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DEVELOPMENT OF A TWO-FACTOR SELF-FORGIVENESS SCALE

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

by

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Abstract

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Notwithstanding progress made in description, prediction, and manipulation of self-forgiveness, the extant literature continues to be wrought with theoretical and empirical quandaries. In the current dissertation, I conceptualize self-forgiveness within the framework of Social Cognitive Theory and develop a two-factor scale to assess distinct decisional and emotional aspects of self-forgiveness among perpetrators of interpersonal transgressions. In Study One, I test the hypothesized two-factor structure in a new measure of state self-forgiveness and provide preliminary evidence supporting construct validity via associations of that measure with perceived responsibility, guilt, and shame. In Study Two, I replicate the factor structure and provide preliminary evidence of criterion-related validity by distinguishing self-forgiveness from self-punishment and self-exoneration using the two-factor structure. In Study Three, I explore profiles of association between the hypothesized decisional and emotional factors of self-forgiveness and pro-social as well as health-related correlates. In sum, findings generally supported the proposed two-factor structure of self-forgiveness, which provides a foundation for future investigations and applications of self-forgiveness.

CHAPTER 1: Introduction

When individuals behave in ways that violate their internalized socio-moral values, they may repair the social and psychological damage by practicing self-forgiveness. According to the dual-process model, self-forgiveness entails (1) decisional affirmation of violated values and (2) emotional restoration of esteem (Griffin, Worthington, Lavelock, Greer, Lin, Davis, & Hook, 2015). The decisional component of self-forgiveness involves the experience of a cognitive shift toward accepting responsibility for one's offense and committing to align one's values and future behavior. The emotional component of self-forgiveness entails replacement of negative self-condemning emotions with positive self-affirming emotions. The aim of the current dissertation is to conduct the first empirical tests of the dual-process model through the development of a psychometric instrument designed to assess state self-forgiveness.

CHAPTER 2: Review of the Literature

Individuals internalize socio-moral values intended to regulate their actions to promote social belonging and personal esteem; however, violations of those values sometimes occur. People who behave in ways that violate their values are motivated to exercise moral reparation in order to mend the social and psychological damage. In the current review, self-forgiveness is conceptualized as a process by which perpetrators might achieve moral reparation by (1) deciding to affirm violated values and (2) experiencing restoration of personal esteem.

Social Cognitive Theory & Morality

Social Cognitive Theory asserts that moral self-regulation occurs as individuals monitor their behavior for morally relevant information, judge their behavior in relation to their socio-moral values and perceived situational constraints, and decide to act in order to maximize self-satisfaction while minimizing anticipated personal and social sanctions (Bandura, 1986, 1991). The primary regulatory mechanism that links moral thought and action is the self-reflective process by which one's planned behavior is judged in relation to one's socio-moral values. Accordingly, socio-moral values are rules to guide behavior that have been internalized by an individual from the specific expected evaluations of significant others (e.g., parents, peers, and symbolic models) and from generic standards apprehended by observing models whose actions were considered either morally praiseworthy or reprehensible by societal standards. The aim of moral self-regulation is to maintain a sense of self-worth and social connection through adherence to socio-moral values (Bandura, 2001). When individuals judge their planned behavior as incongruent with their internalized values, they anticipate a feeling of self-condemnation and abstain from behaving in a way that is judged as morally unacceptable (Bandura, 2002).

Despite the importance that Bandura placed on congruency between one's values and behavior, he and his colleagues wrote extensively on the perpetration of value violation (Bandura, 1990; Bandura, 1999; Osofsky, Bandura, & Zimbardo, 2005). His analysis is likely a consequence of the *Zeitgeist* in which he lived, given allusions in his work to racial discrimination toward devalued sub-groups (e.g., African-American Civil Rights Movement; 1954-1968), political and military violence (Cold War conflicts involving nuclear threat; 1947-1991), and the targeting of youth by cigarette manufacturers in the 1960's and 70's despite the U.S. Surgeon General's report on the health risks of smoking issued on January 11, 1964. In the wake of these and other grievances, Bandura (2002) described strategies by which individuals selectively activate socio-moral values or disengage inhumane conduct from self-condemnation to perpetrate behavior that is perceived as morally impermissible. For example, individuals might evade self-condemnation by (a) reframing a behavior as not immoral, (b) minimizing the perpetrator's self-perceived responsibility for the offense, (c) ignoring the consequences of wrongdoing, and (d) defaming the victim(s) of one's offense (Bandura, 1996, 1999). Thus, despite the internalization of socio-moral values, personal and situational factors sometimes interfere with the process of forming a moral judgment, which may result in conduct that violates one's socio-moral values.

Three principles may be adduced from the Social Cognitive Theory of moral self-regulation to provide a foundation for the current review. First, socio-moral values are an internalized set societal standards and personal principles that govern an individual's behavior. Second, individuals aim to adhere to their socio-moral values to promote social connection and enhance self-worth. Third, when violations of socio-moral values occur, distressing social and psychological sanctions are anticipated to follow. Yet, to the extent that Bandura focused on

moral self-regulation in the context of pre-offense self-reflective reasoning, he excluded how enduring needs for social connection and self-worth are met in the aftermath of engaging in a behavior that violates one's socio-moral values. It is here, in the post-offense context, that I conceptualize forgiveness of oneself.

A Primer on Self-forgiveness

The empirical study of self-forgiveness is a relatively new topic of interest. Whereas the study of forgiveness in general began in the early 1990's, self-forgiveness has been described as the neglected step-child of the forgiveness literature (Hall & Fincham, 2005). Studies of forgiving oneself are fewer and less methodologically sophisticated than studies of forgiving others, and no consensus exists among scholars regarding a single theoretical definition of self-forgiveness. During the past decade, however, the rate of publication for empirical and theoretical articles on self-forgiveness has rapidly accelerated (McConnell, 2015). In this section of the review, I summarize prior definitions of self-forgiveness, give the state of the basic and applied work on self-forgiveness, and critique the existing studies to provide a justification for a new theoretical model that integrates the literature on self-forgiveness.

First, there is no scholarly consensus regarding a definition of self-forgiveness. The earliest definition found in the psychological literature comes from Enright and the Human Development Group (1996, p. 116) who described self-forgiveness as "a willingness to abandon self-resentment in the face of one's own acknowledged objective wrong, while fostering compassion, generosity, and love toward oneself." After Enright et al.'s introduction of the construct, the study of self-forgiveness remained nearly dormant until Hall and Fincham (2005) highlighted the need for empirical research on the topic of self-forgiveness. In reply to their own call for research, Hall and Fincham (2008, p. 175) conducted a preliminary empirical study in

which they conceptualized self-forgiveness as a "set of motivational changes whereby one becomes decreasingly motivated to avoid stimuli associated with the offense, decreasing motivated to retaliate against the self, and increasingly motivated to act benevolently toward the self." It is without question that these early definitions were heuristically meaningful, though they were inadequately operationalized and inspired little confidence among researchers. However, scholars responded to these ground-breaking definitions with an explosion of reactionary research.

A major consequence of this reaction was that conceptualizations of self-forgiveness were derived from empirical evidence, rather than modifying existing definitions of forgiveness of others to apply to the self. First, Wohl, DeShea, and Wahkinney (2008, p. 2) defined self-forgiveness as "a positive attitudinal shift in the feelings, actions, and beliefs about the self following a self-perceived transgression or wrongdoing committed by the self." In a sample of undergraduate students (N = 113), Wohl and colleagues operationalized their definition in the development of the State Self-forgiveness Scales that assess (1) an affective and behavioral component of self-forgiveness and (2) a cognitive component of self-forgiveness. For example, items from the Self-forgiving Feelings and Actions subscale (SFFA) are "As I consider what I did that was wrong, I feel accepting of my self." and "As I consider what I did that was wrong, I put myself down. (reverse score)" An item from the Self-forgiving Beliefs subscale (SFB) is "As I consider what I did that was wrong, I believe I am acceptable." Participants rate the 8 items on the SFFA subscale and 9 items on the SFB subscale using a 4-point response format (1 = *not at all*, 4 = *completely*), such that higher scores are intended to indicate greater levels of self-forgiveness. Preliminary evidence supporting the discriminant validity of scores on the State Self-forgiveness Scales include non-significant associations with life satisfaction and

dispositional tendency to forgive others, and evidence supporting construct validity include associations in the anticipated directions for the SFFA (r = -.42) and SFB (r = -.39) with depressive symptoms among undergraduate students who reported experiencing an unwanted end to a romantic relationship (N = 60).

As an alternative to Wohl, DeShea, and Wahkinney's (2008) conceptualization, Woodyatt and Wenzel (2013a) conceptualize self-forgiveness as "a process whereby the offender recognizes their own culpability and the worth of the victim, experiences the resulting emotions, addresses attitudes and behaviors that led to the offense in the first place, attempts to make amends, and in the process, restores their moral self" (p. 231). They operationalize their definition in the Differentiated Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013a). A primary distinction between Woodyatt et al.'s and Wohl et al.'s definitions is that, according to Woodyatt and her colleagues, self-forgiveness in the absence of value affirmation is not self-forgiveness even if a positive self-image is restored. This is because perpetrators of wrongdoing might maintain a positive sense of self using strategies other than self-forgiving such as evading blame (Wenzel, Woodyatt, & Hedrick, 2012; Wohl & McLaughlin, 2014).

The Differentiated Process Scales of Self-forgiveness assess genuine self-forgiveness (7 items; e.g., I am trying to learn from my wrongdoing), pseudo self-forgiveness (6 items; e.g., I feel the other person go what they deserved), and self-punishment (7 items; e.g., I deserve to suffer for what I've done; Woodyatt & Wenzel, 2013a). Participants rate each item using a 5-point response format (1 = *strongly disagree*, 5 = *strongly agree*). Preliminary evidence supporting the predictive validity of scores on each subscale suggests that, when controlling for relationship importance, perceived responsibility, and offense severity among undergraduate interpersonal offenders (N = 76), a differential pattern on interpersonal and intrapersonal benefits

emerge. Pseudo self-forgiveness was unrelated to self-esteem and negatively related to empathy for the victim. Self-punitiveness was negatively related to self-esteem and unrelated to empathy for the victim of one's offense. Genuine self-forgiveness was positively related to self-esteem and empathy toward the victim of one's offense. In summary, Woodyatt and colleagues (2013a) demonstrate that, in the aftermath of perpetrating interpersonal harm, self-forgiveness must include affirmation of values through accepting responsibility for one's offense.

Whereas the State Self-forgiveness Scale (Wohl, DeShea, & Wahkinney, 2008) and the Differentiated Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013a) are the only available measures of state self-forgiveness, other measures assess dispositional self-forgiveness. For example, the trait self-forgiveness subscale of the Heartland Forgiveness Scale (Thompson, Snyder, Hoffman, Michael, Rasmussen, Billings, Heinze, Neufeld, Shorey, Roberts, & Roberts, 2005) is the most widely used measure of self-forgiveness – whether trait or state. Other measures of dispositional self-forgiveness exist but have been shown be misleading due to problems with scenario-based items (Tangney, Boone, Fee, & Reinsmith, 1999; Tangney, Boone, & Dearing, 2005) and conflating the lack of self-condemnation as evidence for the presence of self-forgiveness (Mauger, Perry, Freeman, Grove, McBride, & McKinney, 1992). For the purpose of the current review, however, I focus on event-specific state self-forgiveness.

Second, basic and applied studies of self-forgiveness have yielded promising and perplexing findings. Self-forgiveness has been associated with psychological well-being as well as self-rated physical health (for a meta-analytic review, see Davis, Ho, Griffin, Bell, Hook, Van Tongeren, DeBlaere, Worthington, & Westbrook, 2015; Worthington, Witvliet, Pietrini, & Miller, 2007). Furthermore, failure to forgive oneself affects not only perpetrators' relationship satisfaction but also victims' relationship satisfaction in the context of romantic dyads (Pelucchi,

Paleari, Regalia, & Fincham, 2013). Forgiveness of oneself has also been associated with spiritual well-being and perceptions of divine forgiveness among religious and spiritual individuals (for a meta-analytic review, see Davis, Worthington, Hook, & Hill, 2013). Finally, self-forgiveness has been studied in special populations including military service-members (Bryan, Theriault, & Bryan, 2015), caregivers in healthcare settings (Jacinto, 2009), patients receiving substance use treatment (Webb, Robinson, & Brower, 2009; Webb, Robinson, Brower, & Zucker, 2006), and individuals convicted of committing a crime (Cornish & Wade, 2015a).

Yet, self-forgiveness is no panacea. The self-forgiveness literature is replete with scholarly skepticism, contraindications regarding when it is appropriate to forgive oneself, and concern that self-forgiveness may be a tactic that enables perpetrators of wrongdoing to continually violate socio-moral values without consequence. For example, Vitz and Meade (2011) assert that self-forgiveness is at best an unsustainable mood elevator that is entirely subjective and egocentric or at worst a mechanism by which individuals who violate socio-moral values evade blame. These concerns have received some support by studies that linked empathy for victims with less self-forgiveness (Zechmeister & Romero, 2002) as well as lower likelihood of making amends among perpetrators who report higher levels of self-forgiveness (Exline, Root, Yadavalli, Martin, & Fisher, 2011). In addition, Cornish and Wade (2015a) point out that self-forgiveness may be contraindicated in cases where individuals engage in a pattern of ongoing harm. For instance, evidence has shown that self-forgiveness for smoking behavior hindered behavioral change among individuals who viewed their smoking habit as a serious health problem (Wohl & Thompson, 2011).

Not surprisingly, the growing foundation of basic empirical science on self-forgiveness has given rise to a burgeoning body of applied studies. Findings from four published randomized

controlled trials (Cornish & Wade, 2015b; Griffin, Worthington, Lavelock, Greer, Lin, Davis, & Hook, 2015; Scherer, Worthington, Hook, & Campana, 2011; Toussaint, Barry, Bornfriend, & Markman, 2014) and one unpublished dissertation study (Campana, 2010) test various theories of intervention to promote self-forgiveness. Of these trials, three (Campana, 2010; Griffin et al., 2015, and Scherer et al., 2011) apply an adaptation of Worthington's six-step method to promote self-forgiveness (Worthington, 2013), one (Cornish & Wade, 2015b) applies Cornish and Wade's (2015a) approach to working with clients toward self-forgiveness, and one (Toussaint, et al., 2014, p. 54) applies a "psycho-spiritual curriculum for encouraging self-forgiveness." I review each theory of intervention and its associated trial(s) successively.

In its initial form, Worthington's (2013) six-step method to promote self-forgiveness was as follows: Receive Divine Forgiveness, Repair Relationships, Rethink Rumination, REACH Emotional Self-forgiveness, Rebuild Self-acceptance, and Resolve to Live Virtuously. Scherer et al. (2011) tested the theory of intervention in its earliest form by randomly assigning outpatients at an alcohol rehabilitation center (N = 79) to participate in treatment as usual or a 4-hour series of group therapy sessions on the topic of self-forgiveness. Findings indicated that, in comparison to the control condition, those who participated in the self-forgiveness groups reported lower levels of offense-related negative emotion, higher levels of self-forgiveness, and higher levels of drinking refusal self-efficacy. Also testing the REACH method in an unpublished dissertation, Campana (2010) adapted Worthington's (2013) six-step method into a 6-hour workbook for women following the unwanted termination of a romantic relationship (N = 74). Findings indicated that participants who were randomly assigned to complete the workbook reported stronger increases on a single item measure of self-forgiveness in comparison to participants assigned to a wait-list control condition.

More recently, Griffin et al. (2015) adapted Worthington's (2013) six-step method to a 6-hour self-directed workbook intended to promote self-forgiveness among university students who reported violating their socio-moral values by perpetrating an interpersonal offense (N = 204). Participants were randomized into either an immediate treatment or waitlist control condition, and assessments were administered on three occasions. Treatment led to increases in self-forgiveness as well as decreases in guilt and shame. Stronger effects of treatment were observed for participants who initially reported lower levels of dispositional self-forgiveness, higher levels of perceived transgression severity, and higher self-administered dose of treatment (i.e., the number of words that participants wrote in the workbook) in some cases. Effect sizes ranged from medium to large (d = .52 to .80).

Cornish and Wade (2015a) advocate for a theory of intervention in which perpetrators of interpersonal harm progress through 4 components of genuine self-forgiveness: responsibility, remorse, restoration, and renewal. Responsibility is viewed as accepting culpability for one's actions and their consequences, which elicits Remorse characterized by an array of offense-related negative emotions (e.g., shame and guilt). Restoration implies that one ought to make amends and address behavioral patterns that initially led to the offense. Finally, Renewal entails that one works toward a new found sense of compassion, acceptance, and respect for oneself. Cornish and Wade (2015b) tested the efficacy of their model through the delivery of eight 50-minute individual psychotherapy sessions. In a sample of adults (N = 26) who were randomly assigned to either an immediate or delayed treatment condition and who completed pre- and post-test assessments. Treatment effects were shown including decreased self-condemnation, increased self-forgiveness, decreased psychological distress, and increased self-compassion.

Toussaint, Barry, Bornfriend, and Markman (2014) evaluated the effect of treatment using a brief psycho-spiritual intervention administered in small group format (4 to 5 people) intended to promote self-forgiveness. Cancer patients and caregivers (N = 83) were randomly assigned to either an intervention or control condition and were assessed at pre- and post-test. Activities focused on prayer/meditation, self-reflection, and expressive writing, as well as psychoeducation regarding the nature of self-forgiveness as a method to restore a positive and productive self-image. Findings demonstrated that increased levels of self-improvement and decreased levels of pessimism contributed to the effect of treatment on self-forgiving feelings and actions; however, changes in self-improvement appeared to be the most robust mechanism of the treatment effect when included in a multiple mediator model.

Finally, having reviewed existing definitions as well as basic and applied studies of self-forgiveness, I offer critiques of the literature. First, the current empirical literature is nearly exclusively cross-sectional, with a few notable exceptions (Hall & Fincham, 2008; Woodyatt & Wenzel, 2013a), and convenience samples often include university students. Greater methodological diversity is needed to complement and qualify the existing body knowledge. For example, the nature of self-forgiveness over time in response to offenses commonly reported by university students (e.g., unwanted termination of a dating relationship) may differ from the nature of self-forgiveness over time in response to offenses that tend to occur later in life (e.g., divorce of one's spouse).

Second, the majority of findings that associate self-forgiveness with an array of personality, health, and relationship outcomes focus on trait self-forgiveness to the exclusion of state self-forgiveness (Davis et al., 2015). This is unfortunate given theoretical arguments regarding the importance of viewing self-forgiveness as a process rather than an outcome

(Woodyatt & Wenzel, 2013a) and patterns of association between scales that each purport to assess state self-forgiveness but are inversely correlated with a third variable (Griffin et al., 2015). Thus, greater theoretical and empirical clarity is needed to connect the definitional debates and contradictory empirical findings that pervade the self-forgiveness literature.

Third, although scholars continue to emphasize the importance of accepting responsibility for one's offense in a definition of self-forgiveness (McConnell, 2015) and not conflating self-forgiveness with strategies by which perpetrators of offense might seek to excuse themselves of wrongdoing (Wohl & McLaughlin, 2014), this theoretical debate has not been incorporated into the applied literature. Theories of intervention may include elements such as responsibility-taking and making amends; however, these outcomes have not been assessed. For the most part, investigations of the efficacy of explicit self-forgiveness interventions have relied upon measures of self-forgiveness that have been scrutinized by scholars as being insensitive to the degree to which perpetrators have sought to affirm their violated socio-moral values (Woodyatt & Wenzel 2013a). I propose a new model of self-forgiveness to address these concerns, which I refer to as the dual-process model of self-forgiveness.

The Dual-process Model of Self-forgiveness

The dual-process model of self-forgiveness asserts that when individuals violate their socio-moral values their reaction may be evaluated according to two related but distinct factors. The first factor is the extent to which the individual makes a decision to affirm their violated socio-moral values. The second factor is the extent the individual experiences the replacement of negative self-condemning emotions with positive self-affirming emotions. Although perpetrators may react to violations of their socio-moral values in a variety of ways, self-forgiveness occurs

when there is a high degree of both decisional affirmation of values and emotional restoration of esteem.

The dual-process model can be situated within Social Cognitive Theory. Recall that Bandura (2001) argued that moral self-regulation occurs when one's planned behavior is judged according to one's socio-moral values, and behavior that violates those values evokes anticipatory condemnation from self and others which is intended to deter the individual from engaging in the behavior that is judged as morally unacceptable. Personal or environmental factors may, however, interfere with the process of forming a moral judgment, and people consequently violate their socio-moral values. Yet, as Bandura (2001) suggested, humans have an enduring need for social connection and a sense of self-worth. I therefore suggest the existence of a corollary to pre-offense moral self-regulation, which is post-offense moral reparation. In the context of Social Cognitive Theory, *moral reparation* describes the attempts of an individual to repair his or her social-image and self-image after engaging in a behavior that violates his or her socio-moral values.

Self-forgiveness is the epitome of moral reparation. Namely, in the aftermath of perpetrating wrongdoing, individuals experience offense-related negative emotions intended to motivate realignment of one's behavior with one's socio-moral values (Gausel & Brown, 2012; Gausel & Leach, 2011). This can be achieved through the process of self-forgiveness. First, the decisional component of self-forgiveness entails accepting responsibility of one's offense and resolving to live according to that value in the future. Second, the emotional component of self-forgiveness entails the juxtaposition of negative self-condemning with positive self-accepting emotions. Given the congruence between the decisional and emotional components of self-forgiveness with the perpetrator's social- and self-image, self-forgiveness is theorized to result in

the satisfaction of basic psychological needs (Woodyatt & Wenzel, 2014). Furthermore, these decisional and emotional components of self-forgiveness extend the decisional and emotional bifurcation that has been traditionally been made in the forgiveness of others literature (Davis, Hook, Van Tongeren, DeBlaere, Rice, & Worthington, 2015).

If either making a decision to affirm violated values or experiencing the emotional restoration of positive self-regard is absent, then whatever occurs is not self-forgiveness. Thus, the dual-process model can distinguish self-forgiveness from alternative methods by which perpetrators might react to wrongdoing. Self-forgiveness occurs when a perpetrator is high in both decisional affirmation of values and emotional restoration of esteem. On one hand, self-excusing (a.k.a. pseudo self-forgiveness) differs from self-forgiveness insofar as self-excusing occurs when and individual is high in emotional restoration of esteem but low in decisional affirmation of values. This distinction is congruent with Woodyatt and Wenzel's (2013b) theorizing about pseudo self-forgiveness constituting minimization of harm, failure to accept responsibility for one's offense, and defamation of the victim of one's wrongdoing. On the other hand, self-punishment occurs when an individual is high in decisional affirmation of values and low in positive self-regard, which also is congruent with theorizing that individuals who self-punish devalue themselves to atone for their offense (Fisher & Exline, 2010).

Not only can one define self-forgiveness and distinguish it from alternative reactions that perpetrators have to wrongdoing using the dual-process model, one can also employ the model to describe patterns of association between self-forgiveness and its correlates. The *social reconnection hypothesis* asserts that decisional affirmation of values is associated primarily with positive relationship outcomes (e.g., conciliatory behavior), and the *personal restoration hypothesis* asserts that the emotional restoration of esteem is associated primarily with positive

intrapersonal outcomes (e.g., health). Nevertheless, future investigations of the pro-social and health-related correlates of self-forgiveness are needed to support the dual-process model.

Conclusion

In conclusion, Social Cognitive Theory provides a framework by which to understand self-forgiveness as a moral reparative strategy that may characterize an individual's response to violation of his or her socio-moral values in order to meet enduring needs for belonging and esteem. This model of self-forgiveness can be used to integrate differing theoretical perspectives and contradictory empirical evidence within the existing self-forgiveness literature, and it can guide future investigations in the basic and applied study of self-forgiveness. However, no direct empirical tests of the dual-process model yet exist.

CHAPTER 3: Statement of the Problem

A new wave in the empirical study of self-forgiveness is on the horizon. Whereas scholars have referred to self-forgiveness as the neglected stepchild of the forgiveness literature (Hall & Fincham, 2005), the publication rate of empirical studies on self-forgiveness has ebbed and flowed over the past decade (McConnell, 2015). I argue that the variability in publication rates in this literature coincides in part with (1) the development of new instruments to assess self-forgiveness including the Heartland Forgiveness Scale (Thompson et al., 2005) and State Self-forgiveness Scale (Wohl, DeShea, & Wahkinney, 2008) as well as (2) the discovery of evidence linking self-forgiveness to health outcomes (e.g., Krause & Hayward, 2013; Nsamenang, Webb, Curkowicz, & Hirsch, 2013; Webb, Hirsch, Visser, Preston, & Brewer, 2013; see Davis, Ho, et al., 2015, for a meta-analysis).

Yet, scholars continue to debate definitional and measurement issues (Hall & Fincham, 2008; Wohl, DeShea, & Wahkinney, 2008; Woodyatt & Wenzel, 2013a), perhaps due to skepticism about self-forgiveness potentially functioning as a strategy by which wrongdoers might evade blame and persist in patterns of destructive behavior (McConnell, 2015; Wohl & Thompson, 2011). Also, despite the proliferation of studies that test interventions intended to promote forgiveness of others (for a meta-analytic review of 54 published and unpublished reports, see Wade, Hoyt, Kidwell, & Worthington, 2014), only four peer-reviewed studies (Cornish & Wade, 2015b; Griffin et al., 2015; Scherer, Worthington, Hook, & Campana, 2011; Toussaint, Barry, Bornfriend, & Markman, 2014) and one unpublished dissertation (Campana, 2010) test explicit self-forgiveness interventions. Thus, I seek to propel the next wave of self-forgiveness research by integrating the existing but disparate definitions of self-forgiveness into a single *dual-process model of self-forgiveness*. The two processes I theorize to comprise self-

forgiveness are (1) decisional affirmation of values and (2) emotional restoration of esteem. I test the proposed model in a set of studies that provide support for a new psychometric instrument designed to measure state self-forgiveness.

The Dual-Process Model of Self-forgiveness

Griffin and colleagues (2015) hypothesized the dual-process model of self-forgiveness to extend the historical separation of decisional and emotional components of forgiveness to the self-forgiveness literature (Davis, Hook, Van Tongeren, DeBlaere, Rice, & Worthington, 2015; Worthington, Witvliet, Pietrini, & Miller, 2007). Namely, in the aftermath of perpetrating an interpersonal offense, Griffin and colleagues (2015) argue that perpetrators might (1) decide to affirm violated socio-moral values by accepting responsibility for the offense and committing to aligning their values and behavior in the future as well as (2) experiencing the emotional restoration of esteem through replacing self-condemning emotions with self-affirming emotions. Although the dual-process model only recently debuted in the self-forgiveness literature, evidence may be adduced from a historical review of the literature to support the model.

First, a precise definition of self-forgiveness has yet to mature out of the burgeoning literature, and operationalizing the existing definitions been unsuccessful. For example, one of the ground-breaking empirical studies of self-forgiveness conducted by Hall and Fincham (2008) conceptualized self-forgiveness as a "set of motivational changes whereby one becomes decreasingly motivated to avoid stimuli associated with the offense, decreasing motivated to retaliate against the self, and increasingly motivated to act benevolently toward the self" (p. 175). With such a complex definition, the authors acknowledged that the single item that was administered likely did not capture the complexity of their definition, and future efforts to

develop a more sophisticated psychometric instruments congruent with their definition have not been published.

As the literature has grown, other scholars offered definitions of self-forgiveness. Wohl, DeShea, and Wahkinney (2008, p. 2) defined self-forgiveness as "a positive attitudinal shift in the feelings, actions, and beliefs about the self following a self-perceived transgression or wrongdoing committed by the self." Thus, Wohl and colleagues developed the State Self-forgiveness Scales that assess (1) self-forgiving feelings and actions and (2) self-forgiving beliefs. However, philosophers (Dillon, 2001; Holmgren, 1998), social scientists (Carpenter, Carlisle, & Tsang, 2014; McConnnell, 2015; Wenzel, Woodyatt, & Hedrick, 2012), and even Wohl and Thompson (2011) emphasized that accepting responsibility for one's wrongful actions and attempting to make restitution when possible are necessary components of genuine self-forgiveness. This emphasis is absent from Wohl et al.'s (2008) "positive attitudinal shift," and it is consequently not present in the State Self-forgiveness Scales, which has likely resulted in misleading findings that conflate self-forgiveness with alternative methods of coping with wrongdoing such as excusing blame. Excusing oneself has sometimes been called "pseudo self-forgiveness" (Wohl & McLaughlin, 2014) to indicate that letting oneself off of the moral hook without accepting responsibility for wrongdoing should not be confused with a respected type of self-forgiveness (Wohl & Thompson, 2011; cf. Woodyatt & Wenzel, 2013a)

The most recent definitions of self-forgiveness cohere to a greater extent. Cornish and Wade (2015a) conceptualize self-forgiveness as a seemingly linear process by which individuals accept responsibility, express remorse, exercise attempts to restore damage caused by the offense, and experience renewal of a positive sense of self. And, their conceptualization has appeared to be clinically relevant as individual therapy patients are able to comprehend the

process and report experiencing the anticipated therapeutic benefits (Cornish & Wade, 2015b). Nevertheless, the efficacy of Cornish et al.'s (2015b) intervention was assessed using the aforementioned State Self-forgiveness Scale (Wohl, DeShea, & Wahkinney, 2008). While the intervention may have actually influenced responsibility-taking and amend-making behavior among participants, the current efficacy trial (Cornish & Wade, 2015b) does not necessarily show such an effect of treatment due to limitations resulting from operationalization of outcomes.

Another group of scholars have developed what is assuredly the strongest measure of state self-forgiveness currently available. It is the Differentiated Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013a). Woodyatt and colleagues (2013a) conceptualize self-forgiveness as "a process whereby the offender recognizes their own culpability and the worth of the victim, experiences the resulting emotions, addresses attitudes and behaviors that led to the offense in the first place, attempts to make amends, and in the process, restores their moral self" (p. 231). This definition is captured in a seven-item genuine self-forgiveness subscale, findings from which have shown that self-forgiveness weakens the link between responsibility-taking and negative self-regard among interpersonal offenders to result in both interpersonal and intrapersonal restorative benefits (Woodyatt & Wenzel, 2013a). However, depending on participants' interpretation of the items on Woodyatt and colleagues' genuine self-forgiveness scale, it could be reasoned that the scale captures both of the proposed components of self-forgiveness according to the dual-process model (i.e., deciding to affirm violated values and experiencing the emotional restoration of positive self-regard) in a single broad stroke.

Greater empirical specification between these related but distinct decisional and emotional processes may be important to the development of the field for at least two reasons.

First, decisional and emotional components likely do not occur simultaneously, and a scale that combines the two would obscure any longitudinal investigations that attempt to investigate the multivariate change process that like occurs between decisional and emotional components of self-forgiveness over time (Hall & Fincham, 2008). Second, the body of literature that examines the forgiveness-health relationship has long demonstrated that the emotional component of forgiveness is more strongly related to health than is the decisional component, and while Woodyatt et al.'s scale will likely continue to propel the self-forgiveness field forward in terms of value affirmation, responsibility-taking, and conciliatory behavior because it includes items to that effect whereas Wohl et al. does not, it may obscure findings related to health because it treats the decisional and emotional processes together in a single scale.

In summary, the dual-process model of self-forgiveness represents a synthesis of the thesis that self-forgiveness requires intrapersonal restoration (Wohl, DeShea, & Wahkinney, 2008) and the antithesis that self-forgiveness cannot be genuine without accepting culpability for an interpersonal offense (Woodyatt & Wenzel, 2013a), within the familiar decisional and emotional bifurcation that has traditionally defined forgiveness of others (Davis et al., 2015). That is, in the aftermath of perpetrating an interpersonal offense, the dual-process model proposes that self-forgiveness entails (1) deciding to affirm violated socio-moral values and (2) experiencing restoration of esteem.

Second, not only does the dual-process model of self-forgiveness help reconcile definitional quandaries in the self-forgiveness literature, it also distinguishes self-forgiveness from two prevalent alternative methods – self-punishing and self-excusing – by which perpetrators sometimes attempt to cope with wrongdoing and its consequences (Woodyatt & Wenzel, 2013a). That is, self-forgiving may be conceptualized as high levels of both deciding to

affirm violated values and experiencing the emotional restoration of positive esteem. On one hand, self-excusing – or pseudo self-forgiveness as it is sometimes called – refers to high emotional restoration of positive self-regard but low decisional affirmation of values. Thus, Woodyatt and Wenzel (2013b) refer to pseudo self-forgiveness as a method of coping with a wrongdoing and its consequences that aims to reduce the discomfort of offense-related emotion by minimizing harm, denying wrongdoing, or derogating the victim of one's offense. On the other hand, self-punishing refers high decisional affirmation of values but low emotional restoration of positive self-regard. Self-punishing behavior involves depriving oneself of pleasant experiences or subjecting oneself to unpleasant experiences in an attempt to atone for an offense, which implicates a general devaluation of the self (Fisher & Exline, 2010). Thus, the positive intrapersonal and interpersonal correlates of self-forgiving distinguish it from self-excusing, which may have intrapersonal but not interpersonal benefits, and self-punishing, which may have interpersonal but not intrapersonal benefits.

In a preliminary study, Griffin, Moloney, Green, Worthington, Cork, Tangney, Van Tongeren, Davis, and Hook (2016) sought empirical evidence to the aforementioned theoretical distinction between self-forgiving, self-punishing, and self-excusing behaviors by investigating the pattern of associations between guilt and shame with each of the possible reactions that individuals might have in response to committing wrong against another person. Guilt was conceptualized as an other-focused emotion that enhances personal relationships by increasing the likelihood that perpetrators of offense will have empathy for their victims and exercise amend-making behavior (Baumeister, Stillwell, & Heatherton, 1994). Shame was conceptualized as a self-focused emotion that begets avoidance behaviors such as decreased empathy and deflection of personal responsibility (Wolf, Cohen, Panter, & Insko, 2010).

In Griffin et al.'s (2016) sample of undergraduate students who reported perpetrating an interpersonal harm (N = 410), findings indicated evidence to suggest that guilt was positively related to forgiving oneself, positively related to punishing oneself, and negatively related to excusing oneself; whereas, shame was negatively related to forgiving oneself, positively related to punishing oneself, and positively related to excusing oneself. The differential patterns of associations between guilt and shame with perpetrators' reactions to wrongdoing are consistent with what the dual-process model of self-forgiveness would suggest. That is, decisional affirmation of violated values would entail acceptance of responsibility for an offense that evokes negative emotion directed toward one's offending behavior (i.e., guilt) and emotional restoration of positive self-regard would entail the absence of negative emotion directed at the self (i.e., shame). Similarly, the patterns of associations between guilt and shame with self-punishing and self-excusing behavior were consistent with conceptualization according to the dual-process model.

Third, the dual-process of model of self-forgiveness is a useful paradigm to guide the development and evaluation of explicit self-forgiveness interventions. Scholars continue to call for the incorporation of responsibility and positive self-regard in interventions (McConnell, 2015). For example, two of the four R's (Responsibility, Restoration) discussed by Cornish and Wade (2015a) focus on affirmation, and two of the four R's focus on positive self-regard (Remorse, Renewal). In addition, Worthington's (2013) original six-step method to promote self-forgiveness devotes three steps to decisional affirmation of values (i.e., Receive Divine Forgiveness, Repair Relationships, and Resolve to Live Virtuously) as well as three steps to emotional restoration of positive self-regard (i.e., Rethink Rumination, REACH Emotional Self-forgiveness, and Rebuild Self-acceptance). Although it has yet to be articulated, it is clear that

the most recent self-forgiveness interventions contain both elements of the dual-process model, though their efficacy has not been assessed accordingly.

The Current Studies

Three studies comprise the current set of studies. In Study One, I test the hypothesized two-factor structure in a new measure of state self-forgiveness and provide preliminary evidence supporting construct validity via associations of that measure with perceived responsibility, guilt, and shame. In Study Two, I replicate the factor structure and provide preliminary evidence of criterion-related validity by distinguishing self-forgiveness from self-punishment and self-exoneration using the two-factor structure. In Study Three, I explore profiles of association between the hypothesized decisional and emotional factors of self-forgiveness and pro-social as well as health-related correlates. Discussion of limitations and implications for the current set of studies follows.

CHAPTER 4: Study One

For decades, scholars recognized the paucity of empirical studies on self-forgiveness. Enright and The Human Development Group (1996, p. 116) stated that self-forgiveness was the "least studied" aspect of forgiveness, and Hall and Fincham (2005, p. 621) identified it as the forgotten "stepchild of the forgiveness literature." Yet, conceptualizations of self-forgiveness now abound, such as those offered by Enright and colleagues (1996), Hall and Fincham (2008), McConnell (2015), Worthington and Langberg (2012), and Wenzel, Woodyatt, and Hedrick (2012). Psychometric instruments assessing self-forgiveness as a dispositional trait (Thompson et al., 2005) and momentary state (Wohl, DeShea, & Wahkinney, 2008; Woodyatt & Wenzel, 2013a) have yielded numerous basic scientific studies associating self-forgiveness with health (Davis, Ho et al., 2015), personality (Ross, Kendall, Matters, Rye, & Wrobel, 2004; Ross, Hertenstein, & Wrobel, 2007), interpersonal functioning (Pelucchi, Paleari, Regalia, & Fincham, 2013), and religiousness/spirituality (Davis, Worthington, Hook, & Hill, 2013). Furthermore, a burgeoning applied literature explores clinical applications of self-forgiveness (Bell, Davis, Griffin, Ashby, & Rice, 2016; Cornish & Wade, 2015a; Scherer, Worthington, Hook, & Campana, 2011; Toussaint, Barry, Bornfriend, & Markman, 2016; Griffin, Worthington, Lavelock, Greer, Lin, Davis, & Hook, 2015). Clearly, the literature on self-forgiveness has begun to proliferate.

Notwithstanding progress made in description, prediction, and manipulation of self-forgiveness, the extant literature continues to be wrought with theoretical quandaries. Some scholars express concern that self-forgiveness might be a strategy by which perpetrators of offense morally disengage, excusing themselves of wrongdoing and its consequences (Vitz & Meade, 2011). In fact, in a qualitative analysis of self-reported offense narratives (N = 122),

Zechmeister and Romero (2002) concluded that self-forgiveness was inversely associated with perpetrators' empathy toward the victims of their offenses, leading to greater likelihood that perpetrators would try to justify their actions or implicate the victim with culpability for the offense. Others have demonstrated a positive association between self-forgiveness and narcissism (Strelan, 2007), reduced likelihood of making amends associated with self-forgiveness (Exline, Root, Yadavalli, Martin, & Fisher, 2011), and the perception that self-forgiveness is morally inappropriate in the absence of conciliatory behavior following a social transgression (Carpenter, Carlisle, & Tsang, 2014). It is likely that scholarly skepticism has contributed to the delayed development of the self-forgiveness literature, especially without integration of the developing literature into major psychological theory.

In the current dissertation, I argue that Social Cognitive Theory provides a framework for a new model of self-forgiveness – that is, the dual-process model (Griffin et al., 2015). Social Cognitive Theory asserts that *moral self-regulation* occurs as individuals monitor their behavior for morally relevant information, judge their behavior in relation to socio-moral values and perceived situational constraints, and act in order to maximize self-satisfaction while minimizing the possibility of social rejection (Bandura, 1986, 1991). The aim of moral self-regulation is therefore to mitigate threats to social connection and self-worth, especially insofar as esteem functions as an evolutionarily adaptive sociometer by monitoring and anticipating others' perceptions of one's own relational value (Leary & Baumeister, 2000; Leary, Tambor, Terday, & Downs, 1995). Yet violations of socio-moral values inevitably occur (Bandura, 1990; Bandura, 1999; Osofsky, Bandura, & Zimbardo, 2005). For this reason, Bandura described strategies by which one might selectively activate values or morally disengage to reduce dissonance resulting from perpetration of inhumanities (Bandura, 2002). What Bandura did not do, however, was

describe a complementary process by which individuals engage in *moral repair* in the post-offense context to meet one's enduring needs for belonging and esteem. For this reason, I conceptualize self-forgiveness as a moral repair strategy in which individuals aim to satisfy psychological needs of belonging and esteem following violation of one's internalized socio-moral values by making a decision to affirm violated values and replacing self-condemning emotions with self-affirming emotions.

The Dual-process Model of Self-forgiveness

Empirical research on forgiveness of others has traditionally described forgiveness as having both decisional and emotional components (Davis, Hook, Van Tongeren, DeBlaere, Rice, & Worthington, 2015), Likewise, according to the *dual-process model of self-forgiveness* (Griffin et al., 2015) self-forgiveness is composed of distinct decisional and emotional components. First, decisional affirmation of values requires a cognitive shift toward accepting responsibility for one's offense and committing to align one's behavior and values in the future. Second, emotional restoration of esteem entails the replacement of self-condemning emotions with self-affirming emotions. While these decisional and emotional components are each necessary and jointly sufficient for self-forgiveness to occur, they likely relate differently to various antecedents and consequences. Yet, no scale that has been developed assesses the proposed decisional and emotional facets of self-forgiveness.

Aims of Study One

Thus, the first aim of Study One is to empirically test the factor structure of a psychometric instrument designed to assess state self-forgiveness according to the theorized dual-process model. Measures of state self-forgiveness exist, but lack cogent theoretical support and sound psychometric qualities. First, Wohl, DeShea, and Wahkinney (2008) developed the

State Self-forgiveness Scale, which is composed of two subscales that assess self-forgiving beliefs (7 items) and self-forgiving feelings and actions (8 items), according to the conceptualization that self-forgiveness involves "abandoning negative thoughts, feelings, and behaviors directed at the self and replacing them with compassion generosity and love." Due to concern that Wohl et al.'s scale confounds forgiving and exonerating oneself, Woodyatt and Wenzel (2013a) offered an alternative with the Differential Processes Scales of Self-forgiveness, which conceptualized genuine self-forgiveness (7 items) as the "process whereby the offender recognizes their own culpability and the worth of the victim, experiences the resulting emotions, address attitudes and behaviors that led to the offense in the first place, attempts to make amends and, in the process restores their moral self."

Unfortunately, inspection of the items on each scale reveals that the interpersonal and intrapersonal elements of these conceptualizations may have evaded adequate operationalization. Within the framework of Social Cognitive Theory, Wohl et al.'s operationalization prioritized how perpetrators respond to psychological sanctions associated with their actions; whereas, Woodyatt et al.'s operationalization emphasized how perpetrators respond to social sanctions that accompany wrongdoing. Therefore, if I correctly theorized self-forgiveness to require decisional affirmation of values, which is interpersonally focused, and emotional restoration of esteem, which is intrapersonally focused, then the existing measures of state self-forgiveness fail to assess self-forgiveness insofar as they capture only one of these two essential factors.

Not surprisingly, the existing measures of state self-forgiveness yield conflicting empirical results. For example, Griffin et al. (2015) simultaneously administered the scales developed by Wohl and colleagues (2008) as well as Woodyatt and colleagues (2013) to a sample of university students who reported wronging another person (N = 204). As one might

predict from the focus on interpersonal wrongdoing, Woodyatt et al.'s scale was positively associated with perceived transgression severity ($r = .33$, $p < .001$); yet, perceived transgression severity was negatively associated with both the self-forgiving feelings and actions subscale ($r = -.27$, $p < .01$) and self-forgiving beliefs subscale ($r = -.15$, $p < .01$) of Wohl et al.'s instrument, which was internally focused. Of course, two scales that purport to assess the same construct ought to correlate with a third variable similarly, raising skepticism regarding the validity of one or both of the aforementioned scales in assessing the construct of self-forgiveness.

The dual-process model offers one explanation for this divergent pattern of associations. On one hand, Wohl et al.'s operationalization is a better proxy of emotional restoration of esteem, and increased severity of an offense evokes increased negative emotion directed at oneself and one's behavior. On the other hand, Woodyatt et al.'s operationalization is a better proxy of decisional affirmation of values, and perceiving an offense as more severe compels greater resolve to repair valuable ruptured interpersonal bonds. While the scales administered were not designed to assess decisional and emotional components of self-forgiveness, findings obtained using the existing scales appear congruent with the dual-process model, warranting development of a new scale designed to assess state self-forgiveness according the proposed two-factor structure. This is the first aim of Study One.

The second aim of Study One is to provide initial validation evidence supporting construct validity of the hypothesized decisional and emotional factors of self-forgiveness by exploring how these factors associate with offense-related cognitions (i.e., perceived responsibility) and emotions (i.e., guilt and shame) among perpetrators of interpersonal wrongdoing. Scholars agree that acceptance of personal responsibility for wrongdoing is an antecedent of self-forgiveness that counteracts self-enhancing tendencies to avoid blame and that

elicits self-conscious emotions intended to motivate repair of ruptured social bonds (Exline, Root, Yadavalli, Martin, & Fisher, 2011), and evidence suggests that acceptance of responsibility is positively associated with self-forgiveness (Fisher & Exline, 2006). In the current study, I expect to find evidence of an association between perceived responsibility and both components of self-forgiveness. Furthermore, I will add to the literature by examining the mediating role of offense-related emotions (i.e., guilt and shame) in the associations.

In contrast to agreement among scholars about the importance of responsibility in perpetrators' responses to social transgressions, few topics stimulate as much debate as the theorized functions of guilt and shame. In a sample of university students who reported wronging another person (N = 410), Griffin, Moloney, Green, Worthington, Cork, Tangney, Van Tongeren, Davis, and Hook (2016) found that state self-forgiveness (as assessed Woodyatt & Wenzel's (2013a) genuine self-forgiveness scale) was positively associated with guilt and negatively associated with shame related to a specific offense. Using the Heartland Forgiveness Scale (Thompson et al., 2005), a measure that is tilted toward assessing emotional restoration of esteem, McGaffin, Lyons, and Deane (2013) found a similar pattern of associations at the trait level among individuals receiving treatment for substance use disorder (N = 133), with guilt-proneness positively associating with self-forgiveness and shame-proneness negatively associating with self-forgiveness. Carpenter, Tignor, Tsang, and Willett (2016) examined associations between guilt-proneness, shame-proneness, and dispositional self-forgiveness in community (N = 502) and university student (N = 153) samples using a single-item measure of self-forgiveness (Hall & Fincham, 2008). Their findings added that a dispositional tendency to make negative behavior evaluations was associated with trait self-forgiveness indirectly via increased repair-oriented tendencies, greater engagement in amend-making behavior, and

decreased withdraw-oriented tendencies. The tendency to make negative self-evaluations was inversely associated with self-forgiveness directly in most cases.

In contrast to the patterns of association that replicated across the aforementioned studies, findings from a meta-analytic synthesis performed by Davis, Ho and colleagues (2015) revealed inverse associations between primarily trait self-forgiveness and both state guilt (r = -.50, 95% C.I. [-.64, -.33], k = 11, N = 1,494) as well as state shame (r = -.60, 95% C.I. [-.72, -.45], k = 9, N = 964). Yet, these findings ought to be interpreted cautiously. To be included in the analysis, studies must have incorporated a quantitative measure of self-forgiveness, and effect sizes that were synthesized were primarily derived from associations calculated using trait (Thompson et al., 2005) and state (Wohl et al., 2008) measures of self-forgiveness that focus primarily on emotional restoration of esteem, which both have questionable validity.

For the purpose of the current study, I adopt the conceptualizations of guilt and shame asserted by Tangney and Dearing (2002), such that guilt refers to negative emotion directed at one's behavior and shame refers to negative emotion directed at one's global self (cf. deHooge, Zeelenberg, & Breugelmans, 2010; Cibich, Woodyatt, & Wenzel, 2016). Though each is laden with negative affect and often both occur simultaneously, guilt and shame differ in their interpersonal and intrapersonal outcomes. Namely, guilt is associated with approach-oriented feelings that enhance interpersonal relationships by motivating amend-making behavior (e.g., apology), and shame is associated with avoidance-oriented feelings that evoke deflection of personal responsibility and decreased self-esteem (Baumeister, Stillwell, & Heatherton, 1994; Tangney, Stuewig, & Mashek, 2007; Wolf, Cohen, Panter, & Insko, 2010). Given the socially reparative focus of negative emotion directed at one's behavior (i.e., guilt) and personally depreciative focus of negative emotion directed at one's global self (i.e., shame), I suspect that

guilt will be positively associated with decisional affirmation of values and unassociated with emotional restoration of esteem when controlling for shame. Shame will be negatively associated with emotional restoration of esteem and unassociated with decisional affirmation of values when controlling for guilt. Thus, I hypothesized the following for Study One:

(1) Exploratory factor analysis will provide evidence of a simple structure indicating decisional and emotional factors by which to assess self-forgiveness to create a psychometrically sound measure of self-forgiveness designed according to the dual-process model.

(2) Tests of indirect effects will reveal that responsibility appraisals indirectly affect the decisional and emotional components of self-forgiveness via socio-affective experiences of guilt and shame. Furthermore, profiles of association will be observed whereby guilt associates most strongly with decisional affirmation of values and shame associates most strongly with emotional restoration of esteem.

Method

Participants. Participants were undergraduate students (N = 191) at a large public university in the Mid-Atlantic region of the United States. Women (71.4% female, 28.6% male) and young adults (M_{Age} = 20.69, SD = 4.23) comprised the majority of the sample. Diverse racial backgrounds were represented including Caucasian/White (42.6%), African American/Black (21.1%), Asian/Pacific Islander (17.9%), Latino/Latina (7.4%), Multiracial (6.8%), Other (2.1%), Native American/Alaskan Native (0.5%), and prefer not to answer (1.6%). Participants identified as Heterosexual (84.2%), Bisexual (10.0%), Lesbian/Gay (3.2%), Other (2.1%), and prefer not to answer (0.5%). Religious/spiritual affiliations included Christian (48.9%),

Atheist/Agnostic (12.6%), None (11.1%), Spiritual but not religious (5.8%), Other (5.8%), Hindu (4.7%), Buddhist (3.2%), Muslim (2.6%), Jewish (2.1%), and prefer not to answer (3.2%).

A majority of participants matriculated across assessment occasions over a two-week interval (93.2%), and independent-samples *t*-tests revealed no differences between those who matriculated and those who did not on study variables (*p*'s = .247 to .993). Although no differences were observed between those who matriculated and those who did not on gender, racial minority status, and sexual orientation minority status (*p*'s = .090 to .895), those who were religious were slightly more likely to matriculate than those who were not, $\chi^2(1) = 7.97$, $p = .005$, $r_\Phi = .21$.

In addition, participants reported on a specific interpersonal offense that they had perpetrated – hereafter, index offense. They were instructed as follows:

> Write a small paragraph (6-8 sentences) about a time when you wronged another person. Think of the person you hurt or offended. Think of the ways in which your offense affected the other person as well as yourself. It is important that you recall one specific wrongdoing. Be sure to write about what you did and how it continues to affect you even today.

The amount of time passed since index offenses occurred ranged between within the past week (4.7%), within the past month (13.2%), within the past three months (12.6%), within the past six months (8.9%), to more than six months ago (60.5%). Victims of offense included friends (35.3%), romantic partners (24.2%), classmates (15.3%), parents (8.9%), siblings (6.3%), coworkers (1.6%), and other (8.4%). Index offense narratives were categorized into the following categories: verbal aggression (42.0%), physical aggression (7.3%), relational exclusion (15.1%), romantic/sexual infidelity (13.7 %), dishonesty (16.6%), destruction of property (2.9%), and miscellaneous (2.4%). Finally, participants completed several psychometric instruments based on the index offense that they described.

Instrumentation. First, fifty face-valid items were developed by the first author based on the theorized decisional and emotional components of self-forgiveness to comprise the Two-factor Self-forgiveness Scale. Three coauthors, who are published experts in the empirical study of forgiveness and psychometrics, reviewed the initial item list, suggested revisions, and provided ratings to select the best items. Twenty-six items were selected to comprise the initial item pool. Participants rated each item using a 7-point response format (1 = *Strongly Disagree* to 7 = *Strongly Agree*) indicating the degree to which each item reflected participants' current thoughts and feelings associated with their index offense. Higher scores on the decisional subscale were indicative of a stronger cognitive shift toward accepting responsibility, making amends, and resolving to attempt to not perpetrate the same offense again. Higher scores on the emotional subscale were indicative of a stronger experience of replacing self-condemning emotions with self-affirming emotions.

Self-perceived personal responsibility was assessed using five items developed by Fisher and Exline (2006). Example items include "I feel I was responsible for what happened" as well as reverse-scored items such as "I did not really do anything wrong." Each item was rated on a 10-point response format (1 = *Completely disagree* to 10 = *Completely agree*). Higher scores are indicative of greater self-perceived responsibility. Fisher and Exline (2006) provide an estimate of internal consistency between items ($\alpha = .83$) among a sample of undergraduates as well as evidence of predictive validity via associations with self-forgiveness, repentant actions, and perceived transgression severity in the anticipated directions. In the current sample, α was .83.

Offense-related affect was measured using the State Shame and Guilt Scale (Marschall, Saftner, & Tangney, 1994). Five items ($\alpha = .89$) assessed guilt (e.g., "I feel bad about something I have done"), and five items ($\alpha = .87$) assessed shame (e.g., "I feel like I am a bad person").

Responses were recorded using a 5-point response format (1 = *Not feeling this way at all*, 5 = *Feeling this way very strongly*). Higher scores indicate greater levels of guilt and shame. Tangney and Dearing (2002) provide evidence supporting the estimated internal reliability of scores on the guilt (α = .89) and shame (α = .87) subscales. Furthermore, Griffin, Moloney, Green, Worthington, Cork, Tangney, Van Tongeren, Davis, and Hook (2016) offer evidence of predictive validity, such that guilt and shame were uniquely related to self-forgiveness, self-punishment, and self-exoneration in the anticipated directions. In the current sample, α was .85 and .89 for the guilt and shame subscales, respectively.

Three items assessed how severe each participant perceived their index offense to be, as indicated by their perceptions of how their behavior affected themselves, the victim, and their relationship with the victim (Hall & Fincham, 2008). An example item is "How did your behavior affect the other person?," and each item was rated on a 7-point response format (1 = *Very positively* to 7 = *Very negatively*). Higher scores indicate that participants viewed their offense as increasingly severe. Hall and Fincham (2008) provide evidence of acceptable internal consistency between the items (α = .71) among a sample of undergraduate interpersonal offenders. Evidence of predictive validity was derived from associations with guilt, shame, empathy, and conciliatory behavior in the anticipated directions (Hall & Fincham, 2008). In the current sample, α was .59.

Design. Eligible participants were 18 years of age and could recall perpetrating an interpersonal offense. They were given an opportunity to enroll in the study via the online undergraduate research participant pool. After being informed about the details of the study, being given an opportunity to ask for further information, and providing their electronic consent, participants were directed to an electronic survey (Harris, Taylor, Thielke, Payne, Gonzalez, &

Conde, 2009). Data were collected on two occasions, upon enrollment in the study and two weeks after date of enrollment. Participants were awarded a small amount of course credit to satisfy a curriculum requirement in exchange for enrolling in the study. Debriefing followed completion of the study with referral to psychological services in the area if participants' index offense continued to interfere with their functioning.

Data analysis. The data were checked for lack of normality, linearity, and homoscedasticity of the residuals through examination of basic statistics and histograms. Missing data diagnostics revealed that only 1.78% of item-level data were missing data across 14.66% of cases, which was primarily due to omission of single items. Thus, the bias associated incomplete data was determined to be insignificant (Tabachnick & Fidell, 2001). Missing data was handled using the Full Information Maximum Likelihood (FIML) technique, given that FIML (1) produces unbiased results on the basis of using all available data and (2) retains the sample size to produce accurate standard errors (Schlomer, Bauman, & Card, 2010). Also, dichotomous dummy variables were created to represent the effects of being female (0 = male, 1 = female), a racial minority (0 = Caucasian/White, 1 = Racial minority), a sexual minority (0 = Heterosexual, 1 = Sexual minority), and religiously affiliated (0 = No religious/spiritual affiliation, 1 = Religiously/Spiritually affiliated).

Exploratory Factor Analysis (EFA) was performed using IBM SPSS Statistics v. 23 (IBM Corp., 2013). In order to retain factors that were more likely to have occurred than mere chance would suggest, Eigenvalues obtained from the observed dataset were compared to Eigenvalues obtained from a randomly generated comparable dataset in parallel analysis (Hayton, Allen, & Scarpello, 2004). Factors in the observed dataset were retained only if they explained more variance than factors obtained from the randomly generated comparison data. Following factor

selection, only items that loaded at least .55 on a primary factor and no more than .25 on a secondary factor were retained (Devillis, 2012).

Next, an initial test of predictive validity was conducted using Structural Equation Modeling (SEM) performed with Mplus Version 6.11 (Muthén & Muthén, 2010). SEM was the preferred analytic method because it permits testing overall measurement and structural model fit and estimation of direct and indirect effects among variables (Ullman & Bentler, 2003; Wang & Wang, 2012). The model was estimated using maximum likelihood estimation with robust standard errors (MLR) to provide mean-adjusted estimates for non-normally distributed continuous data that account for minor violations of parametric assumptions (Muthén & Muthén, 2010). Fit was assessed using the χ^2 value, as well as a three-index strategy to assess measurement and structural model fit (Fan & Sivo, 2005). The Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) more sensitively measure measurement model misspecification, while the Standardized Root Mean Square Residual (SRMR) more sensitively measures structural model misspecification. Values of .90 or above for the CFI (Tucker & Lewis, 1973), .08 or below for the RMSEA (Browne & Cudeck, 1993), and .08 or below for the SRMR (Kline, 2005) indicate that a model fits the data well.

Finally, significance of indirect effects was tested using bias-corrected bootstrapping procedures described by Shrout and Bolger (2002). In the current study, 1,000 bootstrap samples created through random sampling with replacement produced confidence intervals and standard errors to determine the significance of indirect effects. According to Shrout and Bolger (2002), if a 95% confidence interval does not contain zero, then the indirect effect is considered significant at $p < 0.05$.

Results

Principal axis factor analysis estimation with Varimax rotation was used to analyze the item correlation matrix in Exploratory Factor Analysis. As is shown in Figure 1, parallel analysis supported a two-factor solution. The combined factors explained 50.95 % of the total item variance. Factor structure and item content were consistent with the theorized dual-process model of self-forgiveness; thus, the factors were named accordingly — Decisional Affirmation of Values (Factor 1) and Emotional Restoration of Esteem (Factor 2). Decisional affirmation of values explained 25.92 % of the total item variance (DEC; 5 items), and emotional restoration of esteem explained 25.03 % of the total item variance (EMO; 5 items). To reduce redundancy, one item was eliminated that was moderately related to another item on the same factor after controlling for variance explained by the total latent construct (Funk & Rogge, 2007). Factor loadings are depicted in Table 1.

Cronbach's alpha was computed at the first and second assessment occasions for the decisional (α = .82 & .83) and emotional (α = 86 & .86) factors. In addition, estimates of test-retest reliability across a two-week interval were calculated for decisional affirmation of values (r = .71, p < .001) and emotional restoration of esteem (r = .66, p < .001). Descriptive statistics, bivariate associations, and estimated reliabilities are reported in Table 2. There was no evidence of an association between participants' scores on the decisional and emotional components of self-forgiveness (r = .06, p = .381); thus, my choice to use Varimax rotation was supported by the analysis of the data. Preliminary results including descriptive statistics, bivariate associations, and estimates of internal consistency are reported in Table 2. Next, as an initial test of construct validity, a structural equation model was estimated to test the indirect effects of perceived responsibility (Time 1) on decisional and emotional factors of self-forgiveness (Time 2) via guilt

and shame (Time 1), when statistically controlling for baseline levels of perceived transgression severity and time since the offense occurred. The measurement model specifying orthogonal decisional and emotional latent factors fit the data well, $\chi^2(34) = 49.90$, $p = .038$, RMSEA = .052 (90% Confidence Interval = [.012, .081], $p = .438$), CFI = .969, and SRMR = .060. All factor loadings were significant at $p < .001$, and no evidence suggested an association between the decisional and emotional components ($p = .098$). Structural elements were then added specifying the hypothesized effects of perceived responsibility, guilt, and shame on decisional affirmation of values and emotional restoration of esteem. The structural model fit the data well, $\chi^2(75) = 108.29$, $p = .007$, RMSEA = .048 (90% C.I. = [.026, .067], $p = .540$), CFI = .962, and SRMR = .053.

In Figure 2, I depict standardized beta coefficients for each parameter in the structural model. Analysis of the indirect effects revealed a significant indirect effect of perceived responsibility on decisional affirmation of values via guilt (β = .055; 95 % C.I. [.014, .094], $p = .009$) but not shame (β = -.009; 95 % C.I. [-.033, .015], $p = .457$). Conversely, perceived responsibility indirectly affected emotional restoration of esteem via shame (β = -.046, 95 % C.I. [-.084, -.007]; $p = .022$) but not guilt (β = .007; 95 % C.I. [-.026, .040]; $p = .680$). Regarding statistical controls, perceived transgression severity was significantly associated with perceived responsibility (β = .26, $p = .002$), guilt (β = .21, $p = .001$) and shame (β = .16, $p = .020$) but not the decisional ($p = .959$) or emotional components of self-forgiveness ($p = .868$). Increased time since the offense occurred was associated with less guilt (β = -.15, $p = .022$) but no less shame ($p = .084$), perceived personal responsibility ($p = .121$), decisional affirmation of values ($p = .604$), or emotional restoration of esteem ($p = .653$).

Discussion

Results from Study One fully supported my hypotheses. The two-factor structure by which self-forgiveness is operationalized according to the dual-process model was identified using exploratory factor analysis, and estimates of internal and test-rest reliability for the decisional and emotional subscales were strong. Preliminary evidence of criterion-related validity was also obtained, such that perceived responsibility indirectly affected decisional and emotional components of self-forgiveness via guilt and shame among perpetrators of interpersonal wrongdoing. Importantly, given that much of the empirical literature on self-forgiveness lacks a foundation in general psychological theory, the current findings begin to link self-forgiveness to basic psychological needs of belonging and esteem, which are hypothesized to govern moral behavior according to Social Cognitive Theory (Bandura, 2001). Specifically, to the extent that perceived responsibility evoked repair-oriented feelings of guilt, perpetrators were more likely to experience a cognitive shift toward affirming violated socio-moral values, and evidence suggests that value affirmation is critical to the repair of ruptured interpersonal bonds following social transgressions (Carpenter et al., 2014; Wenzel, Woodyatt, & Hedrick, 2012). Also, perpetrators were less likely replace self-condemning emotions with self-affirming emotions following an offense to the extent that perceived responsibility evoked withdraw-oriented feelings of shame, possibly leading to chronic negative emotions directed at one's global self (Fisher & Exline, 2010).

The potential theoretical and empirical contributions of these findings are many. For example, we largely replicated associations between self-forgiveness, guilt, and shame observed by Carpenter et al. (2016), Griffin et al. (2016), and McGaffin et al. (2013), with the extension that the current results demonstrate unique profiles of association with decisional and emotional

facets of self-forgiveness. It is also noteworthy that the effect of perceived responsibility on decisional affirmation of values remained significant when accounting for the indirect effect of guilt in the current study, which supports Carpenter and colleagues' (2016) conclusion that multiple mediators of the association between negative appraisals directed at one's transgression and self-forgiveness exist, but the association between negative appraisals directed at oneself and self-forgiveness was accounted for primarily by feelings of shame.

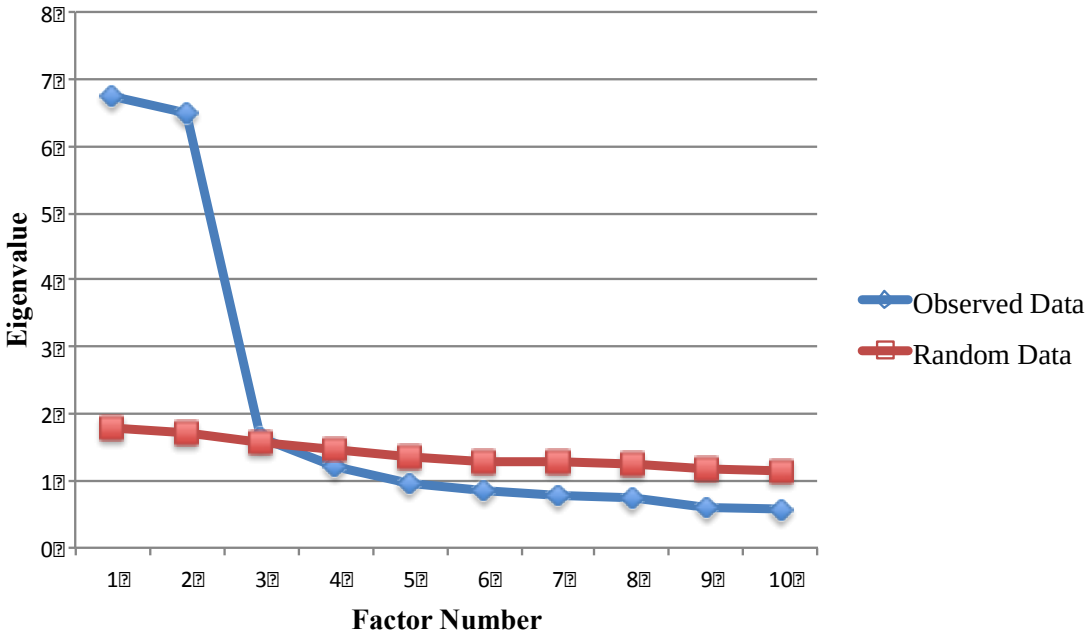
Yet, the present study (and others) raise questions about how scholars ought to interpret the contradictory meta-analytic finding of Davis, Ho et al. (2015), who reported an inverse association between guilt and self-forgiveness? We find an answer in the content of the measures used in each case. In the current study, bivariate associations revealed that emotional restoration of esteem was inversely related to both guilt and shame, while decisional affirmation of values was positively associated to guilt and shame. Nearly all of the literature synthesized by Davis, Ho et al. (2015) employed empirical measures of self-forgiveness that have been criticized for assessing release of negative feelings toward the self without accounting for responsible management of the social consequences of wrongdoing (Woodyatt & Wenzel, 2013a). Those measures were the Heartland Forgiveness scale (Thompson et al., 2005), Mauger Forgiveness Scale (Mauger et al., 1992), and State Self-forgiveness Scale (Wohl et al., 2008). Thus, within the context of the dual-process model of self-forgiveness, Davis, Ho et al.'s (2015) observation of an inverse association between guilt and self-forgiveness adds credibility to the psychometric critique questioning the validity of existing self-forgiveness instruments insofar as the measures upon which the meta-analytic finding are primarily based (Thompson et al., 2005; Wohl, DeShea, & Wahkinney, 2008) may assess only one but not both necessary components of self-forgiveness.

It is also important to consider methodological limitations that qualify interpretation of the current findings. For instance, the current results depend upon conceptualizations of guilt as repair-oriented negative emotion directed at one's behavior and shame as withdraw-oriented negative emotion directed at one's global self (Lewis, 1971). However, guilt is not necessarily adaptive and shame is not necessarily maladaptive in every situation. Gausel and colleagues (2011, 2012) showed that guilt promotes repair of ruptured interpersonal bonds when perpetrators perceived amend-making is possible, but might lead to self-punishment intended to atone for an offense if amend-making is perceived as impossible. Again, while shame has been shown to be maladaptive when focused on one's global self, it might prompt personal growth when focused on specific and modifiable aspects of the self (Cibich, Woodyatt, & Wenzel, 2016). Future investigations of dispositional and contextual factors are needed to explore the conditions under which guilt and shame either impair or empower social connection and self-worth following perpetration of a social transgression. Also, given that experiences of guilt and shame among university students at a public university in the United States are likely shaped by individualistic cultural identities, it may be that a different pattern of results would be observed among individuals who hold more collectivistic values that are characteristic of non-western cultures (Hook, Worthington, Utsey, Davis, & Burnette, 2012).

In sum, as indicated by Study One, the Two-factor Self-forgiveness Scale was comprised of five items assessing decisional affirmation of values and five items assessing emotional restoration of esteem. In addition to providing support for the proposed factor structure, the current study explored the effects of offense-related appraisals and emotions on self-forgiveness, such that guilt was more strongly associated with decisional affirmation of values and shame was more strongly associated with emotional restoration of esteem. However, because the observed

factor structure and validation evidence was based on the characteristics of the one sample, I next sought to replicate the factor structure in an independent sample and apply the dual-process model to differentiate self-forgiveness from other ways that perpetrators might respond to wrongdoing.

Figure 1
Parallel analysis of Eigenvalues for Observed Data and Randomly-generated Data



Note. To reduce figure complexity and aid in interpretation, factors after the first ten were included in the analysis but excluded from the figure.

Table 1

Descriptive Statistics and Factor Loadings for Items of the Two-factor Self-forgiveness Scale

	M	*SD*	DEC	EMO
I will try not to repeat my offense in the future.	6.16	1.29	**.72**	.16
I acknowledge that I am to blame for my actions.	5.74	1.53	**.72**	.11
I would take back what I've done if I could.	5.87	1.68	**.70**	.03
I regret that my past actions violated my values.	5.23	1.83	**.64**	-.03
My actions violated something that is important to me.	5.50	1.69	**.59**	.01
Even though I did something wrong, I feel a sense of self-acceptance.	4.51	1.88	.02	**.55**
I feel like a valuable person despite my wrongdoing.	5.45	1.59	-.04	**.81**
I still love myself even though I did wrong.	5.56	1.55	.14	**.81**
I respect myself even though I did wrong.	5.50	1.63	.10	**.80**
I feel compassion toward myself.	4.52	1.64	-.05	**.76**

Note. Primary factor loadings are bolded. Abbreviations include decisional affirmation of values (DEC) and emotional restoration of esteem (EMO).

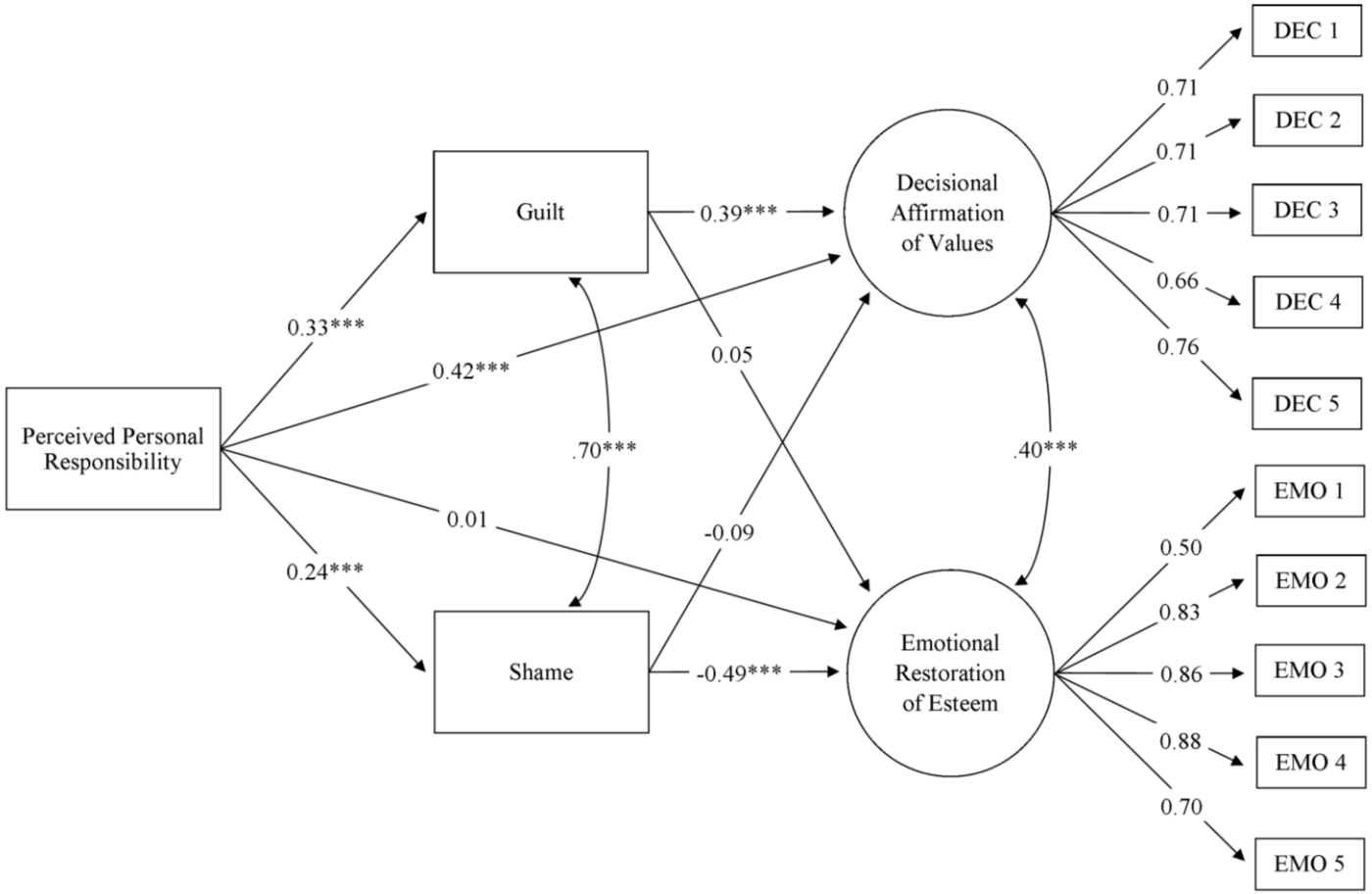
Table 2.

Descriptive Statistics, Bivariate Associations, and Estimates of Internal Reliability for Study 1 variables at Baseline

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. DEC	-											
2. EMO	.06	-										
3. RESP	.57***	-.09	-									
4. GLT	.47***	-.35***	.37***	-								
5. SHM	.31***	-.48***	.26***	.73***	-							
6. SEV	.32***	-.01	.27***	.29***	.21**	-						
7. TIME	.05	.10	.14	-.08	-.07	.09	-					
8. Female	.03	.03	-.05	.04	.12	.06	.01	-				
9. Age	.01	.03	.02	.02	.02	-.03	.04	-.07	-			
10. Racial Minority	-.10	-.04	-.06	-.04	-.06	-.08	-.04	.09	-.05	-		
11. Sexual Minority	.02	-.02	.08	-.07	.01	-.03	.05	.07	.07	-.14	-	
12. Rlg. Affiliation	.07	-.03	-.10	.01	.02	-.07	-.06	.13	.03	.22**	-.14	-
M	5.72	5.12	7.53	2.04	1.07	4.71	4.07	71.43%	20.69	56.68%	15.34%	75.54%
SD	1.18	1.30	2.14	1.09	1.08	0.92	1.30	n/a	4.22	n/a	n/a	n/a
α	.82-.83	.86-.86	.83	.85	.89	.59	n/a	n/a	n/a	n/a	n/a	n/a

Note. Abbreviations include decisional affirmation of values (DEC), emotional restoration of esteem (EMO), self-perceived personal responsibility (RESP), guilt (GLT), shame (SHM), perceived transgression severity (SEV), and time since the offense occurred (TIME). * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 2.
Structural Equation Model estimating the Indirect Effects of Perceived Responsibility on Self-forgiveness via Guilt and Shame.



Note. The model fit the data well: $\chi^2(75) = 108.29$, $p = .007$, RMSEA = .048 (90% C.I. = [.026, .067], $p = .540$), CFI = .962, and SRMR = .053. Effects of statistical control variables and residual variances were included in the model but excluded from the figure to reduce figure complexity.* $p < .05$, ** $p < .01$, *** $p < .001$.

CHAPTER 5: Study Two

In Study One, the data yielded a two-factor solution for a scale assessing decisional and emotional components of state self-forgiveness (the Two-factor Self-Forgiveness Scale) as well as preliminary evidence supporting construct validity of interpreting the scores as representing decisions to take responsibility for wrongdoing and emotional restoration of positive esteem. Study Two builds off of this foundation by seeking to replicate the factor structure and provide criterion-related validity through examination of how decisional affirmation of values and emotional restoration of esteem associate differently with self-forgiveness, self-punishment, and self-exoneration. First, a discussion of perpetrators' possible responses to perceived wrongdoing within the framework of the dual-process model is needed.

Primer on Self-forgiveness, Self-punishment, and Self-exoneration

According to the dual-process model (Griffin et al., 2015), self-forgiveness entails the co-occurrence of two processes: (1) affirming one's violated values by making a decision to accept responsibility for one's offense and align one's behavior and values in the future as well as (2) enhancing esteem by replacing self-condemning emotions with self-affirming emotions. Both decisional and emotional factors are necessary components of self-forgiveness (Griffin et al., 2016). In the absence of either factor, what occurs is not self-forgiveness.

On one hand, accepting personal responsibility for wrongdoing but refusing to change one's emotions will yield self-punishment and not self-forgiveness. Self-punitive behavior is intended to alleviate injustice resulting from one's offense by denying oneself of pleasure or enforcing punishments on oneself (Neilssen & Zeelenberg, 2009).

Oftentimes, self-punishment occurs as a result of dispositional and situational barriers to the resolution of offense-related negative emotion, such as perceiving that relational repair is impossible (e.g., a perpetrator's apology is rejected by the victim or the victim is unable to receive restitution from the offender for some reason; Witvliet, Hinman, Exline, & Brandt, 2011), holding unrealistic expectations leading to a sense that atonement cannot be achieved (Dixon, Earl, Lutz-Zois, Goodnight, & Peatree, 2014), and repeated exposures to cues that elicit rumination on memories of past mistakes (Barber, Maltby, & Macaskill, 2005). Woodyatt and Wenzel (2013a) add that university students who perpetrated a social transgression were less likely to increase in self-esteem over time to the extent that they engaged in higher levels of self-punitive behavior. The chronicity of negative emotion in such cases likely contributes to increased risk of psychopathology and hypersensitivity to future offenses associated with self-punishment (Fisher & Exline, 2010; Roberts & Gotlib, 1997). According to the dual-process model, self-punishment involves making a decision to affirm violated values but does not replace self-condemning emotions with self-affirming emotions.

On the other hand, perpetrators who exonerate themselves (a.k.a. pseudo self-forgiveness, see Hall & Fincham, 2005) arrive a state of positive self-regard by protecting their self-concept from the reality of their transgressions. Woodyatt and colleagues (2013b) conducted pioneering empirical work studying self-exoneration, which they and others refer to as pseudo self-forgiveness, and they describe the phenomenon as "use of minimization of harm, denial of wrongdoing, or victim derogation in order to release oneself from guilt and shame" (2013b, p. 951). Such failures to accept responsibility has been associated with narcissistic entitlement (Strelan, 2007), reduced empathy toward

victims of offense (Zechmeister & Romero, 2002), and lack of conciliatory behavior and affirmation of values following perpetration of a transgression (Carpenter et al., 2014; Wenzel, Woodyatt, & Hedrick, 2012). Within the dual-process model of self-forgiveness of wrongdoing, self-exoneration involves replacing self-condemning emotions with self-affirming emotions without making a decision to affirm violated values.

Aims of Study Two

Thus, Study Two has two aims. I first intend to replicate the factor structure of the Two-Factor Self-forgiveness Scale in an independent sample, and I then utilize the proposed decisional and emotional factors to differentiate self-forgiveness, self-punishment, and self-exoneration. My hypotheses are as follows:

(1) Confirmatory Factor Analysis will indicate replication of the two-factor structure for assessing self-forgiveness in an independent sample.

(2) Evidence supporting the criterion validity of interpretations of scores on the Two-factor Self-forgiveness Scale will be adduced via patterns of associations between the decisional and emotional subscales with existing measures of self-forgiveness, self-punishment, and self-exoneration. Specifically, I hypothesize that decisional affirmation of values will be positively associated with self-forgiveness and self-punishment as well as negatively associated with self-forgiveness. Emotional restoration will be positively associated with self-forgiveness and self-exoneration and negatively associated with self-punishment.

Method

Participants. Participants were undergraduate students (N = 100) at a large public university in the Mid-Atlantic region of the United States. Women (75.0% female,

25.0% male) and young adults (M_{Age} = 20.07, *SD* = 2.05) comprised the majority of the sample. Racial backgrounds represented included Caucasian/White (45.0%), African American/Black (17.0%), Asian/Pacific Islander (21.0%), Latino/Latina (9.0%), Multiracial (5.0%), and Other (3.0%). Participants identified as Heterosexual (87.0%), Bisexual (6.0%), Lesbian/Gay (6.0%), and prefer not to answer (1.0%). Finally, religious/spiritual affiliations included Christian (52.0%), None (10.0%), Spiritual but not religious (9.0%), Muslim (6.0%), Atheist/Agnostic (9.0%), Other (5.0%), Hindu (4.0%), Buddhist (2.0%), Jewish (1.0%), and prefer not to answer (2.0%).

The procedure by which participants reported perpetrating an interpersonal offense was identical to that of Study 1. Index offense narratives were categorized into the following categories: verbal aggression (35.4%), physical aggression (3.0%), relational exclusion (16.2%), romantic/sexual infidelity (14.1%), dishonesty (25.3%), destruction of property (5.1%), and miscellaneous (1.0%). Time passed since the index offense occurred ranged between within the past week (6.0%), within the past month (10.0%), within the past three months (17.0%), within the past six months (10.0%), and more than six months ago (57.0%). Participants reported wronging friends (41.0%), romantic partners (21.0%), parents (11.0%), classmates (6.0%), siblings (8.0%), coworkers (2.0%), and other (11.0%). Participants completed several psychometric instruments based on their index offense.

Instrumentation. Participants completed the 10 items comprising the Two-factor Self-forgiveness Scale developed in Study 1 to assess the decisional and emotional components of self-forgiveness. As reported in Table 3, Cronbach's coefficient alphas were .80 for the decisional subscale and .82 for the emotional subscale, which is

consistent with estimates of reliability in Study 1. Furthermore, there was no evidence of a significant association between the decisional and emotional factors (r = -.03, p = .77). Participants also completed the perceived transgression severity scale described in Study One (Hall & Fincham, 2008), with α = .56 in the current sample.

The extent to which participants forgave, punished, or exonerated themselves for their index offense was examined using the Differentiated Process Scale of Self-forgiveness (Woodyatt & Wenzel, 2013a). Participants' scores were aggregated according to three subscales: self-forgiveness (e.g., "I am trying to accept myself even with my failures." and "Since committing the offense I have tried to change."), self-exoneration (e.g., I wasn't the only one to blame for what happened."), and self-punishment ("I deserve to suffer for what I've done."). Higher scores on the respective subscale indicate greater levels of what the authors label as genuine self-forgiveness, pseudo-self-forgiveness (a.k.a. self-exoneration), and self-punishment. Prior literature supports the reliability of the self-forgiveness (α's = .46-.68), self-exoneration (α's = .69-.80), and self-punishment (α's = .83-.89) subscales as well as validity of participants' scores on each via associations with empathy and self-esteem (Woodyatt & Wenzel, 2013). In the current sample, α was .91, .80, and .82 for the self-forgiveness, self-punishment, and self-exoneration subscales, respectively.

Design. Eligible participants were 18 years of age and could recall perpetrating an interpersonal offense. They were given an opportunity to enroll in the study via the online undergraduate research participant pool. After being informed about the details of the study, being given an opportunity to ask for further information, and providing their electronic consent, participants were directed to an electronic survey. Cross-sectional data

were collected on a single assessment occasion. Participants were awarded a small amount of course credit to satisfy a curriculum requirement in exchange for enrolling in the study. Debriefing followed completion of the study with referral to psychological services in the area if participants' index offense continued to interfere with their functioning.

Data analysis. The data were checked for lack of normality, linearity, and homoscedasticity of the residuals through examination of basic statistics and histograms. Missing data diagnostics revealed that only 0.25% of item-level data were missing data across 3.00% of cases; thus, the bias associated incomplete data was determined to be insignificant (Tabachnick & Fidell, 2001). Missing data was handled using FIML (Schlomer, Bauman, & Card, 2010). Dichotomous dummy variables were created to represent the effects of being female (0 = male, 1 = female), a racial minority (0 = Caucasian/White, 1 = Racial minority), a sexual minority (0 = Heterosexual, 1 = Sexual minority), and religiously affiliated (0 = No religious/spiritual affiliation, 1 = Religiously/Spiritually affiliated).

Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were performed using Mplus Version 6.11 (Muthén & Muthén, 2010). SEM was the preferred analytic technique because of its ability to account for measurement error, test overall model fit, and estimate unidirectional and bidirectional effects among variables (Wang & Wang, 2012). Models were estimated using maximum likelihood estimation with robust standard errors (MLR; Muthén & Muthén, 2010). Using the same criteria of acceptability discussed in Study One, model fit was assessed using the χ^2 value, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and

Standardized Root Mean Square Residual (SRMR).

Results

Preliminary analyses including descriptive statistics, estimates of internal reliability and bivariate associations are reported in Table 3. Confirmatory factor analysis indicated that specification of two orthogonal decisional and emotional factors replicated in the current data. The measurement model fit the data well: $\chi^2(34) = 33.77$, $p = .430$, RMSEA = .015 (90% C.I. = [.000, .075], $p = .764$), CFI = .997, and SRMR = .055. All factor loadings were significant at $p < .001$. To further refine the model, residual variance was co-varied ($cov_{Emo3,Emo4} = .71$, $p < .001$) for two items based on conceptual similarity (i.e., "I still love myself even though I did wrong." and "I respect myself even though I did wrong."). No evidence indicated that decisional affirmation of values and emotional restoration of esteem significantly co-varied ($cov_{DEC,EMO} = -.09$, $p = .496$). Structural elements were added to the model, and the specified structural model fit the data well: $\chi^2(73) = 100.39$, $p = .02$, RMSEA = .061 (90% C.I. = [.026, .089], $p = .258$), CFI = .936, and SRMR = .058.

Standardized beta coefficients for each parameter are reported in Figure 3. Decisional affirmation of values was significantly positively associated with genuine self-forgiveness ($\beta = .57$, $p < .001$) and self-punishment ($\beta = .27$, $p = .011$) as well as significantly negatively associated with self-exoneration ($\beta = -.44$, $p < .001$). Emotional restoration of esteem was significantly negatively associated with self-punishment ($\beta = -.42$, $p < .001$) but neither genuine self-forgiveness ($\beta = -.01$, $p = .916$) nor self-exoneration ($\beta = .06$, $p = .570$). Regarding statistical controls, perceived transgression severity was significantly associated with genuine self-forgiveness ($\beta = .27$, $p = .001$) and

decisional affirmation of values (β = .40, $p < .001$), but not self-punishment ($p = .858$), self-exoneration ($p = .275$), or emotional restoration of esteem ($p = .169$). Time since the offense occurred was significantly associated with no other variable (p's = .141 to .744).

In addition, I tested several propositions that were not specifically hypothesized. Supplemental analyses examined the bivariate associations between each individual item of the genuine self-forgiveness subscale of the Differentiated Process Scale of Self-forgiveness (Woodyatt & Wenzel, 2013a) and the decisional and emotional factors of the Two-factor Self-forgiveness scale to assess the relative contributions of the hypothesized decisional and emotional components of self-forgiveness to Woodyatt and Wenzel's (2013a) genuine self-forgiveness subscale. As is depicted in Table 4, all seven items of the genuine self-forgiveness subscale positively correlated with decisional reaffirmation of values (r's = .27 to .64, p's = .007 to < .001); however, only one item was found to be positively associated with emotional restoration of esteem (i.e., "I am trying to accept myself even with my failures;" $r = .25$, $p = .014$).

Discussion

Results of Study Two partially supported my hypotheses. The two-factor structure identifying and decisional and emotional facets of self-forgiveness replicated as was hypothesized. Interestingly, the anticipated pattern of associations between the decisional and emotional factors with measures of genuine self-forgiveness, self-punishment, and self-exoneration was different than hypothesized in some cases. First, self-forgiveness according to Woodyatt and Wenzel's (2013a) operationalization was positively associated with decisional affirmation of values, though no evidence of an association between genuine self-forgiveness and emotional restoration of esteem was found. Given

that an aim of Study Two was to establish criterion-related validity by associating the proposed subscales of the Two-factor Self-forgiveness Scale with the gold standard in state self-forgiveness measurement (Woodyatt & Wenzel, 2013a), the finding warrants further investigation.

Theoretical conceptualizations of self-forgiveness repeatedly implicate the release of negative emotion. For example, self-forgiveness has been conceptualized as follows: "abandoning negative thoughts, feelings, and behaviors directed at the self and replacing them with compassion, generosity and love" (Wohl et al., 2008, p. 2), "a willingness to abandon self-resentment in the face of one's own acknowledged objective wrong, while fostering compassion, generosity, and love toward oneself" (Enright et al., 1996, p. 115), and becoming "decreasingly motivated to retaliate against the self and increasingly motivated to act benevolently toward the self" (Hall & Fincham, 2008, p. 175). To these, Woodyatt and Wenzel (2013a, p. 231-232) add that self-forgiveness is the "process whereby the offender recognizes their own culpability and the worth of the victim, experiences the resulting emotions, addresses attitudes and behaviors that led to the offense in the first place, attempts to make amends and, in the process, restores their moral self."

Woodyatt and Wenzel's (2013a) conceptualization offers a paradigm shift insofar as prior empirical operationalizations did not account for acknowledgment of personal responsibility for one's wrongdoing. Yet, it may be that the content of items on Woodyatt and Wenzel's (2013a) genuine self-forgiveness scale over-correct, measuring responsibility-taking to the exclusion of assessing change in offense-related emotion. This seems likely given the supplemental item analysis performed in the current study,

which demonstrated that seven of seven items on Woodyatt and colleagues' scale are associated with decisional affirmation of values but only one item is associated with emotional restoration of esteem. While the aim of Study Two was to provide criterion-related validity via associations between the Two-factor Self-forgiveness Scale and Woodyatt and Wenzel's (2013a) genuine self-forgiveness scale, results seem to indicate that the Two-factor Self-forgiveness most accurately operationalizes scholars' definitions of self-forgiveness.

In addition to clarifying scholarly thinking about self-forgiveness, the current results offer insight about the natures of punishing and exonerating oneself. Self-punishment was positively associated with decisional affirmation of values and negatively associated with emotional restoration of esteem, as was hypothesized. While self-punishment is not a recommended way of dealing with wrongdoing, given the negative consequences of chronic negative emotion directed at oneself (Fisher & Exline, 2010), it indicates that a person is willing to accept responsibility for wrongdoing—and do something about it. This finding is consistent with prior studies of dispositional and situational constraints that increase the likelihood of a perpetrator engaging in self-punitive behavior intended to atone for an offense (Barber, Maltby, & Macaskill, 2005; Dixon, Earl, Lutz-Zois, Goodnight, & Peatree, 2014; Witvliet, Hinman, Exline, & Brandt, 2011). Further investigations are needed to examine factors that buffer dispositional and situational constraints known to weaken restoration of esteem following taking responsibility for an offense (e.g., Does amend-making behavior targeted toward someone other than the victim of one's offense mitigate the association between offense-

related emotion and self-punishment among individuals who perceive making-amends with the victim of their offense to be impossible?).

Moreover, the problem of pseudo self-forgiveness or exonerating oneself of blame has been one of the biggest theoretical and empirical problems in the self-forgiveness literature (Fisher & Exline, 2006; Hall & Fincham, 2005; McConnell, 2015). While I initially hypothesized that self-exoneration would be positively associated with restoration of esteem and negatively associated with decisional affirmation of values, evidence indicated only a negative association between decisional affirmation of values and self-exoneration. This is consistent with prior literature suggesting that pseudo self-forgiveness involves deflection of personal responsibility (Hall & Fincham, 2008), but the question remains if deflection of responsibility is successful in enhancing one's self-concept. The current results coupled with prior literature demonstrating that pseudo self-forgiveness is more likely to occur when perceived rejection or victim hostility threaten the perpetrator's sense of belonging may suggest that the function of pseudo self-forgiveness is more interpersonal than intrapersonal (Woodyatt & Wenzel, 2013b).

In sum, findings from Study Two expand upon Study One by replicating the structure of the Two-factor Self-forgiveness Scale in an independent sample and demonstrating that the decisional and emotional factors may be used to differentiate self-forgiveness from alternative ways that perpetrators might respond to wrongdoing. In order to continue building upon this foundation, I next sought to employ the Two-factor Self-forgiveness Scale to provide evidence supporting the *social reconnection hypothesis* and *personal restoration hypothesis* introduced by Griffin and colleagues (2016).

Table 3.

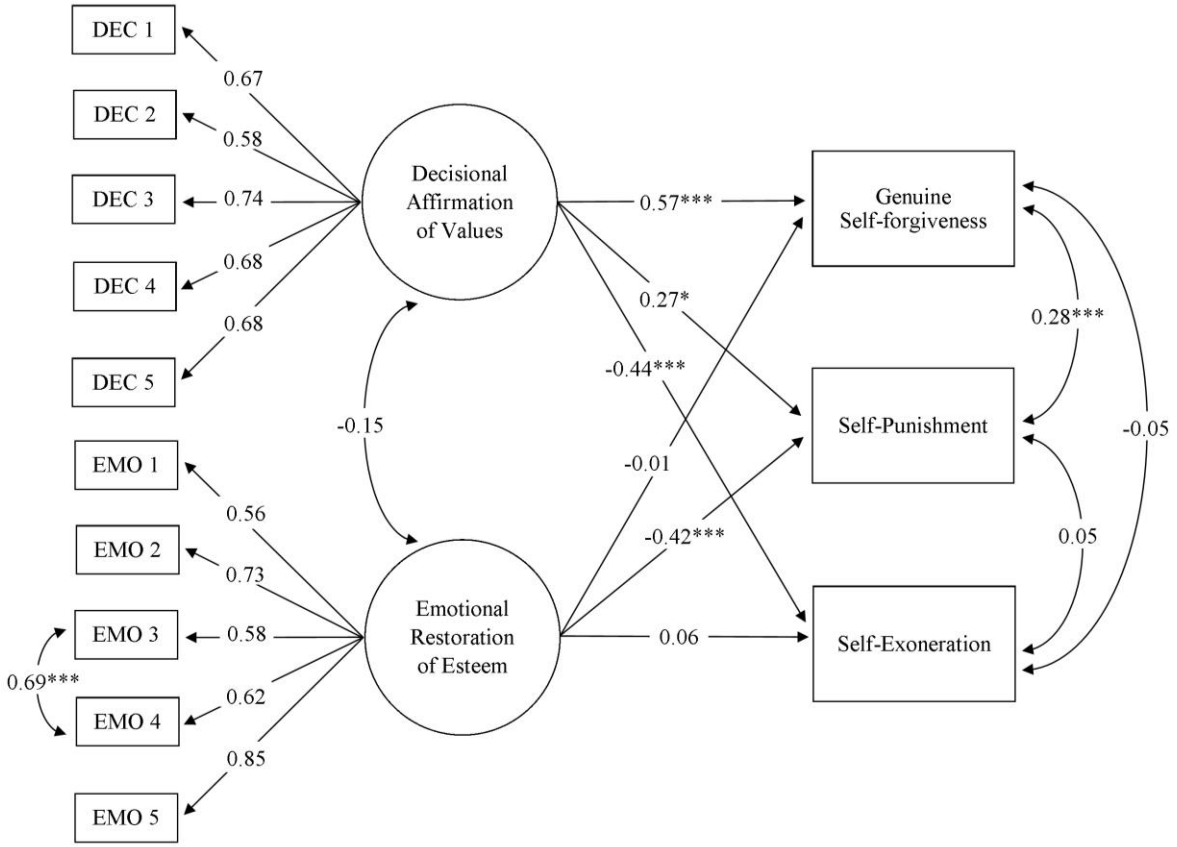
Descriptive Statistics, Bivariate Associations, and Estimates of Internal Reliability for Study 2 variables at Baseline

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. DEC	-											
2. EMO	-.03	-										
3. GSF	.59***	.02	-									
4. SPU	.28**	-.43***	.33**	-								
5. SEX	-.43***	.08	-.38***	-.10	-							
6. SEV	.34***	.12	.47***	-.01	-.20**	-						
7. TIME	.04	.04	.02	-.16	-.11	.25*	-					
8. Female	.14	.10	.06	-.02	.05	.18	.08	-				
9. Age	.01	-.04	.04	.03	.04	.11	.05	-.08	-			
10. Racial Minority	-.09	.08	-.05	-.04	.03	-.10	-.14	.13	.08	-		
11. Sexual Minority	.17	-.02	.21*	-.01	-.06	.03	-.01	.01	-.06	-.04	-	
12. Rlg. Affiliation	-.15	.17	-.02	-.08	.28**	.13	-.12	.02	-.15	.18	-.14	-
M	5.82	5.26	4.35	1.41	1.54	4.68	4.02	75.00%	20.07	55.00%	12.12%	80.61%
SD	1.14	1.22	1.45	1.22	1.25	0.94	1.30	n/a	2.05	n/a	n/a	n/a
α	.80	.82	.91	.80	.82	.56	n/a	n/a	n/a	n/a	n/a	n/a

Note. Abbreviations include decisional affirmation of values (DEC), emotional restoration of esteem (EMO), genuine self-forgiveness (GSF), self-punishment (SPU), self-exoneration (SEX), perceived transgression severity (SEV), and time since the offense occurred (TIME). * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 3

Structural Equation Model of the associations between the Two-factor Self-forgiveness Scale and Differential Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013a).



Note. The model fit the data well $\chi^2(73) = 100.39$, $p = .02$, RMSEA = .061 (90% C.I. = [.026, .089], $p = .258$), CFI = .936, and SRMR = .058. Effects of statistical control variables and residual variances were included in the model but excluded from the figure to reduce figure complexity. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.

Item Analysis of GSF items according to Dual-process Model.

	M	*SD*	DEC	EMO
1. I have tried to think through why I did what I did.	3.81	2.05	.27**	-.11
2. I am trying to learn from my wrongdoing.	4.80	1.66	.51***	.04
3. I have spent time working through my guilt.	4.15	1.88	.55***	-.04
4. I have put energy into processing my wrongdoing	4.08	1.91	.46***	-.01
5. I am trying to accept myself even with my failures.	4.55	1.78	.43***	.25*
6. Since committing the offense I have tried to change.	4.89	1.50	.64***	.04
7. I don't take what I've done lightly.	4.13	1.86	.54***	-.07

Note. Items from genuine self-forgiveness subscale of the Differential Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013a). * $p < .05$, ** $p < .01$, *** $p < .001$.

CHAPTER 6: Study Three

Using the framework of Social Cognitive Theory, I conceptualized self-forgiveness as a moral repair strategy intended to satisfy basic psychological needs of belonging and self-worth (Bandura, 1991). One might therefore ask what the possible consequences of perpetrating a social transgression are, and how do social transgressions obstruct satisfaction of a perpetrator's basic psychological needs? Content analysis of autobiographical accounts from university students (N = 63) conducted by Baumeister, Stillwell, and Wotman (1990) found evidence of persisting interpersonal conflict and emotional distress for both victims and perpetrators of offense. Victims were more likely to perceive relationship damage from accumulating provocations, though perpetrators tended to view an offense as a single occurrence. Perpetrators were more likely to view their actions as impulsive, report experiencing self-blame, and express regret, though victims seldom acknowledged awareness of regret among offenders. These differences in subjective experiences of offenses may contribute to rupture of social bonds and elicit chronic negative emotion that impairs health and well-being (Worthington, Witvliet, Pietrini, & Miller, 2007). Thus, the purpose of Study Three is to explore empirical associations of decisional and emotional components of self-forgiveness with pro-social, mental health, and physical health outcomes following perpetration of an interpersonal offense.

Social Reconnection and Personal Restoration Hypotheses

Griffin et al. (2016) describe two hypotheses that guide investigations of outcomes related to self-forgiveness according to the dual-process model. First, the *social reconnection hypothesis* suggests that making a decision to affirm one's violated values potentially enhances the quality of one's interpersonal relationships. Second, the *personal restoration hypothesis* suggests that replacing self-condemning emotion with self-affirming emotion potentially

alleviates stress-related health problems associated with chronic emotional distress. Neither hypothesis has been empirically investigated to date.

Social Cognitive Theory asserts that personal values are internalized by individuals from valued others (e.g., family of origin, romantic partnerships; Bandura, 1991); thus, violation of an internalized value is likely accompanied by perceived or actual rejection from valued others who share similar values (Griffin, Worthington, Danish, Donovan, Lavelock, Shaler, Dees, Maguen, & Davis, 2017). For this reason, the *social reconnection hypothesis* suggests that one's decision to affirm values violated by one's transgression via accepting responsibility and resolving to align one's values and future behavior will be perceived by victims as re-alignment with social expectations and will satisfy one's need for belonging by repairing ruptured emotional bonds.

Importantly, among social transgressors (N = 204), Griffin et al. (2015) observed that nearly 90% of victims were individuals with whom perpetrators reported being in close and continual relationship, such as family members (37.1%), romantic partners (27.9%), and friends (23.6%). Pelucchi, Paleari, Regalia, and Fincham (2013) further demonstrated that the consequences of failure to forgive oneself extend beyond the perpetrator, such that failure to forgive oneself was associated with self-reported and partner-reported relationship satisfaction for both men and women among romantic couples (N = 168 couples). Conversely, Woodyatt and Wenzel (2014) found that self-forgiveness was associated with an increase in desire for reconciliation over the period of one week among university students who reported perpetrating an interpersonal offense (N = 97). It is to this literature on the pro-social consequences of self-forgiveness that the *social reconnection hypothesis* introduces decisional affirmation of values results in potential repair of ruptured interpersonal bonds.

Next, the *personal restoration hypothesis* posits that enhancement of esteem by replacing negative self-condemning emotions with positive self-affirming emotions mitigates risk of stress-related psychological and physiological health problems (Griffin et al., 2016). Being either the victim or perpetrator of an offense induces stress, and offense-related cues that remind individuals of an event may evoke a stress-response analogous to stress associated with the initial offense (Witvliet, Ludwig, & Vander Laan, 2001; Witvliet, Hinman, Exline, & Brandt, 2011). While stress in response to an offense-related cue likely is less intense than stress in response to the initial offense, chronicity of negative emotion increases risk for problems such as depression, cardiovascular reactivity, and changes in endocrine functioning that negatively affect multiple organ systems (Worthington, Witvliet, Pietrini, & Miller, 2007). Thus, to the extent that self-forgiveness enables individuals to be exposed to offense-related stimuli (e.g., the victim of one's offense) without re-experiencing a stress-response, self-forgiveness is theorized to associate with improved psychological and physiological functioning.

In their meta-analytic review, Davis, Ho et al. (2015) concluded that self-forgiveness was related to improved psychological well-being (r = .45, 95% C.I. [.41, .48]) and physiological health (r = .32, 95% C.I. [.22, .41]). Findings indicated robust associations between self-forgiveness (mostly dispositional measures) and mental health outcomes including depression (r = -.48), life satisfaction (r = -.43), trait anxiety (r = -.50), suicide symptoms (r = -.37), and substance abuse (r = -.24). One potential mechanism of these associations is rumination, which refers to passive and repetitive focus on one's distress and on possible causes and consequences of that distress (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Accordingly, individuals who fail to forgive themselves ruminate on memories of past mistakes (Barber, Maltby, & Macaskill, 2005), inability to uphold unrealistic standards (Dixon, Earl, Lutz-Zois, Goodnight, & Peatee,

2014), and failure to repair ruptures in their relationships (Witvliet, Hinman, Exline, & Brandt, 2011).

Regarding physiological health, one limitation that Davis and colleagues (2015) identified is that investigations of self-forgiveness and physical health almost exclusively employ self-report measures of physical health. However, a growing body of evidence associates self-forgiveness with biomarkers of physical health, linking self-forgiveness to immune system function (Seybold, Hill, Nuemann, & Chi, 2001), cardiovascular and endocrine reactivity (Toussaint & Williams, 2003), and mortality in some cases (Krause & Hayward, 2013). Most recently, da Silva, Witvliet, and Riek (2016) examined cardiac and emotional patterns among healthy young adults (N = 80) who reported perpetrating a social transgression. Participants engaged in imagery exercises designed to facilitate experiences of self-forgiveness, rumination, receiving forgiveness, and being withheld forgiveness by a victim of one's offense. In comparison to the other conditions, individuals reported lower levels of sadness, guilt, and anger during self-forgiveness imagery, and heart rate acceleration as well as decrease in respiratory sinus arrhythmia but no change in pre-ejection period was observed in the rumination condition relative to the self-forgiveness condition. Da Silva and colleagues (2016) interpreted these findings as evidence of uncoupled parasympathetic inhibition, indicating that perpetrators who ruminate about their behavior experience stress-related physiological arousal characteristic of perceptual response without engagement in central processing (Backs, Rohdy, & Barnard 2005). Thus, in accordance with prior evidence linking self-forgiveness to improved health outcomes and models demonstrating emotion as a critical mechanism of the forgiveness-health association (Green, Decourville, & Sadava, 2012), the *personal restoration hypothesis* introduces

replacement of self-condemning emotions with self-affirming emotions as a probable mechanism of the associations between self-forgiveness, physiological health, and psychological well-being.

Aims of Study Three

Given theory and empirical evidence linking self-forgiveness to improved interpersonal relationships, psychological well-being, and physiological health (for a review, see Davis, Ho et al., 2015), Griffin et al. (2016) put forward the *social reconnection hypothesis* and *personal restoration hypothesis* to describe the respective effects of self-forgiveness on quality of interpersonal relationships and personal well-being. These hypotheses extend the body of literature by positing the distinct roles of decisional and emotional aspects of self-forgiveness. Thus, I hypothesized the following.

(1) Decisional affirmation of values will be positively associated with pro-social intentions (i.e., desire to reconcile) as well as unassociated with psychological (i.e., rumination about an interpersonal offense) and physiological (i.e., heart rate, systolic pressure, and diastolic pressure) indicators of stress.

(2) Emotional restoration of esteem will be negatively with psychological (i.e., rumination about an interpersonal offense) and physiological (i.e., heart rate, systolic pressure, and diastolic pressure) indicators of stress as well as unassociated with pro-social intentions (i.e., desire to reconcile).

Method

Participants. Participants were undergraduate students (N = 62) at a large public university in the Mid-Atlantic region of the United States. Women (59.7% female, 40.3% male) and young adults (M_{Age} = 19.68, SD = 2.06) comprised the majority of the sample. Diverse racial backgrounds were represented including African American/Black (30.6%), Caucasian/White

(29.0%), Asian/Pacific Islander (16.1%), Middle Eastern (9.7%), Latino/Latina (4.8%), Other (4.8%), Multiracial (1.6%), Native American/Alaskan Native (1.6%), and prefer not to answer (1.6%). Participants identified as Heterosexual (96.8%), Bisexual (1.6%), and Lesbian/Gay (1.6%). Religious/spiritual affiliations included Christian (58.1%), None (11.3%), Atheist/Agnostic (9.7%), Muslim (9.7%), Spiritual but not religious (3.2%), Hindu (3.2%), Muslim (2.6%), Other (1.6%), and prefer not to answer (3.2%).

The procedure by which participants reported perpetrating an interpersonal offense was similar to that of Studies 1 and 2. Index offense narratives were categorized into the following categories: verbal aggression (38.8%), physical aggression (1.5%), relational exclusion (22.4%), romantic/sexual infidelity (16.4 %), dishonesty (16.4%), destruction of property (3.0%), and miscellaneous (1.5%). Time passed since the index offense occurred ranged between within the past week (1.6%), within the past month (11.3%), within the past three months (4.8%), within the past six months (21.0%), and more than six months ago (61.3%). Victims of offense included perpetrators' friends (32.3%), romantic partners (30.6%), parents (12.9%), siblings (8.1%), classmates (4.8%), and other (11.3%). Participants completed several psychometric instruments based on their index offense.

Instrumentation. Participants completed the Two-factor Self-forgiveness Scale to assess the decisional (5 items, $\alpha = .72$) and emotional (5 items, $\alpha = .80$) facets of self-forgiveness as well as the perceived transgression severity scale ($\alpha = .61$, Hall & Fincham, 2008) administered in Studies 1 and 2. Additionally, offense-related pro-social, mental health, and physical health variables were assessed.

Pro-social behavioral intention was measured using four items developed by Woodyatt and Wenzel (2014) that assess perpetrators' desire to reconcile with the person they wronged.

Example items include “I want to be reconciled with this person” and “I want the relationship between myself and this person to get better.” Participants’ responses were recorded on a 7-point response format (1 = *do not agree at all*, 7 = *strongly agree*). Higher scores on the desire to reconcile scale are indicative a greater intent to repair one’s relationship with the victim of one’s offense. Woodyatt and Wenzel (2014) give evidence of adequate reliability ($\alpha = .82$) and construct validity of the desire to reconcile scale via associations with self-forgiveness and self-trust among university students. In the current sample, $\alpha = .79$.

Offense-related psychological distress was assessed using a modified version of the Rumination about an Interpersonal Offense scale (RIO; Wade, Vogel, Liao, & Goldman, 2008). Although the wording of the scale was initially intended for victims of offense, the phrasing of select items was adapted in the current study to the perpetrators’ perspective. For example, the original scale contained the item, “I can’t stop thinking about how I was wronged by this person,” which was modified as follows, “I can’t stop thinking about how I wronged another person.” Participants indicated their agreement with each of the six items using a 5-point rating scale (1 = *strongly disagree* to 5 = *strongly agree*). Wade and colleagues (2008) provide evidence of convergent and discriminant validity in general and clinical populations via bivariate associations with other measures of rumination, aggression, and psychological symptoms for the original scale. Griffin, Worthington, Wade, Hook, Davis, and Lavelock (2016) provide evidence of the reliability of the modified scale ($\alpha = .79$ to $.91$) in a longitudinal study of university students who reported wronging another person as well as initial validation evidence among perpetrators via associations with depressive symptomatology, quality of life, and self-forgiveness. In the current study, $\alpha = .80$ for the modified scale.

Blood pressure and heart rate were monitored with the Omron BP652/BP652N 7 Series Wrist Blood Pressure Monitor (Omron Healthcare, Inc., 2010). The device is a fully automatic wrist blood pressure monitor designed to assess systolic pressure, diastolic pressure, and pulse via oscillometric measurement. The blood pressure measurement range is 0 to 299 mmHg, and heart rate measurement range is 40 to 180 beats/min. The monitor is equipped with a position sensor that determines the optimal height (i.e., heart level) for measurement. Furthermore, the device assesses pressures and heart rate while monitoring position and movement to abort questionable assessments. Altunkan, Öztas, and Altunkan (2006) provide evidence of the clinical accuracy and reliability of Omron wrist blood pressure measurement devices via associations with measurements obtained via a mercury sphygmomanometer and dual-headed binaural stethoscope according to the International Protocol criteria.

Design. Eligible participants were 18 years of age and could recall perpetrating an interpersonal offense. The study was advertised on an online undergraduate research participant pool, and interested students presented to a secure lab space. After being informed about the details of the study and giving their consent, I assessed participants' blood pressures and heart rates in response to a neutral imagery task, administered a brief survey in which participants described an interpersonal wrongdoing that they perpetrated and responded to items associated with the offense, and assessed participant's blood pressures and heart rates in response to a offense-related rumination imagery task. Participants were awarded a small amount of course credit to satisfy a curriculum requirement in exchange for enrolling in the study. Debriefing followed completion of the study with referral to psychological services in the area if participants' index offense continued to interfere with their functioning.

Participants engaged in neutral and ruminative imagery tasks that were were replicated from DaSilva, Witvliet, and Riek (2016) before and after completing the study survey. Participants were seated and instructed to engage in each imagery exercise for 120 seconds. Prior to receiving instructions for the rumination trial, participants were given a copy of the paragraph they had written about their index offense. Full instructions for the respective neutral and offense-related rumination tasks were as follows:

> For the neutral trial, "Please sit still for the next two minutes and try your best to follow the instructions. It is important for you to sit still and get used to being quiet for a while. Your job is to sit, relax, and think of the word 'one.' Keep your arms, legs, and body still as you remain quiet for two minutes, thinking the word 'one.'"
>
> For the rumination trial, "After having read what you have written about when you wronged another person, read this carefully. For the next two minutes, think of the person you hurt, offended, or wronged. Think of the ways in which your offense harmed this person when it happened, and how it continued to negatively affect this person. During your imagery, actively focus on the negative thoughts, feelings, and physical response you have as you think about the negative ways in which you offended this person and how your offense harmed him or her."

Data Analysis. The data were checked for lack of normality, linearity, and homoscedasticity of the residuals through examination of basic statistics and histograms. Cardiovascular data for participants who were hypertensive at baseline (150 systolic / 90 diastolic) were excluded from analysis (N = 3). Missing data diagnostics revealed that only 4.79% of item-level data were missing data across 8.45% of cases; thus, bias associated incomplete data was determined to be insignificant (Tabachnick & Fidell, 2001). Missing data was handled using the Full Information Maximum Likelihood (FIML) technique. Also, dichotomous dummy variables were created to represent the effects of being female (0 = male, 1 = female), a racial minority (0 = Caucasian/White, 1 = Racial minority), a sexual minority (0 = Heterosexual, 1 = Sexual minority), and religiously affiliated (0 = No religious/spiritual

affiliation, 1 = Religiously/Spiritually affiliated). Preliminary results including descriptive statistics, bivariate associations, and estimates of internal consistency are reported in Table 5.

All analyses conducted with Mplus Version 6.11 (Muthén & Muthén, 2010). Path analysis was the preferred analytic method because it permits testing overall model fit and associations among variables (Alwin & Hauser, 1975). The hypothesized models were estimated using maximum likelihood estimation with robust standard errors (MLR) to provide mean-adjusted estimates for non-normally distributed continuous data that account for minor violations of parametric assumptions (Muthén & Muthén, 2010). Model fit was assessed using the χ^2 value, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Standardized Root Mean Square Residual (SRMR).

Results

Descriptive statistics, bivariate associations, and estimates of internal consistency for variables in Study 3 are reported in Table 5. For cardiovascular outcomes, neutral imagery aggregate measurements were as follows: systolic pressure (M = 120.80 mmHG, SD = 12.78 mmHG), diastolic pressure (M = 71.54 mmHG, SD = 8.24 mmHG), and heart rate (M = 78.85 beats/min, SD = 11.31 beats/min). Average ruminative imagery measurements for systolic (M = 122.66 mmHG, SD = 14.96 mmHG, $t(58)=1.595$, p = .116) and diastolic (M = 72.95 mmHG, SD = 9.91 mmHG, $t(58)=1.786$, p = .079) pressures increased but only approached significance and heart rate decreased significantly (M = 76.97 beats/min, SD = 10.80 beats/min, $t(58)= -2.438$, p = .018). Consistent with Studies One and Two, there was no evidence of a bivariate association between decisional affirmation of values and emotional restoration of esteem (r = .21, p = .099), and both the decisional (α = 72) and emotional (α = .80) subscales demonstrated adequate reliability in the current sample. Females were found to have significantly lower neutral imagery

systolic pressures than males (r = -.30, p = .020). Thus, I proceeded to estimate a path model to examine associations between decisional and emotional factors of self-forgiveness with perpetrators' desire to reconcile with the victim of their offense, rumination about their offense, and cardiovascular outcomes in response to offense-related imagery, when statistically controlling for the effects of perceived transgression severity and sex.

The specified path model fit the data well, $\chi^2(34) = 42.52$, p = .150, RMSEA = .064 (90% C.I. = [.000, .118], p = .339), CFI = .973, and SRMR = .078 (see Figure 4). As was hypothesized, decisional affirmation of values predicted desire to reconcile (β = .28, p = .044) but no evidence indicated that decisional affirmation of values significantly predicted health-related outcomes including rumination (β = .25, p = .147) or ruminative imagery systolic pressure (β = .06, p = .341), diastolic pressure (β = -.04, p = .620), or heart rate (β = -.07, p = .239). Conversely, emotional restoration of esteem predicted rumination (β = -.33, p = .001) and ruminative imagery heart rate (β = .13, p = .019). However, emotional restoration of esteem did not predict ruminative imagery systolic pressure (β = .05, p = .595), diastolic pressure (β = .06, p = .540), or desire to reconcile (β = -.10, p = .345). Offense-related ruminative imagery systolic pressure was also predicted by rumination (β = .14, p = .038), and the association between diastolic pressure and rumination trended toward significance (β = .13, p = .076). No evidence suggested that rumination predicted post-imagery heart rate (β = .05, p = .444).

Select covariances and effects of statistical control variables were included in the model but excluded from Figure 5. Ruminative imagery systolic pressure was covaried with diastolic pressure ($cov_{SP2,DP2}$ = .35, p = .060) and heart rate ($cov_{SP2,HR2}$ = .05, p = .734), and ruminative imagery diastolic pressure was covaried with heart rate ($cov_{DP2,HR2}$ = .18, p = .101). Likewise, neutral imagery systolic pressure was covaried with diastolic pressure ($cov_{SP1,DP1}$ = .76, p < .001)

and heart rate ($cov_{SP1,HR1}$ = -.11, p = .352), and neutral imagery diastolic pressure was covaried with heart rate ($cov_{DP1,HR1}$ = .23, p = .06). Regarding variables included in the model for statistical control, decisional affirmation of values (β = .22, p = .115) and emotional restoration of esteem (β = -.07, p = .571) were regressed on transgression severity. Sex effects were controlled for neutral imagery systolic pressure (β = -.47, p < .001) and diastolic pressure (β = -.23, p = .091). Finally, shared variance between rumination and neutral imagery systolic pressure (β = .13, p = .226), diastolic pressure (β = .16, p = .139), and heart rate (β = -.22, p = .048) was accounted for.

In sum, findings from Study Three build upon that of Studies One and Two by providing initial support for the *social reconnection hypothesis* and *personal restoration hypothesis*. In the final model, decisional affirmation of values was found to be positively associated with desire to reconcile but not psychological or physical indicators of stress. Emotional restoration of esteem was found to be negatively associated with rumination and positively associated with heart rate, and some evidence indicated that emotional restoration of esteem is associated with decreased systolic pressure to the extent that perpetrators engage in less rumination. Thus, my hypotheses were generally supported.

Discussion

Findings from Study Three generally supported the *social reconnection* and *personal restoration hypotheses*, and the present study adds to this literature in several ways. First, prior literature indicates that self-forgiveness promotes interpersonal, psychological, and physiological functioning (for a review, see Davis, Ho et al., 2015). The current results add to this literature by demonstrating distinct patterns of association between decisional and emotional factors of self-forgiveness and several correlates. Specifically, decisional affirmation of values appeared to

result in higher quality relationships, and emotional restoration of esteem appeared to result in improved psychological well-being and physiological health. Scholars might employ these hypotheses to guide future investigations. For instance, within the domain of the *social reconnection hypothesis*, does interpersonal commitment moderate the association between decisional affirmation of values and desire to reconcile?

Second, previous investigations of the association between self-forgiveness and cardiovascular indicators of stress are mixed. One on hand, although participants reported higher levels of self-forgiveness when imagining themselves seeking forgiveness, no difference in heart rate was observed across within-subjects imagery conditions for perpetrators who imagined reliving versus seeking forgiveness for a social transgression (Witvliet, Ludwig, & Bauer, 2002). On the other hand, in another within-subjects imagery study conducted by da Silva, Witvliet, and Riek (2016), perpetrators of social transgressions imagined ruminating, being begrudged forgiveness by the victim of one's offense, being forgiven by the victim of one's offense, and forgiving oneself. Results revealed that participation in rumination imagery was associated with greater heart rate in comparison to all other conditions. Also, decreased respiratory sinus arrhythmia (RSA) was observed during participation in rumination imagery relative to self-forgiveness imagery. No differences were observed in the duration of pre-ejection period across conditions, providing no evidence of change in sympathetic activity. Da Silva and colleagues (2016) therefore interpreted their findings to suggest that rumination about a social transgression evokes uncoupled parasympathetic withdrawal (e.g., reactivity associated with perceptual attention without activation of central processing resources), which is consistent with conceptualizations of rumination as perseverative cognition without seeking to resolve the distress (Brosschot, Gerin, & Thayer, 2006; Nolen Hoeksema, Wisco, & Lyubomirsky, 2008).

Within the context of the dual-process model, the current results may provide insight into mixed findings regarding cardiovascular outcomes associated with self-forgiveness. That is, despite increased levels of self-forgiveness being associated with seeking forgiveness, Witvliet et al (2001) found no evidence indicating a difference in heart rate when comparing cardiovascular reactivity despite participating in imagery focused on seeking forgiveness and reliving the offense. Perhaps this is because seeking forgiveness from the victim is more closely associated the decisional component of self-forgiveness, and current results indicate no association between decisional affirmation of values and psychological well-being or physiological health. On the other hand, Da Silva et al. (2016) found evidence of increased heart rate and decreased RSA when comparing across rumination and self-forgiveness imagery conditions. This is consistent with current findings that emotional restoration of esteem was inversely associated with rumination about an interpersonal offense and rumination was significantly associated with increased systolic pressure and marginally significantly associated with increased diastolic pressure during engagement in offense-related imagery. Indeed, future investigations are needed to examine rumination as a critical mechanism of the association between self-forgiveness and cardiovascular reactivity, and such health-related investigations should be careful to differentiate between the decisional and emotional components of self-forgiveness to ensure the validity of their results.

Third, the current findings provide evidence of the complexity of the association between self-forgiveness and cardiovascular reactivity. Specially, while the effect of emotional restoration of esteem on vascular pressure appeared to be negative and indirect in nature via decreased rumination, a direct positive association was observed between emotional restoration of esteem and heart rate in the current results. This is contrary to the hypothesized negative association

between emotional restoration of esteem and heart rate. In concert with prior literature suggesting that emotional change is critical to the forgiveness-health association (Green, Decourville, & Sadava, 2012), this finding may provide further insight into the nature of emotional-replacement hypothesis as it extends to forgiveness of self (Worthington & Scherer, 2006). In particular, self-forgiveness entails the release of negative emotion contributing to reduced parasympathetic withdrawal (Kreibig, 2010), which is consistent with da Silva et al.'s (2016) finding of lower levels of anger, anxiety, sadness, and guilt for engagement in a self-forgiveness condition to rumination condition.

Nevertheless, in addition to the decrease of negative emotion, the increase of positive emotion might elicit sympathetic activation, which was observed in the current study given the significant positive association between emotional restoration of esteem and heart rate. In contrast to stress-related health problems associated with sympathetic activation due to negative emotion, however, sympathetic activation that is characteristic of positive emotion appears not to threaten health (Shiota & Danvers, 2014). Thus, the replacement of self-condemning emotions with self-affirming emotions is characterized by unique profiles of autonomic activity associated with both decreasing negative emotion and increasing positive emotion.

It is important to consider the present findings within the context of specific limitations. First, the sample size of study three was limited, and the convenience sample was comprised of university students who were primarily young adults. Future investigations would benefit from having larger and more diverse samples upon which to base generalization of results. Moreover, due to limited power, one should not take the absence of evidence of an effect of decisional affirmation of values on health or the absence of evidence of an effect of emotional restoration of esteem on pro-social outcomes as grounds to accept the null. Perhaps these effects are smaller

than the effects hypothesized to be congruent with the *social reconnection* and *personal restoration hypotheses* but still clinically relevant. For example, although the association between rumination and desire to reconcile in the present study was not significant, prior evidence indicates that perpetrators who ruminate are less likely to engage in amend-making behavior (Witvliet, Hinman, Exline, & Brandt, 2011) and receiving forgiveness from others has also been associated with improved cardiovascular reactivity though not as strongly as self-forgiveness has (da Silva, Witvliet, & Riek, 2016). Having reviewed the findings of Studies One, Two, and Three separately, I further discuss implications of this series of studies for the extant self-forgiveness literature.

Table 5.

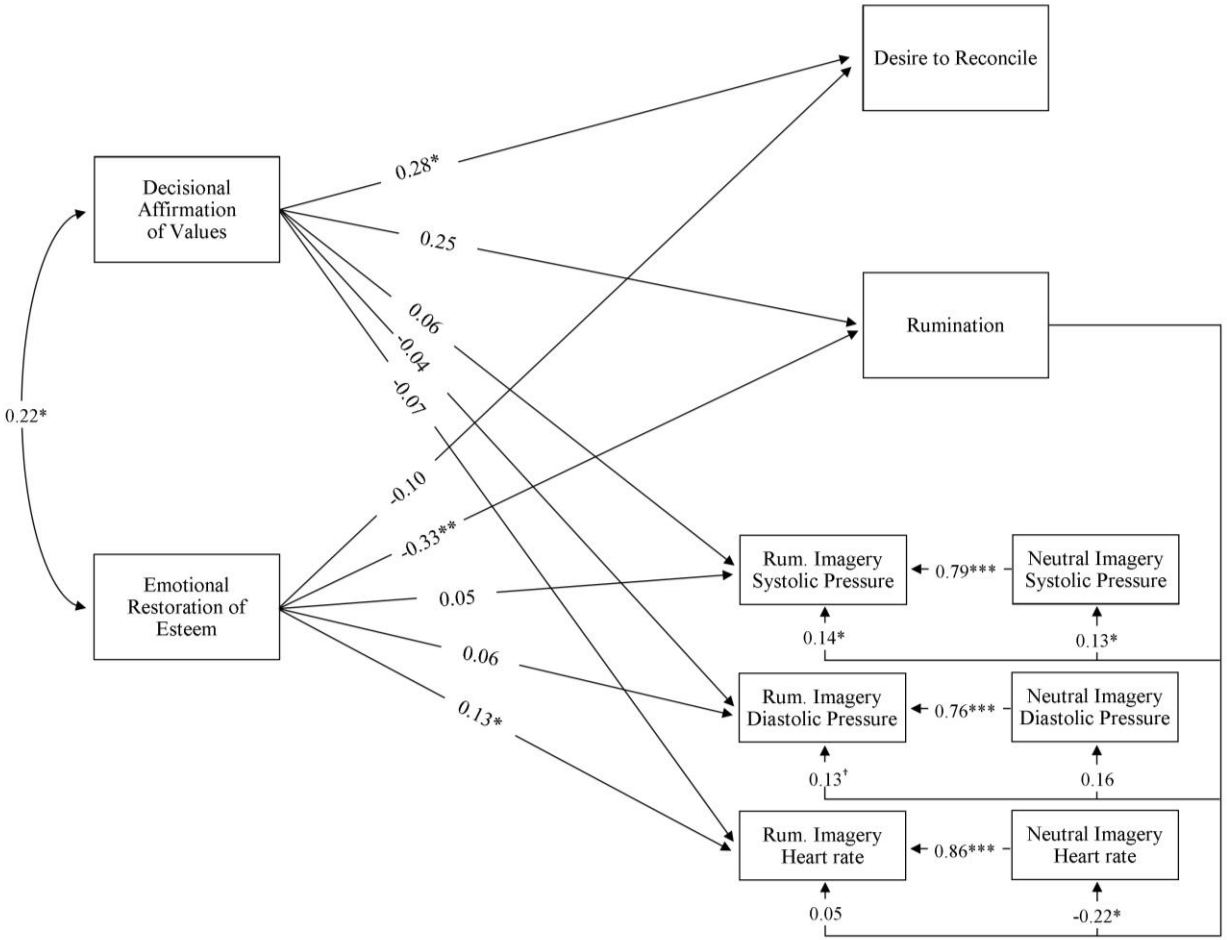
Descriptive Statistics, Bivariate Associations, and Estimates of Internal Reliability for Study 3

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. DEC	-													
2. EMO	.21	-												
3. REC	.26*	-.04	-											
4. RUM	.18	-.29*	.04	-										
5. Systolic	.02	-.01	-.01	.26*	-									
6. Diastolic	-.07	-.07	-.12	.22	.76***	-								
7. Heart Rate	-.01	.09	-.01	-.20	-.07	.13	-							
8. SEV	.22	-.07	.17	.15	-.07	-.06	.04	-						
9. TIME	.17	.03	-.16	-.13	-.03	.18	.18	.07	-					
10. Female	-.02	.03	.02	-.05	-.30*	-.14	.02	-.06	-.14	-				
11. Age	.17	.19	.07	.03	-.12	-.06	.09	-.14	.25	-.03	-			
12. Racial Minority	-.13	-.09	.16	-.20	-.15	.18	-.13	-.18	-.03	.27*	.03	-		
13. Sexual Minority	.05	-.17	-.08	.14	-.22	-.14	-.17	.20	.12	-.04	-.06	-.08	-	
14. Rlg. Affiliation	.16	.11	.13	-.19	-.01	-.01	-.10	-.12	-.09	.15	.01	.19	-.13	-
M	6.05	5.29	5.63	2.77	122.66	72.95	76.97	4.72	4.29	59.68%	19.68	70.49%	3.23%	78.33%
SD	0.99	1.01	1.48	0.94	14.96	9.91	10.80	0.88	n/a	n/a	2.06	n/a	n/a	n/a
α	.72	.80	.79	.80	n/a	n/a	n/a	.61	n/a	n/a	n/a	n/a	n/a	n/a

Note. Abbreviations include decisional affirmation of values (DEC), emotional restoration of esteem (EMO), desire to reconcile (REC), rumination about the offence (RUM), perceived transgression severity (SEV), and time since the offense occurred (TIME). Cardiovascular outcomes assessed in response to neutral imagery.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 4
Path Model testing the Social Reconnection and Personal Restoration hypotheses of Self-forgiveness.



Note. The model fit the data well, $\chi^2(34) = 42.52$, $p = .150$, RMSEA = .064 (90% C.I. = [.000, .118], $p = .339$), CFI = .973, and SRMR = .078. Select covariances, effects of statistical control variables, and residual variances were included in the model but excluded from the figure to reduce figure complexity. † $p < .10$ * $p < .05$, ** $p < .01$, *** $p < .001$.

CHAPTER 7: General Discussion

The main finding of this set of studies is support for a two-factor scale, which was derived according to the dual-process model of self-forgiveness (Griffin et al., 2015). One factor is decisional affirmation of values, and the other is emotional restoration of esteem. The decisional component of self-forgiveness involves the experience of a cognitive shift toward accepting responsibility for one's offense and aiming to align one's values and future behavior. The emotional component of self-forgiveness entails the replacement of negative self-condemning emotions with positive self-affirming emotions.

Studies One and Two demonstrate the hypothesized factor structure in two independent samples. In addition, Study One provides evidence supporting construct validity for each factor by examining associations of decisional and emotional components of self-forgiveness with perceived responsibility, guilt, and shame. Study Two provides evidence of criterion-related validity by demonstrating patterns of association in the anticipated directions with measures of self-forgiveness, self-punishment, and self-exoneration. Study Three provides preliminary support for the *social reconnection hypothesis* and *personal restoration hypothesis*, which extends the two-factor approach to investigation of relations between self-forgiveness and its health-related and pro-social correlates. Finally, estimates of internal consistency and test-retest reliability across all studies were good.

Several important modifications to scholar's interpretations of the extant self-forgiveness literature are warranted in accordance with the dual-process model of self-forgiveness (Griffin et al., 2015). The current results raise concerns about the validity of existing psychometric instruments used to assess trait (Thompson et al., 2005) and state

self-forgiveness (Wohl, DeShea, & Wahkinney, 2008; Woodyatt & Wenzel, 2013a). Although most conceptualizations emphasize experiences similar to the hypothesized decisional and emotional components of self-forgiveness, assessment of both factors in a single instrument appears to have eluded scholars. Rather, the existing measures of self-forgiveness err toward assessing either but not both the decisional and emotional factors, as was demonstrated in the present study using the gold-standard of Woodyatt and Wenzel's (2013a) genuine self-forgiveness comprised of items that were associated almost exclusively with the decisional but not emotional component of self-forgiveness.

The implications of these psychometric issues are many. Some scholars have raised concerns regarding proposed negative effects of self-forgiveness. For example, Using the State Self-forgiveness Scale (Wohl, DeShea, & Wahkinney, 2008), Wohl and Thompson (2011) found that increased self-forgiveness was associated reduction in the beneficial impact of acknowledging the negative effects of smoking on motivation to quit. However, these empirical findings were based on a scale that was operationalized according to a conceptualization of self-forgiveness that emphasizes emotional restoration of esteem to the exclusion of decisional affirmation of values (Wohl, DeShea, & Wahkinney, 2008). The absence of decisional affirmation of values risks conflating self-forgiveness and self-exoneration as is demonstrated by results of Study Two; therefore, the validity of these empirical findings are suspect. Moreover, the two-factor conceptualization answers larger conceptual issues in the self-forgiveness literature of concerns related to pseudo-self-forgiveness, especially as Carpenter et al. (2014) showed that individuals who view themselves positively following perpetration of an offense in the absence of conciliatory behavior (a proxy for decisional affirmation of values) are

viewed as morally inappropriate. Second, theorizing of the dual-process model should also result in reconceptualization of meta-analytic conclusions by Davis et al. (2015). Most effect sizes that Davis and colleagues synthesized were obtained using scales that emphasized emotional restoration of esteem (Thompson et al., 2005; Wohl et al., 2008); thus, findings such as the null association between self-forgiveness and relationship quality fail to consider the importance of decisional affirmation of values and likely do not accurately reflect the strength of the association.

Moving beyond empirical operationalizations of self-forgiveness, the current set of studies also connects self-forgiveness to major psychological theory in a way that has not previously occurred. Specifically, within the context of Social Cognitive Theory, self-forgiveness was conceptualized as a moral repair strategy intended to meet basic psychological needs for social belonging and personal esteem (Bandura, 2001). Leary and Baumeister's (2000) sociometer theory provides further evidence that decreases in affect-laden self-appraisals signaling possible threats to others' perceptions of one's relational value trigger interpersonal self-regulation, which might self-forgiveness as an attempt to express alignment between one's behavior and internalized social moral values and increased esteem. This is the first study to describe these links between the burgeoning empirical literature on self-forgiveness and guiding psychological theories.

Limitations

Despite being a promising contribution to the theoretical and empirical literature on self-forgiveness, findings from the current studies ought to be interpreted within several limitations. For example, participants were convenience samples of university students in every case, and many described socio-moral violations that are characteristic

of developmental challenges that occur in young adulthood (e.g., romantic infidelity). Yet, as long as such convenience samples are used, the utility of self-forgiveness research is dramatically reduced given its relevance to several populations of interest. Investigations of self-forgiveness ought to be extended into other clinically-relevant areas in which violations of socio-moral values might be a target of clinical intervention such as in treatment related to substance use disorder (Scherer et al., 2011; Webb, Robinson, & Brower, 2009), combat trauma (Bryan, Theriault, & Bryan, 2015), and rehabilitation and societal reentry of criminal offenders (Cornish & Wade, 2015).

Another limitation is that, in order to be included in the current studies, participants were required to identify a time when they wronged another person as a target offense. There is a class of stimuli that lead to self-condemnation that does not involve violation of a socio-moral value, but involves failure to achieve non-moral performance standards, and scholars continue to draw attention to the nature of the offense as a determinant of forgiveness outcomes (Scherer et al., 2011). Whereas decisional affirmation of values as it relates to self-forgiveness has been the primary point of contention for interpersonal offenses to differentiate self-forgiveness from self-exoneration, it is likely that the challenge of intrapersonal offenses will be distinguishing emotional restoration of esteem as it relates to self-forgiveness from self-acceptance and self-compassion. To date, there are few studies that investigate self-forgiveness in the context of events other than interpersonal transgressions (cf. Toussaint et al., 2014) However, results from studies of interpersonal transgressions in the general literature as well as in the current set of studies likely cannot be generalized to violations of one's

self-expectations in the absence of violating a socio-moral value, which leaves an untilled area of study ripe for investigation.

Future Directions for Research

Directions for future research based on these findings are many. For example, it is important that the psychometric quality of the two-factor self-forgiveness scale continue to be assessed. One area of expansion is tests of measurement and structural invariance across both dispositional and contextual factors (Fehr, Geland, & Nag, 2010). For example, meta-analytic evidence demonstrates that men on average report lower rates of both guilt (d = -.27, 95% CI [-.32, -.23]) and shame (d = -.29, 95% CI [-.34, -.24]) than do women (Else-Quest, Higgins, Allison, & Morton, 2012), and the current findings indicate unique patterns of association between decisional and emotional factors of self-forgiveness with guilt and shame. Testing for invariance across dispositional factors such as gender, age, racial status, sexual orientation, and religious/spiritual affiliation might be considered. In addition to these person-related factors, invariance testing across situational factors such as categories of offense is warranted. One might examine for invariance across inter- and intra-personal offenses or offenses in which perpetrators and victims are able or not able to reconcile.

Another direction to consider is the temporal course of the decisional and emotional components of self-forgiveness (Hall & Fincham, 2008). According to the Sociometer theory of esteem, depreciation in affect-laden self-appraisals following perpetration of an interpersonal offense serves the evolutionary mechanism of preserving one's membership in a social group when the drop in esteem motivates realignment of one's behavior with the values of the group (Leary and Baumeister., 2000). For this

reason, novel methods such as ecological momentary assessment is needed to assess the longitudinal trajectories of decisional and emotional components of self-forgiveness (and their association) immediately following perpetration of an interpersonal transgression. Theory suggests that initial decreases in esteem that motivate decisional affirmation of socio-moral values that correspond with subsequent increases in esteem.

Next, although the precedence is to study single virtues in isolation from one another, virtues exist within a constellation of character comprised of many virtues (Peterson & Seligman, 2004). Thus, investigations of self-forgiveness as it relates to other virtues are warranted. For instance, regarding forgiveness of others, Davis, Ho and colleagues (2015) found a positive association (r = .40, 95% C.I. [.36, .44]) between dispositional forgiveness of self and dispositional forgiveness of others; yet, evidence also suggests that people tend to be more forgiving of others than themselves (Macaskill, 2007). Future investigations similar to the third-party forgiveness effect might illuminate this finding, given that we are less likely to forgive people that hurt those who harm people with whom we are close as opposed to people who harm us (Green , Burnette, Davis, 2008) and when we condemn ourselves for a social transgression evidence suggest that it is for harming someone with whom we are in close and continued relationship (Griffin et al., 2015). Scholars might also consider how humility – that is, accurate appraisal of one's own strengths and weakness, other-orientation, and modest self-presentation – might decrease self-condemnation and increase self-forgiveness following perpetration of an offense, though empirical studies of self-forgiveness and humility have yet to be conducted (Worthington, Hook, & Davis, 2016).

Finally, the current set of basic studies has important implications for investigations of the clinical application of self-forgiveness. Theories of intervention often emphasize both the decisional and emotional components of self-forgiveness, such as Cornish and Wade's (2015a) that has two steps aimed at decisional affirmation of values (Responsibility, Restoration) and two steps aimed at emotional restoration of esteem (Remorse, Renewal). However, applied studies of self-forgiveness continue to assess outcomes using measures of self-forgiveness with a myopic focus on either the decisional (Woodyatt & Wenzel, 2013a) or emotional component of self-forgiveness (Wohl, DeShea, & Wahkinney, 2008). The current ability to assess outcomes, therefore, does not reflect theories of self-forgiveness intervention. Thus, the development of the two-factor self-forgiveness scale provides an additional measure that is sensitive to momentary changes in decisional and emotional components of self-forgiveness that might occur over the course of treatment. In addition to providing outcome assessment that is more congruent with theory of self-forgiveness intervention, the two-factor scale also creates opportunity for dismantling and dose-response designs that help identify the optimally efficacious intervention.

Conclusion

In sum, the development of the dual-process model of self-forgiveness and corresponding two-factor scale that assess distinct decisional and emotional components of self-forgiveness advances represents a critical step toward enhancing the theoretical and methodological rigor of the empirical study of self-forgiveness. While providing a framework for interpreting mixed findings in prior literature and resolving skepticism about the validity of existing psychometric instruments that purport to assess self-

forgiveness, the two-factor scale provides a basis for the next wave of self-forgiveness research focused on understanding structural associations between self-forgiveness and its pro-social and health related correlates. Coupled with the diverse array of studies in the extant self-forgiveness literature, I hope that this scale contributes to better description, prediction, and manipulation of self-forgiveness in order to facilitate the process of forgiveness for the person whom many report great difficulty forgiving – that is, oneself.

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APPENDIX A

Prior Measures of State Self-forgiveness

1. **The State Self-forgiveness Scales (Wohl, DeShea, & Wahkinney, 2008)**

	Not at all	A little	Mostly	Completely
1. As I consider what I did that was wrong, I feel compassionate toward myself.	1	2	3	4
2. As I consider what I did that was wrong, I feel rejecting of myself. (R)	1	2	3	4
3. As I consider what I did that was wrong, I feel accepting of myself.	1	2	3	4
4. As I consider what I did that was wrong, I feel dislike toward myself. (R)	1	2	3	4
5. As I consider what I did that was wrong, I show myself acceptance.	1	2	3	4
6. As I consider what I did that was wrong, I show myself compassion.	1	2	3	4
7. As I consider what I did that was wrong, I punish myself. (R)	1	2	3	4
8. As I consider what I did that was wrong, I put myself down.	1	2	3	4
9. As I consider what I did that was wrong, I believe I am acceptable.	1	2	3	4
10. As I consider what I did that was wrong, I believe I am okay.	1	2	3	4
11. As I consider what I did that was wrong, I believe I am awful. (R)	1	2	3	4
12. As I consider what I did that was wrong, I believe I am terrible. (R)	1	2	3	4
13. As I consider what I did that was wrong, I believe I am decent.	1	2	3	4

14. As I consider what I did that was wrong, I believe I am rotten. (R)	1	2	3	4
15. As I consider what I did that was wrong, I believe I am worthy of love.	1	2	3	4
16. As I consider what I did that was wrong, I believe I am a bad person. (R)	1	2	3	4
17. As I consider what I did that was wrong, I believe I am horrible. (R)	1	2	3	4
18. As I consider what I did that was wrong, I have forgiven myself.	1	2	3	4

Note. Items 1 to 8 comprise the *Self-forgiving Feelings and Actions* subscale. Items 9 to 17 comprise the *Self-forgiving Beliefs* subscale. Item 18 is a single item. (R) indicates that the item is reverse-scored.

2. **The Differentiated Process Scales of Self-forgiveness (Woodyatt & Wenzel, 2013)**

	Do Not Agree At All			Neutral			Strongly Agree
1. I have tried to think through why I did what I did.	0	1	2	3	4	5	6
2. I am trying to learn from my wrongdoing.	0	1	2	3	4	5	6
3. I have spent time working through my guilt.	0	1	2	3	4	5	6
4. I have put energy into processing my wrongdoing.	0	1	2	3	4	5	6
5. I am trying to accept myself even with my failures.	0	1	2	3	4	5	6
6. Since committing the offense, I have tried to change.	0	1	2	3	4	5	6
7. I don't take what I have done lightly.	0	1	2	3	4	5	6
8. What I've done is unforgiveable.	0	1	2	3	4	5	6
9. I can't seem to get over what I have done.	0	1	2	3	4	5	6
10. I deserve to suffer for what I have done.	0	1	2	3	4	5	6
11. I feel like I can't look myself in the eye.	0	1	2	3	4	5	6
12. I want to punish myself for what I have done.	0	1	2	3	4	5	6
13. I keep going over what I have done in my head.	0	1	2	3	4	5	6

14. I don't understand why I behaved as I did.	0	1	2	3	4	5	6
15. I feel the other person got what they deserved.	0	1	2	3	4	5	6
16. I wasn't the only one to blame for what happened.	0	1	2	3	4	5	6
17. I think the other person was really to blame for what I did.	0	1	2	3	4	5	6
18. I feel what happened was my fault. (R)	0	1	2	3	4	5	6
19. I feel angry about the way I have been treated.	0	1	2	3	4	5	6
20. I'm not really sure whether what I did was wrong.	0	1	2	3	4	5	6

Note: Items 1 to 7 comprise the *Genuine Self-forgiveness* subscale. Items 8 to 14 comprise the *Self-punishment* subscale. Items 15 to 20 comprise the *Pseudo Self-forgiveness* (*Self-exoneration*) subscale. (R) indicates that the item is reverse-scored.

APPENDIX B

Measures Administered in the Current Studies

1. Two-factor Self-forgiveness Scale (Griffin, this volume)

	Strongly Disagree			Neutral			Strongly Agree
1. I will try not to repeat my offense in the future.	1	2	3	4	5	6	7
2. I acknowledge that I am to blame for my actions.	1	2	3	4	5	6	7
3. I would take back what I've done if I could.	1	2	3	4	5	6	7
4. I regret that my past actions violated my values.	1	2	3	4	5	6	7
5. My actions violated something that is important to me.	1	2	3	4	5	6	7
6. Even though I did something wrong, I feel a sense of self-acceptance.	1	2	3	4	5	6	7
7. I feel like a valuable person despite my wrongdoing.	1	2	3	4	5	6	7
8. I still love myself even though I did wrong.	1	2	3	4	5	6	7
9. I respect myself even though I did wrong.	1	2	3	4	5	6	7
10. I feel compassion toward myself.	1	2	3	4	5	6	7

Note. Items 1 to 5 assess *Decisional Affirmation of Values*. Items 6 to 10 assess *Emotional Restoration of Esteem*.

2. Perceived Personal Responsibility Scale (Fisher & Exline, 2006)

	Completely Disagree									Completely Agree
1. I feel I was responsible for what happened.	1	2	3	4	5	6	7	8	9	10
2. I wasn't really to blame for this. (R)	1	2	3	4	5	6	7	8	9	10
3. I was in the wrong in the situation.	1	2	3	4	5	6	7	8	9	10
4. This was clearly my fault.	1	2	3	4	5	6	7	8	9	10
5. I did not really do anything wrong.	1	2	3	4	5	6	7	8	9	10

Note. (R) indicates that the item is reverse scored.

3. State Shame and Guilt Scale (Marschall, Saftner, & Tangney 1994)

	Not feeling this way at all				Feeling this way very strongly
1. I want to sink into the floor and disappear.	0	1	2	3	4
2. I feel remorse, regret.	0	1	2	3	4
3. I feel small.	0	1	2	3	4
4. I feel tension about something I've done.	0	1	2	3	4
5. I feel like I am a bad person.	0	1	2	3	4
6. I cannot stop thinking about something bad I have done.	0	1	2	3	4
7. I feel humiliated, disgraced.	0	1	2	3	4
8. I feel like apologizing, confessing.	0	1	2	3	4
9. I feel worthless, powerless.	0	1	2	3	4
10. I feel bad about something I have done.	0	1	2	3	4

Note. Items 1, 3, 5, 7, 9 comprise the *Shame* subscale. Items 2, 4, 6, 8, 10 comprise the *Guilt* subscale.

4. Differentiated Processes of Self-forgiveness Scale (Woodyatt & Wenzel, 2013)

	Do Not Agree At All			Neutral			Strongly Agree
1. I have tried to think through why I did what I did.	0	1	2	3	4	5	6
2. I am trying to learn from my wrongdoing.	0	1	2	3	4	5	6
3. I have spent time working through my guilt.	0	1	2	3	4	5	6
4. I have put energy into processing my wrongdoing.	0	1	2	3	4	5	6
5. I am trying to accept myself even with my failures.	0	1	2	3	4	5	6
6. Since committing the offense, I have tried to change.	0	1	2	3	4	5	6
7. I don't take what I have done lightly.	0	1	2	3	4	5	6
8. What I've done is unforgiveable.	0	1	2	3	4	5	6
9. I can't seem to get over what I have done.	0	1	2	3	4	5	6
10. I deserve to suffer for what I have done.	0	1	2	3	4	5	6
11. I feel like I can't look myself in the eye.	0	1	2	3	4	5	6
12. I want to punish myself for what I have done.	0	1	2	3	4	5	6
13. I keep going over what I have done in my head.	0	1	2	3	4	5	6

14. I don't understand why I behaved as I did.	0	1	2	3	4	5	6
15. I feel the other person got what they deserved.	0	1	2	3	4	5	6
16. I wasn't the only one to blame for what happened.	0	1	2	3	4	5	6
17. I think the other person was really to blame for what I did.	0	1	2	3	4	5	6
18. I feel what happened was my fault. (R)	0	1	2	3	4	5	6
19. I feel angry about the way I have been treated.	0	1	2	3	4	5	6
20. I'm not really sure whether what I did was wrong.	0	1	2	3	4	5	6

Note: Items 1 to 7 comprise the *Genuine Self-forgiveness* subscale. Items 8 to 14 comprise the *Self-punishment* subscale. Items 15 to 20 comprise the *Pseudo Self-forgiveness* (*Self-exoneration*) subscale. (R) indicates that the item is reverse-scored.

5. Desire to Reconcile Scale (Woodyatt & Wenzel, 2014)

	Do not Agree At All			Neutral			Strongly Agree
1. I only want good things for this person.	1	2	3	4	5	6	7
2. I want to be reconciled with this person.	1	2	3	4	5	6	7
3. I want the relationship between myself and this person to get better.	1	2	3	4	5	6	7
4. I want things to go back to the way they were before all this happened.	1	2	3	4	5	6	7

6. Rumination about an Interpersonal Offense Scale (Wade, Vogel, Liao, & Goldman, 2008) – Adapted for Perpetrators of Offense

	Strongly Disagree		Neutral		Strongly Agree
1. I can't stop thinking about how I wronged another person.	1	2	3	4	5
2. Memories about my wrongful actions have limited my enjoyment in life.	1	2	3	4	5
3. I have a hard time getting thoughts of how I mistreated others out of my head.	1	2	3	4	5
4. I try to figure out the reasons why I hurt others.	1	2	3	4	5
5. The wrong I committed is never far from my mind.	1	2	3	4	5
6. I find myself replaying the events over and over in my mind.	1	2	3	4	5

7. Perceived Transgression Severity Index (Hall & Fincham, 2008)

	Very Positively			None			Very Negatively
1. How did your behavior affect you?	0	1	2	3	4	5	6
2. How did your behavior affect the other person?	0	1	2	3	4	5	6
3. How did your behavior affect your relationship with the other person?	0	1	2	3	4	5	6