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Decisional and Emotional Forgiveness: Conceptualization and Development of Self-

Report Measures

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Abstract

Decisional forgiveness is a behavioral intention to act less negatively and more positively toward an offender. Emotional forgiveness is a process in which positive other-oriented emotions replace unforgiving emotions. We present five studies, involving N=832 participants, to (a) develop the Decisional Forgiveness Scale (DFS) and Emotional Forgiveness Scale (EFS; Studies 1 & 2), and (b) assess initial evidence for the construct and discriminant validity of the DFS and EFS (Studies 3, 4 & 5). The DFS and EFS are distinct but related psychometrically sound measures of two forms of forgiveness, which are potentially important when people have decided to forgive an offender but still feel negative emotions associated with anger, resentment, and bitterness toward the offender. The distinction between decisional and emotional forgiveness is expected to advance forgiveness research, especially in studying the processes associated with forgiving.

(137 words)

Key words: forgiveness, decision, emotion, psychometric, test construction

Decisional and Emotional Forgiveness: Conceptualization and Development of Self-Report Measures

In the book, *Left to Tell*, Immaculée Ilibagiza (2006) describes her experiences during the 100 days of genocidal violence in Rwanda in 1994. While Hutus searched and called threats against her name, she hid with seven other women for 91 days in a small bathroom. There, she forgave those who tried to kill her and who hacked to death her brother, friends, and other family members. Yet, as the days passed and she and the other women were liberated and walked to a French army camp, she describes the discord between her decision to forgive and her emotional experience:

> My soul was at war with itself. I'd struggled so hard to forgive, but now felt duped for having done so; …. I could feel the weight of my negative thoughts dragging me away from the one light that had guided me through the darkness…. "Forgive my evil thoughts, God," I prayed. … "Those who did these horrible things are still your children, so let me help them, and help me to forgive them" (p. 196).

Why was Immaculée's commitment to forgive, which she had struggled hard to achieve, unaccompanied by her current feelings of forgiveness? She had made an earlier sincere, decision to release the murders from her condemnation. Yet still, in this passage, she wrestles with profound hatred. As is consistent with her experience throughout, she prays for a solution, and the solution is to ask God to help her have a different type of forgiveness—one that had eluded her despite a sincere religiously empowered experience of prior forgiveness. Later, Semana, a politician who was in charge of prisoners

responsible for killings, offered Immaculée the opportunity to meet with one of the killers:

> "Do you want to meet the leader of the gang that killed your mother and Damascene [Felicien]?"
>
> "Yes, sir. I do."
>
> … Felicien was sobbing. I could feel his shame. He looked up at me for only a moment, but our eyes met. I reached out, touched his hands lightly, and quietly said what I'd come to say.
>
> "I forgive you."
>
> My heart eased immediately ….
>
> "What was that all about, Immaculée? That was the man who murdered your family. I brought him to you to question, to spit on if you wanted to. But you forgave him! How could you do that? Why did you forgive him?"
>
> I answered him with the truth: "Forgiveness is all I have to offer" (pp. 203-204).

Even other people in Immaculée's life recognized the peace of emotional forgiveness that shown through her. Still later in Immaculée's story, another genocide survivor, whose family had also been killed, said, "I keep hearing people talk about how you forgave your family's killers and moved on with your life … that you're happy…. I need to learn how to let go of my hatred, too. I need to live again" (p. 209).

In popular culture, the word *forgiveness* refers imprecisely to merciful, generous, or non-retaliatory response to a transgression. Forgiveness is frequently confused with many intrapersonal and interpersonal responses to transgressions. Researchers, however,

distinguish forgiveness from excusing, justifying, condoning, exonerating, accepting, moving on, seeing justice served, forbearing, forgetting, and reconciliation (Enright & Fitzgibbons, 2000). Most researchers agree that forgiveness is an internal, *intra*personal process that overcomes angry, hurt, and bitter responses through mercy toward the person(s) held responsible for causing harm (Worthington, 2005).

While theorists show increasing agreement both on what forgiveness is not and what it is, the singular word *forgiveness* is increasingly understood to be insufficient to describe the internal experiences of forgiving (Exline, Worthington, Hill, & McCullough, 2003). Two forms of forgiveness of others can be distinguished: one's decision to forgive, and one's forgiving change of emotion toward one's offender.. *Decisional forgiveness* is an intention to behave more benevolently toward the transgressor (DiBlasio, 1998; Exline et al., 2003)—to the extent that it is safe to do so. Decisional forgiveness can involve an intention to eliminate negative behavior in non-continuing relationships (McCullough, Fincham, & Tsang, 2003) and also to restore positive behavior in continuing close relationships (Finkel, Rusbult, Kumashiro, & Harmon, 2002). Whereas decisional forgiveness is a behavioral intention, *emotional forgiveness* involves affective transformation. In emotional forgiveness, the forgiver's negative, unforgiving emotions are supplanted with positive other-oriented emotions, such as empathy, sympathy, compassion, or love toward the offender (Exline et al., 2003).

Theoretically, decisional and emotional forgiveness are two separate but related processes that are easy to distinguish in personal experience, as they were for Immaculée. She knew she had forgiven through a decision, but she clearly was not in a state of emotional forgiveness; she was still emotionally angry and hate-filled. Although the

decision to forgive was made, her experience of emotional forgiveness was a process that lasted several years

There are important implications for measuring decisional and emotional forgiveness that arise from thinking through this process. For example, different scales to measure decisional and emotional forgiveness separately are likely to be highly correlated. If a social scientist merely examined the correlation within a population but did not attend to the different processes involved, the social scientist likely would conclude that emotional and decisional forgiveness are so intertwined as to be indistinguishable. Many people would at any time have both low decisional and low emotional forgiveness. Many would have reached resolution and have both high decisional and high emotional forgiveness. Over the full range of scores, the correlation would be high. But attending to the full-range correlation would obliterate the weight of evidence, which may show that virtually all of the people spent some time with high decisional forgiveness without having reached full emotional forgiveness.

Research has yielded many psychometrically strong measures for tracking forgiveness as a general construct and various components of forgiveness, as outlined in McCullough, Hoyt, & Rachal's (2000) taxonomy of current forgiveness measures. The two most widely used forgiveness measures are the Enright Forgiveness Inventory (EFI; Enright, 1994) and the Transgression-Related Inventory of Motivations (TRIM; McCullough et al., 1998).

The EFI is a general measure of forgiveness that assesses, using 60 items, cognitive, affective, and behavioral components of forgiveness. The presence of positive

cognition, affect, and behavior and the absence of negative cognition, affect, and behavior is each assessed with 10 items.

The TRIM is a 12-item measure of avoidance (TRIM-A) and revenge (TRIM-R) motivations and been has supplemented with 7 items measuring benevolence (TRIM-B) motivations (McCullough et al., 2003). Each measure has strengths and weaknesses. The EFI assesses cognition, affect and behavioral components, but it is relatively lengthy and it must be purchased. It has higher estimated reliabilities and is probably more suited to clinical work than the TRIM because of its length. The TRIM may be used without cost, assesses unforgiving motivations (TRIM-A and TRIM-R) and more positive motivations (TRIM-B), and is brief (19 total items). However, motivational change, which is how McCullough et al. (1998) defines forgiveness, might not be the construct of interest for some researchers.

Although the EFI and TRIM are both excellent measures with evidence supporting their reliability and validity, no existing instrument adequately measures the distinction between decisional and emotional forgiveness. Indeed, prior distinctions between decisional and emotional forgiveness have remained theoretical (e.g., Exline et al., 2003; Worthington, Witvliet, Pietrini, & Miller, 2007) or have been measured using single items. Our research team has conducted two manipulated studies and a questionnaire survey in Israel and Palestine using two single item measures of decisional and emotional forgiveness to provide initial construct validity (Reports are available upon request). Some work has examined the adequacy of single-item measures and provided evidence of the validity and estimated reliability of their scores (Wanous, Reichers, & Hudy, 1997). Despite their meta-analysis, the reliability and validity of scores of single-

item measures of forgiveness have not been investigated, and the general view is that single-item measures are psychometrically risky for research and are likely of little use clinically.

The present article has two major aims, addressed in five studies. The first aim was to develop two brief measures—the Decisional Forgiveness Scale (DFS) and the Emotional Forgiveness Scale (EFS). Study 1 involved creating and refining the DFS and EFS using expert raters and exploratory factor analysis (EFA). Study 2 used confirmatory factor analysis (CFA) to confirm the factor structure of the DFS and EFS in an independent sample.

The second aim was to provide evidence of construct validity for the DFS and EFS. In Studies 3, 4, and 5, we provide general evidence that the DFS and EFS are related to other forgiveness-related constructs. We also report evidence that differentiates the DFS and EFS for times in which a person might have experienced a decision to forgive but not yet completed emotional forgiveness. We do so using an experiment that assesses the number of positive written descriptions of one's offender and an experiment that measures reaction times using an implicit attitudes test.

Study 1: Construction and Refinement of the DFS and EFS

The purpose of Study 1 was to create and refine measures of decisional and emotional forgiveness. Items were created to measure these constructs, and then these items were refined through expert ratings, latent semantic analysis, and exploratory factor analysis (EFA). Initial estimates are given for the internal consistency (alpha) of this scale and subscales.

Method

Participants

Participants were undergraduate students ($N = 400$) from a large urban university. Demographic data are summarized in Table 3 for Studies 1 through 3.

Measures

Decisional and emotional forgiveness items. Items to measure decisional forgiveness ($n = 24$; the DFS-24) and emotional forgiveness ($n = 48$; the EFS-48) were created for the present study. They were later reduced to $n = 15$ and $n = 37$ items for decisional (DFS-15) and emotional (EFS-37) forgiveness, respectively. Participants completed items in reference to one specific offender and offense situation. They reported their current behavioral intentions and forgiving emotions by indicating their agreement with items on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*.

Procedure

Winnowing items. The DFS-24 and EFS-48 were sent to four expert raters who had published articles in peer-reviewed journals on the topic of forgiveness. The experts rated each item on the degree of fit that they thought it showed to its construct on a 5-point scale from 0 = *no fit* to 4 = *excellent fit*. The degree of fit of each scale item to its construct was also examined using Latent Semantic Analysis (LSA; http://lsa.colorado.edu; Landauer, Foltz, & Laham, 1998), which represents scale items as nearness in semantic space and represents nearness as a cosine score. The cosines were then analyzed for estimated internal consistency to determine the consistency of an item or scale to the comparison definition or textual passage. In the current study, LSA was used to assess the degree of fit of each scale item with the overall meaning of each construct as described in a paragraph.. (For the precise wording of the descriptions,

please contact the first author). We removed items that did not show good or excellent fit

from expert raters or from LSA analyses, for which an item must substantially add to the

scale alpha computed on LSA analyses. The LSA analyses agreed with the expert raters

in all but two cases, and we selected the judgment of raters in both cases.The revised

measures—the DFS-15 and the EFS-37—were then given to the current sample.

Administration of questionnaires. Participants were recruited from undergraduate

classes and participated as part of a course requirement or in exchange for a small amount

of class credit. After informed consent, participants were instructed to think about

someone who has hurt or offended them and to write a short summary of the

transgression. They then completed the DFS-15 and EFS-37.

Results

Decisional Forgiveness Scale (DFS)

Scores on all 15 decisional forgiveness items were assessed for missing data,

normality, and the presence of outliers. All subsequent data sets were examined similarly

to insure the accuracy of the data.

We used the Eigenvalue rule (Kaiser, 1960) and the scree test (Cattell, 1966) to

determine the optimal number of factors. Two factors best described the data. Thus, all

items were analyzed using an exploratory factor analysis (EFA) with principal

components analysis (PCA) constrained to two factors ($N = 399$). We first examined the

factor loadings with orthogonal Varimax rotation, and second with oblique Promax

rotation. The factors correlated with each other .53, which exceeded recommendations for

independent factors (.32 from Tabachnick & Fidell, 2007). Thus, the solution with

oblique rotation was retained. Items were dropped from the DFS if (a) they did not load

at .45 or above on their highest factor (as recommended by Comrey & Lee, 1992) or (b) they loaded more closely than .15 on their next highest factor. Furthermore, items were dropped if they did not align theoretically with their primary factor. The factor loadings of each item are reported in Hook (2007).

Eight of the initial 15 items were retained, and make up the Decisional Forgiveness Scale (DFS). The DFS has two four-item subscales. One measures Prosocial Intentions; the other, Inhibition of Harmful Intentions. The coefficient alphas for the DFS and subscales were .83 (95% CI = .80-.85) for the full scale, .78 (95% CI = .75-.82) for Prosocial Intentions, and .83 (95% CI = .80-.86) for Inhibition of Harmful Intentions. A Pearson correlation coefficient was calculated to determine the subscale intercorrelation. Prosocial Intentions was moderately correlated with Inhibition of Harmful Intentions, $r(397) = .46, p < .01$. The final version of the DFS is given in the Appendix.

Emotional Forgiveness Scale (EFS)

Scores on all 37 emotional forgiveness items of the EFS-37 were assessed for violation of assumptions, as described for the DFS. We followed the same PCA protocol as with the DFS. Two factors best described the data, and they were correlated with each other at .55. Thus, the solution with oblique rotation was retained. Items not meeting loading criteria, not theoretically aligned, and not contributing to a brief, balanced scale were dropped. The factor loadings of each item are reported in Hook (2007).

Eight of the initial 37 items were retained. They make up the Emotional Forgiveness Scale (EFS). The EFS has two four-item subscales. One subscale measures the Presence of Positive Emotion; the other, the Reduction of Negative Emotion. The coefficient alphas for the new EFS and subscales were .81 (95% CI = .78-.84) for the full

scale, .85 (95% CI = .83-.87) for the Presence of Positive Emotions, and .78 (95% CI = .75-.82) for the Reduction of Negative Emotions. A Pearson correlation coefficient was calculated to determine the subscale intercorrelation. Presence of Positive Emotions was moderately correlated with Reduction of Negative Emotions, $r(397) = .32, p < .01$. The final version of the EFS is given in the Appendix.

<p align="center">Study 2: Confirmatory Factor Analyses for the DFS and EFS</p>

The previous study resulted in 8-item versions of both the DFS and EFS. Both scales showed evidence of a two-factor structure and evidence of estimated internal consistency. However, the items were administered within the context of 52 scale-development items. To provide further evidence for the factor structure of the DFS and EFS—as autonomous scales—we conducted a confirmatory factor analysis (CFA) on the eight-item DFS and EFS scale using an independent sample.

<p align="center">*Method*</p>

Participants were undergraduate students ($N = 298$) from a large urban university recruited similarly to Study 1. Demographic data are summarized in Table 3. Participants completed the DFS and EFS within a cross-sectional, correlational design.

<p align="center">*Results*</p>

A CFA that used maximum likelihood estimation tested the extent to which a two-factor model for the DFS fit the data. The Chi-square value was significant, $X^2(19) = 48.07, p < .001$. However, the Chi-square test is sensitive to sample size and does not necessarily reflect a poor fit to the data (Bollen, 1989). The X^2/df was 2.5, which is less than the recommended maximum value of 5 (DeVellis, 2004), indicating an acceptable fit. Additional fit indices also suggested an acceptable fit (comparative fit index [CFI] =

.98; normed fit index [NFI] = .97; goodness of fit index [GFI] = .96; root mean squared error of approximation [RMSEA] = .08). Thus the two-factor correlated model for the DFS fit the data acceptably well.

Similarly, for the EFS, the Chi-square value was significant, $X^2(19) = 56.38$, $p<$ .001. The $X^2/df = 3$, suggesting acceptable fit. Additional fit indices also suggested an acceptable fit (CFI = .97; NFI = .96; GFI = .95; RMSEA = .08). Thus the two-factor correlated model for the EFS also fit the data acceptably well.

Besides testing the factor structure of the DFS and EFS, we evaluated the estimated internal consistency of the scores on the scales. Scores for both measures had adequate Cronbach's alpha coefficients for the full scales and subscales (DFS full scale = .80 (95% CI = .77-.83); Prosocial intention = .79 (95% CI = .75-.83); Inhibition of harmful intention = .78 (95% CI = .73-.82); EFS full scale = .76 (95% CI = .71-.80); Presence of positive emotion = .85 (95% CI = .82-.88); Reduction of negative emotion = .77 (95% CI = .73-.81)).

Discussion of Studies 1 and 2

Both the DFS and EFS showed evidence of a consistent two-factor structure in two studies on different samples. Furthermore, both scales and their subscales showed evidence of estimated internal consistency across the two studies. Now that we have established the factor structure of the DFS and EFS, and have adduced some evidence that these scales are internally consistent, the next three studies will establish evidence of construct and discriminant validity for the DFS and EFS.

Study 3: Construct Validity and Temporal Stability of the DFS and EFS

In the present study, we gave the final versions of the DFS and EFS to a third independent sample. Besides reporting the estimated internal consistency of the DFS and EFS, we tested the 3-week temporal stability of the scales. We also sought initial evidence for construct validity of the scores on the DFS and EFS by examining the correlations between the DFS, EFS, and constructs they have been hypothesized to be related to (Exline et al., 2003). The DFS and EFS are hypothesized to be (a) negatively correlated with measures of unforgiveness and rumination, (b) positively correlated with other measures of forgiveness and to affective empathy, (c) positively correlated with trait forgivingness (but less strongly than with transgression-specific measures of forgiveness, Berry et al., 2005), (d) weakly related to religious commitment (Tsang, McCullough, & Hoyt, 2005), and (e) unrelated to social desirability.

We anticipate only modest differences in the patterns of correlations of the variables with DFS and with EFS. This is because, in the present study, we use a cross-sectional design that encompasses a full range of transgressions—many of which are either completely unforgiven or completely forgiven (necessitating similar scores on both DFS and EFS and weakening differential correlations). Relatively few transgressions are likely to be decisionally but not emotionally forgiven. If differences exist, they are hypothesized to be as follows. In comparison to the DFS, the EFS is hypothesized to have a negative correlation with rumination because rumination is emotionally arousing and negative (Witvliet, Ludwig, & VanderLaan, 2001) and a positive correlation with empathy, which is also an emotional process that is likely related to emotional forgiveness, as early forgiveness research using psychophysiology has suggested (McCullough et al., 2008; Witvliet et al., 2001). In comparison to the EFS, the DFS—

which emphasizes intentions to behave differently—is hypothesized to have a negative correlation with revenge motivations, because a stronger decision to forgive is likely to disengage the desire for revenge.

Method

Participants

Participants were undergraduate students ($N = 179$) from a large urban university. Demographic data are summarized in Table 1.

Measures

DFS and EFS. The DFS and EFS were administered. For the current sample, the Cronbach's alpha coefficient for the DFS was .82 (95% CI = .78-.86) for the full scale, .82 (95% CI = .77-.86) for the prosocial intention subscale, and .86 (95% CI = .83-.89) for the inhibition of harmful intention subscale. For the current sample, the Cronbach's alpha coefficient for the EFS was .69 (95% CI = .62-.76) for the full scale, .81 (95% CI = .76-.85) for the presence of positive emotion subscale, and .76 (95% CI = .69-.81) for the reduction of negative emotion subscale.

Rye Forgiveness Scale (RFS; Rye et al., 2001). The RFS consists of 15 items that measure forgiveness toward a particular offender. Participants indicate their agreement with each item on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. For the current sample, the Cronbach's alpha coefficient was .88 (95% CI = .86-.91).

Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough et al, 1998). The TRIM consists of 19 items that measure motivations toward a particular offender. Participants indicate their agreement with each item on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. Higher scores indicate higher motivations. The

TRIM consists of three subscales: avoidance, revenge, and benevolence motivations. For the current sample, the Cronbach's alpha coefficients were .86 (95% CI = .82-.89) for the revenge subscale, .93 (95% CI = .92-.95) for the avoidance subscale, and .91 (95% CI = .88-.93) for the benevolence subscale.

Affective empathy (Coke, Batson, & McDavis, 1978; Toi & Batson, 1982). The affective empathy measure used by Batson and colleagues consists of eight affect adjectives. Participants indicate the degree to which they felt each affective response toward their offender on a 6-point scale from 0 = *not at all* to 5 = *extremely*. For the current sample, the Cronbach's alpha coefficient was .95 (95% CI = .94-.96).

Intrusiveness subscale of the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). The IES consists of seven items that measure rumination about intrusive thoughts, affects, and imagery related to a particular offense. Participants indicate their agreement with each item on a 5-point scale from 1 = *not at all* to 5 = *often*. For the current sample, the Cronbach's alpha coefficient was .88 (95% CI = .85-.90).

Trait Forgivingness Scale (TFS; Berry, Worthington, O'Connor, Parrott, & Wade, 2005). The TFS consists of 10 items that measure dispositional forgiveness, the tendency to forgive over time and across situations. Participants indicate their agreement with each item on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. For the current sample, the Cronbach's alpha coefficient was .81 (95% CI = .77-.85).

Religious Commitment Inventory-10 (RCI-10; Worthington et al., 2003). The RCI-10 consists of 10 items that assess one's dedication to a specific religion. Participants indicate their agreement with each item on a 5-point scale from 1 = *not at all*

true of me to 5 = *totally true of me*. For the current sample, the Cronbach's alpha coefficient was .95 (95% CI = .93-.96).

   Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960). The MCSDS consists of 33 items that measure the need for social approval. Participants read statements concerning personal attributes and traits, and indicated whether each statement is true or false for them personally. For the current sample, the Cronbach's alpha coefficient was .78 (95% CI = .73-.83).

Procedure

   Participants were recruited from undergraduate classes and participated as part of a course requirement or in exchange for a small amount of class credit. After informed consent, participants were instructed to think about someone who has hurt or offended them and to write a short summary of the transgression. Participants then completed questionnaires. All participants were contacted three weeks after completing the study. They completed the DFS and EFS again.

<div align="center">Results</div>

Three-Week Temporal Stability

   Pearson correlation coefficients were calculated by using scores on the full-scale DFS and EFS and each subscale for the first administration and the second administration. The 3-week temporal stability coefficients for the full-scale DFS, Prosocial Intention, and Inhibition of Harmful Intention were .73, .72, and .68, respectively. The 3-week temporal stability coefficients for the full-scale EFS, Presence of Positive Emotion, and Reduction of Negative Emotion were .73, .81, and .61, respectively.

Construct Validity

Intercorrelations of all scales hypothesized to correlate with the DFS and EFS are summarized in Table 2 (plus correlations with social desirability and religious commitment, to which little relationship is hypothesized). The DFS and EFS showed evidence of construct validity by correlating in the hypothesized direction with other measures of interpersonal unforgiving motivations (i.e., TRIM), state forgiveness (i.e., RFS), and dispositional forgiveness (i.e., TFS). A t-test for dependent correlations revealed that the DFS and EFS had stronger correlations with the measure of state forgiveness (i.e., RFS) than the measure of dispositional forgiveness (i.e., TFS; both one-tailed $ps < .001$). The DFS and EFS showed further evidence of construct validity by correlating moderately in the hypothesized direction with other measures that are associated with forgiveness (i.e., empathy, rumination). The DFS and EFS also show evidence of discriminant validity by showing no significant correlations with social desirability or religious commitment in this religiously diverse sample.

It was hypothesized that the EFS would show stronger correlations than the DFS with empathy and rumination, and that the DFS would show stronger correlations than the EFS with revenge motivations. These hypotheses were conducted using a *t*-test for dependent correlations. As predicted, in comparison to the DFS, the EFS had a stronger correlation with rumination (one-tailed $p = .04$), although the correlation between the EFS and empathy was not reliably stronger than the correlation between the DFS and empathy (one-tailed $p = .09$). As hypothesized, the correlation between the DFS and revenge motivation was stronger than between the EFS and revenge motivations (one-tailed $p < .01$).

Discussion of Study 3

Both the DFS and EFS showed evidence of three-week temporal stability. The DFS and EFS also showed evidence of construct validity as measures of forgiveness by being associated with other measures of forgiveness and forgiveness-related constructs, and discriminant validity by being unrelated to measures of (a) social desirability and (b) religious commitment.

The DFS and EFS are measures of forgiveness, albeit different types of forgiveness. Their patterns of correlations were generally similar to the patterns of correlations using other measures of forgiveness (i.e., the TRIM, the RFS, and the TFS). There was some evidence for differential validity of the DFS and EFS, but it was weak. This weak support for differential validity was hypothesized. Recall that DFS and EFS are expected to act in parallel for most transgressions, differing starkly only when people make a decision to forgive but have not yet experienced peace. Thus, the patterns of correlations with validity measures should be expected to show only subtle differences. In Study 3, most of our hypotheses about different patterns of correlations only showed a trend toward significance. This is consistent with our expectations when using a full range of transgressions rather than examining those that were not fully forgiven.

Study 4: Comparison of Grudges, Decisional Forgiveness without Emotional

Forgiveness, and Both Decisional and Emotional Forgiveness

The purpose of Study 4 was to provide further evidence of construct validity for the DFS and EFS using a controlled experiment and a behavioral measure of forgiveness. Furthermore, to provide differential validity of the DFS and EFS, we solicit transgressions that people identify as being characterized by high decisional but low

emotional forgiveness. We used an experimental manipulation in which participants were assigned to one of three conditions. Participants in each condition recalled either a transgression from their past in which they currently (a) held an active grudge (i.e., Grudge), (b) had made a decision to forgive but did not feel full emotional forgiveness (i.e., DF-only), or (c) had made a decision to forgive and also felt full emotional forgiveness (DF-EF). As a methodological clarification, there are insufficient numbers of incidents for which people have actually experienced emotional forgiveness without making a conscious decision to forgive, which would otherwise constitute an ideal fourth condition. It is relatively easy to find people who experience little negative emotion toward a transgressor without making a decision to forgive (Wade & Worthington, 2003), but this is often because they have obtained successful revenge, seen justice done, forgotten the wrongdoing, excused it, or justified the wrongdoing. A reduction of negative affect can occur through these other means, and without emotional forgiveness. As a result, we could not test a sample of people who could identify an incident that they emotionally, but not decisionally forgave, so that it could be compared meaningfully with the other three experimental conditions.

We examined the relationship between condition and both scores on the DFS and EFS and a coded behavioral measure of forgiveness—the amount of positive personal qualities the participant could generate regarding the offender in 10 minutes. We theorized that the experience of expressing in writing positive thoughts and feelings about one's transgressor is rooted in emotional forgiveness. Ego depletion theorizing by Baumeister and colleagues suggests that doing a self-control task requires energy (Baumeister et al., 1998). Regulating negative emotions well enough to write positive

evaluative statements about an offender is expected to be very difficult for an active grudge, less difficult for a decisionally forgiven transgression that retains negative emotional loading, and least difficult for an offense that is decisionally and emotionally forgiven. Therefore, we hypothesized that the EFS—versus the DFS—would correlate more strongly with the number of positive qualities participants could identify and write about their offender.

Method

Participants

Participants were undergraduate students ($N = 100$) from a large urban university participated. Demographic data are summarized in Table 1.

Description of the Three Conditions

Participants were randomly assigned to one of three conditions. The DF-EF participants were directed to think and write about an offense in which they believe they have made a conscious commitment to forgive the person and to give up any attempt to get even or avoid the person. They were instructed to choose an offense and offender for whom they currently do not have a strong negative emotional reaction (although they may have in the past). In the DF-only condition, participants were directed to think and write about an offense in which they believe they have made a conscious commitment to forgive the person and give up any attempt to get even or avoid the person, yet they still have a negative emotional reaction to the person. In the Grudge condition, participants were directed to think and write about an offense that they have not forgiven and for which they still hold a strong grudge against the offender. They were instructed to select an offense for which they have frequent thoughts of getting even with the offender, avoid

the person, are actively angry and resentful toward the offender, and have granted virtually no forgiveness to the offender.

Measures

The DFS and the EFS were administered. The coefficient alphas for the DFS and subscales were .86 (95% CI = .81-.90) for the full scale, .83 (95% CI = .77-.88) for Prosocial Intentions, and .82 (95% CI = .75-.87) for Inhibition of Harmful Intentions. The coefficient alphas for the EFS and subscales were .83 (95% CI = .77-.87) for the full scale, .80 (95% CI = .73-.86) for Presence of Positive Emotions, and .79 (95% CI = .71-.85) for Reduction of Negative Emotions.

To measure the positive qualities of the offender, participants wrote as many positive sentences about the offender as possible within ten minutes. Each participant's free responses were rated for the total number of positive qualities written. Each free response was coded by two trained coders (with an independent third coder used to resolve differences). Estimated inter-rater reliability was strong (kappa = .74).

Procedure

Participants completed an informed consent and were randomly assigned to one of three conditions. In each condition, they recalled and wrote a short summary about a transgression they had experienced. They then completed the DFS and the EFS. Participants then wrote as many positive qualities about the person who hurt them as possible within ten minutes.

Results

Construct Validity Analyses

It was hypothesized that scores on both the DFS and the EFS would predict the

number of positive qualities participants wrote about the offender but that the EFS would

be a stronger predictor. Scores on the DFS and the EFS (entered together into a multiple

regression) did predict the number of positive qualities, $F(2, 92) = 11.70$, $p < .01$, $R^2 =$

.20. In support of our hypotheses, most of the variance was accounted for by the EFS,

beta $= .33$, $p < .05$. The DFS score was not a significant predictor of number of positive

qualities written, beta $= .15$, $p = .28$. This supported reasoning based on Baumeister et

al.'s ego depletion hypothesis and provided some behavioral support for the differential

validity of scores on the DFS and EFS.

Analyses by Condition

We hypothesized that scores on the DFS and EFS would vary based on condition.

This was tested using two one-way analyses of variance (ANOVAs) with the DFS and

EFS scale scores as dependent variables and condition as the independent variable. There

was a significant difference in DFS scores based on condition, $F(2, 94) = 12.33$, $p < .01$.

Post-hoc tests using Tukey's HSD revealed that the mean DFS score in the Grudge

condition (M=25.17; SD=7.09) was significantly lower than the mean DFS score in the

DF-only condition (M=30.28; SD=6.11, $p < .01$) and in the DF-EF condition (M=32.81;

SD=5.65, $p < .01$). Consistent with our theorizing, DFS scores did not differ for those in

the DF-only and the DF-EF conditions ($p = .26$)—both of which prescribed that a

decision to forgive had been made.

EFS scores differed based on condition, $F(2, 95) = 5.94$, $p < .01$. Post-hoc tests

using Tukey's HSD revealed that the mean EFS score in the Grudge condition (M=19.61;

SD=6.08) was significantly lower than the mean EFS score in the DF-EF condition

(M=25.06; SD=7.89, $p < .01$), which is consistent with our hypothesis. However, mean EFS score in the DF-only condition (M=22.85; SD=5.02) did not differ significantly from the Grudge ($p = .11$) or the DF-EF ($p = .35$) conditions.

Study 5: Implicit Measures of Decisional and Emotional Forgiveness

The purpose of Study 5 was to provide additional construct validity for the DFS and EFS using a different method of assessing positive responding toward the offender—the Implicit Associations Test (IAT). The IAT, introduced by Greenwald, McGhee, and Schwartz (1998), is a widely used reaction-time measure in social psychological assessments of implicit prejudices and stereotypes about race, gender, and emotionally loaded topics (e.g., Greenwald, Nosek, & Banaji, 2003). It has also recently been used in clinically-related studies to measure implicit phobias (e.g., Teachman & Woody, 2003) and levels of self-esteem (e.g., Greenwald & Farnham, 2000). Recently, the IAT has been employed to measure humility (versus arrogance) and circumvent problems inherent to the self-reporting of humility (Rowatt et al., 2006).

In the present experiment, we employed the IAT to detect the degree of decisional and emotional forgiveness by assessing the impact of implicit cognition. Participants identified two offenders whom they have decisionally forgiven but not fully emotionally forgiven (DF-only) and two offenders whom they have both decisionally and emotionally forgiven (DF-EF).

As with previous IAT experiments, we paired DF-EF and DF-only target names on the same response key with either positive or negative words. The reaction time to classify both names and words was recorded. In the *congruent* condition, positive words were paired with DF-EF names, and negative words were paired with DF-only names. In

the *incongruent* condition, positive words were paired with DF-only names, and negative words were paired with DF-EF names. In theory, trials congruent in affective quality will have faster reaction times than trials incongruent in affective quality because incongruence slows responding due to cognitive interference.

We hypothesized that if participants view the name of someone they have decisionally and emotionally forgiven (DF-EF), they should have few negative associations. Thus, we hypothesized less interference, and faster reaction times for *congruent* trials: when DF-EF names were paired with positive words and DF-only names were paired with negative words. Conversely, we hypothesized more interference, and slower reaction times for *incongruent* trials: when DF-EF names were paired with negative words, and DF-only names were paired with positive words. To provide further evidence for the construct validity of the DFS and EFS, we hypothesized that the results from the implicit measure (the Forgiveness IAT) should be correlated with results from the self-report measures (the DFS and the EFS).

Method

Participants

Participants were 62 undergraduate students (12 M, 50 F) from a small liberal arts, explicitly Christian university. Participants received extra credit in various psychology courses for their participation.

Materials and Procedure

Participants identified the names of four people who had hurt them previously, two of whom they felt they had made a decision to forgive, but had not fully forgiven at an emotional level (DF-only), and two of whom they had been able to forgive at an

emotional level (DF-EF). Participants completed the DFS and EFS for each relationship specified. They then completed the Forgiveness IAT.

The IAT was programmed using E-Prime version 1.1 to present stimuli for responses. Participants were instructed to complete the Forgiveness IAT by pressing one of two buttons on the keyboard as quickly as possible to categorize the names of the four people they had identified as having been decisionally forgiven-only (DF-only) or both decisionally and emotionally forgiven (DF-EF). They also categorized a list of adjectives as being either positive or negative. Stimuli remained on the screen until a response was made, and incorrect responses were followed by a red "x" in the middle of the screen.

Following the model of Greenwald et al. (2003), participants completed a seven-block IAT task consisting of five practice blocks and two test blocks (see sample in Table 3). Pleasant or unpleasant associations were measured by comparing these factors in the first combined task and reversed combined task results. The order of congruent and incongruent blocks, and the assignment of words and names to left or right keys was counterbalanced across participants.

Results

Implicit Association Measures

Following typical methods of IAT analysis, reaction times for each of the different stimuli in the test blocks were categorized as either congruent (DF-EF names with positive adjectives and DF-only names with negative adjectives) or incongruent (DF-EF names with negative adjectives and DF-only names with positive adjectives). Trials with incorrect responses were not included in the analyses, and the mean accuracy levels were 93% and 95% for the incongruent and congruent conditions, respectively.

A paired-samples *t*-test was used to compare reaction times for the congruent and incongruent conditions. As hypothesized, the reaction times for the congruent conditions (*M* = 687 ms, *SD* = 104 ms) were significantly faster than for the incongruent conditions (*M* = 822 ms, *SD* = 186 ms, *t*(61) = 5.47, *p* < .001). This provides further evidence that decisional and emotional forgiveness are two distinct forms of forgiveness.

Construct Validity of the DFS and EFS

The total DFS and EFS scores were calculated for each of the four targets identified by the participant. The DFS and EFS scores were then combined for the two DF-only targets and two DF-EF targets to get an overall DFS and EFS score for each of the two target types. It is important to emphasize that both types of targets had been decisionally forgiven; however, they differed on emotional forgiveness. To test whether this pattern of responding would be seen on the DFS and EFS, we computed a difference score for each scale by subtracting the total score for the DF-only targets from the total score for the DF-EF targets. Results from a paired-sample *t*-test indicated that the difference in DFS scores between DF-only targets and DF-EF targets (*M* = 11.50, *SD* = 10.03) was significantly less than the difference in EFS scores between DF-only targets and DF-EF targets (*M* = 16.60, *SD* = 13.76, *t*(61) = 3.82, *p* < .001). This finding lends additional experimental support for the construct validity of the DFS and EFS.

Discussion of Studies 4 and 5

Both the DFS and EFS showed further evidence of construct validity by being related to non self-report measures of forgiveness—a behavioral measure of forgiveness in Study 4 and an implicit measure of forgiveness in Study 5. Studies 4 and 5 also provided evidence for the differential validity of the DFS and EFS, by showing that

scores on the DFS and EFS are related to forgiveness-related constructs in distinct ways that are consistent with our theorizing.

General Discussion

In this set of five studies, we have described, assessed, and evaluated two related but distinct types of forgiveness: decisional forgiveness and emotional forgiveness. Worthington and colleagues (Exline et al., 2003) have theorized about these two types of forgiveness, and this distinction has been helpful in interventions to promote forgiveness. However, the empirical study of decisional and emotional forgiveness has been hampered because no psychometrically sound instrument existed to measure these constructs. The present study created and refined two scales to measure decisional and emotional forgiveness. The DFS and EFS show evidence of internal consistency and temporal stability. The DFS and EFS also show evidence of construct and discriminant validity. Evidence for validity was adduced using self-report measures as well as behavioral measures of forgiveness.

This study relates to previous research that has attempted to use valid means of assessing forgiveness. However, forgiveness is multi-faceted, and often to describe it completely it is necessary to assess each component. Existing measures assess affective, behavioral, and cognitive aspects (Enright, 1994), motivational aspects (McCullough et al., 1998), and the absence of negative experiences and presence of positive experiences (Rye et al., 2001). Still,—

prior to the current research—no psychometrically sound instruments were available to assess forgiveness as decision (DiBlasio, 1998) and as a process of emotional replacement (see Exline et al., 2003). The present research developed two brief

instruments to fill that gap. Making such distinctions and being able to assess them validly will aid research on forgiveness and its implications for clinicians and lay persons alike.

Limitations

Although evidence suggests that the DFS and EFS are psychometrically sound measures of decisional and emotional forgiveness, there are some methodological limitations of the present series of studies that lead us to be circumspect. First, all five studies used an undergraduate student sample, so generalizations to other populations should be made with caution. Second, with the exception of a brief test of temporal stability, all other analyses used a cross-sectional design. No repeated measures designs were used to assess the process of forgiveness. Third, no physiological measures have been incorporated in research with the DFS and EFS.

Areas for Future Research

Several exciting areas of future research can be developed. First, we believe that the DFS and EFS will advance research on more nuanced understandings of forgiveness, especially as forgiveness unfolds over time, (see McCullough et al., 2003). McCullough and colleagues (2003; McCullough & Root, 2005) have argued cogently that the process of forgiveness is best measured repeatedly over time. The DFS and EFS allows researchers to examine the extent to which changes in behavioral intentions (using the DFS) and emotions (using the EFS) change longitudinally. This distinction may be especially relevant in clinical or intervention studies to promote forgiveness, as many interventions promote a decision or commitment to forgive first, followed by a more emotional component (for a review, see Enright & Fitzgibbons, 2000). Second, future

research must consider the contextual factors that surround the forgiveness process. We encourage researchers to situate their findings within the interpersonal contexts of the transgressions, the historical contexts of the transgressions, and the religious and socio-cultural contexts in which the transgressions and forgiveness responses occur. Third, research using the DFS and EFS should be conducted using populations other than college students. Research using the DFS and EFS in clinical populations might be especially interesting. Fourth, further evidence for the construct and discriminant validity of the DFS and EFS could be adduced using other types of experimental designs and measures (e.g., physiological stress reactions).

Conclusion

With the limitations in mind, the DFS and EFS can aid psychologists in developing a more fine-tuned understanding of interpersonal forgiveness. Currently, the DFS and EFS can be used most confidently within the college population. As different populations use the DFS and EFS and employ longitudinal designs, these scales may deepen the field's understanding of forgiveness across a variety of persons and over time.

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Table 1

Descriptive Data for Demographics of Participants in All DFS and EFS Studies

Demographic	Study 1	Study 2	Study 3	Study 4	Study 5
N	400	298	179	100	62
Age (years)					
M (*SD*)	19.7 (3.0)	19.2 (2.9)	23.6 (6.0)	19.6 (3.3)	20.4 (2.5)
Range	18-43	17-46	18-55	18-43	18-51
Ethnicity (percent)					
Black/African-American	24.5	22.8	27.4	22.0	2.9
Asian/Asian-American	16.3	13.9	12.3	13.0	9.5
White/Caucasian	50.5	54.1	52.0	53.0	61.7
Latino	3.5	4.1	5.6	1.0	15.7
Other (or did not report)	5.3	5.1	2.8	11.0	10.2
Gender (percent)					
Female	63.8	71.4	85.5	72.0	80.1
Male	36.3	28.6	14.5	28.0	19.9
Religious orientation (percent)					
Christian	67.0	68.5	73.7	69.0	100.0
Muslim	4.0	2.4	2.8	3.0	0
Buddhist	2.8	1.0	.6	3.0	0
Hindu	2.8	1.4	1.7	1.0	0
Jewish	2.3	0.7	1.1	0	0
None	17.3	15.0	15.6	18.0	0
Other (or did not report)	4.0	10.8	4.5	6.0	0
Marital Status (percent)					
Single	97.0	95.9	84.9	98.0	98.5
Married	2.8	3.4	13.4	2.0	1.5
Divorced	.3	.7	1.7	0	0

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

Table 2

Intercorrelations of all scales hypothesized to correlate with DFS, EFS (Study 3)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. DFS	1	.53*	-.63*	-.61*	.68*	.65*	.44*	.46*	-.17	.11	.15
2. EFS	-	1	-.73*	-.44*	.75*	.67*	.36*	.54*	-.29*	.13	.21
3. TRIM-A	-	-	1	.37*	-.81*	-.58*	-.31*	-.62*	.22	-.07	-.13
4. TRIM-R	-	-	-	1	-.47*	-.56*	-.34*	-.23	.25*	-.02	-.17
5. TRIM-B	-	-	-	-	1	.72*	.42*	.65*	-.24	.15	.23
6. RFS	-	-	-	-	-	1	.54*	.42*	-.43*	.17	.28*
7. TFS	-	-	-	-	-	-	1	.24	-.20	.32*	.45*
8. Empathy	-	-	-	-	-	-	-	1	.01	.21	.15
9. Rumination	-	-	-	-	-	-	-	-	1	.09	-.21
10. RCI-10	-	-	-	-	-	-	-	-	-	1	.30*
11. MCSDS	-	-	-	-	-	-	-	-	-	-	1

Note. $N = 179$. DFS = Decisional Forgiveness Scale; EFS = Emotional Forgiveness Scale; TRIM-A = Transgression-Related Interpersonal Motivations Inventory-Avoidance; TRIM-R = Transgression-Related Interpersonal Motivations Inventory-Revenge; TRIM-B = Transgression-Related Interpersonal Motivations Inventory-Benevolence; RFS = Rye Forgiveness Scale; TFS = Trait Forgiveness Scale; Empathy = Batson's Empathy Adjectives; Rumination = Intrusiveness subscale of the Impact of Events Scale; RCI-10 = Religious Commitment Inventory-10; MCSDS = Marlow-Crowne Social Desirability Scale.
* Bonferroni-corrected $p < .001$

Table 3

Sample Order of Trial Blocks in IAT Experiment (Study 5)

Block	# of Trials	Function	Items Assigned to Left-Key Response	Items Assigned to Right-Key Response
1	20	Practice	Emotionally-Forgiven Names	Decisionally-Forgiven Names
2	20	Practice	Pleasant Words	Unpleasant Words
3	40	Practice	Pleasant Words + EF Names	Unpleasant Words + DF Names
4	40	Test (C)	Pleasant Words + EF Names	Unpleasant Words + DF Names
5	40	Practice	Decisionally-Forgiven Names	Emotionally-Forgiven Names
6	40	Practice	Pleasant Words + DF Names	Unpleasant Words + EF Names
7	40	Test (I)	Pleasant Words + DF Names	Unpleasant Words + EF Names

Note. Test(C) and Test(I) refer to congruent and incongruent testing blocks, respectively. The order of congruent and incongruent pairs, and the assignment of words and names to left or right keys was counterbalanced across participants.

Appendix
The Decisional Forgiveness Scale (DFS) and the Emotional Forgiveness Scale (EFS)
DFS
Think of your current intentions toward the person who hurt you. Indicate the degree to which you agree or disagree with the following statements.

	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1. I intend to try to hurt him or her in the same way he or she hurt me.	SD	D	N	A	SA
2. I will not try to help him or her if he or she needs something.	SD	D	N	A	SA
3. If I see him or her, I will act friendly.	SD	D	N	A	SA
4. I will try to get back at him or her.	SD	D	N	A	SA
5. I will try to act toward him or her in the same way I did before he or she hurt me.	SD	D	N	A	SA
6. If there is an opportunity to get back at him or her, I will take it.	SD	D	N	A	SA
7. I will not talk with him or her.	SD	D	N	A	SA
8. I will not seek revenge upon him or her.	SD	D	N	A	SA

Score: SD = 1 to SA = 5; Reverse code: 1, 2, 4, 6, 7
Prosocial Intention subscale items: 2, 3, 5, 7
Inhibition of Harmful Intention subscale items: 1, 4, 6, 8

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

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

Score: SD = 1 to SA = 5; Reverse code: 3, 5, 7
Presence of Positive Emotion subscale items: 1, 4, 6, 8
Reduction of Negative Emotion subscale items: 2, 3, 5, 7