.

Construct Validity Analyses

Means, standard deviations, ranges, and alphas for all variables are reported in Table 2. The data are reported in groups of similar variables to aid in interpretation. The data were first checked for normality, missing data, and outliers. Two cases had significant missing data and were excluded from analyses. All scales were normally distributed. All outliers on the scales fell within the ranges of expected values, and thus are thought to represent true responses, and were retained in subsequent analyses.

Intercorrelations of all scales with the MM-Warmth and MM-Restraint subscales, and total score of the Mercy Meter are reported in Tables 3 through 8. A Bonferroni-corrected alpha of .0003 was accepted to control for experiment-wise error.

As predicted by Hypothesis 2, the MM-W was strongly positively correlated with state emotional and decisional forgiveness (r 's = .57 and .53, respectively) and benevolence motivations ($r = .53$). The MM-R was also moderately positively correlated with state emotional and decisional forgiveness (r 's = .28 and .24, respectively) and benevolence motivations ($r = .24$). Finally, the MM Total was also strongly positively correlated with state emotional and decisional forgiveness (r 's = .55 and .48, respectively) and benevolence motivations ($r = .50$). Thus Hypothesis 2 was supported.

In Hypothesis 3, I predicted that the Mercy Meter and its subscales would be negatively correlated with unforgiveness motivations. As predicted, the MM-W was negatively correlated with avoidance ($r = -.43$), revenge ($r = -.29$), and overall unforgiveness motivations ($r = -.43$). The MM-R was also negatively correlated with avoidance ($r = -.21$), revenge ($r = -.41$), and overall unforgiveness motivations ($r = -.32$). Finally, the MM total was also negatively correlated with avoidance ($r = -.41$), revenge ($r = -.45$) and overall unforgiveness motivations ($r = -.47$).

In Hypothesis 4, I predicted that the Mercy Meter and its subscales would be negatively correlated with measures of state and trait anger and trait aggression. Contrary to the hypothesis, the MM-W was unrelated to state anger ($r = -.20$), trait anger ($r = -.11$), and trait aggression ($r = -.11$). The MM-R, on the other hand, was negatively related to state anger ($r = -.24$), trait anger ($r = -.24$), but unrelated to trait aggression ($r = -.17$). Like the MM-R, the MM Total was also negatively related to state anger ($r = -.28$), trait anger ($r = -.24$), but again unrelated to trait aggression ($r = -.18$). Thus, Hypothesis 4 was partially supported.

Table 2 Means, Standard Deviations, and Alphas for All Measures in Study 1

Variable	Range	<i>M</i>	<i>SD</i>	<i>Alpha</i>	<i>95% CI</i>
Mercy Meter					
1. MM Warmth	7 to 35	18.75	6.32	.85	.82 to .88
2. MM Restraint	7 to 35	24.51	6.19	.81	.78 to .84
3. MM total	14 to 70	43.26	10.19	.84	.82 to .87
Forgiveness Variables					
4. EFS	8 to 40	23.05	6.95	.95	.94 to .96
5. DFS	4 to 20	13.20	4.95	.81	.78 to .84
6. TRIM-B	7 to 35	22.28	7.82	.92	.91 to .94
7. TRIM-A	7 to 35	21.23	9.27	.95	.94 to .96
8. TRIM-R	5 to 25	10.11	5.20	.89	.86 to .90
9. TRIM-Total	12 to 60	31.34	12.85	.93	.92 to .94
Anger and Aggression Variables					
10. SAS	10 to 40	14.51	6.46	.93	.92 to .95
11. TAS	10 to 40	19.74	5.94	.88	.85 to .90
12. AQ	29 to 145	73.80	18.45	.91	.89 to .92
Altruism Variables					
13. SRA	0 to 80	33.61	11.07	.84	.82 to .87
Empathy Variables					
14. BEA	8 to 48	26.70	10.92	.94	.93 to .95
15. IRI-EC	7 to 35	26.51	4.80	.76	.72 to .80
16. IRI-PT	7 to 35	24.14	4.83	.76	.72 to .80
17. IRI Total	14 to 70	50.64	7.99	.81	.77 to .84
Attribution of Blame Variables					
18. ABS-V	7 to 42	16.44	6.34	.79	.75 to .83
19. ABS-O	7 to 42	25.90	5.63	.71	.66 to .76
Interpersonal Judgment Variable					
20. IJS	4 to 28	16.70	5.65	.85	.82 to .88
Social Desirability					
21. MCSD	13 to 26	19.14	2.80	.67	.61 to .72

Note. (*N* = 398). MM-W = Mercy Meter Warmth subscale. MM-R = Mercy Meter Restraint subscale. MM Total = Mercy Meter total score. EFS = Emotional Forgiveness Scale. DFS = Decisional Forgiveness Scale. TRIM-B = Benevolence subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM-A = Avoidance subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM-R = Revenge subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM Total = Transgression-Related Interpersonal Motivations Inventory total score. SAS = State Anger Scale. TAS = Trait Anger Scale. AQ = Aggression Questionnaire. SRA = Self-Report Altruism Scale. BEA = Batson's Empathy Adjectives. IRI – EC = Trait Empathic Concern. IRI – PT = Trait Perspective Taking. IRI Total = Trait Empathy. IJS = Interpersonal Judgments Scale. ABS-V = Victim subscale of the Attribution of Blame Scale. ABS-O = Offender subscale of the Attribution of Blame Scale. RCI-10 = Religious Commitment Inventory. MCSD = Marlow-Crowne Social Desirability Scale.

Table 3 *Intercorrelations between Mercy Meter and Forgiveness Measures (Study 1)*

Variable	1	2	3	4	5	6	7	8
1. MM – W	1							
2. MM – R	.28*	1						
3. MM Total	.78*	.76*	1					
4. EFS	.57*	.28*	.55*	1				
5. DFS	.53*	.24*	.48*	.68*	1			
6. TRIM B	.53*	.24*	.50*	-.77*	-.64*	1		
7. TRIM A	-.43*	-.21*	-.41*	-.75*	-.56*	.94*	1	
8. TRIM R	-.29*	-.41*	-.45*	-.57*	-.58*	.80*	.54*	1
9. TRIM Total	-.43*	-.32*	-.47*	.59*	.56*	-.54*	-.47*	-.40*

Note. $df = 396$. * $p < .0003$. MM-W = Mercy Meter Warmth subscale. MM-R = Mercy Meter Restraint subscale. MM Total = Mercy Meter total score. EFS = Emotional Forgiveness Scale. DFS = Decisional Forgiveness Scale. TRIM-B = Benevolence subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM-A = Avoidance subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM-R = Revenge subscale of the Transgression-Related Interpersonal Motivations Inventory. TRIM Total = Transgression-Related Interpersonal Motivations Inventory total score.

Table 4 *Intercorrelations between Mercy Meter and Anger and Aggression Measures (Study 1)*

Variable	1	2	3	4	5
1. MM – W	1				
2. MM – R	.28*	1			
3. MM Total	.78*	.76*	1		
4. SAS	-.20 ^a	-.24*	-.28*	1	
5. TAS	-.11 ^b	-.24*	-.24*	.54*	1
6. AQ	-.11 ^c	-.17 ^d	.18 ^d	.37*	.69*

Note. $df = 396$. * $p < .0003$. ^a $p = .0006$, ^b $p = .056$, ^c $p = .069$, ^d $p = .003$
 SAS = State Anger Scale; TAS = Trait Anger Scale; AQ = Aggression Questionnaire

Table 5 *Intercorrelations between Mercy Meter and Altruism (Study 1)*

Variable	1	2	3
1. MM – W	1		
2. MM – R	.28*	1	
3. MM Total	.78*	.76*	1
4. SRA	.23*	.06 ^a	.20 ^b

Note. $df = 396$. * $p < .0003$. ^a $p = .325$, ^b $p = .0005$.
 SRA = Self Report Altruism Scale

Table 6 *Intercorrelations between Mercy Meter and Empathy Measures (Study 1)*

Variable	1	2	3	4	5	
1. MM – W	1					
2. MM – R	.28*	1				
3. MM Total	.78*	.76*	1			
4. BEA	.36*	.07 ^b	.25*	1		
5. IRI – EC	.13 ^a	.14 ^c	.18 ^f	.27*	1	
6. IRI – PT	.25*	.11 ^d	.23*	.20*	.38*	1
7. IRI Total	.23*	.15 ^e	.25*	.29*	.83*	.83*

Note. $df = 396$. * $p < .0003$. ^a $p = .021$, ^b $p = .241$, ^c $p = .019$, ^d $p = .068$, ^e $p = .012$, ^f $p = .002$. BEA = Batson's Empathy Adjectives; IRI – EC = Trait Empathic Concern; IRI – PT = Trait Perspective Taking; IRI Total = Trait Empathy.

Table 7 *Intercorrelations between Mercy Meter and Attribution of Blame Measures (Study 1)*

Variable	1	2	3	4
1. MM – W	1			
2. MM – R	.28*	1		
3. MM Total	.78*	.76*	1	
4. ABS-V	-.04 ^a	-.18 ^c	-.17 ^e	1
5. ABS-O	-.12 ^b	.02 ^d	-.03 ^f	.21*

Note. * $p < .0003$. ^a $p = .449$, ^b $p = .048$, ^c $p = .002$, ^d $p = .801$, ^e $p = .003$, ^f $p = .615$. ABS-V = Victim subscale of the Attribution of Blame Scale. ABS-O = Offender subscale of the Attribution of Blame Scale.

Table 8 *Intercorrelations between Mercy Meter, Interpersonal Judgments, and Social Desirability (Study 1)*

Variable	1	2	3	4
1. MM – W	1			
2. MM – R	.28*	1		
3. MM Total	.78*	.76*	1	
4. IJS	.40*	.21*	.38*	1
5. MCSD	.06 ^a	.12 ^b	.10 ^e	.04 ^d

Note. * $p < .0003$. ^a $p = .302$, ^b $p = .038$, ^c $p = .085$, ^d $p = .492$. IJS = Interpersonal Judgments Scale; MCSD = Marlow-Crowne Social Desirability Scale.

I hypothesized that the Mercy Meter and its subscales would be positively correlated with self-reported altruistic behavior (Hypothesis 5). The MM-W was positively related to self-reported altruism ($r = .23$). However, neither the MM-R, nor the MM Total, were related to self-reported altruism ($r = .06$ and $.20$, respectively). Hypothesis 5 was partially supported.

In Hypothesis 6, I predicted that the Mercy Meter would be positively correlated with state empathy. The MM-W was positively correlated with state empathy ($r = .36$). The MM-R, on the other hand, was unrelated to state empathy ($r = .07$). The MM Total was also positively correlated with state empathy ($r = .25$). Thus Hypothesis 6 was partially supported.

I also hypothesized that mercy would be positively correlated with trait empathy (Hypothesis 7). The MM-W was not correlated with trait empathic concern ($r = .13$), but was positively correlated with trait perspective taking ($r = .25$) and overall trait empathy ($r = .23$). The MM-R, on the other hand, was not correlated with trait empathic concern ($r = .14$), trait perspective taking ($r = .11$), or overall trait empathy ($r = .15$). Similarly to the MM-W, the MM Total was not correlated with trait empathic concern ($r = .18$), but was positively correlated with trait perspective taking ($r = .23$) and overall trait empathy ($r = .25$). Hypothesis 7 was partially supported.

In Hypothesis 8, I predicted that mercy would be negatively correlated with one's tendency to blame the offender but uncorrelated with one's tendency to blame the victim. The MM-W, MM-R, and MM Total were all unrelated to both one's tendency to blame the victim (r 's = $-.04$ to $-.17$) or the offender (r 's = $-.02$ to $-.12$).

In Hypothesis 9, I predicted that mercy would be positively related to a general interpersonal judgment of the offender. As predicted, interpersonal judgment of the offender was

positively related to the MM-W ($r = .40$), MM-R ($r = .21$), and the MM Total ($r = .38$).

Hypothesis 9 was supported.

Finally, in Hypothesis 10, I predicted that the Mercy Meter and its subscales would be unrelated to social desirability. As predicted, the MM-W, MM-R, and MM Total were all uncorrelated with social desirability (r 's = .06 to .12). Thus Hypothesis 10 was supported.

Discussion

In the present study, I empirically investigated a person's merciful response to an injustice or offense. To date, mercy has not been studied scientifically. Furthermore, there are no psychological measures that assess one's merciful response to an offense. Thus, in the present study, I developed the Mercy Meter and assessed its psychometric properties.

Using Rasch Analysis, the Mercy Meter was found to have two factors – a warmth-based factor and a restraint-based factor. Both the Mercy Meter-Warmth subscale and Mercy Meter-Restraint subscale demonstrated acceptable characteristics according to item response theory Rasch Analysis. Furthermore, these two scales were moderately correlated, suggesting two distinct yet related aspect of merciful behavior.

Mercy and Forgiveness

Furthermore, the Mercy Meter and its subscales also showed initial evidence of construct validity, as the total score and each subscale were positively related to emotional and decisional forgiveness and benevolence motivations, and negatively related to unforgiveness motivations. The positive relationship between mercy and forgiveness (and negative relationship between mercy and unforgiveness) is in line with theorizing about mercy as an alternative response to justice in light of an injustice. For example, past research has found that people with strong just-world beliefs for other people (e.g., expecting that other people are treated fairly by the world)

were less forgiving of an offender (Lucas, Young, Zhdanova, & Alexander, 2010; Strelan & Sutton, 2011). Thus, our findings suggest that mercy is associated with forgiveness as an alternative injustice response.

Mercy and Anger

The subscales did offer some distinctions in how mercy is related to various constructs. For example, mercy as warm actions was unrelated to state and trait anger. Mercy as justice restraint, on the other hand, was negatively related to both state and trait anger. The Mercy Meter total score was also negatively related to both state and trait anger. Contrary to hypotheses, neither of the subscales nor the total Mercy Meter score were related to trait aggression. The relationship between mercy as justice-restraint and anger is in line with past research on anger, forgiveness, and punishment. Items on the MM-Restraint subscale describe inhibiting punishment towards the offender (e.g., “I did not seek revenge on him/her”). For example, Nelissen and Zeelenberg (2007) found that when anger is elicited people are more punishing of a third-party member. The negative relationship between the MM-Restraint and state anger supports this line of reasoning, that increased anger would be negatively associated with restraining punishment.

Mercy and Altruism

Interesting, only the MM-Warmth was positively related to self-reported altruism. Items on the MM-Warmth revolve around active, prosocial behaviors (i.e., “I showed empathy towards the person”; “I acted with compassion towards him/her.”) It may be that participants associate active mercy as more altruistic than simply refraining from punishing a person.

Mercy and Empathy

Only the MM-Warmth and the MM-total, and not the MM-Restraint, were associated with state empathy. Past research has shown that empathy elicits altruistic motivation but does not impact egalitarianism (e.g., a fair outcome) or selflessness motivations (Van Lange, 2008). Perhaps empathy elicits actively doing something positive for an offender rather simply not doing something (such as administering punishment). This is somewhat controversial with past research suggesting that increased empathy is related to more lenient punishment for an offender (e.g., Johnson et al., 2002).

Similarly to state empathy, the MM-Warmth and MM-Total, and not the MM-Restraint, were associated with trait perspective taking and overall trait empathy. These findings are in line with theorizing mercy and past research on related constructs. For example, people have been found to be more forgiving when they can imagine themselves committing a similar offense or taking on the perspective of the offender (Exline, Baumeister, Zell, Kraft, & Witvliet, 2008; Exline & Zell, 2009). Similarly, we might expect a person to be more merciful if he or she is able to understand the offender's perspective.

However, none of the Mercy Meter subscales were associated with trait empathic concern. This is inconsistent with my current theorizing that empathy promotes merciful behavior. There are, however, several reasons for this inconsistency. First, the Mercy Meter is measured as a state variable, which is a different level of specificity than trait empathic concern. McCullough and Worthington (1999) suggest that measures tend to correlate more strongly when they are measured at the same level of specificity than when measured at different levels of specificity. Thus, when empathic concern and mercy are measured at the same level of specificity (as seen with state empathy), we find a positive relationship between the MM-Warmth and MM-Total and empathy. Second, it might be that a general disposition to feel

empathic concern could translate to feeling more empathy for everyone involved in a transgression. Thus, if a person is describing mercy for a third-party, it is possible that trait empathic concern would be related to increased empathic feelings for both the victim and the offender. This increased empathic concern may impact merciful behavior then in different ways (such as decreasing mercy if the empathy is more strongly felt for the victim, or increasing mercy if empathy is more strongly felt for the offender).

Mercy, Blame, and Interpersonal Judgments

Contrary to my hypothesis, mercy was unrelated to both one's tendency to blame the offender and one's tendency to blame the victim. Again, it could be that the blame tendencies were measured as dispositional traits rather than state-specific appraisals. State-specific appraisals of blame may have been more strongly correlated with mercy.

Mercy was also related to positive interpersonal judgments of the offender. This finding supports past research that has shown that people are more lenient with offenders whom they like (i.e., Fand, Labig, & Urich, 1990; Michelini & Snodgrass, 1980).

Finally, mercy was unrelated to social desirability. This lends support that the Mercy Meter is actually measuring the mercy construct and not simply the tendency to report socially desirable behavior.

Should the Mercy Meter Be Treated as Separate Subscales or a Single Scale?

In the present study, the Warmth and Restraint subscales were moderately correlated. While both subscales were associated with forgiveness, unforgiveness, and interpersonal judgments of the offender, there were some distinctions. Specifically, the Warmth subscale, but not the Restraint subscale, was related to self-reported altruism, state empathy, trait perspective-taking, trait empathy. And only the Restraint subscale was related to state and trait anger. Thus it

seems that the warmth subscale is most appropriate when assessing the relationship between mercy and positive, other oriented behaviors and emotions. The Restraint subscale, on the other hand, is most appropriate when assessing the relationship between mercy and anger. Further research is needed to determine the relationship between the Mercy Meter subscales and other measures of negative emotions (i.e., such as shame, rejection, anxiousness, or grief). In sum, based on the present results, it seems that there is some utility in using separate subscales of the Mercy Meter as we enter the new field of scientifically studying mercy. By only using the full scale Mercy Meter, we may lose important distinctions in how people approach mercy to injustice or hurtful transgressions that can be articulated by using the separate subscales.

Limitations

There were several limitations to the present study. First, the cross-sectional correlational design does not allow any causal inferences to be made. Thus an experimental design would allow us to better understand the mechanisms that promote and hinder merciful behavior. Second, the scale was not yet given in its final form and items were selected based on characteristics of the present sample. Therefore a replication of the scale fit statistics and internal consistency is warranted.

There are also other telling limitations. I have conceptualized mercy as a behavior, yet the present study has sought to develop a self-report of mercy. People's self-reports do not always correlate perfectly with their actual behavior. It is necessary to correct this limitation by additional research measuring actual merciful (or unmerciful) behavior.

Future Research Areas

The present study is the first to measure the extent to which a person responds to an injustice with mercy. While the current study offered support for good psychometric properties

and construct validity of the Mercy Meter and its two subscales, future studies on separate populations should be conducted to assess the predictive validity and temporal stability of the Mercy Meter. With a promising self-report measure for the mercy, researchers can now explore different factors that influence one's merciful behavior. However, as I mentioned in the limitations, because by its very definition mercy is behavior, a behavioral measure is necessary to assess the validity of the Mercy Meter as a self-report measure of actual behavior (rather than a hypothetical response).

More importantly to the development of an understanding of mercy as a construct, it is necessary to study mercy behavior apart from treating it as a mere criterion for construct validity of the Mercy Meter. I suggest that an experimental manipulation of conditions that are hypothesized to affect mercy should be carried out, with a behavioral measure of mercy as the dependent variable. Furthermore, an experimental design will allow us to make causal inferences as to what factors influence merciful behavior.

STUDY 2: THE EFFECT OF EMPATHY AND GROUP STATUS ON MERCIFUL BEHAVIOR

The current study employs an experimental design to understand the factors that promote mercy. Mercy is defined as a behavior. However, it is helpful, of course, to develop psychometrically sound self-report measures for ease of research. I provided the initial evidence supporting the psychometric adequacy of the Mercy Meter and its subscales in Study 1, but I used it in Study 2 so that (as a secondary purpose of that study) I could use a behavioral measure of mercy to assess evidence of the Mercy Meter's predictive validity. This will increase confidence that the Mercy Meter is measuring one's estimation of his or her actual behavior rather than a participant's hypothetical responses to a questionnaire.

Method

Participants

Undergraduate female students ($N = 77$) from a large Mid-Atlantic urban university were recruited from undergraduate psychology classes to participate as part of a course requirement or in exchange for a small amount of class credit (i.e., less than 0.2% of the class grade). We excluded any participants ($n = 6$) that were not raised in the United States. Demographic data for the participating sample ($N = 71$) are summarized in Table 1.

Design

This study used a cross-sectional experimental design. The completely crossed factorial design is a 3 (*target of empathy*: empathy towards the victim; empathy towards the offender; no empathy) x 2 (*offender status*: in-group or out-group) experimental design. Participants were randomly assigned to one of the six conditions.

Measures

Demographic Data Sheet. Demographic information, including gender, ethnicity, and religious affiliation, was collected from each participant (see Appendix A for all measures).

Mercy Meter (MM). Participants completed the 14-item Mercy Meter scale that was developed in Study 1. The MM is comprised of two subscales – MM-Warmth and MM-Restraint. In the present study, the MM total had a Cronbach's alpha of .86 (95% CI = .81 to .90). The MM-Warmth had a Cronbach's alpha of .87 (95% CI = .82 to .91) and the MM-Restraint had a Cronbach's alpha of .71 (95% CI = .60 to .80).

Affective empathy (Batson Affective Empathy, BEA; Coke, Batson, & McDavis, 1978; Toi & Batson, 1982). The affective empathy measure used by Batson and colleagues consists of eight affect adjectives (sympathetic, empathic, concerned, moved, compassionate, softhearted, warm, and tender). Participants reported the degree to which they felt each affect toward their offender on a 6-point rating scale from 0 = *Not at all* to 5 = *Often*. The BEA has strong estimated internal consistency, with Cronbach's alphas ranging from .79 to .95 (Batson et al., 1983; Coke et al., 1978; Toi & Batson, 1982). The BEA shows evidence of construct validity; it was found to be positively correlated with measures of dispositional empathy, perspective taking, and helping behavior (Batson et al., 1986). In the present study, the Cronbach's alpha was .93 (95% CI = .90 to .95).

Procedure

Recruitment. Participants were recruited to participate through the psychology department undergraduate research study website. The current study was presented as a study about justice, forgiveness, and self-forgiveness across cultures. The study took place in the laboratory.

Actual and ostensible random assignment to condition. When participants arrive at the laboratory, they were randomly assigned to one of six conditions (empathy offender – in-group offender; empathy victim – in-group offender; no empathy – in-group offender; empathy offender – out-group offender; empathy victim – out-group offender, no empathy – out-group offender). In each condition, the participant was directed to a room with a desk and a computer. On the opposite wall of the desk, there was a table with a large textbook, and several strips of tape on the wall (to give the illusion that participants could have been chosen to play a different role described below). While the participant does not know the actual random assignment, the participant was led to believe that she is being randomly assigned to one of three conditions based on the cover story of the experiment.

Cover story. The research assistant informed the participant that she is joined by two other students who are also in separate rooms with a computer at two different schools, and that all three participants will communicate via webcam. The research assistant explained that the webcams are an experimental procedure that the investigator is trying out so that schools can more easily collaborate with one another in soliciting and running research participants and that it is especially useful for schools that do not have a participant pool as large as VCU does.

The research assistant then described the nature of the study as research in justice, forgiveness, and self-forgiveness, and collected the participant's signed consent. The participant

consented to be randomly assigned to one of three conditions (i.e., Amends-Maker, Recommender, or Ender). (Note. the participant was always selected as Ender.) Each of the three roles were described for the participant.

- *If selected as Amends-Maker*, the participant agrees to (a) reveal a recent true interpersonal wrongdoing to students in the roles of Recommender and Ender (understanding that the self-revelation is to be treated as confidential by all), (b) receive a punishment imposed by the Recommender and carry out the sentence to the best of her ability, (c) afterwards complete candid assessments of his or her experiences.
- *If selected as Recommender*, the person must (a) agree to treat the Amends-Maker's revelation of personal wrongdoing as confidential, (b) make a fair and impartial assessment of the severity of the wrongdoing, (c) assign a fair punishment for the Amends-Maker that will provide a means of the Amends-Maker making some sort of restitution for the wrongdoing, and (d) rate the Amends-Maker's responses to the punishment/restitution.
- *If selected as Ender* (the true participant's condition), the participant must (a) agree to treat the Amends-Makers revelation of personal wrongdoing as confidential, (b) make a fair assessment of the severity of the wrongdoing, (c) monitor the punishment assigned by the Recommender for the Amends-Maker, and (d) decide whether to terminate the punishment early or on time.

Writing about a wrong committed within the last two weeks. In all conditions, the participants were instructed to write about a time that they had hurt or offended another person,

if possible occurring within the past two weeks. They were told that this writing may be used as part of the judgment process in the study depending on what condition they are assigned to.

Empathy condition. In the *Offender-Empathy* condition, the participant was also instructed to write about her own reasons and circumstances that led to the situation in which she harmed another person, or what possible circumstances impacted her behavior. In the *Victim-Empathy* condition, the participant was instructed to write about the consequences of the offense for the victim, and what it was like for the victim to experience this offense. In the *No-Empathy* condition, no further writing instructions were given.

In-group versus out-group. The manipulation of in-group or out-group occurred by the apparent nationality of the offender. The in-group offender was an American student from North Carolina State University, whereas the out-group offender was portrayed as someone of Canadian nationality. Canadian nationality was chosen for several reasons. First, given the diverse nature of the student population, it is difficult to find variables that would identify someone as an out-group member for the majority of the participant population. I assumed that most participants would be American (in fact, 92% were from the United States), and therefore non-American is an out-group status shared by most of the participants. Second, Canadian nationality can be highlighted through a distinguishable accent. Third, I am not aware of any common severely negative stereotypes against Canadians that could possibly provide a confounding variable with the offense in question, especially compared to other distinguishable out-groups (i.e., Middle Eastern). Third, Canadians speak English. Fourth, Canada is an out-group in the Eastern Time zone. Given the nature of the study, it was important to have the “other students” in a geographic location that makes logical sense to be communicating with (compared to, say, a European country that has a 5 hour time-difference).

Selection of participant into the Ender condition. Once the participant finished writing, she signed onto the computer program (MediaLab® software), with the help of the research assistant, and the following directions were given via the computer “webpage.”

The computer set-up—introductions and identification of location of school. The screen instructed participants that they are waiting for the participants to connect to the session, with a note on the bottom of the screen stating, “You will be directed to the following page when all participants are joined to the research session.” After approximately one minute, the screen switched to the next page. On the bottom of the screen, instructions read, “To test for sound, each participant should state the name of their school at the indicated time. Your research assistant will tell you when to go. When all school sound sessions have been checked, click CONTINUE.” The screen then displayed the first “participant” – Participant 1 - introducing herself as, “North Carolina State University” (actually a pre-recorded video). The video also showed the research assistant in the background saying, “Go” at the beginning, and “ok” when the first participant finishes. The second participant video then played and Participant 2 (another pre-recorded video) stated, “University of Quebec.” [Note that the introductions varied depending on the group condition]. Again, the research assistant was loud enough to be heard in the background, to give the impression that the other participants were also receiving live instruction similarly to the actual participant. Finally, the participant’s own video image is displayed, and the research assistant instructed the participant to state her school. When the participant finished, she clicked continue.

The next screen stated, “You have all three written about a time that you hurt or offended another person, and you have consented to share this if you are selected into the wrongdoer

condition. At this time, each participant will be assigned her role in the current study based on computer-generated random number lists. Please click NEXT to receive your role assignments.”

In all conditions the participant was selected to play the role of the Ender. In the *In-group* condition, the student ostensibly from Canada was selected as the Recommender and the student ostensibly from North Carolina (presumably more of an in-group member than a Canadian) played the role of the Amends-Maker. In the *Out-group* condition, the student ostensibly from Canada was selected as the Amends-Maker, and the student ostensibly from North Carolina played the role of the Recommender. A screen was presented with each “participant’s” assignment.

The next screen stated that the sentencing and punishment of the Amends-Maker is ready to begin, and each participant continued. The following screen stated:

“You have all been randomly selected to play the role of the Amends-Maker, Recommender, or Ender. Again, please read the responsibilities of each role, which are listed below.

Amends-Maker: You will read the offense that you wrote down in the beginning of the study. Please do not say anything else other than what you were instructed to write down. The other participants will watch you share your statement via the webcams.

Recommender: After listening to the Amends-Maker’s confession, you will sentence the Amends-Maker to a length of the prescribed punishment that you choose. You can choose the length of time, from 0 to 4 minutes, that the Amends-Maker has to hold a book out in front of him or her, depending on your judgment of what is appropriate. In pilot testing, we must inform you, students were usually able to hold the

book—on the average—just less than two minutes until the pain became severe.

(Obviously, some held it longer and others less long.)

Ender: You will also listen to the Amends-Maker’s confession as well as the Recommender’s sentence. The Recommender may choose the length of time that the Amends-Maker must hold out a book at arm’s length. The Recommender can choose any amount of time as punishment and restitution from 20 seconds to 4 minutes, depending on her judgment of what is fair. In pilot testing, we must inform you, as we have the Recommender, that students were usually able to hold the book—on the average—just less than two minutes until the pain became severe. (Obviously, some held it longer and others less long.) Importantly, like a warden in the corrections system, you have the authority to reduce the length of the sentence that the Recommender orders at any time while the punishment is being enforced.

When each of you has read the duties, please click continue to begin this sentencing.”

When the participant clicks “CONTINUE,” and the next screen will show a video of only the Amends-Maker with the following instructions, “Please listen to the Amends-Maker’s statement. When he or she has finished you will be directed to the following screen.” The video (pre-recorded) followed the script below (note. there may have been minor changes in wording):

“Research Assistant: Ok. Please begin. Read only what you had previously written.

Amends-Maker: Ok. Uh, well, ‘I hurt my best friend about a week and a half ago. We were supposed to go to a party together, which we had planned on for a while, and I knew she was really excited about the party. And then we got to the party, and I got a call from this guy that I like. He asked me to go hang out with him. So I left without telling my friend.

(In the Offender-Empathy Condition, the Amends-Maker continued)

I know I should not have done that, but I really like guy, and I've been having a really rough time since ending a rocky relationship with my ex-boyfriend a couple months ago. I thought that my best friend would understand where I was coming from.

(In the Victim-Empathy Condition, the Amends-Maker continued)

I know that it really hurt her that I left her alone at that party. She ended up having to walk home by herself, which wasn't far or unsafe or anything, but still she was really upset about that. She said that I abandoned her, and chose a guy over her.

(In the No-Empathy condition the Amends-Maker stopped talking).

Amends-Maker: Ok. That's everything that I wrote down.

Research assistant: Ok. Now please click continue."

The following screen showed a video of the Recommender. The instructions at the top of the screen read, "The Recommender will now give her sentence. Please listen to the Recommender's decision. Ender, remember that, after the Amends-Maker begins the restitution/punishment, you may choose to reduce the length of the Recommender's sentence—but not reduce it to less than 20 seconds. You will then be directed to the following screen." The pre-recorded video of the Recommender followed the script below (note. there may have been minor changes in wording):

"Research assistant for the Recommender: Ok. Remember that you can choose the length of time that the Amends-Maker has to hold a book out in front of her arm as punishment for her offense. You can choose anywhere from 20 seconds to 4 minutes. We chose this because, in our pilot tests, the average woman held the book just short of two minutes before reporting that the pain was severe. Now, how long do you want to punish the Amends-Maker?"

Recommender: It has to be between 20 seconds and 4 minutes, huh? I'll say that she has to hold the book out for 3 minutes as punishment.

Research assistant: Ok. 3 minutes. Please type in 180 seconds, and then click continue at the bottom of your screen.”

The next screen displayed a video of the Amends-Maker. The instructions at the top of the screen stated, “The Amends-Maker should now perform her punishment according to the Recommender’s sentence. At the end of the sentence that has been selected by the Recommender, the screen will go blank, which will be the signal to the Amends-Maker that she has been released and no longer has to hold out the book. Ender, remember that you have the authority to stop the punishment at any time after 20 seconds has elapsed, or to let it continue the full length of the sentence. To stop the punishment, please click on the STOP button at the bottom of the screen, which will notify the assistants by shutting off the screen. The Amends-Maker will be released from her punishment when the screen goes blank. When the punishment has ceased you will be directed to the next page.”

The video followed the general script below (note. there may have been minor changes in wording):

“Research assistant to the Amend-Maker: Please come stand over at this wall.

(Amends-Maker walked over and stands next to wall).

Amends-Maker: Is here ok?

Research assistant: Yes. You will have to hold the book between these two lines for the full three minutes. I'll tell you when to begin. We stop when the screen changes, either when the three minutes or up or the Ender decides to reduce your punishment. Take the book and hold it at your side. I'll go to the computer to start the timer after I say “BEGIN.”

(Amends-Maker takes book from the research assistant).

Amends-Maker: Wow this is heavier than I thought.

Research assistant: Ok. I'm going to walk to the timer on the computer, and when I say begin, hold the book up.

(Research assistant walks over to the computer screen).

Research assistant: Ok. Begin.

(Amends-Maker begins to hold the book out in front of her. A timer is started for the participant).

Amends-Maker made the following comments at the various time points:

15 seconds: This is harder than I thought

48 seconds: Grunt.

1 minute, 26 seconds: Grunt louder. (Breathing becomes heavier) My arm is getting tired and weak.

1 minutes, 57 seconds: My arm is really, *really* tired. I'm going to be sore.

2 minutes, 15 seconds: Owwww. Grunt. This hurts!

2 minutes, 33 seconds: Is it almost over? PLEASE tell me it's over. This hurts! This is cruel. Hey, can't you end this? This really hurts.

When the Amends-Maker finished her punishment (either because the participant pressed STOP or the 3 minute time period elapses) the computer switched to the following screen.

Dependent measure of mercy. Mercy was measured by the length of time before the participant stops the punishment. Shorter durations of punishment indicated higher degrees of mercy.

The next screen displayed the following instructions:

“The part of the study where participants interact with one another has ended. For the remaining part of the study, each of you will complete several questionnaires. Please click CONTINUE at each site to finish the remaining part of the study.”

The participant then complete the demographic data sheet and the Mercy Meter. Upon completing the questionnaires, the participant was debriefed, and received partial course credit for her participation.

Hypotheses

Hypothesis #1. There will be a significant main effect of group status membership on mercy. Specifically, I predict that participants will be more merciful towards in-group members.

Justification. Tajfel and Turner’s (1979) social identity theory suggests that people are willing to benefit fellow in-group members with valuable resources at the expense of out-group members. People want to help members of their in-group (for review, see Saucier, McManus, & Smith, 2010). From an evolutionary perspective, Bernhard et al. (2006) suggest that punishing an out-group member who offends an in-group member enhances the security of the in-group against future offenses from that out-group. In other words, people may also be more likely to punish out-group members more. Thus, we might also suspect that people will act more mercifully towards an in-group member rather than an out-group member. The reasoning behind this could either be to a) benefit the in-group member (with higher levels of mercy), or b) to more severely punish the out-group member (with lower levels of mercy).

Hypothesis #2. There will be a significant main effect of empathy conditions on mercy. Specifically, I predict that participants in the offender empathy condition will show higher levels of mercy than participants in the victim empathy and no empathy conditions. I also predict that

participants in the victim empathy condition will show the lowest levels of mercy compared to the no empathy and offender empathy conditions.

Justification. There is a wealth of research supporting the notion that empathy leads to altruistic motivations (i.e., Batson & Shaw, 1991; de Waal, 2008; Dovidio, Piliavin, Schroeder, & Penner, 2006). For example, in a laboratory study participants in a high-empathy condition assigned more lenient punishments to offender than in no- and low-empathy conditions (Johnson et al., 2002). Therefore I hypothesize that increased empathy towards the offender will predict higher levels of merciful behavior towards the offender.

I also hypothesize that participants who empathize most highly with the victim will have the least amount of mercy towards the offender. In a study on empathic anger, Vitaglione and Barnett (2003) found that empathic anger for a suffering victim predicted desires to punish a transgressor. Thus I predict that if the participant focuses her empathy on the victim, she will less likely to act mercifully towards the offender (suggesting an increased desire to punish the offender).

Hypothesis #3. There will be an interaction between group membership and empathy conditions.

Justification. Past research has suggested that feeling empathy towards an out-group member generally improves attitudes and reactions towards the out-group member. Vorauer and Sasaki (2009) found that contact with and empathy towards an out-group member improved inter-group attitudes individually. However, when a highly-prejudice individual was placed in an inter-group contact situation *and* asked to empathize with the out-group member the usual inter-group attitudes improvement did not occur. Instead, out-group members were negatively

evaluated. In another study, Johnson et al. (2002) found that group membership can moderate the effect of empathy felt for a defendant.

If we were to apply these findings to the current study, they would suggest that placing participants in a contact situation with an out-group member and asking to empathize with the offender will mitigate the positive main effect of empathy on mercy.

Hypothesis #4. The relationship between group status and mercy will be partially mediated by empathy felt towards the offender. Following Baron and Kenny's (1986) method of mediation, I predict that (a) group status will significantly predict mercy, (b) group status will significantly predict empathy, (c) after controlling for group status, empathy will significantly predict mercy, and (d) when group status and empathy are both included in the model, the effect of group status on mercy will be significantly reduced (as indicated by a significant Sobel test).

Justification. I theorized that mercy, as a form of altruistic behavior, is elicited by feelings of empathy. To the extent that my theorizing is correct, the effect of group status on mercy should be at least partially mediated by the amount of empathy the offender feels towards the offender.

Hypothesis #5. Merciful behavior as measured by the time that participants allow the offender to be punished will be correlated with the MM-Warmth, MM-Restraint, and MM-Total.

Justification. To the extent that the Mercy Meter and its subscales measure self-reports of perceived actual merciful behavior, instead of an individual's ideas of how they would hypothetically act with mercy, the self-report Mercy Meter should be correlated with the behavioral measure of mercy.

Results

Means, standard deviations, ranges, and alphas for all variables are reported in Table 9. The data were first checked for normality, missing data, and outliers. No cases had significant missing data that warranted exclusion from analyses. Any missing data was replaced with the mean. All scales were normally distributed. All outliers on the scales fell within the ranges of expected values, and thus are thought to represent true responses, and were retained in subsequent analyses.

First, I hypothesized that participants would act more mercifully for in-group offenders compared to out-group offenders. I also hypothesized that participants in the offender empathy condition would show higher levels of mercy than participants in the victim empathy and no empathy conditions; similarly, participants in the victim empathy condition would show the lowest levels of mercy compared to the no empathy and offender empathy conditions. I also hypothesized an interaction between group status and empathy condition. The means and standard deviations of each conditions' mercy level are reported in Table 10. To test these three hypotheses, I ran a 2 x 3 (Group X Empathy) between-subjects ANOVA using my length of punishment as my proxy for merciful behavior. As predicted in Hypothesis 1, there was a significant main effect of group status on mercy, $F(1, 71) = 4.05, p = .048$. Specifically, participants were more merciful towards in-group offenders ($M = 88.06, SD = 29.26$) than out-group offenders ($M = 107.37, SD = 45.43$).

Contrary to Hypothesis 2, there was not a main effect of empathy condition on mercy, $F(2, 71) = 1.05, p = .354$. Also in contrast to Hypothesis 3, there was not an interaction effect between group status and empathy condition on mercy, $F(2, 71) = 2.13, p = .126$.

Table 9 Means, Standard Deviations, and Alphas for All Measures in Study 2 (N = 71)

Variable	Range	M	SD	Alpha	95% CI
Behavioral Mercy					
1.Mercy Time	29.83 to 180.00	94.35	41.17		
Mercy Meter					
2.MM Warmth	7 to 35	25.75	5.38	.87	.82 to .91
3.MM Restraint	7 to 35	24.75	4.95	.71	.60 to .80
4.MM total	14 to 70	50.65	9.14	.86	.81 to .90
Empathy					
5.BEA	8 to 48	21.32	8.30	.93	.90 to .95

Note. Mercy Time is measured in seconds. MM Restraint = Mercy Meter Restraint. MM-W = Mercy Meter Warmth. MM Total = Mercy Meter total scale. BEA = Batson's Empathy Adjectives.

Table 10 Mercy and Empathy Means and Standard Deviations per Condition (Study 2)

Group Status	Condition	Mercy Time		Empathy	
		M	SD	M	SD
In-group	Offender	91.21	34.35	18.67	9.55
	Victim	83.97	18.90	23.08	6.82
	Control	88.52	33.49	26.30	8.18
Out-Group	Offender	96.91	34.18	19.00	6.02
	Victim	126.51	52.10	18.40	7.36
	Control	93.23	38.35	20.93	8.01

Note. Mercy Time is measured in seconds. MM Restraint = Mercy Meter Restraint. MM-W = Mercy Meter Warmth. MM Total = Mercy Meter total scale. BEA = Batson's Empathy Adjectives.

To better understand the non-significant effect of empathy condition on mercy, I ran a one-way ANOVA to determine the effect of empathy condition on feelings of empathy towards the offender. There was no difference in whether participants were in the offender, victim, or no empathy condition on feelings of empathy towards the offender $F(2, 69) = 1.68, p = .194$, indicating that the empathy manipulation was unsuccessful.

Despite the failure of the manipulation of empathy, I provided an a priori way to examine my theorizing that empathy was related to mercy behavior. I hypothesized that the relationship between group status and merciful behavior would be partially mediated by empathy for the offender. Using the Baron and Kenny (1986) method for testing mediation, I ran three separate linear regressions that are depicted in Figure 4. There was a significant relation between group condition and merciful behavior, $F(1, 70) = 5.100, p = .027; R^2 = .068; \beta = .261$. Specifically, people were more merciful with ingroup offenders ($M = 88275.84, SD = 29977.82$) than with outgroup offenders ($M = 108237.18, SD = 45689.14$). Thus, Hypothesis 4a was supported.

Next, group condition significantly predicted empathy for the offender, $F(1, 65) = 4.054, p = .048; R^2 = .059; \beta = .242$. Specifically, people were more empathic with ingroup offenders ($M = 23.27, SD = 8.62$) than with outgroup offenders ($M = 19.35, SD = 7.30$). Thus, Hypothesis 4b was supported. After controlling for group condition, there was a trend effect of empathy for the offender on merciful behavior, though it did not reach statistical significance, $F(2, 64) = 2.945, p = .060; R^2 = .084; \beta_{\text{Empathy}} = .207, \beta_{\text{Group}} = .160$. Thus, because Hypothesis 4c was not supported, the strict conditions of mediation were not met (Baron & Kenny, 1986). The results were not consistent with Hypothesis 4 that empathy would mediate the relationship between group status and mercy.

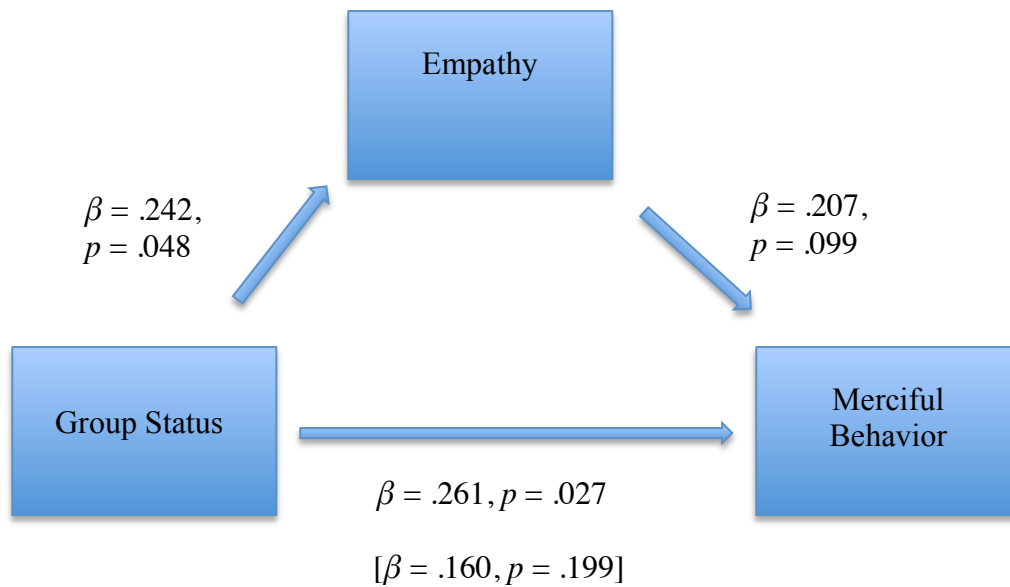


Figure 4. Modeling the mediation effect of empathy on the group-status and merciful behavior relationship. This figure illustrates degree to which empathy felt towards the offender mediates the relationship between the offender's group status and merciful behavior.

I also hypothesized that merciful behavior (i.e., lower scores on Mercy Time) would be significantly correlated with self-reported mercy as measured by the Mercy Meter. To test this hypothesis, I ran bivariate correlations between the time that participants allowed the offender to be punished (so that higher times signified lower levels of merciful behavior) and the subscales of the Mercy Meter (see Table 11). As hypothesized, merciful behavior (i.e., lower mercy time) observed in the laboratory was significantly negatively correlated to participants' self-reported merciful behavior, r 's = -.465 to -.513, $p < .001$ (see Table 10 for all correlations). Thus Hypothesis 5 was supported.

Discussion

In the present study, I sought to utilize a behavioral measure of mercy to (a) provide predictive validity of the Mercy Meter (and its subscales), and (b) test the theory that merciful behavior can be elicited by empathy felt towards an offender. To accomplish these goals, I ran a laboratory study in which participants randomly assigned to one of six conditions with either an in-group offender or an out-group offender, and were persuaded to feel empathy for the offender, empathy for the victim, or were not persuaded to feel empathy. Participants then watched a student confess to an offense and receive punishment. Mercy was measured by the length of time that the participants allowed the student to be punished for.

I found that participants were more merciful towards in-group offenders compared to out-group offenders. This is consistent with my theorizing that mercy can be considered as a form of altruistic behavior. Furthermore, is a wealth of past research supporting the notion that people are more altruistic for in-group members compared to out-group members. For example, Johnson et al. (2002) found that participants assigned more lenient punishments to ingroup members (as categorized by race) than outgroup members. Lieberman (2007) also found that, despite no

Table 11 *Intercorrelations between Observed Merciful Behavior, the Mercy Meter and its Subscales, and Empathy (Study 2)*

Variable	Mercy Time	MM Warmth	MM Restraint	MM Total
Mercy Time	1			
MM Warmth	-.47***	1		
MM Restraint	-.49***	.64***	1	
MM total	-.51***	.88***	.90***	1
BEA	-.26*	.56***	.34**	.46***

Note. Mercy Time suggests that lower times indicate more mercy.

* $p = .029$, ** $p = .005$, *** $p < .001$.

changes in ratings of moral wrongness of the offense, participants gave lighter penalties to in-group offenders compared to out-group offenders.

Furthermore, though not significant, our findings suggest that there is a trend that the effect of group status on mercy may be at least partially relate to the amount of empathy that an individual feels for the offender. This trend is in line with my theorizing mercy as an alternative response to injustice that can be elicited through felt empathy. Past research has demonstrated that when empathy is elicited, people are more altruistically motivated (e.g., Van Lange, 2008), will increase benefits for another person even if it is in conflict with justice (e.g., Batson et al., 2005), and will be more lenient in their punishments (Johnson et al., 2002).

However, though there was a trend towards significance, the present study's mediation was not statistically significant. I offer several explanations for the lack of significant results in the present study. First, recent research has suggested that different types of empathy have different effects on subsequent behavior. For example, Vitaglione and Barnett (2003) found that a third-party's empathic anger felt for the victim affects punishment towards the offender, but empathic sadness (i.e., sympathy, warmth, compassion, etc.) does not affect punishment. In the present study, we only assessed empathy (what Vitaglione and Barnett identified as empathic sadness) felt towards the offender. Assessing more specific dimensions of empathy would have provided a more nuanced understanding of how empathy affects punishment. Second, the effect of group status on empathy barely reached significance ($p = .048$). It could be that group status elicited other motivations and attitudes that were more predominant than increasing empathy. For example, participants could have been more merciful to ingroup members based on evolutionary theory perspective of reciprocal altruism (Trivers, 1979). Perhaps participants were more merciful to ingroup members not because empathy was elicited, but because they have a

sense that if they found themselves in a similar predicament as the offender they could expect mercy from a fellow ingroup member.

Evidence for the Psychometric Soundness and Use of the Mercy Meter

As a secondary purpose of Study 2, I sought to provide additional evidence of the predictive validity of the Mercy Meter and its subscales. Consistent with my hypothesis, mercy as measured by length of punishment was correlated with the MM-Warmth, MM-Restraint, and MM Total. This provides some support for the self-report Mercy Meter's predictive validity of mercy as an actual behavior. Furthermore, the MM-Warmth and MM-Restraint were highly correlated in the present study. Both subscales and the total scale also all significantly correlated with state empathy.

Limitations and Future Research

Perhaps the most important limitation of the present study was that the empathy manipulation was not successful. One reason for the lack of differences in empathy towards the offender between offender-empathy, victim-empathy, and no-empathy group is that participants were instructed to write about a time that they offended another person (under the assumption that they could be chosen to play the Amends-maker role) in all conditions. This procedure may have primed all participants to at least consider themselves as in an offender position. Past research has shown that being able to consider oneself committing similar past offenses increases forgiveness for an offender (Exline et al, 2008). Furthermore, based on the model I presented in the introduction of how empathy might elicit merciful behavior (see Figure 2), it could be that by asking participants to recall their own memory of offending a person and feeling bad about it, they will be persuaded to act with mercy. Thus, it may be that we unintentionally primed all

participants to consider the offender's perspective in all conditions. Perhaps if in future studies this aspect of the study is modified the empathy condition may be significant.

Furthermore, the present study was conducted on a convenience sample of college-students in a laboratory setting. Though participants were given the authority to enforce and stop the punishment of the offender, the punishment itself was somewhat arbitrary and limited in nature. Future research may want to address how group status and empathy affect mercy in a more consequential context (such as a court setting where punishment is significant jail time, or a work setting where punishment is being fired). Other areas of interest may include how parents might act with mercy towards their children or how a school administration may act with mercy towards a dishonest student.

GENERAL DISCUSSION

In the foregoing set of studies, I developed a 14-item Mercy Meter scale and provided initial evidence of its psychometric adequacy in Study 1 (Chapter 3). Namely, I adduced evidence for its two-factor structure and internal consistency using Rasch analysis, and construct validity using bivariate correlations. I also provided additional evidence of the predictive validity of the Mercy Meter, and its two subscales, by correlating the Mercy Meter with a behavioral measure of mercy in Study 2 (Chapter 4). However, the main purpose of Study 2 was to examine the factors that promote actual merciful behavior. Specifically, I manipulated an offender's group status and the amount of empathy the participant felt for the offender and examined participants' subsequent merciful behavior.

Development of the Mercy Meter

To date, there is no scientific research on how a person responds to an offense or an injustice with merciful behavior. As a first step to being able to study mercy, we must be able to measure it. Study 1 demonstrated that the Mercy Meter has a two-factor structure comprised of a warmth-based facet (MM-Warmth), and a justice-restraint facet (MM-Restraint).

The MM-Warmth was positively related to positive other-oriented emotions and behaviors (including empathy and altruism). The MM-Restraint, on the other hand, was negatively related to negative other-oriented emotions (included state and trait anger). Both subscales and the total scale were related to decisional and emotional forgiveness, unforgiveness

motivations, and general interpersonal judgments about the target person. These findings are consistent with my definition of mercy as an act by a person who has the authority to do so that administers or recommends less negative consequence or punishment than is deserved by someone justly deserved. Thus the act of mercy seems to be either in the form of showing positive other-oriented (MM-Warmth), or inhibiting punishment (MM-Justice), though it is clear by the overlap in the two subscales that these two aspects of mercy are not mutually exclusive.

Combining the findings in Study 2 with those of Study 1, it is possible to recommend how to use the Mercy Meter in subsequent research. It seems that, when considering an actual immediate behavior (as compared to a recalled past behavior), there was no differentiation in the subscales of the Mercy Meter. However, when considering a past merciful behavior, using the Mercy Meter subscales offered nuanced interpretations of how mercy is related to anger, empathy, and altruism.

I offer several possible reasons for the discrepancy in using the Mercy Meter's total scale or separate subscales. First, Study 2 employed a third-party methodology – the participant was given authority to be merciful but was not the victim of the offense. Study 1, on the other hand, did not specify whether participants reported a merciful behavior as a third-party participant or as the victim themselves. Past research has shown that close friends of victims – third-party participants – are less forgiving than the victims themselves (Green, Burnette, & Davis, 2008). Based on the relationship between mercy and forgiveness (as evidenced in Study 1), perhaps participants who were more merciful in Study 2, as a third-party participant, found it more difficult to be merciful (compared to being a first-party participant), and therefore their level of mercy was actually higher. And while we cannot compare participants from Study 1 and Study 2, I anecdotally report the mean levels of the Mercy Meter were higher in Study 2 compared to

Study 1. This reasoning is further substantiated by the IRT development of the Mercy Meter, which suggests that higher scores are associated with harder-to-endorse aspects of the construct (and therefore a greater experience of the construct). Further research may want to assess whether the subscales of the Mercy Meter are more differentiated at lower levels of mercy compared to higher levels of mercy.

Thus, for studies that use in vivo offenses and actual behaviors that likely elicit more powerful experiences of mercy, researchers may find that the full scale Mercy Meter is acceptable to measure merciful behavior. Studies that use recall and self-report methodologies, or are interested in how mercy is related to specifically positive or negative other-oriented emotions, would likely find more nuanced results using the separate subscales of the Mercy Meter.

Experimental Study of Mercy

I found that participants were more merciful to ingroup offenders compared to outgroup offenders. The empathy manipulation, on the other hand, was ineffective at changing participants' feelings of empathy towards the offender or their merciful behavior. However, a mediation analysis that predicted that the effect of group status on mercy was mediated by feelings of empathy was nonsignificant (though there was a trend towards significance). This suggests that further work is needed to determine whether Batson's Empathy Altruism Hypothesis can be applied to the context of merciful behavior.

Still, the effect of group status on mercy is consistent with previous research that has found that people are more willing to help (e.g., O'Gorman et al., 2005), and are more lenient in their punishments (e.g., Lieberman, 2007) of ingroup members. However, the mechanism that explains why people are more merciful towards ingroup members is still unknown. Evolutionary

theory suggests that it is productive from an evolutionary standpoint to be cooperative and altruistic with ingroup members (Simpson & Beckes, 2010). However, the present study did find that people felt more empathy towards ingroup members than outgroup members. This is also consistent with past research that has found that group membership moderates the amount of empathy experienced for a defendant (Johnson et al., 2002). Thus, future research is needed to better understand this relationship.

Implications and Future Research

The present set of studies was the first attempt at exploring a person's merciful response to an injustice. With both a promising new self-report measure and a behavioral measure methodology, we can now begin to more fully explore merciful behavior. However, we still need to continue to assess the validity and reliability of the self-report Mercy Meter. Studies should be done using the scale on different populations other than college students. The temporal stability of the scale also needs to be assessed. Furthermore, the behavioral measure of mercy was conducted on a female-only population. Studies that include both males and females should be done in order to assess whether the present behavioral methodology can be generalized to both genders.

I theorized that mercy can be conceptualized as an alternative response to injustice that might be elicited by feeling empathy towards the offender. The results of the present studies suggest that this relationship may be more complicated than initially predicted. For example, in Study 1 only the MM-Warmth and the MM-Total, but not the MM-Restraint, were correlated with state empathy. In Study 2, although there was a trend that empathy mediated the effect of group status on mercy, the mediation analysis was not significant. In Study 1, I assessed the empathy felt towards the offender without specifying whether the participant was the victim or

simply a third-party participant. In Study 2 I only examined the participants' empathy felt towards the offender as a third-party participant. Further research is needed examining how empathy is related to mercy based on the specific role of the person acting mercifully. For example, perhaps different aspects of empathy (such as empathic sadness or empathic anger (Vitaglione & Barnett, 2003)) are more important in promoting or hindering merciful behavior depending on the relationship between the offender and the person acting with mercy.

In this first set of studies, I also assessed only the situational factors in the context of the participant's experience with the offender. And specifically in Study 2, the participant was granting mercy to a third-party offender based on being given the authority to give mercy instead of granting mercy based on inherent authority as the victim. Thus the distinction between direct mercy (between the victim and the offender), and third-party mercy (between a person in authority and the offender) is an area that should be addressed. For example, past research has shown that third-party forgivers are less forgiving of their close friend's offender than the victim him or herself – dubbed the “third-party forgiveness effect” (Green et al., 2008). Future studies may assess whether this effect also applies to merciful behavior.

Eventual Practical Applications

This scientific study of mercy has practical benefits that extend to close relationships (such as parents and their children, spouses), work or professional relationships (such as a teacher and student, or boss and employee), and the legal system. For example, perhaps mercy training interventions (when they are eventually developed) could be utilized for parents who have endorsed excessive or corporal punishment. Marriage therapists may be interested in how to promote couples to act more mercifully towards each other after a transgression within the relationship. I think that any professional relationship that includes a leader-follower or

professionally assigned hierarchical relationship can benefit from understanding mercy. For example, employees may be interested in how to elicit a merciful response from an employer after a negative evaluation. People in leadership roles may also be interested in how receiving a merciful response affects an offender's future behavior. For example, does the receiver meet a merciful response with gratitude and future merciful behavior, or is it met with increased offending?

The legal system is also a potential arena that could significantly benefit from studying mercy. For example, lawyers would likely be interested in learning what factors promote or hinder a merciful response from a judge or a jury. Furthermore, the present research highlights some important issues for social justice. For example, in Study 2 we found that participants were more merciful towards ingroup members than outgroup members. This has important implications for the fairness of the legal system for various minority or "outgroups." What factors could moderate or temper the relationship between group status and mercy to insure more fair outcomes.

Conclusion

Mercy is a virtue that has yet to be studied scientifically. The current research studies developed a self-report measure of mercy, the Mercy Meter, and found that it was related to forgiveness, anger, altruism, empathy, and general interpersonal judgments. Support for the predictive validity of the Mercy Meter was also provided using a behavioral methodology to measure mercy. Furthermore, people were more merciful towards ingroup members compared to outgroup members. There is ample areas for future research in understanding the psychological and situational mechanisms that promote or hinder mercy.

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Mercy Meter (initial version)

DIRECTIONS: For the following questions, please consider your thoughts, feelings, and behaviors in regards to the person who offended you or someone that you are close to for the specific offense that you wrote about previously. Use the following scale to indicate your agreement or disagreement with each of the statements.

1 = strongly disagree, 2 = mildly disagree, 3 = agree and disagree equally, 4 = mildly agree, 5 = strongly agree

1. The person deserved to be punished
2. The person was responsible for the offense
3. The person was guilty of the offense
4. The person needed to be punished.
5. I had the ability to punish the person
6. I had a chance to reduce his/her suffering.
7. I was in the position to reduce his/her suffering
8. I punished the person.
9. I acted with empathy towards the person.
10. I acted with compassion towards him/her.
11. I showed forgiveness to him/her.
12. I avoided punishing him/her.
13. He/she seemed to suffer for what he/she did.
14. I have tried to act mercifully
15. I have tried to ease his/her pain.
16. I did not seek revenge on him/her.
17. I forgave him/her.
18. I have tried to decrease the consequence of his/her behavior
19. I tried to make him/her suffer for what he/she did
20. I tried to reduce his/her suffering as much as I was able to.
21. I wanted to reduce his/her suffering as much as I was able to.
22. I acted mercifully.
23. I punished him/her.
24. I acted with forgiveness to him/her.
25. I acted in a loving way towards him/her.
26. I made an effort to show him/her mercy.
27. I tried to get back at him/her.
28. I showed compassion to him/her despite what he/she did.
29. I responded to his/her offense with justice.
30. I showed mercy to him/her.
31. I tried to reduce the negative consequences of what he/she did.
32. I reduced his/her suffering.
33. I eased his/her suffering.
34. I withheld punishment.
35. I did not get back at him/her even though I could have.
36. I only punished him/her as much as I had to.

37. I avoided punishing him/her as much as possible.
38. I held him/her accountable for what he/she did.
39. I was sympathetic to him/her after what he/she did.
40. I avoided him/her after what he/she did.
41. I punished the person less than what he/she deserved.
42. I showed empathy towards the person.
43. I was motivated to show mercy to him/her.

EFS

Think of your current emotions toward the person who hurt you. Indicate the degree to which you agree or disagree with the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1. I care about him or her.	SD	D	N	A	SA
2. I no longer feel upset when I think of him or her.	SD	D	N	A	SA
3. I'm bitter about what he or she did to me.	SD	D	N	A	SA
4. I feel sympathy toward him or her.	SD	D	N	A	SA
5. I'm mad about what happened.	SD	D	N	A	SA
6. I like him or her.	SD	D	N	A	SA
7. I resent what he or she did to me.	SD	D	N	A	SA
8. I feel love toward him or her.	SD	D	N	A	SA

DFS

Think of your current intentions toward the person who hurt you. Indicate the degree to which you agree or disagree with the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1. I have decided to forgive him or her	SD	D	N	A	SA
2. I have made a commitment to forgive him or her	SD	D	N	A	SA
3. I have made up my mind to forgive him or her	SD	D	N	A	SA
4. I have made a choice to forgive him or her	SD	D	N	A	SA

TRIM-R and TRIM-A and TRIM-C and TRIM-B

DIRECTIONS: For the following questions, please indicate what you imagine your **current thoughts and feelings** would be about the person who wounded you. Use the following scale to indicate your agreement or disagreement with each of the statements.

- 1 = strongly disagree
- 2 = mildly disagree
- 3 = agree and disagree equally
- 4 = mildly agree
- 5 = strongly agree

1. ___ I'll make him or her pay.
2. ___ I wish that something bad would happen to him/her.
3. ___ I want him-her to get what he/she deserves.
4. ___ I'm going to get even.
5. ___ I want to see him/her hurt and miserable.
6. ___ I'd keep as much distance between us as possible.
7. ___ I'd live as if he/she doesn't exist, isn't around.
8. ___ I wouldn't trust him/her.
9. ___ I'd find it difficult to act warmly toward him/her.
10. ___ I'd avoid him/her.
11. ___ I'd cut off the relationship with him/her.
12. ___ I'd withdraw from him/her.
13. ___ I looked for the source of the problem and tried to correct it.
14. ___ I took steps toward reconciliation: wrote him/her, called him/her, expressed love, showed concern, etc.
15. ___ I made an effort to be more friendly and concerned.
16. ___ I did my best to put aside the mistrust.
17. ___ I tried to make amends.
18. ___ I was willing to forget the past and concentrate on the present.
19. ___ Even though his/her actions hurt me, I still have goodwill for him/her.
20. ___ I want us to bury the hatchet and move forward with our relationship.
21. ___ Despite what he/she did, I want us to have a positive relationship again.
22. ___ I have given up my hurt and resentment.
23. ___ Although he/she hurt me, I put the hurts aside so we could resume our relationship.
24. ___ I forgive him/her for what he/she did to me.
25. ___ I have released my anger so I could work on restoring our relationship to health.

SAS

DIRECTIONS: As you think about the person who hurt you, please answer the following questions about the intensity of your feelings toward that person. We do not want your ratings of your past feelings, but your rating of feelings right now as you think about this event, and all that has happened since. Use the following scale to indicate your agreement with each of the questions.

- 1 = Not at all**
2 = Somewhat
3 = Moderately so
4 = Very much so

1. ____ I am mad.
2. ____ I feel angry.
3. ____ I am burned up.
4. ____ I feel like I'm about to explode.
5. ____ I feel like banging on the table.
6. ____ I feel like yelling at somebody.
7. ____ I feel like swearing.
8. ____ I am furious.
9. ____ I feel like hitting someone.
10. ____ I feel like breaking things.

TAS

A number of statements that people have used to describe themselves are given below. Read the statements below and indicate how you generally feel by placing the appropriate number next to each item.

- 1 = Almost never**
2 = Sometimes
3 = Often
4 = Almost always

- (1) I am quick tempered.
- (2) I have a fiery temper.
- (3) I am a hot-headed person.
- (4) I get angry when I am slowed down by others' mistakes.
- (5) I feel annoyed when I am not given recognition for doing good work.
- (6) I feel infuriated when I do a good job and get a poor evaluation.
- (7) I fly off the handle.
- (8) When I get angry, I say nasty things.
- (9) It makes me furious when I am criticized in front of others.
- (10) When I get frustrated, I feel like hitting someone.

AQ

- 1= Extremely Uncharacteristic of me**
2 = somewhat uncharacteristic of me
3 = neither uncharacteristic nor characteristic of me
4 = somewhat characteristic of me
5 = extremely characteristic of me

1. Some of my friends think I am a hothead
2. If I have to resort to violence to protect my rights, I will.
3. When people are especially nice to me, I wonder what they want
4. I tell my friends openly when I disagree with them
5. I have become so mad that I have broken things
6. I can't help getting into arguments when people disagree with me
7. I wonder why sometimes I feel so bitter about things
8. Once in a while, I can't control the urge to strike another person
9. I am an even-tempered person
10. I am suspicious of overly friendly strangers
11. I have threatened people I know
12. I flare up quickly but get over it quickly
13. Given enough provocation, I may hit another person
14. When people annoy me, I may tell them what I think of them
15. I am sometimes eaten up with jealousy
16. I can think of no good reason for ever hitting another person
17. At times I feel I have gotten a raw deal out of life
18. I have trouble controlling my temper
19. When frustrated, I let my irritation show
20. I sometimes feel that people are laughing at me behind my back
21. I often find myself disagreeing with people
22. If somebody hits me, I hit back
23. I sometimes feel like a powder keg, ready to explode
24. Other people always seem to get the breaks
25. There are people who pushed me so far that we came to blows
26. I know that "friends" talk about me behind my back
27. My friends say that I'm somewhat argumentative
28. Sometimes I fly off the handle for no good reason
29. I get into fights a little more than the average person

SRA Scale

For each item, identify the frequency with which you have carried out the following acts

0 = never

1 = once

2 = more than once

3 = often

4 = very often

1. I have helped push a stranger's car out of the car
2. I have given directions to a stranger
3. I have made change for a stranger
4. I have given money to a charity
5. I have given money to a stranger who needed it (or asked for it)
6. I have donated goods or clothes to a charity
7. I have done volunteer work for a charity
8. I have donated blood
9. I have helped carry a stranger's belongings (books, parcels, etc)
10. I have delayed an elevator and held the door open for a stranger
11. I have allowed someone to go ahead of me in a lineup (at Xerox machine, in the supermarket)
12. I have given a stranger a lift in my car
13. I have pointed out a clerk's error (in a bank, at a supermarket), in underchanging me for an item
14. I have let a neighbor whom I didn't know too well borrow an item of some value to me (e.g., a dish, tools, etc.)
15. I have bought "charity" Christmas cards deliberately because I knew it was a good cause
16. I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers
17. I have before being asked, voluntarily looked after a neighbor's pets or children without being paid for it
18. I have offered to help a handicapped or elderly stranger across a street
19. I have offered my seat on a bus or train to a stranger who was standing
20. I have helped an acquaintance to move households

Batson Empathy Adjectives

As you think about this situation as it has developed to this minute, please answer the following questions about your attitude toward the person. We do not want your ratings of your past attitudes, but your rating of attitudes right now as you think about this event, and all that has happened since. After each item, please **CIRCLE** the word that best describes your current feeling. Please do not skip any item.

Not = Not at all **Lit** = Little **Som** = Somewhat **Mod** = Moderately **Qui** = Quite a lot
Ext = Extremely

For example, if you were rating the word “proud,” and you felt somewhat proud of the person, you would circle the word “Som” following the word “proud.” Complete the next items in the same way.

		<u>Current Degree of Feeling</u>					
1.	sympathetic:	Not	Lit	Som	Mod	Qui	Ext
2.	empathic:	Not	Lit	Som	Mod	Qui	Ext
3.	concerned:	Not	Lit	Som	Mod	Qui	Ext
4.	moved:	Not	Lit	Som	Mod	Qui	Ext
5.	compassionate:	Not	Lit	Som	Mod	Qui	Ext
6.	softhearted:	Not	Lit	Som	Mod	Qui	Ext
7.	warm:	Not	Lit	Som	Mod	Qui	Ext
8.	tender:	Not	Lit	Som	Mod	Qui	Ext

IRI Brief

Below is a series of statements which describe how people act and feel in particular situations. Please indicate the number which corresponds with how characteristic the statement is of you:

- 1= Not at all characteristic of me.
- 2= Slightly characteristic of me.
- 3= Moderately characteristic of me.
- 4= Very characteristic of me.
- 5= Extremely characteristic of me.

- _____ 1. I often have tender, concerned feelings for people less fortunate than me.
- _____ 2. I sometimes find it difficult to see things from the “other guy’s” point of view.
- _____ 3. Sometimes I don’t feel very sorry for other people when they are having problems.
- _____ 4. I try to look at everybody’s side of a disagreement before I make a decision.
- _____ 5. When I see someone being taken advantage of, I feel kind of protective towards them.
- _____ 6. I sometimes try to understand my friends better by imagining how things look from their perspective.
- _____ 7. Other people’s misfortunes do not usually disturb me a great deal.
- _____ 8. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments.
- _____ 9. When I see someone being treated unfairly, I sometimes don’t feel very much pity for them.
- _____ 10. I am often quite touched by things that I see happen.
- _____ 11. I believe that there are two sides to every question and try to look at them both.
- _____ 12. I would describe myself as a pretty soft-hearted person.
- _____ 13. When I’m upset at someone, I usually try to “put myself in his shoes” for awhile.
- _____ 14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Interpersonal Judgments Scale

Please indicate the extent to which you agree with the following statements in regards to the (judge, warden, wrongdoer).

1 = strongly disagree

7 = strongly agree

1. I believe that this person is intelligent
2. I believe that this person is moral
3. I believe that I would like this person
4. I believe that I would enjoy working with this person

ABS

This scale assesses how people assign blame. Use the following scale to indicate your agreement or disagreement with each item.

1 = strongly disagree, 2 = moderately disagree, 3 = mildly disagree, 4 = mildly agree, 5 = moderately agree, 6 = strongly agree

1. Victims of crime nearly always deserve what they get
2. When a crime occurs, it is the offender's fault.
3. Alcohol is to be blamed for most of the crimes in our society
4. Society's rigid rules bring people to jail
5. Provocation by the victim is the cause of most crimes
6. Most crimes can be attributed to problems in the offender's personality
7. If people would stop drinking the crime rate would be sharply reduced
8. Living in a bad neighborhood is the cause of most crimes
9. Victims should be blamed for being attacked
10. Most offenders commit crimes because they cannot control themselves
11. Alcohol is responsible for the majority of inmates being locked up
12. When a man commits a crime it is society that should be blamed
13. Women who are raped have usually set themselves up to be raped
14. Criminal behavior is often caused by mental illness
15. Alcohol makes people commit crime
16. Current societal morality is the cause of so many crimes
17. There is no such thing as an innocent victim
18. Criminal behavior is the result of abnormal personality
19. The high incidence of violent acts is related to drinking
20. The media are responsible for so much violence on the street
21. A person who commits rape is mentally ill, or psychological disturbed
22. Rapists are driven to commit rape by something wrong in their personality
23. Women entice men to rape them
24. A woman hitchhiker is almost asking to be raped.

MCSDS

Marlowe-Crowne Social Desirability Scale, Short Form (MC-13; Reynolds, 1982).

INSTRUCTIONS: For each item below, please indicate whether the statement is true of you or false of you by circling "T" or "F" respectively. If neither seems to apply exactly to you, then circle the answer which is closest to how you truly feel.

1. T F It is sometimes hard for me to go on with my work if I am not encouraged.
2. T F I sometimes feel resentful when I don't get my way.
3. T F On a few occasions, I have given up doing something because I thought too little of my ability.
4. T F There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. T F No matter who I'm talking to, I'm always a good listener.
6. T F There have been occasions when I took advantage of someone.
7. T F I'm always willing to admit it when I make a mistake.
8. T F I sometimes try to get even rather than forgive and forget.
9. T F I am always courteous, even to people who are disagreeable.
10. T F I have never been irked when people expressed ideas very different from my own.
11. T F There have been times when I was quite jealous of the good fortune of others.
12. T F I am sometimes irritated by people who ask favors of me.
13. T F I have never deliberately said something that hurt someone's feelings.

APPENDIX B

Mercy Meter – Final Version

DIRECTIONS: For the following questions, please consider your thoughts, feelings, and behaviors in regards to the person who offended you or someone that you are close to for the specific offense that you wrote about previously. Use the following scale to indicate your agreement or disagreement with each of the statements.

1 = strongly disagree, 2 = mildly disagree, 3 = agree and disagree equally, 4 = mildly agree, 5 = strongly agree

1. I acted with compassion towards him/her.*
2. I punished the person. (rev)
3. I showed forgiveness to him/her.*
4. I did not seek revenge on him/her.
5. I tried to reduce his/her suffering as much as I was able to.*
6. I tried to make him/her suffer for what he/she did. (rev)
7. I showed mercy to him/her.*
8. I tried to get back at him/her. (rev)
9. I tried to reduce the negative consequences of what he/she did.*
10. I withheld punishment.
11. I was sympathetic to him/her after what he/she did.*
12. I did not get back at him/her even though I could have.
13. I showed empathy towards the person.*
14. I avoided punishing him/her as much as possible.

* Indicates Mercy Meter Warmth subscale.

AUBREY GARTNER

Department of Psychology
Virginia Commonwealth University
P.O. Box 842018
Richmond, VA 23284

Phone: (616) 520-5461
E-mail: gartneral@vcu.edu

EDUCATION

- M.S. Virginia Commonwealth University, Richmond, VA, 2009
Counseling Psychology
- B.A. Denison University, Granville, OH, 2006
Major: Psychology
Graduated Magna Cum Laude

PUBLICATIONS

Refereed Articles Published or In Press

In press

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Jennings, D. J., II, **Gartner, A. L.**, Worthington, E. L., Jr., Davis, D. E., Hook, J. N., Greer, C. L., Van Tongeren, D. R., & Greer, T. W. (2011). Punishment as a restraint of evil. In J. H. Hellens (Ed.), *Explaining Evil: Approaches, Responses, Solutions*.

Van Tongeren, D. R., Green, J. D., Davis, J. L., Davis, D. E., Worthington, E. L., Jr., Hook, J. N., Jennings, D.J., II, **Gartner, A. L.**, Greer, C. L., & Greer, T. W. (2011). Meaning as a restraint of evil. In J. H. Hellens (Ed.), *Explaining Evil: Approaches, Responses, Solutions*.

Worthington, E. L., Jr., Davis, D. E., Hook, J. N., **Gartner, A. L.**, Jennings, D. J., II, Greer, C. L., Van Tongeren, D. R., & Greer, T. W. (2011). Forgiveness and reconciliation within the psychology of religion and spirituality. In: Aten, J. D., O'Grady, K. A., & Worthington, E. L., Jr. (Eds.). (2010) *The Psychology of Religion and Spirituality for Clinicians: Using Research in Your Practice*. (pp.). New York: Brunner-Routledge.

Worthington, E. L., Jr., Davis, D. E., Hook, J. N., Miller, A. J., **Gartner, A. L.**, & Jennings, D. J. II. (2011). Promoting forgiveness as a religious or spiritual intervention. In J. D. Aten, M. R. McMinn, & E. L. Worthington, Jr. (Eds.), *Spiritually oriented interventions for counseling and psychotherapy* (pp. 169-195). Washington, D.C.: American Psychological Association.

2010

Worthington, E. L., Jr., Davis, D. E., Hook, J. N., **Gartner, A. L.**, & Jennings, D. J. II. (2010). Relational spirituality and forgiveness. In J. H. Ellens (Ed.), *The healing power of spirituality: How faith helps humans thrive* (pp. 41-58). Westport, CT: Praeger.

Non-refereed Articles

2009

Worthington, E. L., Jr., Hook, J. N., Davis, D. E., **Gartner, A. L.**, & Jennings, D., J., II. (2009). REACH: An evidence-based group intervention to help Christians forgive. *Christian Counseling Connection*, 16(4), 9-10.

2008

Gartner, A. L., & Worthington, E. L., Jr. (2008). Student excitement, engagement, and knowledge of psychological science in a Positive Psychology class. *VCU Teaching: CTE (Center for Teaching Effectiveness) Newsletter*, 9, 13-14.

Articles Under Editorial Consideration

Gartner, A. L., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., & Davis, J. (under review). Acceptance of forgiveness. Manuscript under review at *Personality and Social Psychology Bulletin*.

Hook, J. N., Worthington, E. L., Jr., Utsey, S. O., Davis, D. E., **Gartner, A. L.**, Jennings, D. J. II., Van Tongeren, D. R., & Dueck, A. (under review). Intrapersonal and interpersonal conceptualizations of forgiveness. Manuscript under review at *British Journal of Social Psychology*.

Jennings, D. J. II., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., Gartner, A. L., & Greer, C. L. (under review). The transgressor's response to denied forgiveness. Manuscript under review at *Journal of Personality and Social Psychology*.

Miller, A. J., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., **Gartner, A. L.**, & Frohne, N. A. (under review). A brief workshop to improve communication of reproach and apology in college students. Manuscript under review at *Journal of Counseling and Development*.

Chapters Under Editorial Consideration

Worthington, E. L., Jr., Davis, D. E., Hook, J. N., Van Tongeren, D. R., **Gartner, A. L.**, Jennings, D. J. II., Greer, C. L., & Greer, T. W. (in press). Forgiveness and religion: Update and current status. In M. R. Maamri, N. Verbin, & E. L. Worthington (Eds.), *A Journey through Forgiveness* (pp.). Oxford, United Kingdom: Inter-Disciplinary Press.

Worthington, E. L., Davis, D. E., Hook, J. N., Webb, J. R., Toussaint, L., Sandage, S. J., **Gartner, A. L.**, & Van Tongeren, D. R. (under review). Forgiveness as fruit of the spirit and fruit of the garden: Consequentialist evidence of the physical and mental health sequelae of forgiveness. In T. G. Plante (Ed.), *Religion and Positive Psychology: Understanding the Psychological Fruits of Faith* (pp.). Westport, CT: Praeger Publishers.

Manuscripts in Preparation

Gartner, A. L., & Worthington, E. L., Jr.. Student excitement, engagement, and knowledge of psychological science in a Positive Psychology class. Target Journal: *Teaching of Psychology*.

Scherer, M., Worthington, E. L., Jr., Hook, J. N., Campana, K. L., West, S. L., & **Gartner, A. L.** Forgiveness and cohesion in familial perceptions of alcohol misuse. Virginia Commonwealth University, Richmond, VA.

PAPER/POSTER PRESENTATIONS

2011

Gartner, A. L., Worthington, E. L., Jr., Jennings, D. J., II., Van Tongeren, D. R., Green, J. D., & Greer, C. L. (2011, April). Positive Psychology and Religion and Spirituality. Symposium presented at the APA Division 36 Midyear Conference, Columbia, MA, April 15, 2011.

2010

Gartner, A. L., (2010, November). The Scientific Study of Mercy. Paper presented at the Christian Association for Psychological Studies East Conference, Chambersburg, November, 5, 2010.

Gartner, A. L., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., & Jennings, D. J. II. (2010, March). The Acceptance of a Communicated Offer of Forgiveness in Romantic Relationships. Paper presented at the APA Division 36 Midyear Conference, Columbia, MA, March 26, 2010.

Jennings, D. J. II., Hook, J. N., Davis, D. E., Gartner, A. L., & Greer, C. L. (2010, April). The transgressor's response to a rejected request for forgiveness. Poster presented at the Christian Association for Psychological Studies International Conference, Kansas City, April 17, 2010.

2009

Davis, D. E., Hook, J. N., Jennings, D. J. II., & Gartner, A. L. (2009, November). Relational humility. Paper presented at the Christian Association for Psychological Studies East Conference, Chambersburg, November, 6, 2009.

Gartner, A. L., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., & Jennings, D. J. II. (2009, April). The Acceptance of a Communicated Offer of Forgiveness in Romantic Relationships. Poster presented at the Graduate Student Symposium, Virginia Commonwealth University, April 21, 2009.

Gartner, A. L., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., & Jennings, D. J. II. (2009, November). The Acceptance of a Communicated Offer of Forgiveness in Romantic Relationships. Poster presented at the CAPS East Conference, Chambersburg, PA, November 7, 2009.

Hook, J. N., Worthington, E. L., Jr., Davis, D. E., **Gartner, A. L.**, Jennings, D. J. II., & Hook, J. P. (2009, April). Empirically supported religious and spiritual therapies. Paper presented at the Mid-Year Conference on Religion and Spirituality, Loyola Columbia Graduate Center, April 4, 2009.

Hook, J. N., Worthington, E. L., Jr., Davis, D. E., **Gartner, A. L.**, Jennings, D. J. II., & Hook, J. P. (2009, April). Empirically supported religious and spiritual therapies. Poster presented at the Christian Association for Psychological Studies National Conference, Orlando, April 4, 2009.

Hook, J. N., Worthington, E. L., Jr., Davis, D. E., **Gartner, A. L.**, Jennings, II, D. J., & Hook, J. P. (2009, April). *Empirically supported spiritual and religious therapies*. Paper presented at the meeting of the American Psychological Association, MidYear Convention, Columbia, MD, April 4, 2009.

Miller, A. J., Worthington, E. L., Jr., Hook, J. N., Davis, D. E., & **Gartner, A. L.** (2009). An intervention to improve communication of reproach and apology after transgressions. Virginia Commonwealth University, Richmond, VA.

2008

Hook, J. N., Worthington, E. L., Jr., Davis, D. E., **Gartner, A. L.**, Jennings, D. J. II., & Hook, J. P. (2008, November). Empirically supported Christian therapies: A review. Paper presented at the Christian Association for Psychological Studies East Conference, Chambersburg, November, 7, 2008.

Worthington, E. L., Jr., Miller, A. J., & Gartner, A. L. (2008, April). Gender Differences in Stress, Forgiveness, and Mental Health in Recently Married Couples. Poster presented at the Women's Health Research Conference, Virginia Commonwealth University, April 16, 2008.

2005

Rojewski, A., Buckley, M., **Gartner, A.**, & Brooks, C. (2005, March). Effects of an Extinction Cue and Stress Procedure on Reinstatement in Appetitive Conditioning with Rats. Poster presented at the Eastern Psychological Association Annual Conference, Boston, MA, March 16, 2005.

TEACHING EXPERIENCE

Graduate Courses Taught:

Statistics in Psychological Research I (VCU; Lab Instructor)
Advanced Statistics – Graduate Study Lab (VCU)

Undergraduate Courses Taught:

Introduction to the Helping Relationship (VCU)
Positive Psychology (VCU)
Experimental Methods in Psychology (VCU; Teaching Assistant)

Guest Lectures:

Principles in Psychological Measurement (VCU)

CLINICAL EXPERIENCE

Practicum student.

University of Virginia Center for Addiction Research and Education, Richmond, VA.

June 2010 – present.

Provided empirically supported cognitive behavioral treatment to substance dependent

individuals participating in a research clinical trial. Administered structured intake interviews and assessed psychology functioning and eligibility to participate in research trials. Provided empirically supported motivational interviewing sessions to young adults who endorsed high risk drinking behaviors. Attended weekly group supervision meetings.
Supervised by J. Kim Penberthy, PhD, LCP, Christina Hill, PhD.

Practicum student
August 2009-present

University Counseling Services, Virginia Commonwealth University, Richmond, VA
Provide weekly individual psychotherapy, administer weekly intake evaluations.

Practicum student
August 2008-May 2009

University Counseling Services, Virginia Commonwealth University, Richmond, VA
Process observer for weekly group psychotherapy.

Practicum student
May 2008-August 2009

Center for Psychological Services and Development, Richmond, VA
Provide weekly individual and couple psychotherapy

Intern
May 2004-August 2005

Arbor Circle Homeless Youth Services Center, Grand Rapids, MI
Assisted clients with apartment and job searches, working with different agencies, and observed client assessments and evaluations.

SERVICE

APA Division 36 Student Leader
January 2010-present

APA, Division 36, Psychology of Religion
Engage student involvement in the division, organize faculty and student meetings at the mid-year conference

Program Task Force
November 2008-May 2009

Virginia Commonwealth University, Richmond, VA
Meet to discuss and address issues related to program climate.

AWARDS AND HONORS

CAPS East Student Award for Outstanding Paper Winner – 2nd place 2009
CAPS Outstanding Graduate Student Award 2010

PROFESSIONAL ASSOCIATIONS

American Psychological Association
American Psychological Association of Graduate Students
Christian Association for Psychological Studies
Division 36: Psychology of Religion