

**The Differential Prediction of Outcome Following Interpersonal Offenses Versus  
Impersonal Tragedies by Attachment to People and Attachment to God**

by

Jolene M. Hill

A thesis

submitted in partial fulfillment

of the requirements for the degree

Master of Arts

Department of Psychology

BROCK UNIVERSITY

St. Catharines, ON

August 2014

© Jolena-Sophia Des Alexandra, 2014

## **Abstract**

Previous research has found that attachment styles to people and to God are related. However, to my knowledge, no one has examined whether an individual's attachment style to God is essentially another expression of general attachment style or whether it is a different, albeit, related construct. I hypothesized that God attachment styles are different and that this would be reflected in (1) attachment to people and attachment to God independently contributing to prediction of outcome following upsetting events, and (2) both attachment measures differentially predicting outcome following interpersonal offenses versus impersonal tragedies. Two studies were conducted, one examining Christians who had experienced an interpersonal offense and the other examining Christians who had experienced an impersonal tragedy. The results provided mixed support for the first hypothesis and stronger support for the second. Future research should include longitudinal studies in order to truly determine whether attachment scores uniquely predict subsequent outcome.

## Acknowledgements

I would like to thank my committee, Dr. Kathryn Belicki, Dr. Nancy DeCourville, and Dr. Drew Dane for their insightful comments, constant availability, and never-ending patience. I would especially like to thank Dr. Kathryn Belicki, my supervisor. Without her, this would have never come to fruition. She is the most sagacious, all-knowing, always insightful woman that I have ever known. Her talents far exceed anything psychology-related. She has been a light at the “end of my tunnel!”

I would also like to thank my external examiner, a theology professor, Dr. Thomas O’Connor. I deeply appreciated the opportunity to have a theology-driven mind at my defense.

There are two more people without whom I would not have been able to succeed. The first is my dear, departed mother. I did this for her. She was and is the “love of my life.” Everything I ever do that is good or worthy shall always be dedicated to her. She loved me unconditionally, and I miss her greatly!

The second is my dear, dear friend, Dr. John Roberts of University at Buffalo. He has been my rock, my advisor, and my mentor through many seasons now. I shall be ever eternally grateful for his invaluable advice, counsel, and guidance. It was his constant encouragement that brought me here. Without his support, this would not be possible!

Finally, I want to thank my heavenly Father, who inspired me to write about Him. I think of the words of a song sung to me from long ago by my mother, a song written by Andrae Crouch...

“How can I say thanks for the things you have done for me? Things so undeserved, yet you gave to prove your love for me. The voices of a million angels cannot express my gratitude. All that I am or ever hope to be, I owe it all to Thee...to God be the glory, to God be the glory.”

## TABLE OF CONTENTS

Abstract .....	ii
Acknowledgements .....	iii
Table of Contents .....	v
List of Tables .....	vi
List of Appendices .....	vii
Introduction .....	1
Study 1 Method .....	29
Study 1 Results .....	35
Study 2 Method .....	44
Study 2 Results .....	47
Discussion .....	56
References .....	66
Appendices .....	79

## LIST OF TABLES

TABLE		PAGE
1	Psychometric Properties of Study 1 Variables.....	38
2	Table of Correlations – Study 1 .....	39
3	Summary of Multiple Regression Predicting Post-traumatic Symptoms .	42
4	Summary of Multiple Regression Predicting Forgiveness of People .....	42
5	Summary of Multiple Regression Predicting Forgiveness of God .....	43
6	Summary of Multiple Regression Predicting Anger at God.....	43
7	Psychometric Properties of Study 2 Variables.....	49
8	Table of Correlations – Study 2 .....	50
9	Summary of Multiple Regression Predicting Post-traumatic Symptoms .	53
10	Summary of Multiple Regression Predicting Forgiveness of People .....	53
11	Summary of Multiple Regression Predicting Forgiveness of God .....	54
12	Summary of Multiple Regression Predicting Anger at God.....	54
13	Exploratory – Study 1 – Multiple Regression Predicting IES .....	91
14	Exploratory – Study 1 – Multiple Regression Predicting TRIM .....	91
15	Exploratory – Study 1 – Multiple Regression Predicting God TRIM .....	92
16	Exploratory – Study 1 – Multiple Regression Predicting Anger at God ..	92
17	Exploratory – Study 2 – Multiple Regression Predicting IES .....	93
18	Exploratory – Study 2 – Multiple Regression Predicting TTF.....	93
19	Exploratory – Study 2 – Multiple Regression Predicting God TRIM .....	94
20	Exploratory – Study 2 – Multiple Regression Predicting Anger at God ..	94

## LIST OF APPENDICES

### APPENDIX

A	Measures .....	79
	Demographics .....	79
	Questions about the Event.....	80
	Age Universal I-E Scale -12 .....	81
	Stressful Life Events .....	82
	Experiences in Close Relationships .....	83
	Attachment to God Inventory .....	85
	TRIM.....	86
	God TRIM.....	87
	Tendency to Forgive .....	88
	Anger at God.....	89
	Impact of Event Scale .....	90
B	Exploratory Analysis – Study 1 .....	91
	Multiple Regression Predicting Post-traumatic Symptoms .....	91
	Multiple Regression Predicting Forgiveness of Offender .....	91
	Multiple Regression Predicting Forgiveness of God .....	92
	Multiple Regression Predicting Anger at God.....	92
C	Exploratory Analysis – Study 2 .....	93
	Multiple Regression Predicting Post-traumatic Symptoms .....	93
	Multiple Regression Predicting Dispositional Forgiveness .....	93
	Multiple Regression Predicting Forgiveness of God .....	94
	Multiple Regression Predicting Anger at God.....	94

## Introduction

This research focused on attachment styles to people and attachment styles to God<sup>1</sup> and the differential impact of attachment to people versus attachment to God on outcome following different types of upsetting events (interpersonal offenses versus impersonal tragedies). Three types of outcome were considered: post-traumatic symptoms, forgiveness of people, and forgiveness of God.

First, in this introduction I will give a general overview of attachment theory. Next, I will look at how attachment theory has been expanded to include attachment styles to God. Regarding attachment styles to God and their relation to “general” attachment style, there have been mixed results. Some results provide evidence for a model known as the *correspondence model* (Brokaw & Edwards, 1994; Hall, Brokaw, Edwards, & Pike, 1998) while other results support a model known as the *compensation model* (Granqvist, 1998; Kirkpatrick & Shaver, 1990). Both will be reviewed, and it will be noted that the best evidence favors the former. However, this still leaves unaddressed the issue of whether attachment to God is simply an expression of general attachment style or whether it is related but different. I hypothesized that it is different and that this difference would be reflected in (1) both attachment to people and attachment to God independently contributing to prediction of outcome following upsetting events, and (2) both differentially predicting outcome following interpersonal offenses versus impersonal

---

<sup>1</sup> As a Christian, it is important for me to capitalize the word “God.” Therefore, I will continue to do so throughout this document. Moreover, such capitalization is in keeping with the practice of the participants in this study. I do, however, recognize that this would not be the practice of all readers of this document. Finally, in recognition that some readers will be unfamiliar with Christian experience and language, I will include footnotes throughout the introduction, explaining or describing such material..

tragedies. Outcome was measured both by post-traumatic symptomatology and forgiveness. The introduction will include a section addressing post-traumatic symptomatology following upsetting events and the relations of such symptoms to attachment. Additionally, the relations between attachment style and forgiveness will be examined. I will review literature on both forgiveness of people and of God. Finally, the mediating role of forgiveness between attachment and post-traumatic symptoms will be explored.

### **Overview of Attachment Theory**

Attachment theory was introduced by John Bowlby (1969,1982). It emphasized the importance of the maternal bond between a mother and her child. Bowlby ascertained that the lack of such a bond could lead to detrimental outcomes as the child approached maturity. These outcomes included the absence of positive social and emotional interactions with others. Bowlby also stressed the importance of a child feeling a sense of security when interacting with her/his primary caregiver, most often the mother. When the caregiver consistently meets the physical and emotional needs of the child, the child will begin to experience an awareness of feeling safe and secure. The child's primary caregiver is referred to as her/his attachment figure. Bowlby argued that infants are born with an instinctual motivation to be near the attachment figure. They will seek close proximity to the caregiver when they sense danger or threat. Because infants are totally reliant on the caregiver for their psychological and physical needs, such as helping them to regulate affect and providing food and nourishment, there appears to be a strong biological basis that helps to induce close proximity seeking with the caregiver. It is believed that the child's desire for close proximity is evolutionary because it helps to protect the child from

potential predators. This increases the child's chances of survival. Increasing the probability of survival increases the probability of reproduction. Hence, those genes that help to facilitate a child's desire to be near the caregiver will be selectively passed on.

Psychoanalytic and behavioral psychologists postulated that the mother/child attachment was not a biological attachment; rather, it occurred because the mother fed the child. In contrast, Bowlby (1988) maintained that humans are naturally inclined to seek relationships with others. Along with Harlow (1959), he believed that human beings have a proclivity for contact with one another and that they find comfort in this contact. If humans are denied this contact, Bowlby maintained that they will develop psychological problems.

Building on the work of Bowlby, Mary Ainsworth (1967) was the first to introduce the concept of attachment styles, although she did not name attachment styles as such at that time. She wanted to be able to categorize the behavior of infants after they were separated and then reunited with their mothers. Ainsworth developed a procedure known as the *Strange Situation* in order to evaluate the reactions of the children (Ainsworth, Blehar, Waters, & Wall, 1978).

First, the child and mother are brought into a room full of toys. They are alone in the room, and the parent does not play with the toys, thereby allowing the child to explore the environment on her/his own. Once the child becomes familiar with the room and toys, a stranger enters the room. The stranger speaks to the mother and then approaches the child in a friendly manner. When the child is not looking, the mother leaves the room. Once the child becomes aware of the mother's absence, researchers begin to monitor the

behavior of the child. They continue their observations as the mother returns and attempts to comfort the child (Ainsworth et al., 1978).

Ainsworth and colleagues' (1978) findings originally led to the articulation of three attachment types: secure, anxious, and avoidant. According to Ainsworth et al. (1978), secure infants will become upset once they realize that their mother is gone. Upon the mother's return, the child is easily comforted and will soon go back to exploring the environment and playing with toys. On the other hand, anxious children become extremely agitated and upset once they realize their mother has left the room. They are not easily comforted by their mother when she returns. Eventually, however, they will be either happy to see their mother again, or they will remain angry at her for leaving. Mothers of anxious children are responsive one moment and unresponsive the next. This vacillation in behavior on the part of the mother causes the child to feel insecure. Finally, avoidant children do not seem to notice or care when their mother leaves. Most often they show no interest in her upon her return. The mothers of avoidant children appear to be emotionally unresponsive to their children.

Eventually, Main and Solomon (1990) came to believe that a fourth category existed. They labeled this category disorganized/disoriented. These children are identified by their strange behaviors, such as sitting under tables upon the return of the mother, appearing not to care about her presence. Others will just lie on the floor, not moving. They may make no attempt to seek close proximity to the caregiver when she returns, and they often waver between anxious and avoidant traits.

More recently, in contrast to Ainsworth et al.'s (1978) and Main and Solomon's (1990) classifications, attachment has been conceptualized as dimensional, with

individuals varying on two dimensions: anxiety and avoidance. Secure individuals are people who score low on both dimensions (Brennan, Clark, & Shaver, 1998).

According to Mikulincer and Shaver (2007), infants are most likely to become attached to one of their parents or sometimes to both. They can, however, also become attached to other family members, such as grandparents or older brothers and sisters. They may even become attached to their personal babysitters or to the workers in day care facilities. This bond enables children to reduce their stress and irritability once contact is made. In essence, children feel a sense of security and peace once they are able to approach the primary caregiver and feel lovingly accepted by this person. Basically, having a secure attachment enables children to manage their negative emotions.

In his book, Bowlby (1969/1982) postulated that it is possible for infants to become attached to more than one caregiver. He believed that when this happens, they will form a hierarchical order of those individuals to whom they eventually become attached. The person to whom the infant is closest will be at the top of this arrangement. This order can be composed of individuals from the child's different social groups.

According to Bowlby (1988), although the attachment system is most crucial during childhood and adolescence, it continues to be of the utmost importance as one matures into adulthood. He firmly believed that relying on others throughout the lifespan was an advantageous strategy. Further, he believed that even adults could benefit from having an attachment figure, not just children, as adults, too, can become overwhelmed and stressed.

In support of Bowlby's assertions, Mikulincer and Shaver (2004) found that individuals who had access to an attachment figure were able to facilitate self-soothing for

themselves. Conversely, those who did not have access to attachment figures demonstrated more negative affect than those who did. For example, poorer self-esteem and emotional well-being have been reported for the insecurely attached (Bureau, Easterbrooks, & Lyons-Ruth, 2009). Moreover, Hazan and Shaver (1990) also found that individuals who were insecurely attached reported higher levels of loneliness and stress.

As an individual begins to reach adolescence and adulthood, the number of people available to become attachment figures begins to increase. For example, individuals may have the opportunity to experience close proximity to teachers, coaches, pastors, and romantic partners, among others. As such, emotional bonds may be formed, leading to attachment figure prospects (Mikulincer & Shaver, 2007). According to Fraley and Shaver (1999), many adults report feeling protected by saints, angels, and even the spirits of deceased loved ones. Still others may view God (or a higher being) as their primary attachment figure. Context-specific attachments can also occur (Mikulincer & Shaver, 2007). For example, an individual may view a psychologist in a therapy setting or a supervisor in the work place environment as their attachment figure.

Building on research conducted by Hazan and Shaver (1987) that extended attachment theory from parent-child relationships to those of adults, several studies have indicated that attachment styles are a relatively stable and enduring pattern of behavior within persons throughout their lives. For example, Shaver and Hazan (1988) believed that the infant/caregiver bond present at the beginning of an individual's life is replicated later on in their romantic relationships. They state, "For every documented feature of attachment, there is a parallel feature of love, and for most documented features of love, there is either a documented or a plausible infant parallel" (p. 73).

These authors maintain that there are many similarities between infant love and amorous love. These parallels include hugging, holding, laughing, and a desire to stay in close proximity of the loved one (Shaver & Hazan, 1988). Like Bowlby (1969/1982), Shaver and Hazan assert that it is imperative for the attachment figure to respond with urgency, affection, and tenderness to the requests of the infant or partner. This will determine whether a secure attachment style is formed. Positive responses on the part of the attachment figure will enable the infant or partner to develop a sense of security and confidence.

Conversely, when the attachment figure is not consistently available, the infant or partner may become anxious. Attempts to seek closeness to the attachment figure will not be made indefinitely, as the infant or partner will eventually become frustrated by what they view as a display of rejection on the part of the attachment figure. If this happens, an insecure attachment style will be formed (Shaver & Hazan, 1988).

Mikulincer and Shaver (2007) note that romantic alliances differ from the infant/caregiver relationship because they require the participants to maintain two separate roles in the relationship. There will be times when partners require emotional support and love from their mate, while at other times, they, themselves, will be called upon to give emotional support and love. Of interest, this type of giving and receiving of comfort can also be seen in monogamous non-humans, such as titi monkeys and guinea pigs (Kaiser, Kirtzeck, Hornschuh, & Sachser, 2003).

In contrast to those studies which indicate that attachment style is a relatively stable and enduring pattern of behavior (Shaver & Hazan, 1988), other studies have suggested otherwise. According to Lamb, Thompson, Gardner, Charnov, and Estes (1984),

additional research has demonstrated that although children tend to exhibit considerable stability in their attachment styles, there is also the possibility for change. Such variation may be caused by a shifting in the family dynamics or circumstances.

A study conducted by Cozzarelli, Karafa, Collins, and Tagler (2003) further demonstrates that an individual's attachment style may change over time. These authors examined 442 women who had experienced an abortion. Attachment styles were determined by self-reports. Forty-six percent of the women reported a change in their attachment style over a two year period. Changes from secure to insecure were most often reported by those women who had experienced negative life events, such as depression or overuse of alcohol. In contrast, those reporting a change from insecure to secure were more likely to be the recipients of social support or more likely to also report an increase in self-esteem. It is important to keep in mind that malleability in attachment styles does occur, as this will become important as I consider whether attachment to people is different from attachment to God

As will become clear below, of particular relevance to this study, is that the attachment system will become activated in an environment whereby a threat to the relationship exists (Gillath, Mikulincer, Fitzsimons, Shaver, Schachner, & Bargh, 2006). For example, asking a participant to think about a previous transgression requires the individual to form a mental image of the distressing event. According to Kobak and Sceery (1988), forming this image will most often activate the attachment system. Therefore, attachment styles would likely affect post-transgression responses, such as trauma outcomes and forgiveness.

## **Attachment to God**

According to Strelan, Acton, and Patrick (2009), religion influences the lives of billions of people. For many people, religious beliefs involve more than explicit behaviors. For example, some individuals choose to place God at the center of their daily lives. Further, Exline, Park, Smyth, and Carey (2011) note that many people rely on their religion to meet emotional needs, along with attachment needs. Many studies have reported relations between religiosity and positive psychological factors (see Larson, Sawyers, & McCullough, 1997, and McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000, for reviews). For example, Ayele, Mulligan, Gheorghiu, and Reyes-Ortiz (1999) concluded that individuals who reported being religious also reported higher levels of self-esteem, hopefulness, and life satisfaction. In further support of positive relations between religiosity and well-being, George, Ellison, and Larson (2002) found that religious individuals reported higher levels of physical health. However, as noted below, certain forms of religious experience, such as an insecure attachment to God, may have adverse affects on the individual (Ellison, Bradshaw, Kuyel, & Marcum, 2012).

As already stated, many people turn to God to meet their attachment needs. Because of this, researchers have begun to examine attachment styles to God. For example, Cooper, Bruce, Harman, and Boccaccini (2009) examined the relations between attachment to God and a variety of religious coping methods. Attachment to God was measured using the Attachment to God Inventory (Beck & McDonald, 2004), which is based on the Experiences in Close Relationships measure (Brennan et al., 1998). Cooper et al. predicted that a secure attachment style to God would be related to more positive methods of coping, such as seeking comfort from God and the church when experiencing

negative life events. Conversely, an insecure attachment style was expected to be associated with negative coping methods, such as failing to reach out to God or the church during times of distress.

Consistent with their hypotheses, results showed that those who were securely attached to God were more likely to use positive methods of coping. These methods included being kind to others (e.g., providing help to other church members), focusing thoughts on religious ideas, or participating in religious activities in an attempt to avoid rumination on negative events. Results also indicated that the insecure group showed more anger and doubt towards God. These latter findings suggest that some religious experience can potentially be harmful (Cooper et al., 2009); for example, insecurely attached people's relation to God can be a source of distress.

In response to the recent interest in attachment styles to God, some researchers have begun to examine and debate the relations between attachment styles to people and attachment styles to God. Kirkpatrick and Shaver (1990) maintain that those who have a secure attachment with people will have a secure attachment with God. Likewise, if people have an insecure attachment with people, they will exhibit an insecure attachment to God. As such, secure people are more likely to view God as loving and intimate than the insecure. Additionally, those who are securely attached to people will often report that their relationship with God is more stable and emotionally binding (Hall & Edwards, 2002). This model of the relations between attachment styles to people and attachment styles to God is known as the correspondence model (Hall, Fujikawa, Halcrow, Hill, & Delaney, 2009). As summarized by Hall et al., attachment to God is understood as arising from an implicit generalization to God of one's experiences with people.

In contrast, the compensation model postulates that an individual's attachment style to people does not correspond with her/his attachment style to God (Hall et al., 2009). In this model, insecurely attached people seek out God as a replacement for the absence of a human attachment figure, typically in a time of crisis. To my knowledge, the precise mechanisms by which this happens have not been articulated. However, the general idea is that the insecure individual, in a time of crisis, reaches out to God, apparently on the basis of a description of God's character, believing God to be different from people.

In support of this notion, Kirkpatrick (1997) conducted a four-year longitudinal study on romantic relationships. He found that women who were insecurely attached to their romantic partner were more likely to have a relationship with God than those who were securely attached to their partners. Also of interest was the finding that anxious women were more likely to report having had a religious experience or conversion<sup>2</sup> than either avoidant or secure women.

Overall, the evidence either in support of or against these two models has been mixed. Some researchers have come to the conclusion that it is the correspondence model we should be addressing our attention to while others argue that our focus should be on the compensation model (for review see Hall et al., 2009). Hall et al. argue that the conceptual models for correspondence and compensation contain limitations and that this is why mixed results have been produced. In particular, they postulate that there are problems in the way that spirituality and religiosity have been conceptualized and measured. In an attempt to address this issue, the authors propose that a distinction be made between

---

<sup>2</sup> For the reader unfamiliar with the word "conversion," conversion consists of a sudden and complete embracing of a set of religious beliefs that the individual experiences as life-altering.

*implicit* and *explicit religiosity*. They argue that previous studies employed measures that simultaneously tapped into both internal and external characteristics. For example, when asking how much a person prays, an insecure person might pray a lot, but in a clingy and dependent way. As such, the external practice of prayer has been melded with the internal insecurity. The authors also argue that there has been a failure to conceptually recognize that temporary emotional compensation, such as a conversion experience, does not change the underlying insecurity. It is simply temporary.

Hall and colleagues (2009) explain that emotional information can be processed in two different and simultaneous ways, which they call *implicit and explicit relational knowledge*. They state that the research literature indicates that the processing of emotional information is similar to other information processing. That is, this processing is based on a parallel processing structure as opposed to a single, linear sequential structure. These multiple parallel pathways allow for simultaneously co-occurring implicit and explicit relational knowledge. Implicit relational knowledge is formed by the repeated exposure to primary attachment relationships. This exposure, in essence, teaches us “how to be with someone” (p. 231). It becomes the memory basis for implicit relational knowledge. Essentially, implicit relational knowledge is our intuitive sense of how relationships should work. It is important to note that it may be impossible to articulate such understanding verbally, even as adults. Bowlby (1973) called such implicit relational knowledge *internal working models*. Collins and Read (1994) have reported evidence suggesting that these internal working models help to largely determine how an individual responds to others relationally. As for explicit relational knowledge, in the context of

attachment styles to God, an example would be “I have a close relationship with God because I read my Bible daily and attend church at least once a week.”

Hall et al. (2009) go on to propose a theoretical point of view suggesting that a person’s motivation for seeking a relationship with God corresponds with one’s internal working model of attachment to people. Because insecure people have difficulty regulating their emotions, Hall and colleagues maintain that they may become religious in a desperate attempt to feel better. Conversely, although securely attached individuals may turn to God for assistance with affect regulation, they are more likely to pursue religion for “its own sake” and not just as a tool for affect regulation, because they are more adept at managing their emotions. Even though the insecurely attached may attempt to use God to manage affect, it is likely that they would have difficulty doing so because their internal working model reflects either a negative sense of self or a negative sense of significant others. In other words, as previously stated, their attempt to regulate affect may provide temporary emotional compensation, but it would not necessarily change the underlying structure of their internal working model.

According to Hall et al. (2009), the literature suggests that the evidence for the compensation model includes sudden conversions and increased levels of religious behaviors (which one could speculate, as Hall et al. does, is in response to a crisis. However, their actual study did not address this possibility). In other words, the evidence for religious compensation is based on different aspects of explicit religiosity. Other examples of explicit religiosity include frequency of prayer, church attendance, and how often one reads religious literature. As previously stated, Hall and colleagues maintain that such measures of explicit religiosity do not take into account the components of internal

working models that are a result of motivations and experience. In the context of religiosity, these components of internal working models become evident in implicit religiosity. Therefore, they argue that in order to evaluate an individual's underlying inclinations, implicit religiosity needs to be considered. For example, instead of looking at the frequency of prayer, one needs to examine such things as the style of prayer. The amount of prayer reflects explicit religiosity while the style reflects implicit religiosity. Referring to the example previously used, one could anticipate that anxious individuals might exhibit what Hall et al. describes as "clingy, dependent, and inconsistent" religious prayers<sup>3</sup>, while avoidant individuals might favor reciting written prayers.

Empirical support for Hall et al.'s (2009) ideas can be found in a study conducted by Byrd and Boe (2001). These authors conducted a study examining the association between attachment types and prayer. They used measures taken from Poloma and Pendleton (1989) to identify four types of prayers: meditative prayer (e.g., "How often do you spend time just 'feeling' or being in the presence of God?" and "How often do you spend time just quietly thinking about God?"), colloquial prayer (e.g., "How often do you talk with God in your own words?" and "How often do you spend time telling God how much you love him?"), petitionary prayer (e.g., "How often do you ask God for material things you may need?" and "How often do you ask for material things your friends or relatives may need?"), and ritual prayer (e.g., "How often do you read from a book of prayers?" and "How often do you recite prayers that you have memorized?"). Byrd and

---

<sup>3</sup> For the reader unfamiliar with prayers, there are many "types" of prayers. They can consist of merely reading from printed texts, either silently or aloud. However, they can also be more like a conversation, with the praying person alternating between speaking (silently or aloud) and listening. In the experience of prayer described here, the individual might desperately spew requests, such as "Help me! Help me! Help me!" without pausing to listen and without trusting that the first "help me" was heard.

Boe found that anxious attachment was significantly associated with petitionary (requesting) prayer while avoidant attachment was significantly and negatively associated with colloquial (communicative) and meditative (reflective) prayer.

Given the foundational importance of their work, let us consider the Hall et al. (2009) study in some detail. The authors recruited a sample of 483 undergraduate students from a Protestant university. Measures included The Experiences in Close Relationships (adult romantic attachment), Attachment to God Inventory, two measures of explicit spiritual functioning (Religious Commitment Inventory and Spiritual Practices Scale), and several measures that they argued reflected implicit spiritual functioning (Spiritual Assessment Inventory, Transgression-Related Interpersonal Motivations Inventory, Tendency to Forgive, Purpose in Life, Congregational Items, and the Spiritual Community Scale).

The authors predicted that an insecure attachment style would be associated with higher levels of spiritual difficulty and impairment as measured by the implicit measures of spiritual functioning. They found group differences on several of the measures used to assess implicit spiritual functioning. For example, the secure and dismissing groups reported higher levels of forgiveness than did the anxious and fearful. Additionally, they predicted that an individual's attachment style would not predict their explicit religious involvement. They found no difference between attachment groups on explicit spiritual functioning

One criticism of the Hall et al. (2009) study is that they used the ECR to assign people through median splits into four categories instead of using the full range of scores, which is the contemporary practice. Perhaps their failure to find a relation between

attachment and all measures of implicit religiosity was due to the loss of variability that occurred by assigning people to one of four types rather than retaining their full scores on the two subscales. I will be using the same questionnaires; however, my scoring will be consistent with contemporary practice.

It should also be noted that although Hall et al. (2009) seem to imply that attachment to people and attachment to God are the result of the same internal working model, their language of “corresponds to” is ambiguous. It does not clarify whether there is one underlying internal working model of attachment or separate internal working models. I hypothesize that there are two separate internal working models, related but distinct, one regarding how to be with people and the other regarding how to be with God.

**Is attachment to God *redundant* with general attachment style?** Although Hall and colleagues (2009) appear to make a convincing argument, they do not address whether attachment to God is essentially redundant with attachment to people or whether it is a related but potentially different construct. There is reason to believe that attachment to God will be somewhat independent of attachment to significant others because God is understood to have very different characteristics from those of humans. In essence, God lacks “skin,” and therefore, cannot be supportive in the same way as another (human) person can be. Conversely, God is generally perceived by Christians to be omnipresent and omnipotent, entirely just and good, and completely loving, which conveys possibilities for support not available from humans. Therefore, the core hypothesis of this thesis is that attachment to God is somewhat independent of attachment to people and that, in turn, can be a source of strength and/or a source of distress for individuals who believe in a God with whom one can have a relationship. This study will focus on people who self-identify

as Christians because they are likely to believe in a “personal God,” that is, a God who knows them and interacts with them as individuals (Bracy, 2011).

This hypothesis will be tested as follows. If attachment to people and attachment to God are related but different, then they should contribute independent variance in a regression predicting outcome when both are entered simultaneously. However, this is insufficient to demonstrate that the underlying constructs are independent because it could be that there is only one underlying construct, attachment style, and the two measures reflect different aspects of the same concept. For example, we have seen above that while a case can be made for a general attachment style that is relatively stable across time, one can have different levels of attachment to different people in response to different contexts or relationships. If attachment to God is simply another exemplar of general attachment, then measures of attachment to God and attachment to people would show a similar pattern of prediction across different outcomes. However, if they are in some ways fundamentally different, then they should show differential prediction.

Specifically, as noted above, stressful circumstances “activate” attachment behavior. Experiencing a significant interpersonal offense should particularly activate one’s attachment orientation to people. Presumably, attachment to God would also be activated, but given the greater relevance of human relationships to the injury, attachment to people should more strongly predict outcome following injury. In contrast, experiencing an impersonal tragedy, such as an accident (without human cause) or a medical crisis should particularly activate attachment to God because God is understood to be able to prevent or change such events. It then follows that one would expect attachment to people and attachment to God to differentially predict outcome following interpersonal

and impersonal traumas. Specifically, in this research, I will measure three outcomes following trauma that I would anticipate would show differential relations to attachment to God versus attachment to people: post-traumatic symptoms, forgiveness of people, and forgiveness of God. First, let us turn our attention to attachment and mental health following trauma. Subsequently, I will address attachment and forgiveness following trauma.

### **The Relations of Attachment and Outcomes Following Trauma**

There is a large literature on trauma and its impact on functioning, and there is considerable variation in opinion on what exactly constitutes “trauma.” It is beyond the scope of this study to address this issue; however, I will be studying deeply upsetting events that participants of the study identify as traumatic. As will be discussed in more detail below, there will be two studies, one involving an interpersonal offense that is deeply upsetting and one involving an impersonal tragedy.

There has been some evidence indicating that a secure adult attachment style contributes to an overall sense of well-being. For example, La Guardia, Ryan, Couchman, and Deci (2000) reported positive relations between secure attachment and well-being. Similarly, Torquati and Raffaelli (2004) found positive relations between secure attachment and positive affect. Finally, Ling, Jiang, and Xia (2008) found positive relations between anxious and avoidant attachment and negative affect. They also found negative relations between anxious and avoidant attachment styles and life satisfaction.

Owen, Quirk, and Manthos (2012) examined the relations between betrayal traumas (defined as trauma directed toward someone who is close to the perpetrator), attachment, and well-being. They found that betrayal trauma was associated with insecure

attachment and that both betrayal trauma and attachment were related to poorer well-being. Similarly, betrayal traumas that have been experienced early in life have been associated with insecure attachment, post-traumatic stress disorder symptoms, depression, anxiety, and substance abuse (e.g., DePrince, 2005; Freyd, Klest, & Allard, 2005; Gobin & Freyd, 2009; Kendall-Tackett & Marshall, 1999; Lindblom & Gray, 2010; Romans, Belaise, Martin, Morris, & Raffi, 2002).

According to Sandberg, Suess, and Heaton (2010), these traumas may cause an individual to have difficulty trusting and relying on others. They may also prevent individuals from seeking emotional support when needed. This difficulty in reaching out to others in times of need may foster an insecure attachment style. For example, Owen et al. (2012) reported a positive association between betrayal trauma and anxious or avoidant attachment styles. Moreover, some research has found that when a betrayal is committed by someone who is close to the victim, as opposed to someone who is not as emotionally bound to the victim, the negative psychological impact will be greater (Lindblom & Gray, 2010). Therefore, the findings from these studies suggest that trauma can be one of the causes of insecure attachment.

Other research has indicated that an insecure attachment style, whether to people or to God, is associated with poor outcomes following stressful or traumatic events, while a secure attachment style is associated with more positive outcomes. A study conducted by Ellison et al. (2012) found that being securely attached to God was associated with a decrease of stress over time. Moreover, both general security of attachment (to God) and anxious attachment moderated the relation between number of stressful events and distress. Specifically, attachment security (as a total score) reduced the impact of traumatic events

or distress, while anxious attachment exacerbated the impact. Finally, the researchers found that having a secure attachment style to God was a stronger predictor of change in distress than other variables, such as race, gender, or SES.

Stalker, Gebotys, and Harper (2005) examined the role of attachment style (to people) as a predictor of outcome following trauma. They looked at 134 women who had reported being abused as children and who had completed an in-patient program for traumatic stress. Multiple linear regression analyses were used to predict changes in symptomatology, trauma-related beliefs, and self-esteem. Measures were administered to the participants at admission, discharge, and at a six-month follow-up. Results indicated that security of attachment was able to predict improvement in outcome both at discharge and at six months.

Like the aforementioned studies, I expected secure attachment styles to be associated with more positive outcomes for those who have experienced an interpersonal offense or impersonal tragedy (and the converse for insecure attachment). However, as discussed in more detail below, I expected attachment to people and attachment to God to vary in the strength in their relations to outcome, depending on the type of outcome (e.g., forgiveness of people versus forgiveness of God) and the type of trauma (interpersonal versus impersonal).

**Measuring trauma outcomes.** The present study was designed prior to the publication of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) 5<sup>th</sup> edition, and therefore, was based on the DSM- IV-R (fourth edition text revision). According to the DSM-IV-R, post-traumatic symptoms include the following: "recurrent and intrusive distressing recollections of the event, persistent

avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), and persistent symptoms of increased arousal (not present before the trauma). Duration of the disturbance is more than one month” (p.468).

Additionally, it is generally recognized that other symptoms may occur following trauma, such as depression and anxiety, either comorbidly with PTSD or in the absence of PTSD. However, given that depression and anxiety may arise from many causes, I will be assessing just trauma-specific symptoms, specifically, intrusive thoughts, hyperarousal, numbing, or avoidance of thoughts associated with the trauma. In addition to measuring trauma-specific symptoms, I will also measure forgiveness of the person(s) who is responsible for the traumatic event (including God).

### **Forgiveness of People**

Psychological research on forgiveness has increased in the past two decades (Strelan et al., 2009), as both the physical and psychological health benefits of forgiveness have been examined (Strelan & Covic, 2006). For example, research has shown that those who forgive may experience positive health outcomes, such as better sleep quality (e.g., Stoia-Caraballo, Rye, Pan, Kirschman, Lutz-Zois, & Lyons, 2008), reduced negative affect (e.g., Worthington & Scherer, 2004), and decreased anxiety (e.g., Ryan & Kumar, 2005).

There has been much debate among scholars regarding the definition of forgiveness. One point of contention is whether forgiveness is the transformation of negative affect to positive affect or just to neutral affect (Thompson et al., 2005). Moreover, some definitions emphasize the role of thoughts, affect, and behaviors (Enright & Fitzgibbons, 2000), while others emphasize the importance of reducing one’s desire for revenge and avoidance and increasing a desire for reconciliation (McCullough, Fincham,

& Tsang, 2003). Finally, some scholars believe that forgiveness is an altruistic act (North, 1998). They believe that it is offered as a gift to the offender (Al-Mabuck, Enright, & Cardis, 1995). Others would disagree with this suggestion, however, and would argue that by forgiving others, we are giving ourselves a gift because forgiveness can lead to relief from anger and hostility (Freedman, 2008).

For this research, both dispositional and offense-specific (or situational) forgiveness will be studied. Forgiveness will be operationally defined in terms of two commonly used instruments. To permit some comparison to the Hall et al. (2009) study of attachment to God and its relation to attachment to people, I will use the same measures of forgiveness. Specifically, the Transgression-Related Interpersonal Motivations questionnaire developed by McCullough, Root, and Cohen (2006, TRIM) will be used to assess situational forgiveness. The TRIM measures the desires to seek revenge and to either avoid or build/rebuild a relationship with the injurer. While neither of these dimensions directly assesses forgiveness, however defined, there is reasonably widespread agreement, as indicated by the frequent use of the TRIM, that these dimensions can be used as an index of forgiveness. For dispositional forgiveness, I will use the Tendency to Forgive Scale (TTF; Brown, 2003), which is a measure in which participants rate their general levels of forgiveness, using their own definition of forgiveness.

Several factors have been shown to either reduce or increase an individual's ability to forgive a transgressor after an interpersonal offense has occurred (McCullough, Bellah, Kilpatrick, & Johnson, 2001). These factors include the personality of the injured person (Shepherd & Belicki, 2008); how angry the victim is after the offense, including both dispositional and situational anger (Lawler-Row, Karremans, Scott, Edlis-Matityahou, &

Edwards, 2008); rumination (McCullough, Bono, & Root, 2007); anger rumination (Barber, Maltby, & Macaskill, 2005); and empathy (Exline, Baumeister, Zell, Kraft, & Witvliet, 2008). Of particular interest to this study are the findings that forgiveness is related to attachment styles to people (Burnette, Taylor, Worthington, & Forsyth, 2007; Millar & Belicki, 2012) and also to attachment styles to God (Davis, Hook, & Worthington, 2008; Hall et al., 2009). These findings with attachment will be discussed in more detail below.

### **Forgiveness of God/Anger at God**

As noted above, many Christians may occasionally experience dissonance and distress regarding God, believing that He is more than capable of intervening when tragedy strikes but for some reason chooses not to do so. Events, such as the sudden death of a child, the loss of a spouse after a prolonged illness, catastrophic earthquakes and tsunamis, or financial ruin, can lead individuals to experience anger and unforgiveness towards God (Exline et al., 2011). In essence, what was once a source of comfort may become a source of stress and struggle.

As stated earlier, most Christians view God as both omnipresent and omnipotent. Consequently, when tragedy strikes, they may view God as the source of suffering or unfairness, thereby, finding it difficult to “forgive” God. Essentially, they become angry with God for what they believe to be God’s unwillingness to intervene. This, in turn, may cause additional distress that would not be incurred by someone who does not believe in God (Exline et al., 2011).

Exline, et al. (2011) examined the prevalence of anger towards God in a large national sample. They found that 62% of Americans reported being angry at God

sometimes, while 2.5% reported experiencing this anger often. Strelan et al. (2009) demonstrated that anger towards God may not be limited to just those who actively participate in an organized religion. They found that both agnostics and atheists also reported anger towards God; however, I cannot determine from these data exactly what it means for an atheist to be angry at God.

As further evidence that anger towards God or an inability to forgive God can indeed cause distress, Exline, Yali, and Lobel (1999) found that difficulty forgiving God predicted anxious and depressed mood within a college student sample. Moreover, they determined that forgiving God predicted these variables independently of forgiving the self and others. This is important because it is further evidence that religious experience can sometimes be a burden instead of a comfort. It also indicates that forgiveness of people and forgiveness of God function independently of each other, and therefore, may be differentially predicted by attachment to people versus to attachment to God.

### **Forgiveness and Attachment**

Lawler-Row, Younger, Piferi, and Jones (2006) examined the role of attachment styles and their relations to forgiveness (of people). Young adults were asked in an interview to recall situations when they had experienced conflict and deception. Blood pressure, heart rate, attachment style, forgiveness, empathy, and emotional expressiveness were assessed. Results showed that securely attached individuals were more forgiving of the specific offense, reported higher levels of dispositional forgiveness, and displayed more positive emotion. Additionally, securely attached adults had lower systolic blood pressure during the interview, and they showed faster blood pressure recovery.

Other studies have also found relations between attachment styles and forgiveness. For example, Burnette, et al. (2007) found that securely attached individuals exhibited greater dispositional forgiveness than did either avoidant or anxiously attached individuals. Furthermore, Millar and Belicki (2012) replicated their findings and extended them to offense specific forgiveness.

In addition to examining attachment styles and their relations with forgiveness, researchers have begun to observe attachment styles to God and their relations with forgiveness. For example, Davis et al. (2008) examined the impact of attachment to God on forgiveness. They asked 180 Christian participants to complete questionnaires regarding attachment to God and forgiveness, among other things. Attachment to God was measured using the Attachment to God Scale, which consists of nine self-report items. Examples of these items include “God seems impersonal to me,” and “God sometimes seems responsive to my needs but sometimes not.” Situational forgiveness was measured using the 15-item Rye Forgiveness Scale. Consistent with the authors’ hypotheses, having an anxious and avoidant attachment to God did indeed predict lower situational forgiveness. Furthermore, we have already seen that Hall et al. (2009), using situational and dispositional forgiveness measures as indicators of implicit religiosity in Christians, found both to be related to attachment to God.

It is important to note that in all of these studies forgiveness of people or forgiveness of God have been examined separately but not together. Similarly, each has studied general attachment or attachment to God, but not both simultaneously. The current study will examine simultaneously attachment to people and attachment to God and forgiveness of people and forgiveness of God. This will allow us to test the hypotheses

that attachment to people will more strongly predict forgiveness of people than forgiveness of God, while attachment to God will more strongly predict forgiveness of God than of people.

### **Summary of Hypotheses**

The core hypothesis of the study was that while attachment to people and attachment to God were correlated because they presumably share developmental roots in early experience with significant caregivers, attachment to God is, nonetheless, distinct from attachment to people because of the distinctive characteristics that God is understood to possess. A related hypothesis was that attachment to God can, therefore, be a separate source of either well-being or psychological distress. From these two related, general hypotheses, I specifically hypothesized that attachment to people and attachment to God would independently predict three outcomes: forgiveness of people, forgiveness of God, and post-traumatic symptoms. Moreover, I hypothesized that attachment to people would more strongly predict outcome following an interpersonal injury while attachment to God would more strongly predict outcome following an impersonal tragedy (in which God may be blamed for the event). Similarly, attachment to people would more strongly predict forgiveness of people while attachment to God would more strongly predict forgiveness of God.

Two studies were conducted. The first study examined people who had recently experienced a deeply upsetting interpersonal offense. The second study examined people who had recently experienced an impersonal tragedy, such as the loss of a loved one, a medical crisis, or an accident of non-human origin. Theoretically, it would have been ideal to study individuals who had experienced both types of trauma because that would have

permitted a simultaneous comparison of the prediction of outcome following one versus the other. Unfortunately, however, the clinical reality is that experiencing multiple traumas can result in unpredictably mixed outcomes. For example, Cuddy (1990) found that individuals who had been both sexually and physically abused as children showed a diverse pattern of both symptoms and nightmare content that went beyond the summation of symptoms experienced by those individuals who had “just” been physically abused or “just” been sexually abused.

In the study of interpersonal offenses, the TRIM was used to measure offense-specific forgiveness, while two measures were used to assess forgiveness of God. Because there was no existing measure of forgiveness of God, for the purpose of this study, the TRIM was adapted to produce a new measure of forgiveness of God. However, it was beyond the scope of this project to conduct studies of the psychometric properties of this new measure in advance of the studies for this thesis. Therefore, in case the God TRIM should prove to be inadequate, I also included the four “anger/disappointment” items from the Attitudes Toward God scale (Wood, Worthington, Exline, Yali, Aten, & Minn, 2010). While not a direct measure of forgiveness, they are conceptually related. In addition to these measures of forgiveness, the post-traumatic symptoms of hyperarousal, intrusive thoughts, and numbing were assessed.

Asking participants to recall and focus on a deeply upsetting interpersonal event would activate an individual’s interpersonal attachment style. Attachment to God would be less relevant; however, it would still be influential because God is seen as both capable of preventing and changing events and of being a source of comfort in suffering. It, therefore, was predicted that attachment to people and attachment to God would

independently predict all outcome measures. However, it was expected that attachment to people would more strongly predict forgiveness of people and post-traumatic symptoms. Likewise, to the extent that the participant felt some anger at God in association with the event, it was expected that anger would be more strongly correlated with attachment to God than attachment to people.

Although it is not the focus of this study, I explored whether forgiveness partially mediated the relations between attachment and post-traumatic symptomatology, given that prior studies have found that attachment is related to forgiveness and forgiveness is related to better well-being.

The second study examined the responses of individuals who had experienced an impersonal trauma or tragedy. Because this study did not involve human agency, the TRIM was not relevant; therefore, a measure of dispositional forgiveness was used. As in Study 1, it was expected that attachment to people would predict dispositional forgiveness more strongly than attachment to God, particularly when controlling for religiosity. This latter control was important because it has been shown that religiosity correlates with dispositional forgiveness, but not with offense-specific forgiveness (for review see McCullough & Worthington, 1999). Therefore, if religiosity had not been controlled for, attachment to God could have correlated strongly with forgiveness because of its shared variance with religiosity. It was also hypothesized that attachment to God would more strongly predict anger at God than would attachment to people. Because tragedy invokes a sense of insecurity, the internal working model of attachment would be activated; therefore, I hypothesized that both forms of attachment would independently predict post-traumatic symptoms. However, because God may be seen as responsible for impersonal

tragedies, attachment to God would likely more strongly predict symptoms than attachment to people.

## **Study 1 Method**

### **Participants**

The participants for this study were recruited via Mechanical Turk (MTurk), an online website that allows recruiters to administer surveys to willing participants. In 2012, researchers from the University of California, Yale University, and Massachusetts Institute of Technology examined the efficacy of the site in recruiting subjects for social science experiments. The researchers concluded that MTurk samples did represent a broad cross section of the U.S. populations. An important advantage of using MTurk is the cost associated with recruiting the participants. “Turkers”, as they are known, complete questionnaires for a fraction of the cost that one would normally incur when gathering data by traditional methods (“Amazon Mechanical Turk,” n.d.). Participants for this study were paid \$1 each for their participation.

Participants were required to self-identify as Christians. They needed to have experienced a deeply upsetting interpersonal romantic offense within the prior six months and no other deeply upsetting event within the past two years. I set the timeframe for the offense to have taken place within the prior six months because many people are resilient, which results in a fairly swift decrease of symptoms over time. While there are individual differences in recovery rates, a six-month interval should allow for a range of emotional responses. I did not want the participants to have experienced any other upsetting event within the past two years because if they had, it could be possible for them to confuse their

recall of feelings and emotions associated with the target event with those associated with the other event(s).

Originally, 201 participants (119 women, 80 men, 2 undeclared) completed the questionnaires. Eleven were deleted because they had sizable amounts of missing data. Seven additional participants were deleted either because it was not clear whether their trauma had involved an interpersonal romantic injury and/or their trauma occurred too long ago. This left a sample of 183 participants. Of these, 113 (61.7%) were women and 70 (38.3%) were men. Their ages ranged from 17 years of age to 82 years of age, with a mean age of 32.2 ( $SD = 10.59$ ). On the Stressful Life Experiences questionnaire (see description below), participants indicated having experienced a mean of 9.7 traumatic events in their lifetime ( $SD = 10.45$ ), with a range of 1 to 79.

In terms of ethnicity, 137 (74.9%) identified as Caucasian; 21 (11.5%) as African American; 13 (7.1%) as Hispanic; 2 (1.1%) as Asian; and 10 (5.5%) as other, including multi-racial. For Christian denomination, 54 (29.5%) indicated Roman Catholic; 41 (22.4%) Protestant, Methodist, Lutheran, Anglican, or United; 36 (19.7%) Baptist; 19 (10.4%) Non-denominational; and 30 (16.4%) other (including “Christian”). Three participants (1.6%) did not list their denomination.

Almost half of the sample had a Bachelor’s degree or higher, while three participants (1.6%) reported having less than a high school education. Specifically, participants reported their education as follows: 3 (1.6%) less than high school; 27 (14.8%) high school education; 68 (37.2%) more than high school; 60 (32.8%) a Bachelor’s degree; and 25 (13.7%) some form of post graduate training.

The reasons given for the hurt varied. Based on their answers, I collapsed the respondents' answers into eight groups as follows: 83 (45.4%) reported being cheated on; 47 (25.7%) reported being involved in a relationship break up; 10 (5.5%) said they had been lied to; 7 (3.8%) indicated mental health issues (including drug abuse) in their partner; 7 (3.8%) indicated financial issues, including gambling; 7 (3.8%) reported being abused, including verbal or emotional abuse; 3 (1.6%) reported disagreements on religious issues; while 19 (10.4%) described other upsetting events. These included such categories as finding that their partner had looked at pornography or having upsetting arguments.

### **Measures**

Copies of all questionnaires are included in the appendix.

#### **Demographic and background information about participants.** A

demographics questionnaire was administered to each participant that asked them to report their age, sex, education, and religious affiliation. In addition, participants were asked to complete the Age Universal Intrinsic-Extrinsic Scale – 12 (Religiosity; Maltby, 1999), a measure of religiosity. This measure is an essential component of Study 2. However, it was only included in Study 1 for exploratory purposes. The Age Universal consists of 12 items that are rated on a 5-point Likert scale from strongly disagree to strongly agree. A sample item would be “I try to live all my life according to my religious beliefs.” The original 15 item version of the measure, from which Maltby derived the 12 items, was mistakenly given to participants. However, consistent with Maltby's method, only the 12 items were scored. Maltby did not report any reliability data. Table 1 lists the Cronbach's alpha, as well as descriptive statistics for this and all other questionnaires.

Exposure to traumatic events was measured using the Stressful Life Experiences Screening – Short Form (Goodman, Corcoran, Turner, Yuan, & Green, 1998). This is a 13-item measure that assesses lifetime exposure to traumatic events. For each event, respondents were asked to indicate how many times they had experienced that particular event. Examples include, “I have witnessed or experienced a serious accident or injury” and “I have felt responsible for the serious injury or death of another person.” Goodman et al. report a test retest of .89 over two weeks.

In an open-ended question, participants were asked to briefly describe the deeply upsetting interpersonal offense that brought them into the study. This was followed by several questions about the impact of the event that were not analyzed in this study.

**Attachment to people.** Attachment to people was measured using the Experiences in Close Relationships Scale (Brennan et al., 1998). It contains 36 questions that measure levels of attachment-related anxiety (18 items; e.g., “I worry about being abandoned” and “I worry a lot about my relationships”) and attachment-related avoidance (18 items; e.g., “I prefer not to show a partner how I feel deep down” and “Just when my partner starts to get close to me, I find myself pulling away”). Questions are rated on a scale of 1 (strongly disagree) to 7 (strongly agree). Lower scores reflect a more secure attachment, while higher scores reflect anxious or avoidant attachment. For my study, I reversed these scores so that a high score indicated secure attachment. Brennan and colleagues report high internal consistency for the ECR,  $\alpha = .91$  for anxiety and  $\alpha = .94$  for avoidance. Because there was no specific hypothesis for anxiety versus avoidance, the total score was used; as is evident in Table 1, it had a high internal consistency.

**Attachment to God.** Attachment to God was measured with the Attachment to God Inventory (Beck & McDonald, 2004). The Attachment to God Inventory contains 28 items that measure anxiety regarding abandonment by God (14 items; e.g., “I worry a lot about my relationship with God” and “I crave reassurance from God that God loves me”) and avoidance of intimacy with God (14 items; e.g., “I just don’t feel a deep need to be close to God” and “I am uncomfortable with emotional displays of affection to God”). Questions are rated on a scale of 1 (strongly disagree) to 7 (strongly agree). Beck and McDonald have reported high internal consistency for both subscales,  $\alpha > .80$  across all samples.

**Situational forgiveness of people.** Situational forgiveness was measured with the Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998). It has 18 items, scored on 5-point scales, and was designed to have three subscales: revenge (e.g., “I’ll make him/her pay”), avoidance (e.g., “I live as if he/she doesn’t exist, isn’t around”), and benevolence (“Even though his/her actions hurt me, I still have goodwill for him/her.”). However, it is often scored as a total score, as it was in this study. Hall et al. (2009) reported high internal consistency (.84 to .85).

**Situational forgiveness of God.** Two measures were used to assess forgiveness of God. One was designed specifically for this study and consists of 18 items adapted from the TRIM to reflect motivations towards God (e.g., “I wish I could make God pay.” And “I am trying to keep as much distance between God and me as possible.”) Items are rated on 5-point scales from “strongly disagree” to “strongly agree”. Because this is a new measure, its psychometric properties were unknown. Therefore, the four

“anger/disappointment” items from the Attitudes Toward God scale (Wood et al., 2010) were also used. The scale prompts participants to rate their feelings on 5-point scale items, such as “To what extent do you currently feel angry at God?” Wood et al. reported an alpha of .85 and test retest reliability of .68 over two weeks.

**Post-traumatic symptoms.** Post-traumatic symptoms were measured using the Impact of Event Scale - Revised (Weiss & Marmar, 1997), which is a 22-item measure used to report intrusion, avoidance, and hyperarousal symptoms that people sometimes experience after a distressing event. Items are rated on a 4-point scale from 0 (not at all) to 4 (extremely) based on the frequency of each symptom during the past week. Greater distress is indicated with higher scores. A total score of 36 and over indicates significant distress (Witteveen, Bramsen, Hovens, & Van Der Ploeg, 2005). In this study, the total score was used. Please note that although the online questionnaire asked participants to rate their symptoms using a 0 to 4 scale, the software that was used to analyze the data (Qualtrics) automatically recoded their answers, using a 1 to 5 scale.

### **Procedure**

All questionnaires were completed online. There were four orders of questionnaires. In every case, participants first completed the questions about the upsetting event, including the IES. This served to activate their attachment-related internal working models. Half then completed the attachment measures followed by the forgiveness measures, while the other half completed the forgiveness measures before the attachment measures. Within these, for half of the participants, the measures with God as their focus were presented first; for the remaining participants, the measures with people as their focus were presented first.

## Study 1 Results

### Preliminary Analyses

I screened the data to ensure that participants had experienced the right type of event (an interpersonal offense) and that they had experienced the event within the prior six months. I then looked for missing data that exceeded the recommended cutoff point of 3% (Tabachnick & Fidell, 2001). To offset any remaining data that were missing, I calculated mean scores on all variables. Next, I examined the data for univariate outliers (scores greater than three standard deviations from the mean) and multivariate outliers (examining Cook's D and studentized residuals) and there were no grossly outlying scores. I calculated descriptive statistics and Cronbach's alpha for all measures. As seen in Table 1, all measures had good internal consistency. However, an examination of the skew of variables indicated that three showed some skewness: God TRIM (when considered as a Z score), anger at God, and religiosity. The distribution of scores reflected that a disproportionately large portion of the sample rated themselves as high on religiosity and low on both unforgiveness of God and anger at God. Consistent with the practice argued for by Wilcox (2012), I decided to not transform these scores. Indeed the amount of skewness for anger at God could not likely be corrected.

Because half of the participants completed the attachment measures followed by the forgiveness measures, while the other half completed the forgiveness measures followed by the attachment measures; and within these two groups, half was given the God-focused measures first, while the other half was given the people-focused measures first, ANOVAS were calculated to determine if the order of the measures affected the attachment and forgiveness scores. No significant differences were found.

Next correlations were calculated among all variables. As evident in Table 2, attachment to people was positively correlated with forgiveness of people and forgiveness of God, and negatively related to anger at God and post-traumatic symptoms. Attachment to God was positively correlated with forgiveness of God and negatively correlated with anger at God. It was not related to forgiveness of people or post-traumatic symptoms.

### **Testing of Hypotheses**

It was hypothesized that (1) attachment to people and attachment to God would independently predict outcome following interpersonal events, and (2) that attachment to people and attachment to God would differentially predict outcome. In terms of the latter, given that participants in this study had experienced an interpersonal trauma, it was expected that the ECR would more strongly predict post-traumatic symptoms than would attachment to God. Furthermore, the ECR would more strongly predict forgiveness of people while attachment to God would be more strongly related to forgiveness of God as well as anger at God. To test these hypotheses, four simultaneous multiple regressions were calculated. For each regression, the Experiences in Close Relationships and Attachment to God Inventory were entered as the independent variables. Dependent variables were Impact of Events, TRIM, God TRIM, and Anger at God. Tables 3-6 summarize the findings from these regressions.

Together, the two attachment measures accounted for 12% of the variability in PTSD symptoms ( $F_{2,180} = 12.76, p = .000$ ). As is evident in Table 3, only attachment to people uniquely predicted, with secure attachment being associated with less symptoms.

For the TRIM, the two attachment measures accounted for 14% of the variability ( $F_{2,180} = 14.27, p = .000$ ). Again, as shown in Table 4, only attachment to people uniquely predicted, with secure attachment being associated with greater forgiveness.

Table 1

*Psychometric Properties of Study 1 Variables*

Variable	M	SD	$\alpha$	Range		Skew	Std Error Skew
				Potential	Actual		
ECR Total	3.3	.69	.95	1-5	1.39-5.00	-.32	.18
ECR anxious	3.0	.87	.94	1-5	1.06-5.00	-.38	.18
ECR avoidant	3.6	.78	.94	1-5	1.67-5.00	.23	.18
God Attachment	3.5	.60	.90	1-5	1.43-4.86	-.03	.18
God anxious	3.6	.76	.89	1-5	1.21-5.00	-.37	.18
God avoidant	3.4	.78	.90	1-5	1.29-5.00	-.25	.18
TRIM	3.3	.79	.91	1-5	1.11-4.78	-.14	.18
God TRIM	4.1	.66	.91	1-5	2.00-5.00	-.71	.18
Anger at God	2.8	2.50	.93	1-11	1.00-10.00	1.40	.18
IES	2.9	.85	.93	1-5	1.00-5.00	.05	.18
Religiosity	3.4	.61	.83	1-5	1.00-4.67	-1.09	.18

ECR = Attachment to people, with higher scores reflecting greater security.

TRIM = Measure of situational forgiveness of people, with higher scores reflecting less forgiveness.

IES = Measure of post-traumatic symptoms, with higher scores reflecting greater distress.

Table 2

*Table of Correlations*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	---											
2. Sex	.13	---										
3. ECR Total	.17*	.01	---									
4. ECR Anxious	.18*	.00	.85**	---								
5. ECR Avoidant	.10	.02	.81**	.38**	---							
6. God Attachment	.18*	.16*	.46**	.36**	.42**	---						
7. God Anxious	.16*	.12	.53**	.44**	.44**	.77**	---					
8. God Avoidant	.12	.13	.20**	.12	.21**	.78**	.21**	---				
9. TRIM	.01	.04	.36**	.26**	.34**	.09	.14	-.00	---			
10. God TRIM	.15*	.11	.25**	.12	.30**	.43**	.19*	.47**	.05	---		
11. Anger at God	-.14	-.05	-.36**	-.26**	-.34**	-.53**	-.48**	-.35**	-.17*	-.53**	---	
12. IES	*.12	-.03	-.36**	-.39**	-.19*	-.13	-.20**	-.00	-.31**	-.06	.39**	---

Note. \*  $p < .05$  (2-tailed), \*\*  $p < .01$ . (two-tailed)

ECR = Attachment to people, with higher scores reflecting greater security.

TRIM = Measure of situational forgiveness of people, with higher scores reflecting more forgiveness.

IES = Measure of post-traumatic symptoms, with higher scores reflecting greater distress.

As shown in Table 5, 18% of the variance in forgiveness of God is accounted for by the two attachment measures ( $F_{2,179} = 20.16, p = .000$ ). Only attachment to God uniquely predicted forgiveness of God, with secure attachment being associated with greater forgiveness.

In Table 6 we see that 30% of the variance in anger at God is accounted for by the two attachment measures ( $F_{2,180} = 38.46, p = .000$ ). Both attachment to people and attachment to God uniquely accounted for variance, with secure attachment to both people and to God being associated with less anger at God.

In summary, the first hypothesis was only weakly supported. Attachment to people and attachment to God independently predicted outcome in only one regression, when the DV was anger at God. However, as predicted, while the ECR predicted forgiveness of people, attachment to God did not. Conversely, attachment to God, and not the ECR, predicted the God TRIM, and attachment to God more strongly predicted anger at God than did the ECR.

### **Exploratory Analyses**

Because there were no hypotheses regarding anxious attachment versus avoidant attachment, and given the high internal consistency of both the Experiences in Close Relationships and the Attachment to God Inventory, these variables were not included in the main analyses. However, for exploratory purposes, multiple regressions were done, entering the anxious and avoidance subscales of both measures. See Appendix B. In broad strokes, in terms of the relative contribution of attachment to people and attachment to God, these exploratory analyses had comparable results to the main analyses with the exception of the prediction of forgiveness of God. In the main analysis

(Table 5) only God attachment significantly contributed to the equation. In the exploratory analyses (Table 15), in addition to the 17% of the variance accounted for by God attachment, the ECR avoidant subscale accounted for an additional 3% of the variance, with more secure attachment being associated with more forgiveness.

To explore whether forgiveness mediated the relation between ECR and post-traumatic symptoms (IES), Baron and Kenny's (1986) steps were conducted. Specifically, Baron and Kenny argue that mediation can be inferred if the following are all true: 1) The independent variable is a significant predictor of the dependent variable; 2) the independent variable is a significant predictor of the mediator; 3) the mediator is a significant predictor of the dependent variable, while controlling for the independent variable; and 4) the beta weight associated with the independent variable is smaller than the original correlation (in step one). If it has dropped to near zero, then we can conclude total mediation. If it has reduced, but not to zero, we can then determine whether the reduction is sufficiently large enough to conclude partial mediation. This is done by conducting a Sobel test. As can be seen in Table 2, the first steps or conditions were met. To examine the third and fourth, a multiple regression predicting IES and entering ECR and TRIM was conducted. The TRIM was significantly related to the IES, meeting Baron and Kenny's third condition (Beta =  $-.21$ ,  $p = .004$ ). In addition the Beta weight associated with the ECR was reduced to  $-.28$  and the associated Sobel test was significant (Sobel =  $2.52$ ,  $p = .01$ ). Therefore, from these results, it would appear that forgiveness of the offender partially mediated the relation between attachment and post-traumatic symptoms.

Table 3

*Summary of Multiple Regression Predicting Post-traumatic Symptoms (IES)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	-.37	-4.66	.11	.000
God Attachment	.03	.40	.00	.689

Table 4

*Summary of Multiple Regression Predicting Forgiveness of People (TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	.40	5.19	.13	.000
God Attachment	-.10	-1.26	.01	.208

Table 5

*Summary of Multiple Regression Predicting Forgiveness of God (God TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	.06	.84	.00	.402
God Attachment	.40	5.19	.12	.000

Table 6

*Summary of Multiple Regression Predicting Anger at God*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	-.14	-2.04	.02	.043
God Attachment	-.47	-6.65	.17	.000

## Study 2 Method

### Participants

The participants for this study were again recruited via Mechanical Turk. Participants for this study were paid \$2.50 each for their participation. The amount paid to each participant was increased from Study 1 (\$1) because I received feedback from several Turkers, stating that I was not paying enough for the number of questionnaires that they were being asked to complete.

I also received feedback advising me to increase the approval rate. The approval rate refers to the percentage of jobs that the individual “Turker” has completed satisfactorily in the past. I was told that by doing so, my study would attract participants who were more reliable. For example, a significant portion of participants in Study 1 had difficulty obtaining the confirmation code they were required to get in order to get paid, because they had not read the instructions carefully enough. This raised the possibility that they had similarly not read carefully the instructions for the questionnaires. In Study 1, I set the approval rate at 95%, which is the default setting. For Study 2, the rate was increased to 98%.

As in Study 1, participants were required to self-identify as Christians. They needed to have experienced a deeply upsetting impersonal tragedy in which no person was at fault within the prior six months and no other deeply upsetting event within the past two years. Once again, I set the timeframe for the offense to have taken place within the prior six months because many people are resilient, which results in a fairly rapid decrease of symptoms over time. While there are individual differences in recovery rates, a six-month interval should allow for a range of emotional responses. I did not want

the participants to have experienced any other upsetting event within the past two years because if they had, it could be possible for them to confuse their recall of feelings and emotions associated with the target event with those associated with the other event(s).

Originally, 203 participants (99 women, 102 men, 1 other, and 1 undeclared) completed the questionnaires. No person had to be deleted due to missing data; however, 16 were deleted because the event they described was either an interpersonal offense (not an impersonal tragedy) or there was some human culpability in the tragedy they had experienced. For example, one participant described the death of a parent from a fatal disease, but observed that there had been medical mistakes that may have hastened the death. This left a sample of 187 participants. Of these, 90 (48.1%) were women and 95 (50.8%) were men, 1 (0.5%) selected other, and 1 (0.5%) was undeclared. Their ages ranged from 19 to 62 years of age, with a mean age of 32.3 ( $SD = 10.17$ ). On the Stressful Life Experiences questionnaire, participants reported experiencing a lifetime mean of 9.3 traumatic events ( $SD = 7.27$ ), with a range of 1 to 46.

In terms of ethnicity, 133 (71.1%) identified as Caucasian; 23 (12.3%) as African American; 15 (8.0%) as Hispanic; 8 (4.3%) as Asian; and 7 (3.7%) as other, including multiracial, and 1 (.5%) was undeclared. For Christian denomination 60 (32.1%) indicated Roman Catholic; 52 (27.8%) Protestant, Methodist, Lutheran, Episcopalian, or Presbyterian; 27 (14.4%) Baptist; 18 (9.6%) Non-denominational; and 27 (14.4%) other. Three participants (1.6%) did not list their denomination.

Participants reported their education as follows: 31 (16.6%) had a high school education; 69 (36.9%) had more than high school; 73 (39%) held a Bachelor's degree; 13 (7%) had post graduate education, and 1 (.5%) did not list education.

Once again, the reasons given for the hurt varied. I collapsed the respondents' answers into seven groups as follows: 134 (71.7%) reported bereavement; 22 (11.8%) a major medical crisis either for self or another; 12 (6.4%) had experienced an accident either to the self or another; 5 (2.7%) indicated that they had experienced extreme weather or earthquake; 5 (2.7%) reported having experienced either a miscarriage or a stillbirth; 2 (2.7%) experienced mental illness, and 7 (3.7%) were categorized as other.

### **Measures**

All of the measures used in Study 2 were identical to those used in Study 1 except for the TRIM. The TRIM was not used in Study 2 because I was studying the impact of an impersonal tragedy, not an interpersonal offense. Therefore, the TRIM, which is a situational forgiveness measure, was replaced with a measure of dispositional forgiveness.

**Dispositional forgiveness of people.** Dispositional forgiveness was measured using the Tendency to Forgive Scale (Brown, 2003), which has 4 items (e.g., "I tend to get over it quickly when someone hurts my feelings.") rated on 7-points scales from strongly disagree to strongly agree. Brown has found that responses to the TTF scale to be internally consistent ( $\alpha = .82$ ) and reliable over time (8-week test-retest  $r = .71$ ).

### **Procedure**

The procedure was the same as that in Study 1.

## Study 2 Results

### Preliminary Analyses

I screened the data to ensure that participants had experienced the right type of event (an impersonal tragedy with no human culpability) and that they had experienced the event within the prior six months. I then looked for missing data. No participant exceeded the recommended cutoff point of 3% data missing (Tabachnick & Fidell, 2001). To offset any residual data that were missing, I calculated mean scores on all variables. Next, I calculated descriptive statistics and Cronbach's alpha for the measures. As seen in Table 7, all measures had good internal consistency. However, an examination of the skew of variables indicated that three had skewed distributions: God TRIM, Anger at God, and the ECR-avoidant subscale. The distribution of scores reflected that a disproportionately large portion of the sample rated themselves as low on both unforgiveness of God and anger at God and rated themselves in the secure direction on the ECR Avoidance subscale. However, the amount of skewness was relatively small, and, in the case of anger at God, it was somewhat smaller than in Study 1. Moreover, the ECR- avoidant subscale was only used in exploratory analyses.

Because half of the participants completed the attachment measures followed by the forgiveness measures, while the other half completed the forgiveness measures followed by the attachment measures; and within these two groups, half was given the God-focused measures first, while the other half was given the people-focused measures first, ANOVAS were calculated to determine if the order of the measures affected the attachment and forgiveness scores. No significant differences were found.

Next correlations were calculated among all variables. As evident in Table 8, both attachment to people and attachment to God were positively related to dispositional forgiveness of people and forgiveness of God and negatively related to anger at God and post-traumatic symptoms. Attachment to God, but not attachment to people, was also positively related to religiosity.

Table 7

*Psychometric Properties of Study 2 Variables*

Variable	M	SD	$\alpha$	Range		Skew	Std Error Skew
				Potential	Actual		
ECR Total	3.5	.71	.95	1-5	2.03-5.00	.09	.18
ECR anxious	3.3	.86	.94	1-5	1.22-5.00	-.05	.18
ECR avoidant	3.7	.84	.94	1-5	1.00-5.00	-.44	.18
God Attachment	3.4	.63	.90	1-5	1.89-5.00	.33	.18
God anxious	3.5	.84	.89	1-5	1.36-5.00	-.16	.18
God avoidant	3.2	.75	.90	1-5	1.07-5.00	-.04	.18
TTF	3.9	1.31	.91	1-7	1.00-7.00	.16	.18
God TRIM	4.0	.64	.91	1-5	2.29-5.00	-.50	.18
Anger at God	3.4	2.70	.93	1-11	1.00-11.00	.94	.18
IES	2.65	.81	.93	1-5	1.00-5.00	.18	.18
Religiosity	3.48	.61	.83	1-5	1.00-4.67	-.35	.18

ECR = Attachment to people, with higher scores reflecting greater security.

TTF = Measure of dispositional forgiveness of people, with higher scores reflecting more forgiveness.

IES = Measure of post-traumatic symptoms, with higher scores reflecting greater distress.

Table 8

*Table of Correlations*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	---												
2. Sex	.06	---											
3. ECR Total	.20**	-.08	---										
4. ECR Anxious	.18*	-.15*	.84**	---									
5. ECR Avoidant	.15*	.01	.84**	.41**	---								
6. God Attachment	.20**	.06	.46**	.44**	.33**	---							
7. God Anxious	.16*	-.04	.46**	.55**	.22**	.82**	---						
8. God Avoidant	.15*	.14	.25**	.12	.30**	.77**	.27**	---					
9. TTF	.09	-.27**	.33**	.33**	.22**	.39**	.35**	.27**	---				
10. God TRIM	.14	.13	.36**	.23**	.38**	.43**	.29**	.40**	.17*	---			
11. Anger at God	-.13	-.09	-.33**	-.36*	-.19**	-.59**	-.56**	-.37**	-.21**	-.57**	---		
12. Religiosity	-.03	.05	.09	.01	.15*	.34**	.05	.53**	.20**	.26**	-.20**	---	
13. IES	-.10	.07	-.33**	-.33**	-.22**	-.23**	-.30**	-.05	-.06	-.15*	.37**	.10	---

*Note.* \*  $p < .05$  (2-tailed), \*\*  $p < .01$ . (two-tailed)

ECR = Attachment to people, with higher scores reflecting greater security. TTF = Measure of dispositional forgiveness of people, with higher scores reflecting more forgiveness. IES = Measure of post-traumatic symptoms, with higher scores reflecting greater distress.

## Testing of Hypotheses

Four simultaneous multiple regressions were calculated. Each regression entered the Experiences in Close Relationships, Attachment to God Inventory, and Age Universal (religiosity) as the independent variables. The measure of religiosity was included for two reasons. First, as noted in the Introduction, religiosity is related to dispositional forgiveness (but not offense-specific forgiveness); therefore, I wanted to ensure that any unique prediction of dispositional forgiveness by God Attachment was not due to religiosity. Second, because God attachment was expected to uniquely predict post-traumatic outcome, I similarly decided to include religiosity in order to demonstrate that any unique prediction by God attachment was due to God attachment and not due to general religiosity. The dependent variables were Impact of Events, the TRIM, God TRIM, and Anger at God.

Together, the two attachment measures and religiosity accounted for 14% of the variability in PTSD symptoms ( $F_{3,183} = 10.08, p = .000$ ). As shown in Table 9, all three measures uniquely predicted, with attachment to people and to God being associated with fewer symptoms, but religiosity associated with more.

For the TTF, the measure of dispositional forgiveness, the two attachment measures and religiosity accounted for 19% of the variability ( $F_{3,183} = 13.91, p = .000$ ). As shown in Table 10, both attachment to people and to God uniquely predicted, with more secure attachment being associated with greater dispositional forgiveness of people.

As shown in Table 11, 23% of the variance forgiveness of God was accounted for by the two attachment measures and religiosity. All three measures uniquely predicted

the outcome variable ( $F_{3,183} = 18.59, p = .000$ ), with higher scores on all three variables being associated with greater forgiveness of God.

In Table 12 we see that 35% of the variance in anger at God is accounted for by the two attachment measures and religiosity ( $F_{3,182} = 32.74, p = .000$ ). However, only attachment to God uniquely predicted, with more secure attachment being associated with less anger at God.

Because there were no hypotheses regarding anxiety attachment versus avoidance attachment, and given the high internal consistency of both the Experiences in Close Relationships and the Attachment to God Inventory, these variables were not included in the main analyses. However, for exploratory purposes, multiple regressions were done entering the anxious and avoidance subscales of both measures. See Appendix C.

In broad strokes, in terms of the relative contribution of attachment to people and attachment to God, these exploratory analyses had comparable results to the main analyses for the regression analyses predicting forgiveness of God and anger at God. However, for post-traumatic symptoms, both attachment to people and attachment to God significantly accounted for variance in the main analyses but only anxious attachment to people significantly accounted for variance in the exploratory analysis. Further, in the main analysis, only God attachment accounted for variance in dispositional forgiveness of people, but in the exploratory analysis, both anxious attachment to people and anxious attachment to God accounted for significant variance.

Table 9

*Summary of Multiple Regression Predicting Post-traumatic Symptoms (IES)*

Variable	$\beta$	t-test	$sr^2$	$p^2$
ECR	-.26	-3.45	.06	.001
God attachment	-.16	-2.00	.02	.048
Religiosity	.19	2.54	.03	.012

Table 10

*Summary of Multiple Regression Predicting Dispositional Forgiveness of People (TTF)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	.20	2.67	.03	.008
God attachment	.25	3.15	.04	.002
Religiosity	.12	1.69	.01	.092

Table 11

*Summary of Multiple Regression Predicting Forgiveness of God (God TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	.23	3.10	.04	.002
God attachment	.27	3.47	.05	.001
Religiosity	.16	2.25	.02	.025

Table 12

*Summary of Multiple Regression Predicting Anger at God*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR	-.07	-1.08	.00	.281
God attachment	-.56	-7.85	.22	.000
Religiosity	.00	.06	.00	.950

## **Exploratory Analyses**

Because there were no hypotheses regarding anxiety attachment versus avoidance attachment, and given the high internal consistency of both the Experiences in Close Relationships and the Attachment to God Inventory, these variables were not included in the main analyses. However, for exploratory purposes, multiple regressions were done entering the anxious and avoidance subscales of both measures. See Appendix C.

In broad strokes, in terms of the relative contribution of attachment to people and attachment to God, these exploratory analyses had comparable results to the main analyses for the regression analyses predicting forgiveness of God and anger at God. However, for post-traumatic symptoms, both attachment to people and attachment to God significantly accounted for variance in the main analyses but only anxious attachment to people significantly accounted for variance in the exploratory analysis. Further, in the main analysis, only God attachment accounted for variance in dispositional forgiveness of people, but in the exploratory analysis, both anxious attachment to people and anxious attachment to God accounted for significant variance.

In addition, analyses were conducted to examine whether dispositional forgiveness (TTF) mediated the relation between ECR and IES, and whether forgiveness of God mediated the relation between God attachment and the IES. Once again, I followed Baron and Kenny's (1986) steps.

I first examined the relation between the ECR and IES with TTF as the mediator. As can be seen in Table 8, the first two steps were met. To examine the third and fourth, a multiple regression predicting IES and entering ECR and TTF was conducted. The TTF was not significantly related to the IES, indicating no mediation.

Next, I examined the relations between God Attachment and IES with God TRIM as the mediator. Once again, as can be seen in Table 8, the first two steps of Baron and Kenny (1986) were met. I then conducted a multiple regression predicting IES and entering God Attachment and God TRIM. God TRIM was not significantly related to the IES, again, indicating no mediation.

### **Discussion**

At its inception, attachment theory focused on the bond between an infant and the primary caregiver (Bowlby, 1969, 1982). Thereafter, attachment theory began to examine the relationship between romantic partners (Hazan & Shaver, 1987). More recently, attachment research has begun to consider religion and God in the context of attachment figures (Exline, Park, Smyth, & Carey, 2011). My research examined the differential relations of attachment to people and attachment to God in predicting outcome following trauma.

Hall et al. (2009) noted that there have been contradictory findings regarding whether an individual's attachment style to people carried over into their attachment style to God. The model that states that attachment to God is essentially an outgrowth from attachment to people is referred to as the correspondence model. Some research has supported this model while other research has supported a compensation model. This second model postulates that those who are insecurely attached to others *may* turn to God as a replacement figure and become securely attached to Him.

Hall and colleagues (2009) argued that the contradictory evidence is due to problems in the way that spirituality and religiosity have been conceptualized and measured. They believe that a distinction must be made between *implicit* and *explicit*

*religiosity* and that previous studies employed measures that simultaneously tapped into both internal and external characteristics. According to these authors, compensation is temporary and is most evident with measures that more strongly tap into external expressions of religiosity (like how often one prays). They argue that compensation does not change the individual's underlying internal working model of attachment.

In their own study they found that attachment to people and God were related to each other and to measures of forgiveness (as well as another measure of spiritual functioning that I did not use). Similarly, I found that attachment to people and attachment to God were highly correlated. Moreover, when the bivariate correlations are considered, I replicated several of Hall et al.'s findings that measures of attachment were related to forgiveness. In Study 1, the study of an interpersonal offense, attachment to people was related to all forgiveness measures, while attachment to God was related to forgiveness of God (but not of people). In Study 2, both measures of attachment were related to all measures of forgiveness. Therefore, in general, my results, like Hall et al.'s, support the correspondence model.

However, Hall and colleagues (2009) do not make clear whether there is one underlying internal working model accounting for both attachment styles or whether there are separate underlying internal working models, one for attachment to people and another for attachment to God. I hypothesized that there are two separate internal working models, related but distinct, one regarding how to be with people and the other regarding how to be with God. I made this prediction because God is viewed to be different from humans by most Christians. For example, most Christians believe that God is both omnipresent and omnipotent. Therefore I hypothesized that 1) attachment to

God and attachment to people would independently predict forgiveness of people, forgiveness of God, and post-traumatic symptoms following a deeply upsetting event, and 2) attachment to people would more strongly predict post-traumatic symptoms following an interpersonal offense, and attachment to God would more strongly predict post-traumatic symptoms following an impersonal tragedy. In addition, attachment to people would be more strongly related to forgiveness of people than would attachment to God, and attachment to God would be more strongly related to forgiveness of God (and anger at God as a proxy measure of forgiveness) than would attachment to people.

### **Independent Prediction of Outcome**

My first hypothesis was that attachment to people and attachment to God would independently predict post-traumatic symptoms, forgiveness of people, and forgiveness of God. Prior research has shown that attachment to people has been related to general well-being (Bureau et al., 2009; Hazan & Shaver, 1990), as well as well-being following trauma (Stalker et al., 2005). In addition, attachment to God has been found to correlate with well-being following trauma (Ellison et al., 2012). However, no study has simultaneously considered attachment to people and attachment to God as joint predictors of well-being. Similarly, forgiveness (of people) has been found to correlate with attachment to people (Burnette et al., 2007; Lawler-Row et al., 2006; Millar & Belicki, 2012) and attachment to God (Davis et al., 2008; Hall et al., 2009). Only Hall et al. have simultaneously studied attachment to people and attachment to God in relation to forgiveness of people, but they did not consider how these two jointly predicted forgiveness. Instead they treated attachment to God as one of several measures of implicit spirituality. In addition, on the basis of ECR scores, they assigned participants to one of

four attachment types, rather than treating the ECR scores as a continuous measure. Therefore, my studies are the only ones to consider whether attachment to God and attachment to people function as independent internal working models.

The hypothesis that the two attachment measures would independently account for variance in outcome was partially supported, particularly in Study 2. In this study, which examined the impact of impersonal tragedies, both attachment measures predicted post-traumatic symptoms, as well as forgiveness of God. However, as discussed in more detail below when we consider the second hypothesis, only attachment to God predicted dispositional forgiveness, not the ECR as hypothesized; furthermore, only attachment to God predicted anger at God.

Regarding Study 1, only attachment to people predicted traumatic symptoms following an interpersonal offense. Perhaps God attachment simply was not activated in an interpersonal offense. Many participants may have felt that God had nothing to do with their hurt. Both measures did independently predict anger at God, consistent with the hypothesis. However, only attachment to people (the ECR) predicted forgiveness of people and only attachment to God predicted forgiveness of God. Nonetheless, this latter pair of findings, while not what I explicitly hypothesized, demonstrates that attachment to people and attachment to God are functioning differentially. This relates to my second hypothesis.

### **Differential Prediction of Specific Outcomes**

The second main hypothesis of this study was that attachment to people would more strongly predict traumatic outcome following an interpersonal offense and that attachment to God would more strongly predict traumatic outcome following an

impersonal tragedy. Similarly, I hypothesized that attachment to people would more strongly predict forgiveness of people and attachment to God would more strongly predict forgiveness of God. The results generally supported these hypotheses, albeit not perfectly. In the study of interpersonal offenses, only the ECR predicted post-traumatic symptoms, while in the study of an impersonal tragedy, both attachment measures predicted. Therefore, attachment to God more strongly predicted symptoms following an impersonal tragedy than an interpersonal offense. However, contrary to my hypothesis, when predicting symptoms following an impersonal tragedy, attachment to people was the stronger predictor. The possible significance of this is discussed in more detail below.

Further, as noted above, in Study 1, as hypothesized, God attachment predicted forgiveness of God, while general attachment did not; furthermore, attachment to God more strongly predicted anger at God than did the ECR. Conversely, the ECR predicted forgiveness of the injurer, but attachment to God did not.

In Study 2, consistent with my hypothesis, God attachment more strongly predicted forgiveness of God than did attachment to people, and only attachment to God predicted anger at God. Contrary to the hypothesis, only God attachment predicted dispositional forgiveness (of people). Given this is a dispositional measure, it in part assesses how forgiving Christians believe themselves to be, independent of how forgiving they may actually be. As Christians believe that God wants them to be forgiving, those who feel more securely attached to God have a greater investment in seeing themselves as forgiving (McCullough & Worthington, 1999). Consistent with this interpretation is the fact that in Study 1, attachment to God was not related to offense-specific

forgiveness. A similar pattern has been reported in other literature. Specifically, it has been found that religiosity is related to dispositional, but often not to offense-specific, forgiveness (see McCullough & Worthington, 1999, for review).

Although the findings support the hypothesis that attachment to God and attachment to people function somewhat independently, in my hypotheses I underestimated the power of basic human attachment. Across the two studies, human attachment was the stronger, more consistent predictor of outcome. This could be because humans develop an attachment to other humans before they develop an attachment to God. Experiencing human attachments in infancy and throughout childhood could cause these attachments to exert a stronger influence on an individual than God attachments; thereby, making human attachments more fundamental and foundational in nature. This possibility has not been addressed in previous literature. However, Hall et al. (2009) began to anticipate the foundational impact of human attachments when, in describing the correspondence model, they speculated that God attachment arises from an implicit generalization from the experiences that produce attachment styles to people. However, more research needs to be done regarding how some individuals go on to develop an attachment style to God that differs from their attachment style to people. Hall and colleagues persuasively argue that internal working models arise from experiences; therefore, future research might focus on which experiences shape attachment to God.

One issue that needed to be addressed was whether the unique variance associated with God attachment was just religiosity. To examine this possibility, I included a generic measure of religiosity (Age Universal) in Study 2 (because attachment to God did not predict outcome in Study 1, I did not include the Age Universal scale in the Study 1

regression). God attachment predicted all outcome variables independently of religiosity. Therefore, God attachment appears to be a different construct and not just an expression of religiosity. In fact, religiosity in the multiple regression was slightly, positively related to post-traumatic symptoms, while attachment to God was negatively related. It could be that when a person is doing poorly, she/he will attempt to go to church more, pray more, and read the Bible more in an attempt to feel better. In other words, the symptoms may cause an increase in religious *behavior*; however, these behaviors, in the absence of an experience of having a secure relationship with God, are not helpful. Put another way, those who have assimilated implicit religiosity in their lives, rather than merely explicit religiosity, will probably do better, provided that their implicit religiosity includes a healthy conception of God as an attachment figure. It would be advantageous for future research to address this possibility.

Weighing the results of both studies, in samples of self-identified Christians, both secure attachment to people and to God contribute to positive outcomes following upsetting events. This raises the possibility that a non-religious person who does not have a secure relationship with God is not going to recover as well, following trauma, as a religious person who has secure relationships with both God and people. However, the non-religious person may do better than a religious person who has an insecure attachment to God. This is something that could be tested in future research.

### **Forgiveness as a Mediator Between Attachment and Post-Traumatic Symptoms**

Because it has been found that forgiveness was associated with psychological well-being (e.g., Stoia-Caraballo et al., 2008; Worthington & Scherer, 2004; Ryan & Kumar, 2005), I examined whether forgiveness mediated the relations between

attachment and post-traumatic symptoms. Results indicated that partial mediation occurred in Study 1, while in Study 2 there was no mediation. However, in Study 2, I used a self-rated dispositional measure that may, at least in part, measure one's self-concept rather than one's actual disposition. Given the findings in Study 1 that measured one's actual forgiveness of a real offender, we can conclude that attachment, in part, may work through forgiveness to affect outcome following interpersonal offenses. However, to establish this causal path more confidently, prospective data would have to be collected. Regarding the lack of mediation in Study 2, there are other reasons that this finding may have occurred. First, individuals do not associate forgiveness of people with an impersonal tragedy, and second, many Christians might not feel comfortable associating forgiveness of God with any event. In support of this latter interpretation, in both studies the forgiveness of God and anger at God measures had significant skew, reflecting that most of the sample scored very low on anger towards God and unforgiveness of God.

### **Limitations and Future Directions**

There are limitations to this study. The measures are all self-report. I also used the Experiences in Close Relationships rather than the Experiences in Close Relationships – Revised (ECR-R). Many will argue that the ECR-R is the better measure. I chose to use the ECR because it was used in key, prior studies; however, it would be worthwhile to see if the ECR-R would produce the same results.

In addition, gathering data through MTurk is still in its infancy, as many researchers have not conducted research using this tool. As stated above, however, there is evidence that MTurk samples represent a cross-section of the U.S. population.

Moreover, the quality of data that I obtained seemed quite good. There was little missing data, and the open-ended questions were answered thoughtfully. That said, adopting a requirement that the participants have a 98% acceptance rate for their prior work, instead of the default of 95%, did result in a smoother data collection process in Study 2. While a substantial number of Study 1 participants had troubles finding the confirmation code, none of the Study 2 participants did. There was also less missing data in the second sample.

It is important to note that this study was not designed to test the strength of the compensation model discussed in the Hall et al. (2009) article. In fact, I started with the assumption that Hall and colleagues were correct in their belief that the correspondence model is the better model of the two.

Future studies should try to reflect on the true nature of God because attachment styles arise out of the interaction between two parties. It would be interesting to include a measure that indicates how respondents most often choose to communicate with God and by what means they feel God communicates with them. Research in attachment to God has clinical implications for those doing pastoral counseling and for secular psychologists counseling individuals with a religious faith background.

Finally, although I used the language of prediction, it would be preferable to have conducted this research using longitudinal data in order to observe whether attachment scores truly predicted subsequent outcome.

### **Summary and Conclusions**

Although I did not find every specific finding that I had predicted, on balance, my findings support the general model that attachment to God is a related but distinct,

separate construct from attachment to people. Specifically, independent of their attachment to people, those who are securely attached to God have less anger at God, more forgiveness of God, and fewer symptoms following impersonal traumatic events. Therefore, the Hall et al. (2009) model of correspondence is insufficiently nuanced. In addition, these findings suggest that we need a more complex understanding of the relation of religious experience to well-being. Although many studies have found positive correlations between religiosity and well-being (for review see Larson et al., 1997 and McCullough et al., 2000), not all religious experience produces positive affect. It is possible for religion to cause distress (e.g., Ellison et al., 2012). In this study, insecure attachment to God was associated with poorer outcomes following impersonal tragedies, including the burden of feeling unforgiveness towards the God one worships or, at least, believes in.

It is noteworthy to restate that I found attachment to people to be a more powerful predictor than I had originally hypothesized. This serves to strengthen prior research that has found a relation between general attachment and well-being (Karreman & Vingerhoets, 2012; Hertz, Addad, & Ronel, 2012; Yuval, Guttman-Steinmetz, Koenen, Levinovsky, Zakin, & Dekel, 2001). Future studies should continue to examine the relation of God attachment to people attachment, as well as the processes by which attachment to God is formed. Moreover, it would be an efficacious use of time and resources to investigate the reasons for unforgiveness in Christians whose religion stresses the importance of forgiving, especially as the lack of forgiveness has been shown to produce negative outcomes (Worthington, Davis, Hook, Tongeren, Gartner, Jennings, Lin, 2013; Krumrei, Mahoney, & Pargament, 2008).

## References

- Almabuk, R.H., Enright, R.D., & Cardis, P.A. (1995). Forgiveness education with parentally love-deprived late adolescents. *Journal of Moral Education, 24*, 427-444.
- Ainsworth, M.D.S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: Johns Hopkins University Press.
- Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of attachment: Assessed in the Strange Situation and at home*. Hillsdale, NJ: Erlbaum.
- Amazon Mechanical Turk. (n.d.). In *Wikipedia*. Retrieved February 11, 2014, from [http://en.wikipedia.org/wiki/Amazon\\_Mechanical\\_Turk](http://en.wikipedia.org/wiki/Amazon_Mechanical_Turk)
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Ayele, H., Mulligan, T., Gheorghiu, S., & Reyes-Ortiz, C. (1999). Religious activity improves life satisfaction for some physicians and older patients. *Journal of the American Geriatrics Society, 47*, 453-455.
- Barber, L., Maltby, J., & Macaskill, A (2005). Angry memories and thoughts of revenge: The relationship between forgiveness and anger rumination. *Personality and Individual Differences, 39*, 253-262.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research – conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182
- Beck, R., & McDonald, A. (2004). Attachment to God: The attachment to God inventory, tests of working model correspondence, and an exploration of faith group differences. *Journal of Psychology and Theology, 32*, 92-103.

- Bowlby, J. (1969). Disruption of affectional bonds and its effects on behavior. *Canada's Mental Health Supplement*, 59, 12.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. attachment* (2<sup>nd</sup> ed.). New York: Basic Books. (original work published 1969).
- Bowlby, J. (1973). *Separation: Anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. *American Journal of Orthopsychiatry*, 52(4), 664-678. doi:10.1111/j.1939-0025.1982.tb01456.x
- Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory*. London: Routledge.
- Bracy, J. (2011). *Yearnings: Stories of insecure attachment and the journey to connect to God* (Doctoral dissertation). Retrieved from PsycINFO.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson, & W. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York, NY, US: Guilford Press.
- Brokaw, B.F., & Edwards, K.J. (1994). The relationship of God image to level of object relations development. *Journal of Psychology and Theology*, 22, 352-371.
- Brown, R. P. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. *Personality and Social Psychology Bulletin*, 29, 759-771.
- Bureau, J. F., Easterbrooks, E. A., & Lyons-Ruth, K. (2009). Maternal depressive symptoms in infancy: Unique contribution to children's depressive symptoms in

childhood and adolescence? *Development and Psychopathology*, 21, 519–537.

doi:10.1017/S0954579409000285

Burnette, J. L., Taylor, K. W., Worthington, E. L., & Forsyth, D. R. (2007). Attachment and trait forgivingness: The mediating role of angry rumination. *Personality and Individual Differences*, 42, 1585-1596. doi:10.1016/j.paid.2006.10.033

Byrd, K. R., & Boe, A. (2001). The correspondence between attachment dimensions and prayer in college students. *International Journal for the Psychology of Religion*, 11, 9-24. doi:10.1207/S15327582IJPR1101\_02

Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and function of working models. In K. Bartholomew, & D. Perlman (Eds.), *Attachment processes in adulthood* (pp. 53-90). London, England: Jessica Kingsley Publishers.

Cooper, L.B., Bruce, A.J., Harman, M.J., & Boccaccini, M.T. (2009). Differentiated styles of attachment to God and varying religious coping efforts. *Journal of Psychology and Theology*, 37, 134-141.

Cozzarelli, C., Karafa, J. A., Collins, N. L., & Tagler, M. J. (2003). Stability and change in adult attachment styles: Associations with personal vulnerabilities, life events, and global construals of self and others. *Journal of Social and Clinical Psychology*, 22, 315-346. doi:10.1521/jscp.22.3.315.22888

Cuddy, M. A. (1990). *Predicting sexual abuse from dissociation, somatization and nightmares* (Unpublished doctoral dissertation). York University, Toronto, Ontario.

- Davis, D.E., Hook, J.N., & Worthington, E.L. (2008). Relational spirituality and forgiveness: The roles of attachment to God, religious coping, and viewing the transgression as a desecration. *Journal of Psychology and Christianity, 27*, 293-301.
- DePrince, A. P. (2005). Social cognition and revictimization risk. *Journal of Trauma and Dissociation, 6*, 125-141. doi:10.1300/J229v06n01\_08
- Ellison, C., Bradshaw, M., Kuyel, N., & Marcum, J. (2012). Attachment to God, stressful life events, and changes in psychological distress. *Review of Religious Research, 53*, 493-511. doi:10.1007/s13644-011-0023-4
- Enright, R. D., & Fitzgibbons, R. P. (2000). What forgiveness is not. In *Helping clients forgive: An empirical guide for resolving anger and restoring hope* (pp. 37-51). Washington, DC, US: American Psychological Association. doi:10.1037/10381-003
- Exline, J., Baumeister, R. F., Zell, A. L., Kraft, A. J., & Witvliet, C. O. (2008). Not so innocent: Does seeing one's own capability for wrongdoing predict forgiveness? *Journal of Personality and Social Psychology, 94*, 495-515. doi:10.1037/0022-3514.94.3.495
- Exline, J. J., Park, C. L., Smyth, J. M., & Carey, M. P. (2011). Anger toward God: Social-cognitive predictors, prevalence, and links with adjustment to bereavement and cancer. *Journal of Personality and Social Psychology, 100*, 129-148. doi:10.1037/a0021716
- Exline, J., Yali, A., & Lobel, M. (1999). When God disappoints: Difficulty forgiving God and its role in negative emotion. *Journal of Health Psychology, 4*, 365-379. doi:10.1177/135910539900400306

- Fraley, R., & Shaver, P. R. (1999). Loss and bereavement: Attachment theory and recent controversies concerning 'grief work' and the nature of detachment. In J. Cassidy, P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 735-759). New York, NY, US: Guilford Press.
- Freedman, S. (2008). Forgiveness education with at-risk adolescents: A case study analysis. In W. Malcolm, N. DeCourville, & K. Belicki (Eds.), *Women's reflections on the complexities of forgiveness* (pp. 93-119). New York, NY: Routledge, Taylor, and Francis Group.
- Freyd, J. J., Klest, B., & Allard, C. B. (2005). Betrayal trauma: Relationship to physical health, psychological distress, and a written disclosure intervention. *Journal of Trauma and Dissociation*, 6, 83-104. doi:10.1300/J229v06n03\_04
- George, L. K., Ellison, C. G., & Larson, D. B. (2002). Explaining the relationships between religious involvement and health. *Psychological Inquiry*, 13, 190-200. doi:10.1207/S15327965PLI1303\_04
- Gillath, O., Mikulincer, M., Fitzsimons, G. M., Shaver, P. R., Schachner, D. A., & Bargh, J. A. (2006). Automatic activation of attachment-related goals. *Personality and Social Psychology Bulletin*, 32, 1375-1388. doi:10.1177/0146167206290339
- Gobin, R. L., & Freyd, J. J. (2009). Betrayal and revictimization: Preliminary findings. *Psychological Trauma: Theory, Research, Practice, and Policy*, 1, 242-257. doi:10.1037/a0017469
- Goodman, L. A., Corcoran, C., Turner, K., Yuan, N., & Green, B. L. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful

Life Events Screening Questionnaire. *Journal of Traumatic Stress, 11*, 521-542.

doi:10.1023/A:1024456713321

Granqvist, P. (1998). Religiousness and perceived childhood attachment: On the question of compensation or correspondence. *Journal for the Scientific Study of Religion, 37*, 350-367.

Hall, T.W., Brokaw, B.F., Edwards, K.J., & Pike, P.L. (1998). An empirical exploration of psychoanalysis and religion: Spiritual maturity and object relations development. *Journal for the Scientific Study of Religion, 37*, 303-313.

Hall, T.W., & Edwards, K.J. (2002). The spiritual assessment inventory: A theistic model and measure for assessing spiritual development. *Journal for the Scientific Study of Religion, 41*, 341-357.

Hall, T. W., Fujikawa, A., Halcrow, S. R., Hill, P. C., & Delane, H. (2009). Attachment to God and implicit spirituality: Clarifying correspondence and compensation models. *Journal of Psychology and Theology, 37*, 227-242.

Harlow, H.F. (1959). Love in infant monkeys. *Scientific American, 200*, 68-86.

Hazan, C., & Shaver, P.R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.

Hazan, C., & Shaver, P.R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology, 59*, 270-280.

Hertz, P., Addad, M., & Ronel, N. (2012). Attachment styles and changes among women members of Overeaters Anonymous who have recovered from binge-eating disorder. *Health and Social Work, 37*, 110-122.

- Kaiser, S., Kirtzeck, M., Hornschuh, G., & Sachser, N. (2003). Sex-specific difference in social support--a study in female guinea pigs. *Physiology and Behavior*, *79*, 297-303. doi:10.1016/S0031-9384(03)00091-X
- Karreman, A., & Vingerhoets, A. M. (2012). Attachment and well-being: The mediating role of emotion regulation and resilience. *Personality and Individual Differences*, *53*, 821-826. doi:10.1016/j.paid.2012.06.014
- Kendall-Tackett, K. A., & Marshall, R. (1999). Victimization and diabetes: An exploratory study. *Child Abuse and Neglect*, *23*, 593-596. doi:10.1016/S0145-2134(99)00033-2
- Kirkpatrick, L. A. (1997). A longitudinal study of changes in religious belief and behavior as a function of individual differences in adult attachment style. *Journal for the Scientific Study of Religion*, *36*, 207-217. doi:10.2307/1387553
- Kirkpatrick, L.A., & Shaver, P.R. (1990). Attachment theory and religion: Childhood attachments, religious beliefs, and conversion. *Journal for the Scientific Study of Religion*, *29*, 315-334.
- Kobak, R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, *59*, 135-146. doi:10.2307/1130395
- Krumrei, E., Mahoney, A., & Pargament, K. I. (2008). Turning to God to forgive: More than meets the eye. *Journal of Psychology and Christianity*, *27*, 302-310.
- La Guardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within person variation in security of attachment: A self-determination theory perspective on

- attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, 79, 367–384.
- Lamb, M. E., Thompson, R. A., Gardner, W. P., Charnov, E. L., & Estes, D. (1984). Security of infantile attachment as assessed in the 'strange situation': Its study and biological interpretation. *Behavioral and Brain Sciences*, 7, 127-171.  
doi:10.1017/S0140525X00026522
- Larson, D., Sawyers, J., & McCullough, M. (1997). *Scientific Research on Spirituality and Health: A Consensus Report*. Rockville, MD: National Institute for Healthcare Research.
- Lawler-Row, K. A., Karremans, J. C., Scott, C., Edlis-Matityahou, M., & Edwards, L. (2008). Forgiveness, physiological reactivity and health: The role of anger. *International Journal of Psychophysiology*, 68, 51-58.  
doi:10.1016/j.ijpsycho.2008.01.001
- Lawler-Row, K. A., Younger, J. W., Piferi, R. L., & Jones, W. H. (2006). The role of adult attachment style in forgiveness following an interpersonal offense. *Journal of Counseling and Development*, 84, 493-502. doi:10.1002/j.1556-6678.2006.tb00434.x
- Lindblom, K. M., & Gray, M. J. (2010). Relationship closeness and trauma narrative detail: A critical analysis of betrayal trauma theory. *Applied Cognitive Psychology*, 24, 1–19.
- Ling, X., Jiang, G.-R., & Xia, Q. (2008). Relationship between normal university freshmen's adult attachment towards different subjects and subjective well-being. *Chinese Journal of Clinical Psychology*, 16, 71–73.

- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. In M.T. Greenberg, D. Cicchetti, & M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 121-160). Chicago: University of Chicago Press.
- Maltby, J. (1999). The internal structure of a derived, revised, and amended measure of the Religious Orientation Scale: The 'Age-Universal' I-E Scale-12. *Social Behavior and Personality*, 27, 407-412. doi:10.2224/sbp.1999.27.4.407
- McCullough, M. E., Bellah, C., Kilpatrick, S., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin*, 27, 601-610. doi:10.1177/0146167201275008
- McCullough, M. E., Bono, G., & Root, L. M. (2007). Rumination, emotion, and forgiveness: Three longitudinal studies. *Journal of Personality and Social Psychology*, 92, 490-505. doi:10.1037/0022-3514.92.3.490
- McCullough, M. E., Fincham, F. D., & Tsang, J. (2003). Forgiveness, forbearance, and time: The temporal unfolding of transgression-related interpersonal motivations. *Journal of Personality and Social Psychology*, 84, 540-557. doi:10.1037/0022-3514.84.3.540
- McCullough, M. E., Hoyt, W. T., Larson, D. B., Koenig, H. G., & Thoresen, C. (2000). Religious involvement and mortality: A meta-analytic review. *Health Psychology*, 19, 211-222. doi:10.1037/0278-6133.19.3.211

- McCullough, M. E., Rachal, K., Sandage, S. J., Worthington, E. R., Brown, S., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology, 75*, 1586-1603. doi:10.1037/0022-3514.75.6.1586
- McCullough, M. E., Root, L. M., & Cohen, A. D. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. *Journal of Consulting and Clinical Psychology, 74*, 887-897. doi:10.1037/0022-006X.74.5.887
- McCullough, M. E., & Worthington, E. R. (1999). Religion and the forgiving personality. *Journal of Personality, 67*, 1141-1164. doi:10.1111/1467-6494.00085
- Mikulincer, M., & Shaver, P.R. (2004). Security-based self-representations in adulthood: Contents and processes. In W.S. Rholes & J.A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 159-195). New York: Guilford Press.
- Mikulincer, M., & Shaver, P.R. (2007). *Attachment in adulthood*. New York: The Guilford Press.
- Millar, A., & Belicki, K. (June, 2012). *Attachment and Forgiveness: The Role of Anger Rumination*. Paper presented to the annual meeting of the Canadian Psychological Association, Halifax, New Brunswick.
- North, J. (1998). The 'ideal' of forgiveness: A philosopher's exploration. In R. D. Enright, J. North (Eds.), *Exploring forgiveness* (pp. 15-34). Madison, WI, US: University of Wisconsin Press.

- Owen, J., Quirk, K., & Manthos, M. (2012). I get no respect: The relationship between betrayal trauma and romantic relationship functioning. *Journal of Trauma and Dissociation, 13*, 175-189. doi:10.1080/15299732.2012.642760
- Poloma, M. M., & Pendleton, B. F. (1989). Exploring types of prayer and quality of life: A research note. *Review of Religious Research, 31*, 46–53.
- Romans, S., Belaise, C., Martin, J., Morris, E., & Raffi, A. (2002). Childhood abuse and later medical disorders in women: An epidemiological study. *Psychotherapy and Psychosomatics, 71*, 141-150. doi:10.1159/000056281
- Ryan, R. B., & Kumar, V. K. (2005). Willingness to forgive: Relationships with mood, anxiety and severity of symptoms. *Mental Health, Religion and Culture, 8*, 13-16. doi:10.1080/13674670410001666543
- Sandberg, D. A., Suess, E. A., & Heaton, J. L. (2010). Attachment anxiety as a mediator of the relationship between interpersonal trauma and post-traumatic symptomatology among college women. *Journal of Interpersonal Violence, 25*, 33–49.
- Shaver, P. R., & Hazan, C. (1988). A biased overview of the study of love. *Journal of Social and Personal Relationships, 5*, 473-501. doi:10.1177/0265407588054005
- Shepherd, S., & Belicki, K. (2008). Trait forgiveness and traitedness within the HEXACO model of personality. *Personality and Individual Differences, 45*, 389-394. doi:10.1016/j.paid.2008.05.011
- Stalker, C. A., Gebotys, R., & Harper, K. (2005). Insecure attachment as a predictor of outcome following inpatient trauma treatment for women survivors of childhood

abuse. *Bulletin of the Menninger Clinic*, 69, 137-156.

doi:10.1521/bumc.69.2.137.66508

- Stoia-Caraballo, R., Rye, M. S., Pan, W., Kirschman, K., Lutz-Zois, C., & Lyons, A. M. (2008). Negative affect and anger rumination as mediators between forgiveness and sleep quality. *Journal of Behavioral Medicine*, 31, 478-488. doi:10.1007/s10865-008-9172-5
- Strelan, P., Acton, C., & Patrick, K. (2009). Disappointment with God and well-being: The mediating influence of relationship quality and dispositional forgiveness. *Counseling and Values*, 53, 202-213. doi:10.1002/j.2161-007X.2009.tb00126.x
- Strelan, P., & Covic, T. (2006). A Review of forgiveness process models and a coping framework to guide future research. *Journal of Social and Clinical Psychology*, 25, 1059-1085. doi:10.1521/jscp.2006.25.10.1059
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4<sup>th</sup> ed.). Toronto: Allyn & Bacon.
- Thompson, L., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L. S., & Roberts, D. J. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, 73, 313-359. doi:10.1111/j.1467-6494.2005.00311.x
- Torquati, J. C., & Raffaelli, M. (2004). Daily experiences of emotions and social contexts of securely and insecurely attached young adults. *Journal of Adolescent Research*, 19, 740-758.
- Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale—Revised. In J. Wilson, T. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). New York, NY, US: Guilford Press. Witteveen, A. B., Bramsen, I., Hovens, J. E., &

Van Der Ploeg, H. M. (2005). Utility of the Impact of Event Scale in screening for post-traumatic stress disorder. *Psychological Reports, 97*, 297-308.

doi:10.2466/PR0.97.5.297-308

Wood, B.T., Worthington, E.L., Exline, J.J., Yali, A.M., Aten, J.D., & Minn, M.R.

(2010). Development, refinement, and psychometric properties of the attitudes toward God scale. *Psychology of Religion and Spirituality, 2*, 148-167.

Worthington, E. R. & Scherer, M. (2004). Forgiveness is an emotion-focused coping strategy that can reduce health risks and promote health resilience: Theory, review, and hypotheses. *Psychology and Health, 19*, 385-405.

doi:10.1080/0887044042000196674

Yuval, N., Guttman-Steinmetz, S., Koenen, K., Levinovsky, L., Zakin, G., & Dekel, R.

(2001). Do attachment and hardiness relate to each other and to mental health in real-life stress. *Journal of Social and Personal Relationships, 18*, 844-858.

doi:10.1177/026540750118600

**Appendix A**  
**Copies of Questionnaires**

**Demographic Questionnaire**

Thank you for agreeing to participate in this research. Scientific journals require researchers to provide basic descriptions of participants so that other scientists can judge how well the results will apply to others. We would, therefore, appreciate receiving the following information about you:

1. Sex
2. Age
3. Highest education
4. Citizenship status
5. To which ethnic, cultural, racial group do you belong?
6. To which Christian denomination do you belong?

For the following questions, please pick the closest category.

Almost Never	Up to a few times per year	Monthly	Weekly or almost weekly	More than once a week	Daily
-----------------	-------------------------------	---------	----------------------------	--------------------------	-------

How often do you attend church?

How often do you read the Bible?

How often do you read Christian material written to teach or inspire?

How often do you pray, apart from church services?

## Questions about the Event

Please briefly describe what happened to you when you were deeply upset or hurt by a romantic partner in the last six months:

How upsetting was this event to you?

1) not very upsetting 2) somewhat upsetting 3) upsetting 4) very upsetting 5) extremely upsetting

How long ago did the incident take place? Please be specific, indicating how many weeks, if possible.

Since this happened, has your prayer life changed?

1) I pray a whole lot less 2) I pray less 3) no change 4) I pray more 5) I pray a whole lot more

Since this happened, has your relationship to God changed?

1) I feel much more distant from God 2) I feel more distant from God 3) no change  
4) I feel closer to God 5) I feel much more closer to God

Since this happened, has your religious practice(s) changed (e.g., attendance at church, reading of scriptures)?

1) Greatly decreased 2) decreased 3) no change 4) increased 5) greatly increased

## Age Universal I-E Scale - 12

Please use the following scale to rate your agreement/disagreement with each statement.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

1. I try to live all my life according to my religious beliefs.
2. I have often had a strong sense of God's presence.
3. My whole approach to life is based on my religion.
4. My religion is important because it answers many questions about the meaning of life.
5. I enjoy reading about my religion.
6. It is important to me to spend time in private thought and prayer.
7. What religion offers me most is comfort in times of trouble and sorrow.
8. Prayer is for peace and happiness.
9. I pray mainly to gain relief and protection.
10. I go to church because it helps me make friends.
11. I go to church mainly because I enjoy seeing people I know there.
12. I go to church mostly to spend time with my friends.

### Stressful Life Experiences Screening – Short Form

Please estimate the number of times in your life you have experienced each event. If you have never experienced the event, please place a “0” beside that specific event.

- \_\_\_\_\_ 1. I have witnessed or experienced a natural disaster like a hurricane or earthquake.
- \_\_\_\_\_ 2. I have witnessed or experienced a human made disaster like a plane crash or industrial disaster.
- \_\_\_\_\_ 3. I have witnessed or experienced a serious accident or injury.
- \_\_\_\_\_ 4. I have witnessed or experienced chemical or radiation exposure happening to me or a close friend or a family member. (Do not include routine x-ray examinations unless those deeply concern you).
- \_\_\_\_\_ 5. I have witnessed or experienced a life threatening illness happening to me, a close friend, or a family member.
- \_\_\_\_\_ 6. I have witnessed or experienced the death of my spouse or child.
- \_\_\_\_\_ 7. I have witnessed or experienced the death of a close friend or family member (other than my spouse or child).
- \_\_\_\_\_ 8. I or a close friend or family member has been kidnapped or taken hostage.
- \_\_\_\_\_ 9. I or a close friend or family member has been the victim of a terrorist attack or torture.
- \_\_\_\_\_ 10. I have been involved in combat or a war or lived in a war affected area.
- \_\_\_\_\_ 11. I have seen or handled dead bodies other than at a funeral.
- \_\_\_\_\_ 12. I have felt responsible for the serious injury or death of another person.
- \_\_\_\_\_ 13. I have witnessed or been attacked with a weapon.

### Experiences in Close Relationships

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. I prefer not to show a partner how I feel deep down. (Reverse coded.)
2. I worry about being abandoned. (Reverse coded.)
3. I am very comfortable being close to romantic partners.
4. I worry a lot about my relationships. (Reverse coded.)
5. Just when my partner starts to get close to me, I find myself pulling away. (Reverse coded.)
6. I worry that romantic partners won't care about me as much as I care about them. (Reverse coded.)
7. I get uncomfortable when a romantic partner wants to be very close. (Reverse coded.)
8. I worry a fair amount about losing my partner. (Reverse coded.)
9. I don't feel comfortable opening up to romantic partners. (Reverse coded.)
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her. (Reverse coded.)
11. I want to get close to my partner, but I keep pulling back. (Reverse coded.)
12. I often want to merge completely with romantic partners, and this sometimes scares them away. (Reverse coded.)
13. I am nervous when partners get too close to me. (Reverse coded.)
14. I worry about being alone. (Reverse coded.)
15. I feel comfortable sharing my private thoughts and feelings with my partner.
16. My desire to be very close sometimes scares people away. (Reverse coded.)
17. I try to avoid getting too close to my partner. (Reverse coded.)
18. I need a lot of reassurance that I am loved by my partner. (Reverse coded.)
19. I find it relatively easy to get close to my partner.
20. Sometimes I feel that I force my partners to show more feeling, more commitment. (Reverse coded.)
21. I find it difficult to allow myself to depend on romantic partners. (Reverse coded.)
22. I do not often worry about being abandoned.
23. I prefer not to be too close to romantic partners. (Reverse coded.)
24. If I can't get my partner to show interest in me, I get upset or angry. (Reverse coded.)
25. I tell my partner just about everything.
26. I find that my partner(s) don't want to get as close as I would like. (Reverse coded.)
27. I usually discuss my problems and concerns with my partner.
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure. (Reverse coded.)
29. I feel comfortable depending on romantic partners.

30. I get frustrated when my partner is not around as much as I would like. (Reverse coded.)
31. I don't mind asking romantic partners for comfort, advice, or help.
32. I get frustrated if romantic partners are not available when I need them. (Reverse coded.)
33. It helps to turn to my romantic partner in times of need.
34. When romantic partners disapprove of me, I feel really bad about myself. (Reverse coded.)
35. I turn to my partner for many things, including comfort and reassurance.
36. I resent it when my partner spends time away from me. (Reverse coded.)

## The Attachment to God Inventory

The following statements concern how you feel about your relationship with God. We are interested in how you generally experience your relationship with God, not just in what is happening in that relationship currently. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale.

1	2	3	4	5	6	7
Disagree Strongly			Neutral/Mixed			Agree Strongly

- \_\_\_\_ 1. I worry a lot about my relationship with God.
- \_\_\_\_ 2. I just don't feel a deep need to be close to God.
- \_\_\_\_ 3. If I can't see God working in my life, I get upset or angry.
- \_\_\_\_ 4. I am totally dependent upon God for everything in my life.
- \_\_\_\_ 5. I am jealous at how God seems to care more for others than for me.
- \_\_\_\_ 6. It is uncommon for me to cry when sharing with God.
- \_\_\_\_ 7. Sometimes I feel that God loves others more than me.
- \_\_\_\_ 8. My experiences with God are very intimate and emotional.
- \_\_\_\_ 9. I am jealous at how close some people are to God.
- \_\_\_\_ 10. I prefer not to depend too much on God.
- \_\_\_\_ 11. I often worry about whether God is pleased with me.
- \_\_\_\_ 12. I am uncomfortable being emotional in my communication with God.
- \_\_\_\_ 13. Even if I fail, I never question that God is pleased with me.
- \_\_\_\_ 14. My prayers to God are often matter-of-fact and not very personal.
- \_\_\_\_ 15. Almost daily I feel that my relationship with God goes back and forth from "hot" to "cold."
- \_\_\_\_ 16. I am uncomfortable with emotional displays of affection to God.
- \_\_\_\_ 17. I fear God does not accept me when I do wrong.
- \_\_\_\_ 18. Without God I couldn't function at all.
- \_\_\_\_ 19. I often feel angry with God for not responding to me when I want.
- \_\_\_\_ 20. I believe people should not depend on God for things they should do for themselves.
- \_\_\_\_ 21. I crave reassurance from God that God loves me.
- \_\_\_\_ 22. Daily I discuss all of my problems and concerns with God
- \_\_\_\_ 23. I am jealous when others feel God's presence when I cannot.
- \_\_\_\_ 24. I am uncomfortable allowing God to control every aspect of my life.
- \_\_\_\_ 25. I worry a lot about damaging my relationship with God.
- \_\_\_\_ 26. My prayers to God are very emotional.
- \_\_\_\_ 27. I get upset when I feel God helps others but forgets about me.
- \_\_\_\_ 28. I let God make most of the decisions in my life.

## TRIM – 18

For the following questions, please indicate your current thoughts and feelings about the person who hurt you. Use the following scale to indicate your agreement with each of the statements.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

- \_\_\_ 1. I'll make him/her pay.
- \_\_\_ 2. I keep as much distance between us as possible.
- \_\_\_ 3. Even though his/her actions hurt me, I still have goodwill for him/her.
- \_\_\_ 4. I wish that something bad would happen to him/her.
- \_\_\_ 5. I live as if he/she doesn't exist, isn't around.
- \_\_\_ 6. I want us to bury the hatchet and move forward with our relationship.
- \_\_\_ 7. I don't trust him/her.
- \_\_\_ 8. Despite what he/she did, I want us to have a positive relationship again.
- \_\_\_ 9. I want him/her to get what he/she deserves.
- \_\_\_ 10. I find it difficult to act warmly toward him/her.
- \_\_\_ 11. I avoid him/her.
- \_\_\_ 12. Although he/she hurt me, I put the hurts aside so we could resume our relationship.
- \_\_\_ 13. I'm going to get even.
- \_\_\_ 14. I forgive him/her for what he/she did to me.
- \_\_\_ 15. I cut off the relationship with him/her.
- \_\_\_ 16. I have released my anger so I could work on restoring our relationship to health.
- \_\_\_ 17. I want to see him/her hurt and miserable.
- \_\_\_ 18. I withdraw from him/her.

## God TRIM

For the following questions, please indicate your current thoughts and feelings towards God. If some of these statements seem odd, remember that in the Bible, for example, in the books of Job and Psalms, we see examples of feelings like these being freely expressed by people whom God blessed. Use the following scale to indicate your agreement with each of the statements.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. I wish I could make God pay.
2. I am trying to keep as much distance between God and me as possible.
3. Even though God's actions have hurt me, I have goodwill toward God.
4. I wish that something bad would happen to God.
5. I am living as if God doesn't exist and isn't around.
6. I want to bury the hatchet with God and move forward with our relationship.
7. I don't trust God.
8. Despite what God did (or failed to do), I want us to have a positive relationship again.
9. I am finding it difficult to love God.
10. I am avoiding God.
11. Although God hurt me, I am putting the hurt aside so that we can resume our relationship.
12. I wish I could get even with God.
13. I forgive God for what He did to me.
14. I have cut off my relationship with God.
15. I have released my anger with God so that I can work on restoring my relationship with God.
16. I wish I could make God feel hurt and miserable.
17. I withdraw from God.
18. I no longer set aside time to spend with God.

## Tendency to Forgive

Use the following scale to rate your agreement/disagreement with each statement:

1                      2                      3                      4                      5                      6                      7  
Disagree                      Neutral/Mixed                      Agree  
Strongly

1. I tend to get over it quickly when someone hurts my feelings.
2. If someone wrongs me, I often think about it a lot afterwards.
3. I have a tendency to harbor grudges.
4. When people wrong me, my approach is just to forgive and forget.

## Anger at God

Please answer the following questions using the scale below...

Not at all    1    2    3    4    5    6    7    8    9    Extremely

To what extent to you currently...

feel angry at God?

feel that God has let you down?

view God as unkind?

feel abandoned by God?

## Impact of Event Scale – Revised

Instructions: Below is a list of difficulties people sometimes have after stressful life events. Please read each item and then indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to the event you have just described. How much were you distressed or bothered by these difficulties?

Item response anchors are: 0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

1. Any reminder brought back feelings about it.
2. I had trouble staying asleep.
3. Other things kept making me think about it.
4. I felt irritable and angry.
5. I avoided letting myself get upset when I thought about it or was reminded of it.
6. I thought about it when I didn't mean to.
7. I felt as if it hadn't happened or wasn't real.
8. I stayed away from reminders of it.
9. Pictures about it popped into my mind.
10. I was jumpy and easily startled.
11. I tried not to think about it.
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
13. My feelings about it were kind of numb.
14. I found myself acting or feeling like I was back at that time.
15. I had trouble falling asleep.
16. I had waves of strong feelings about it.
17. I tried to remove it from my memory.
18. I had trouble concentrating.
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.
20. I had dreams about it.
21. I felt watchful and on-guard.
22. I tried not to talk about it.

## Appendix B

### Exploratory Multiple Regressions for Study 1

Table 13

*Summary of Multiple Regression Predicting Post-traumatic Symptoms (IES)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	-.37	-4.67	.10	.000
ECR Avoidant	-.04	-.51	.00	.614
God Attachment Anxious	-.02	-.27	.00	.785
God Attachment Avoidant	.04	.51	.00	.612

Table 14

*Summary of Multiple Regression Predicting Forgiveness of Offender (TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	.17	2.20	.02	.029
ECR Avoidant	.32	3.95	.08	.000
God Attachment Anxious	-.06	-.68	.00	.496
God Attachment Avoidant	-.08	-1.09	.01	.277

Table 15

*Summary of Multiple Regression Predicting Forgiveness of God (God TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	-.01	-.14	.00	.886
ECR Avoidant	.21	2.8	.03	.006
God Attachment Anxious	.01	.15	.00	.881
God Attachment Avoidant	.43	6.45	.17	.000

Table 16

*Summary of Multiple Regression Predicting Anger at God*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	-.02	-.30	.00	.768
ECR Avoidant	-.12	-1.69	.01	.093
God Attachment Anxious	-.37	-4.94	.09	.000
God Attachment Avoidant	-.25	-3.89	.06	.000

## Appendix C

### Exploratory Multiple Regressions for Study 2

Table 17

*Summary of Multiple Regression Predicting Post-traumatic Symptoms (IES)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	-.18	-2.07	.02	.040
ECR Avoidant	-.12	-1.57	.01	.118
God Attachment Anxious	-.16	-1.95	.02	.053
God Attachment Avoidant	-.02	-.20	.00	.843
Religiosity	.14	1.70	.01	.091

Table 18

*Summary of Multiple Regression Predicting Dispositional Forgiveness (TTF)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	.20	2.31	.02	.022
ECR Avoidant	.04	.56	.00	.578
God Attachment Anxious	.17	2.09	.02	.038
God Attachment Avoidant	.12	1.44	.01	.153
Religiosity	.14	1.80	.01	.075

Table 19

*Summary of Multiple Regression Predicting Forgiveness of God (God TRIM)*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	.02	.21	.00	.837
ECR Avoidant	.25	3.46	.05	.001
God Attachment Anxious	.15	1.87	.01	.064
God Attachment Avoidant	.23	2.84	.03	.005
Religiosity	.10	1.32	.01	.190

Table 20

*Summary of Multiple Regression Predicting Anger at God*

Variable	$\beta$	t-test	$sr^2$	$p$
ECR Anxious	-.09	-1.15	.00	.253
ECR Avoidant	.02	.30	.00	.765
God Attachment Anxious	-.47	-6.42	.14	.000
God Attachment Avoidant	-.20	-2.67	.02	.008
Religiosity	-.07	-1.03	.00	.306

