

Interpersonal Forgiving in Close Relationships: II. Theoretical Elaboration and Measurement

Michael E. McCullough
National Institute for Healthcare Research

K. Chris Rachal
Ball State University

Steven J. Sandage
Bethel Theological Seminary

Everett L. Worthington, Jr.
Virginia Commonwealth University

Susan Wade Brown
Rancho Palos Verdes, California

Terry L. Hight
Virginia Commonwealth University

Interpersonal forgiving was conceptualized in the context of a 2-factor motivational system that governs people's responses to interpersonal offenses. Four studies were conducted to examine the extent to which forgiving could be predicted with relationship-level variables such as satisfaction, commitment, and closeness; offense-level variables such as apology and impact of the offense; and social-cognitive variables such as offender-focused empathy and rumination about the offense. Also described is the development of the transgression-related interpersonal motivations inventory—a self-report measure designed to assess the 2-component motivational system (Avoidance and Revenge) posited to underlie forgiving. The measure demonstrated a variety of desirable psychometric properties, commending its use for future research. As predicted, empathy, apology, rumination, and several indexes of relationship closeness were associated with self-reported forgiving.

The concept of forgiving, although not a traditional focus of personality and social psychology, has been of passing theoretical and empirical interest to the discipline for 40 years. In a chapter on benefit and harm in *The Psychology of Interpersonal Relations*, Heider (1958) outlined a variety of attributional principles that underlie the quest for revenge after one has incurred an interpersonal transgression. In this context, Heider described forgiving as the forgoing of vengeful behavior, which he posited to be an implicit expression of the victim's self-worth. However,

the concept of forgiving received no explicit theoretical attention.

In the spirit of Heider's (1958) theoretical work, a variety of researchers have explored forgiving as an attributional phenomenon. Most notably, Boon and Sulsky (1997); Darby and Schlenker (1982); Girard and Mullet (1997); and Weiner, Graham, Peter, and Zmuidinas (1991) used attributional constructs to explore the social-cognitive determinants of forgiving. These studies have found that people's willingness to forgive an offender can be explained by variables of a social-cognitive nature, such as the offender's perceived responsibility, intentionality, and motives (Darby & Schlenker, 1982) and the severity of the offense (Boon & Sulsky, 1997).

Other researchers (e.g., Gahagan & Tedeschi, 1968; Horai, Lindskold, Gahagan, & Tedeschi, 1969) have conceptualized forgiving as a cooperative response following a competitive response in the prisoner's dilemma game. Several studies demonstrate that relatively forgiving strategies for competing in such mixed-motive games fare well in many environments (Axelrod, 1980a, 1980b; Wu & Axelrod, 1995), especially in environments characterized by uncertainty about other people's motivations (Bendor, Kramer, & Stout, 1991; Wu & Axelrod, 1995). Such strategies also promote greater cooperation between interaction partners (Komorita, Hilty, & Parks, 1991).

In spite of these two interesting bodies of research, little theoretical work has explicitly examined the social-psychological nature of forgiveness until quite recently. In the present article, we elaborate on the social-psychological conceptualization of forgiving that we articulated in McCullough, Worthington, and Rachal

Michael E. McCullough, Department of Research, National Institute for Healthcare Research, Rockville, Maryland; K. Chris Rachal, Department of Counseling Psychology and Guidance Services, Ball State University; Steven J. Sandage, Department of Marriage and Family Therapy, Bethel Theological Seminary; Everett L. Worthington, Jr., and Terry L. Hight, Department of Psychology, Virginia Commonwealth University; Susan Wade Brown, Rancho Palos Verdes, California.

This research was made possible in part through the generosity of the John Templeton Foundation. The items on the transgression-related interpersonal motivations inventory were derived from Susan Wade Brown's unpublished master's thesis and doctoral dissertation. We thank Jennie G. Noll and Shelley D. Kilpatrick for statistical consultation and helpful comments on previous versions of this article. We also thank C. Garth Bellah and Judy L. Johnson for their assistance in collecting some of the data that appear in Study 2.

Correspondence concerning this article should be addressed to Michael E. McCullough, Department of Research, National Institute for Healthcare Research, 6110 Executive Boulevard, Suite 908, Rockville, Maryland 20852. Electronic mail may be sent to mike@nihhr.org.

(1997). In particular, our goals are to (a) elaborate a theoretical model that locates forgiving in the context of a basic motivational system that governs people's responses to interpersonal offenses, (b) report on our empirical examination of several of the social and psychological variables that were expected to influence the capacity to forgive a particular transgression, and (c) describe the development and evaluation of a short battery of self-report measures for the assessment of forgiving.

Two Emotional Responses to Negative Relationship Events

Gottman (1993) examined couples' self-reports of their emotional experiences during their most positive and most negative moments during their interactions in a laboratory setting. He reported that couples' ratings on an affect checklist factored into three kinds of emotional responses. The first affective response is a general positive feeling, which is accompanied by friendly, loving, and relationship-constructive behavior. Gottman identified the second affective response to relational events as Hurt-Perceived Attack. This affective response is characterized by internal whining, innocent victimhood, fear, and worry. Gottman called the third affective response to relational events Righteous Indignation, which is characterized by anger, contempt, and thoughts of retaliation toward the partner.

A Two-Component Motivational System Underlies Forgiving

We assume that the two negative affective states that characterize interpersonal interactions around relationship events (Gottman, 1993) correspond to two elements of a motivational system governing people's responses to interpersonal offenses. Specifically, we posit that (a) feelings of hurt-perceived attack correspond to a motivation to avoid personal and psychological contact with the offender (i.e., Avoidance) and (b) feelings of righteous indignation correspond to a motivation to seek revenge or see harm come to the offender (i.e., Revenge). These distinct motivations work together to create the psychological state that people refer to as *forgiveness*. When an offended relationship partner reports that he or she has not forgiven a close relationship partner for a hurtful action, the offended partner's perception of the offense is stimulating relationship-destructive levels of the two motivational states; that is, (a) high motivation to avoid contact with the offending partner and (b) high motivation to seek revenge or see harm come to the offending partner. Conversely, when an offended relationship partner indicates that he or she has forgiven, his or her perceptions of the offense and offender no longer create motivations to avoid the offender and seek revenge. Rather, the victim experiences relationship-constructive transformations in these motivations. Because of the human inclination toward reciprocity in relationships, we believe that the tendency to avoid further harm and seek opportunities to harm one's offending partner in kind are basic.

Forgiving, Like Accommodation and Willingness to Sacrifice, Is Relationship-Constructive

Forgiving—or the reduction in avoidance motivation and revenge motivation following an interpersonal offense—is similar

to other relationship-constructive transformations that occur in close relationships, such as accommodation (Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991) and willingness to sacrifice (Van Lange et al., 1997). From the perspective of close relationships, all three concepts can be understood using interdependence theory (e.g., Kelley & Thibault, 1978). *Accommodation* in close relationships is the inhibition of destructive responses and the enacting of constructive responses following the destructive interpersonal behavior of a relationship partner (Rusbult et al., 1991). *Willingness to sacrifice* in close relationships is "the propensity to forego immediate self-interest to promote the well-being of a partner or relationship" (Van Lange et al., 1997, p. 1374). What forgiving, accommodation, and willingness to sacrifice all have in common is that in each phenomenon, a relationship partner experiences a transformation that causes him or her (a) to refrain from taking actions that might be perceived as protective of his or her self-interests but ultimately destructive for the relationship and, instead, (b) to engage in actions that contribute to relational health (McCullough; Worthington, & Rachal, 1997; Rusbult et al., 1991; Van Lange et al., 1997).

Determinants of Interpersonal Forgiving

The determinants of interpersonal forgiving can be theoretically located in four conceptual categories. We posit that the most proximal determinants of forgiving are social-cognitive (or affective) variables related to the way the offended partner thinks and feels about the offender and the offense. A moderately proximal set of variables includes features of the offense itself. A moderately distal set of determinants of forgiving includes the qualities of the interpersonal relationship in which the offense takes place. The most causally distal determinants of forgiving are personality traits or cognitive processes. We elaborate on these four sets of determinants below.

Social-Cognitive Determinants of Forgiving

A variety of social-cognitive variables are associated with forgiving specific relationship partners. Affective empathy toward the offender appears to be a crucial social-cognitive determinant of forgiving, explaining considerable variability in people's self-reported forgiving of a transgressor. Forgiving also appears to be facilitated by several attributional variables, including judgments of responsibility and blame, perceived intentionality, severity (Girard & Mullet, 1997; Weiner, 1995), and avoidability of the offense (Boon & Sulsky, 1997). The work of Weiner suggests that attributional activity would be causally prior to both empathy and forgiving (see also McCullough, Worthington, & Rachal, 1997).

Another cognitive variable that is a likely determinant of forgiving is rumination about the offense. Given the apparent role of rumination in perpetuating psychological distress following interpersonal stressors (Greenberg, 1995; Holman & Silver, 1996) and in promoting aggression following insults and self-esteem threats (Caprara, 1986; Collins & Bell, 1997), it would seem that rumination over intrusive thoughts, images, and affects related to the interpersonal offense would maintain peo-

ple's distress regarding the offense and, quite possibly, maintain their motivations to avoid contact with and seek revenge against their offenders.

Offense-Related Determinants of Forgiving

We posit that a variety of variables related to the nature of the transgression would be more distal determinants of forgiving. Obviously, the perceived severity of the offense—and its immediate consequences for the relationship—should influence forgiving (Girard & Mullet, 1997; Ohbuchi, Kameda, & Agarie, 1989), with more severe offenses being more difficult to forgive. In addition, the extent to which an offender apologizes and seeks forgiveness for the offense is another offense-related determinant of forgiving. The apology–forgiving link appears to be robust (e.g., Darby & Schlenker, 1982; McCullough, Worthington, & Rachal, 1997; Weiner et al., 1991) and mediated through largely social–cognitive pathways such as empathy (McCullough, Worthington, & Rachal, 1997).

Relational Determinants of Forgiving

Even more distal than the social–cognitive and offense-level determinants of forgiving are qualities of the interpersonal relationship in which forgiving is occasioned. It is in considering these variables that our theorizing is most heavily shaped by interdependence theory (Kelley & Thibault, 1978). Because forgiving is understood as a relationship-constructive set of motivational changes following an interpersonal offense, partners' level of intimacy or closeness should be positively related to forgiving. Several studies (Nelson, 1993; Rackley, 1993; Roloff & Janiszewski, 1989; Woodman, 1991) indicate that partners are more willing to forgive one another for interpersonal offenses in relationships that are characterized by high satisfaction, closeness, and commitment (but see also Roloff & Janiszewski, 1989, for evidence that people are actually less likely to forgive in intimate relationships if the offense is the refusal of a relatively low-cost favor).

We believe that relational quality is linked with forgiving in seven ways. Four of these links are derived from Rusbult et al.'s (1991) and Van Lange et al.'s (1997) interdependence analysis of accommodation and willingness to sacrifice. First, partners in close relationships are more willing to forgive because they are highly motivated to preserve relationships in which they have considerable resources invested and on which they rely for a variety of resources. Second, partners in high-quality relationships have a long-term orientation that might motivate them to overlook hurts in order to maximize the likelihood of preserving the relationship. Third, in high-quality relationships, interests of oneself and one's partner may become merged. Fourth, relational quality may bring about a collectivistic orientation that promotes a willingness to act in ways that are beneficial for the relationship partner, even if they involve some cost to the self.

We would add three additional links between relational quality and forgiving. First, because offended relationship partners in high-quality relationships might have more shared history with their partners and have access to the inner thoughts, feel-

ings, and motivations of their partners (as well as a working knowledge of their partners' shortcomings and limitations), they might find more resources for experiencing empathy for their relationship partners (Batson & Shaw, 1991; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Second, in high-quality relationships, a victim is more likely to be able to reinterpret some "transgressions" as having been for his or her own good (Heider, 1958). For instance, a high-quality relationship partner can offer painful but true criticisms of an individual in such a way that it is interpreted as being "for one's own good," whereas similar criticisms by a partner in a lower quality relationship might be interpreted as having been cruel and inappropriate. Third, in high-quality relationships, offenders might be more likely to apologize or communicate remorse (verbally or nonverbally) and attempt to remediate the effects of their offense than would offenders in noncommitted relationships (Hodgins, Liebeskind, & Schwartz, 1996). Presumably, offenders in committed relationships have much more to lose by the dissolution of their relationship, so we expect that they would engage in efforts to confess and apologize for their wrongdoings. They might also be motivated by greater guilt, prompting confession and apology (Baumeister, Stillwell, & Heatherton, 1994; Tangney, Miller, Flicker, & Barlow, 1996), which are likely to have a positive effect on the offended partner's abilities to empathize with, and thus forgive, the offending partner.

Personality-Level Determinants of Forgiving

Operating most distally in the causal chain, we hypothesize, are a variety of personality processes. For instance, preliminary research suggests that the disposition to forgive others loads on the Agreeableness factor of the Big Five (Mauger, Saxon, Hamill, & Pannell, 1996). Other such variables might include the sophistication of one's reasoning about forgiveness (e.g., Enright, Santos, & Al-Mabuk, 1989), dissipation–rumination (Caprara, 1986; Caprara, Barbaranelli, & Comrey, 1992), attitudes toward revenge (Emmons, 1992; Stuckless & Goranson, 1992), and general styles of responding to anger (e.g., Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). These personality processes might influence forgiving by facilitating certain relational styles (Asendorpf & Wilpers, 1998) or by disposing people to experience some cognitions (e.g., attributions) or affects (e.g., empathy) regarding an interpersonal offense or offender (while restraining them from experiencing others). Finally, variables such as religiousness might reinforce a view of forgiving as a normative means for resolving interpersonal transgressions (Heider, 1958; McCullough & Worthington, in press).

Empathy as Governor of Forgiving

Although we have posited (and reviewed evidence that suggests) that social–cognitive, offense-level, relationship-level, and personality-level variables might facilitate forgiving, our view of forgiving as a primarily empathy-driven motivational phenomenon (McCullough, Worthington, & Rachal, 1997) leads us to hypothesize that empathy is one of the most important mediators of forgiving. Thus, although some social–cognitive,

offense-level, relationship-level, and personality-level variables might be associated with forgiving, we hypothesize that the associations of such variables with forgiving tend to be relatively small after controlling the indirect effects that they have on forgiving by means of their effects on empathy for the offender.

Potential Relational Consequences of Interpersonal Forgiving

Forgiving, accommodation, and willingness to sacrifice all share one other important quality. Just as accommodation and willingness to sacrifice are expected to be predictive of higher levels of relationship adjustment (Rusbult et al., 1991; Van Lange et al., 1997), forgiving a relational offense is hypothesized to contribute to restored relational closeness following the offender's relationship-destructive behavior. Thus, we expect the relationship-constructive motivations toward the offender that are associated with forgiving (low avoidance and low revenge) to be related to higher reported closeness to the offending relationship partner following an offense. Also, consistent with previous studies (McCullough, Worthington, & Rachal, 1997), we expect forgiving to be related to more positive and less negative behavior toward the offending partner. In addition, forgiving is expected to help restore cooperation between relationship partners after an offense (Komorita et al., 1991).

Overview of the Four Present Studies

In the remainder of the article, we report the results of four studies with several practical and theoretical objectives. First, we developed a short set of self-report measures of forgiving that mapped onto the conceptual framework of forgiving set up in the present article and in McCullough, Worthington, and Rachal (1997). Second, we examined the construct validity and reliability of these measures. Third, we inquired into the relationship among relational closeness, apology, empathy, rumination about the offense, and forgiveness.

Study 1

In Study 1, we developed short self-report measures for assessing avoidance motivation and revenge motivation—the key constructs that we hypothesize to be foundational to forgiving.

Method

Participants and Index Offenders

Participants ($N = 239$) were 131 female and 108 male university undergraduates (mean age = 19; 83% Caucasian, 14% African American, and 3% other) from a moderately sized southern university. Participants received a small amount of extra course credit for their participation. Those who participated were instructed to think of a specific person who had hurt them significantly at some time in their life and to complete the items described below.

Participants reported that they had incurred a wide variety of interpersonal injuries. Some examples include the following: "My boyfriend and I broke up before we went to college. He said we would not date other people for a while, but now he is dating one of my best friends." "My father left my mother, sister, and me." "One night my boyfriend

was drinking a lot, and he said things that hurt my feelings. When I began crying, he hit me so I would shut up, and then he broke up with me."

Initial Item Pool

Our initial item pool consisted of 18 items from the Avoidance and Revenge subscales of Wade's (1989) Forgiveness Scale. Wade (1987) sought to develop an operational definition of forgiving by interviewing 20 clinical psychologists, academic psychologists, and clergypersons about what they believed forgiving to be. From her analysis of these interviews, Wade (1987) derived 23 conceptual dimensions of forgiving. On the basis of these 23 dimensions, Wade generated 600 questionnaire items.

Wade (1989) then reduced the 600 items to an 83-item scale consisting of nine factors. Each of the 83 items that were retained had the unique property of discriminating between a group of respondents who completed the items as they thought about an offending relationship partner whom they had forgiven and a group of respondents who completed the items as they thought about an offending relationship partner whom they had not forgiven.

Although many of the factors on Wade's (1989) Forgiveness Scale appear to describe phenomena that are related to forgiveness, only two of the scales appeared to capture distinct aspects of people's interpersonal motivations regarding the offense and offender—the Avoidance and Revenge subscales. Thus, we argue, only this smaller set of two subscales is directly assessing the motivational system that we assume to underlie forgiving. Items were endorsed on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*).

Procedure

Participants were recruited from introductory psychology courses to participate in a study of student lifestyles and relationships. Measures were distributed individually, completed outside of the classroom, and returned anonymously to an instructor. After providing demographic information, participants read the following:

We ask you to think of one person who you experienced as treating you unfairly and hurting you at some point in the past. For a moment, visualize in your mind the events and the interactions you may have had with the person who offended you. Try to visualize the person and recall what happened. Below is a set of questions about the person (offender) we have asked you to think about. In thinking about the one person who hurt you, please consider the following questions.

Similar instructions were used by Subkoviak et al. (1995) in developing and validating the Enright Forgiveness Inventory (EFI). Participants then completed the items from our item pool and a series of measures not related to the present study (see McCullough, Worthington, & Rachal, 1997; Study 1).

Results

Preliminary Factor Analysis

An initial principal-components factor analysis was conducted on the 18 items. Two factors with eigenvalues greater than 1.0 were extracted, which explained 68% of the total item variance. Examination of the communalities led to the removal of items from both subscales. We retained 7 items for the Avoidance subscale and 5 items for the Revenge subscale.

Structural Equation Models

We examined the validity of a two-factor solution for describing the relationships among the 12 retained items through a series of structural equation models. Models were estimated with maximum likelihood estimation using EQS Version 5 (Bentler & Wu, 1995). Goodness of fit was evaluated with the chi-square statistic (Jöreskog & Sörbom, 1984) and the comparative fit index (CFI; Bentler, 1990). A significant chi-square statistic may indicate that the hypothesized model does not fit the observed data. However, because the chi-square statistic is sensitive to sample size, alternative fit indexes are generally used. The CFI compares the fit of the hypothesized model with a "null model" that assumes that no two observed variables are related to each other. CFI values can range from 0.0 (indicating extremely poor fit) to 1.0 (indicating perfect fit). CFI values of .90 or greater are generally considered to reflect an adequate model fit; values of less than .90 reflect that the hypothesized model does not adequately fit the observed data.

The first measurement model tested the hypothesis that the relationships among the 12 indicators were the product of two correlated latent variables (avoidance and revenge). For this model, the chi-square value was high, $\chi^2(53, N = 238) = 190.53, p < .001$, but the CFI was also quite high (CFI = .94), indicating that the two-factor model fit the data well. The two factors were correlated at $r = .67$.

We also tested an alternative measurement model that hypothesized that a single latent variable produced the covariances among the 12 indicators. This model fit the data poorly, $\chi^2(54, N = 238) = 613.07, p < .001$; CFI = .76.

Items that loaded on the two factors were summed to produce subscale scores. Internal consistency reliability was estimated for each subscale using Cronbach's alpha. Scale means, standard deviations, and internal consistency reliabilities appear in Table 1.

Discussion

We refined measures of Avoidance and Revenge motivations in Study 1. The subscales on the resulting measure—which we are calling the transgression-related interpersonal motivations (TRIM) inventory (see the Appendix)—had acceptable levels of internal consistency reliability (alphas of .86 and .90, respectively) and were moderately correlated.

Table 1
Means, Standard Deviations, and Internal Consistency Reliabilities for the Subscales of the Transgression-Related Interpersonal Motivations Inventory (Study 1)

Subscale	<i>M</i>	<i>SD</i>	α
Avoidance ^a	18.14	8.35	.86
Revenge ^b	8.68	4.46	.90

^a Seven items; range = 7 to 35; higher scores indicate higher avoidance.

^b Five items; range = 5 to 25; higher scores indicate higher revenge.

Study 2

In Study 2, we administered the TRIM to a group of people who were recently hurt (i.e., in the previous 16 weeks) by a relationship partner. Second, we administered the TRIM to a group of people who had indicated their interest in participating in an intervention to help them forgive a relationship partner who had hurt them in the past. Because people in the early aftermath of an interpersonal offense and people with longstanding difficulties forgiving are two major populations to which such measures are likely to be applied in future studies, it was important to verify that the measures have acceptable psychometric properties in samples representing both populations.

Method

Participants and Index Offenders—Offenses

Recent victims. Participants were 74 volunteers from introductory psychology courses (38% male and 62% female; 77% White, 20% Black, and 3% Hispanic). Participants indicated that they had been seriously injured or hurt by someone in the previous 4 months (i.e., 16 weeks). Offenders included girlfriends or boyfriends (30%), friends of the same gender (26%), friends of the other gender (12%), other relatives (10%), and others (approximately 22%). The mean length of time since the transgression was 5.7 weeks. Using an item from Subkoviak et al. (1995), the mean degree of hurt (rated on a 1–5 scale, where 1 = *no hurt* and 5 = *a great deal of hurt*) was 3.58 ($SD = 1.27$). The offenses reported were largely accounts of sexual infidelity, betrayal by a friend or roommate, or painful disagreements with a friend or loved one.

People with longstanding difficulty forgiving. Participants were 36 students (mean age = 20.3, $SD = 4.9$) representing several ethnic groups (38.9% Caucasian, 27.8% African American, 19.4% Asian American, 5.6% Hispanic, and 8.3% other) and both genders (80.6% female and 19.4% male). Participants were recruited from introductory psychology courses and indicated their interest in participating in an intervention designed to help them forgive a significant other who had hurt or injured them in the past.

Participants were directed to think of one significant other who had offended or hurt them at some time in the past whom they had not yet forgiven. Offenders included relatives (27.8%), friends of the same gender (25.0%), friends of the other gender (22.2%), spouses (8.3%), employers (5.6%), and others (11.1%). The offenses incurred by most participants occurred "months ago" (25.0%) or "years ago" (38.9%). The mean degree of hurt caused by the offense was 4.03 ($SD = 0.94$), suggesting that participants' index offenses were substantial and painful.

Other Instruments

Along with the TRIM, participants completed a set of demographic items and a single-item measure with which they indicated the extent to which they had forgiven their offender. Scores ranged from 0 (*none*) to 5 (*completely*). Similar items have been used to assess forgiving in research by Boon and Sulsky (1997), Darby and Schlenker (1982), and Weiner et al. (1991) and in psychometric research on forgiving by Subkoviak et al. (1995). Participants in both samples also completed other self-report measures that are not germane to the present study.

Procedure

Recent victims. Packets were distributed to participants in introductory psychology courses; participants completed them individually and

then returned them to an investigator. Eight weeks later, 50 of the 74 participants (68%) were recontacted. At that time, the participants received follow-up packets containing the TRIM and other measures unrelated to this study. On completing the follow-up questionnaires individually, participants returned them to the investigator.

People with difficulty forgiving. Participants volunteered to participate in an intervention that was designed to help them forgive a person whom they had wanted, but had been unable, to forgive. The participants in the current study were randomly assigned to a waiting-list control group. Participants completed the TRIM, a set of demographic items, the single-item measure of forgiving, and a variety of measures unrelated to the present study at an initial screening. Roughly 3 and 9 weeks after the initial screening (during which time participants were still on a waiting list to participate in the intervention), participants were recontacted. At this time, they were given second and third packets of questionnaires. Then, participants individually completed the TRIM, the single-item measure of forgiving, and the other measures again and returned their completed questionnaires to the investigator. Additional procedural details are reported in Sandage (1997).

Results

**Reliabilities and Correlations Among Measures:
Recent Victims**

The TRIM subscales had high internal consistency reliabilities, with alphas ranging from .86 to .93 at the two administrations. Using data from the first administration, we found that the Avoidance subscale was moderately correlated with the Revenge subscale, $r(74) = .50$. The Avoidance and Revenge subscales had correlations of $r(73) = -.41$ and $-.67$ with the single-item measure of forgiving, respectively. In a multiple regression equation, the two subscales of the TRIM were regressed on the single-item measure of forgiving and predicted 48% of the variance in the single-item measure ($R = .69$). This equation was significant, $F(2, 70) = 31.90, p < .0001$. The Revenge subscale had a significant unique relationship with the single-item measure of forgiving ($\beta = -.64, p < .0001$), but the Avoidance subscale did not ($\beta = -.09, p > .10$).

Using data from the first and second administrations to compute the test-retest reliabilities for the Avoidance and Revenge subscales, we found that $r(49) = .44$ and $.53$, respectively, p s $< .01$. For the test-retest reliability for the single-item measure of forgiving, $r(49) = .31, p < .05$.

**Reliabilities and Correlations Among Measures:
People With Difficulty Forgiving**

Internal consistencies for the subscales of the TRIM were acceptable; alphas ranged from .84 to .92. As shown in Table 2, our measures of Avoidance and Revenge were highly correlated with each other and with the single-item measure of forgiving. When the single-item measure of forgiving was regressed on the two subscales of the TRIM, we found that $R(2, 33) = .62$, which was significant, $F(3, 32) = 10.41, p < .001$. The Avoidance subscale predicted unique variance in the single-item measure of forgiving ($\beta = -.46, p < .001$). The Revenge subscale predicted a marginally significant amount of unique variance in the single-item measure ($\beta = -.29, p < .10$). The TRIM subscales also manifested moderate 3-week test-retest

Table 2
Correlation of Forgiveness Measures and Test-Retest Reliability Estimates (Study 2)

Measure	Recent victims ^a			People with difficulty forgiving ^b					
	M	SD	Revenge (Time 1)	Single-item measure (Time 1)	Test-retest (8-week)	Revenge (Time 1)	Single-item measure (Time 1)	Test-retest (3-week)	Test-retest (9-week)
Avoidance ^c (Time 1)	17.35	7.58	.50***	-.41***	.44**	.43**	-.57***	.86***	.64***
Revenge ^c (Time 1)	8.99	5.07	—	-.67***	.53***	—	-.47**	.79***	.65***
Single-item measure (Time 1)	4.00	1.27	—	—	.31*	—	—	.48**	.45**

^a $N = 73$ or 74 for correlations among scales at pretest. $N = 49$ for 8-week test-retest reliability estimates. ^b $N = 35$ or 36 for all correlations. ^c Seven items; range = 7 to 35 ; higher scores indicate higher avoidance. ^d Five items; range = 5 to 25 ; higher scores indicate higher revenge. * $p < .05$. ** $p < .01$. *** $p < .001$.

reliabilities ($r_s = .86$ and $.79$) and 9-week test–retest reliabilities ($r_s = .64$ and $.65$). For the 3-week and 9-week test–retest reliabilities for the single-item measure of forgiving, $r(35) = .48$ and $.45$, $p_s < .01$.

Discussion

The main goal of Study 2 was to assess the reliability and validity of the TRIM in two independent and considerably different samples. In these samples, the TRIM subscales manifested adequate internal consistency reliabilities, moderate test–retest reliabilities (with substantial decay in stability as the length of time between assessments increased), and moderate correlations with each other and a single-item measure of forgiving. Thus, the TRIM subscales appear to manifest adequate reliability and validity coefficients in samples representing two of the major populations to which such measures might be applied in future studies.

One unexpected finding of potential theoretical interest should be noted. In both samples, the two subscales of the TRIM predicted approximately the same proportion of the variability in the single-item measure of forgiving. However, in the sample of recent victims, only the Revenge subscale predicted unique variance in the single-item measure, whereas in the sample of people who expressed difficulty forgiving, only the Avoidance subscale predicted unique variance in the single-item measure of forgiving. This difference in the two samples might suggest that the experience of forgiving is more closely identified with the experience of retaliation and desire for revenge in the early aftermath of an interpersonal offense, whereas over time, it becomes more closely identified with the experience of avoidance and estrangement from the offender. Obviously, this interpretation is extremely speculative and should be examined more intensively.

Study 3

Study 3 was an intensive look at the association of forgiving with measures of relational commitment and adjustment. We asked both members of couples in romantic relationships to indicate the extent to which they had forgiven their relationship partners for two separate interpersonal offenses, and both members also completed assessments of relationship commitment and adjustment. We hypothesized that scores on the TRIM subscales would be correlated with the measures of relational commitment and adjustment not only within persons but across relationship partners as well (which allowed us to rule out the possibility that the correlations were solely an artifact of mono-method confounding).

Method

Participants

Participants were the male and female members of 116 heterosexual couples. These couples were recruited by distributing 200 packets of questionnaires to persons in introductory psychology classes who were involved in ongoing heterosexual relationships. In only four cases were both partners students. Each participant was instructed to complete the

questionnaire and have his or her partner complete the packet as well. Of the 200 individuals to whom questionnaires were distributed, 121 (61%) returned usable questionnaires, although complete demographic data for both partners were obtained for only 114 couples. Of these couples, 13 were married, 22 were engaged, 18 were cohabiting, and 61 were dating. Among the male partners, the mean age was 22.1 ($SD = 7.2$) and among female partners the mean age was 21.1 ($SD = 7.9$). Approximately 60% of the people in the sample were White–Caucasian, 27% were Black–African American, approximately 6% were Asian American, and approximately 3% were Latino–Latina. Approximately 5% indicated that they were of another ethnicity or did not respond to the ethnicity item.

Instruments

TRIM. Participants completed two forms of the TRIM. They were instructed first to think of the most severe offense that their relationship partner had ever caused them and then to complete the items on the TRIM to indicate their thoughts and feelings toward their partner in light of this offense. Participants were also instructed to recall the most recent serious hurt that their partner had caused them and to complete the TRIM to indicate their thoughts and feelings regarding their partner in light of that offense. Participants did not report any additional data on the exact nature of the offenses to which they were responding. Because a single partner was handling both partners' data in order to return it to investigators, this procedure helped to protect the confidentiality of participants' reports.

Dyadic Adjustment Scale (DAS, Spanier, 1976). The DAS is a 32-item instrument that assesses the quality of marital or romantic relationships. The items on this scale are divided into four subscales to measure degree of dyadic consensus, affectional expression, dyadic satisfaction, and dyadic cohesion. Some research suggests that the total score is more reliable and valid than the individual subscales (Cohen, 1985), so we used only the full-scale score. Coefficient alphas for the total DAS score often exceed .90 (Spanier, 1976).

Commitment Inventory (Stanley & Markman, 1992). The Commitment Inventory assesses two aspects of individuals' commitment to their close relationships. The dedication subscale assesses individuals' commitments to their relationships based on their desire to maintain or improve the quality of the relationship for the benefit of both partners. The constraint subscale assesses commitment based on individuals' perceptions of feeling constrained to stay in a relationship based on internal or external pressures. Coefficient alphas for the constraint and commitment subscales exceed .90 and correlate substantially (e.g., .85 and .69) with Rusbult's four-item measure of commitment (Stanley & Markman, 1992).

Procedure

Interested students were invited to participate in a study leading to the development of new measures of marital functioning. After interested students were given the questionnaire packets, they took them home, gave questionnaires to their partners, and participants completed the questionnaires individually. The student members of each dyad then returned both partners' packets to the investigators.

Results

Means and standard deviations for major study variables appear in Table 3. We conducted a series of seven paired t tests in which the DAS, constraint commitment, dedication commitment, and the two TRIM subscale scores for the two offense scenarios (i.e., worst offense ever and most severe recent of-

fense) were the dependent variables. Male and female partners' respective scores were paired measures for all seven analyses. Male participants showed higher levels of constraint Commitment than did female participants, $t(115) = -3.37, p < .001, d = -.31$. We found no evidence of gender differences on the other six dependent variables (all $ps > .10$).

Data Reduction

Because the DAS, constraint commitment, and dedication commitment scales were substantially intercorrelated (rs ranging from .37 to .62), we standardized the scale scores on these three variables and created a linear composite (Dawes, 1979; Wainer, 1976). This linear composite was used as an overall rating of dyadic satisfaction–commitment.¹

Correlations of Forgiving With Dyadic Satisfaction–Commitment

The TRIM subscales were substantially associated with dyadic satisfaction–commitment within persons. More important, however, the TRIM subscales were also associated with the scores on measures of dyadic satisfaction–commitment across persons. That is, two of the four male partners' reports of the extent to which they had forgiven their female partners for the worst offense ever and the most severe recent offense were significantly correlated with female partners' reports of dyadic satisfaction–commitment. All four female partners' reports of the extent to which they had forgiven their male partners for the worst offense ever and the most severe recent offense were significantly correlated with male partners' reports of dyadic satisfaction–commitment (see Table 4). Even where nonsignificant, all correlation coefficients were in the theoretically expected direction (i.e., greater forgiving was associated with higher degrees of dyadic satisfaction–commitment).

Discussion

As predicted, forgiving appears to be substantially correlated with dyadic satisfaction–commitment. Whereas the association

Table 3
Means and Standard Deviations for Relationship Variables and Forgiving for Male and Female Partners (Study 3)

Relationship variable	Male partners		Female partners	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dyadic adjustment	118.07	15.19	117.96	15.97
Constraint	155.03	27.28	146.08	27.58 ^a
Dedication	80.23	14.27	80.20	13.05
Avoidance—recent hurt	12.89	5.02	12.40	5.21
Revenge—recent hurt	7.86	3.25	7.49	3.30
Avoidance—worst hurt	14.99	7.57	17.19	14.51
Revenge—worst hurt	7.66	3.27	8.10	4.25

^a Men scored significantly higher on constraint commitment than did women, $t(115) = -3.37, p < .001$. No other within-couples gender differences were detected (all $ps > .10$).

Table 4
Within-Partner and Cross-Partner Correlations of Forgiveness Variables and Dyadic Satisfaction–Commitment Scores (Study 3)

Forgiveness	Dyadic satisfaction–commitment	
	Male partners	Female partners
Male partners		
Avoidance—recent hurt	-.35***	-.11
Revenge—recent hurt	-.32**	-.29**
Avoidance—worst hurt	-.31**	-.03
Revenge—worst hurt	-.40***	-.37***
Female partners		
Avoidance—recent hurt	-.38***	-.47***
Revenge—recent hurt	-.44***	-.47***
Avoidance—worst hurt	-.21*	-.13
Revenge—worst hurt	-.46***	-.34**

Note. *Ns* ranged from 102 to 106 for each correlation. Values are Pearson product–moment correlations.

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

of forgiving and dyadic satisfaction–commitment was strong within persons, their association also manifested itself across informants, suggesting it is generally robust and cannot be explained solely as an artifact of mono-method bias. These findings gave some encouraging support for our conceptualization of forgiving as a motivational transformation that occurs more readily in satisfactory, committed relationships. Of course, the cross-sectional nature of these findings limits our ability to discern whether relational closeness causes forgiving, or vice versa, or whether a third variable is responsible for both relational satisfaction–commitment and forgiving.

Study 4

Given the links between relational satisfaction–commitment and forgiving from Study 3, we investigated whether the associations of measures of relational quality could be explained using a mediational model that posited that pre-offense relational closeness provided a setting in which forgiving was made more likely (by making apologies more likely and facilitating offender-focused empathy), thereby leading to greater restorations in interpersonal closeness following an interpersonal offense. Given our theorizing about the proximal role that empathy plays as a mediator of more distal variables that are associated with

¹ We also conducted these analyses using a factor score based on principal-axis factor analyses of these three variables. A single factor was extracted that accounted for more than 55% of the variance in the three variables. Scores on the DAS, constraint, and dedication scales were correlated with the common factor with ($rs = .67, .56, \text{ and } .92$, respectively). Thus, their common factor appears to be most strongly related to partners' satisfaction with the quality of the relationship and desire to maintain the relationship. When the factor score was used as an overall rating of dyadic satisfaction–commitment, we found results that were nearly identical to those obtained when unit weighting was used to create the linear composite.

forgiving, we posited that the effects of interpersonal closeness and apology on forgiveness would be largely mediated by empathy.

Consistent with our theorizing about the role of rumination about intrusive thoughts, images, and affects as an inhibitor of forgiving, we also hypothesized that rumination about the offense would inhibit the experience of empathy for the offender, and thus, forgiveness as well. We also hypothesized that offenses in close relationships create less ruminative thought regarding the offense. Our hypotheses about the structural relations among pre-offense relational closeness, apology, rumination regarding the offense, empathy, forgiveness, and current relational closeness are displayed in schematic form in Figure 1.

In addition, basic questions about the construct validity of the TRIM remained. To the extent that people's scores on the Avoidance and Revenge subscales reflect people's motivations toward relationship partners who have offended them (rather than global personality tendencies), the TRIM subscales should manifest low correlations with measures of respondents' global affectivity (both positive and negative) and tendency to respond in a socially desirable light. We examined all of these hypotheses in Study 4.

Method

Participants and Index Offenders

The 187 participants (59 men and 128 women) were students in introductory psychology courses at a medium-sized midwestern university. Participants were predominantly White (90%). Small proportions of participants were Black (8%) and members of other ethnic groups (2%).

Most participants indicated that the people who had injured them were girlfriends or boyfriends (49.4%). Another large proportion of participants indicated that a friend of the same gender (11.8%) or friend

of the opposite gender (9.1%) had injured them. The remaining participants (29.6%) indicated that relatives, children, employers, and other nonrelatives were the people who had injured them. Participants had known their offenders an average of 8.25 years ($SD = 8.69$). Offenses had occurred an average of 2.65 years ($SD = 4.71$) prior to data collection, but some had occurred as much as 35 years prior to the study. On a 5-point Likert-type scale (1 = *no hurt*, 5 = *a great deal of hurt*), participants responded to an item that read, "How deeply were you hurt when the incident occurred?" The mean score on this item, which was also used in research on forgiveness by Subkoviak et al. (1995), was 4.31 ($SD = .84$).

Additional Instruments

Relational closeness. Relational closeness was measured with Aron, Aron, and Smollan's (1992) Inclusion of Other in the Self (IOS) Scale. This single-item, visual analogue measure consists of seven Venn diagrams, each of which consists of two circles marked "self" and "other." The seven pictures portray progressively increasing degrees of overlap between the circles to symbolize varying degrees of closeness that someone might experience toward another person. Aron et al. found that the IOS Scale had high test-retest reliabilities, had high correlations with other measures of relational closeness, and was sensitive to experimental manipulations designed to manipulate relational closeness.

In the present study, participants completed the IOS Scale under three sets of instructions. First, they used the IOS Scale to indicate the degree of closeness that they experienced with their offender *before the offense ever occurred*. Second, they completed the instrument to indicate their closeness to the offender *after the offense occurred*. Later in the survey, they were instructed to indicate their *current closeness with their offender* using the IOS Scale.

Degree of apology. The extent to which participants perceived that their offenders apologized for the offense was measured with a scale previously used by McCullough, Worthington, and Rachal (1997). This scale consisted of two 5-point Likert-type items that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Items elicited the degree to which participants perceived that their offenders apologized for and

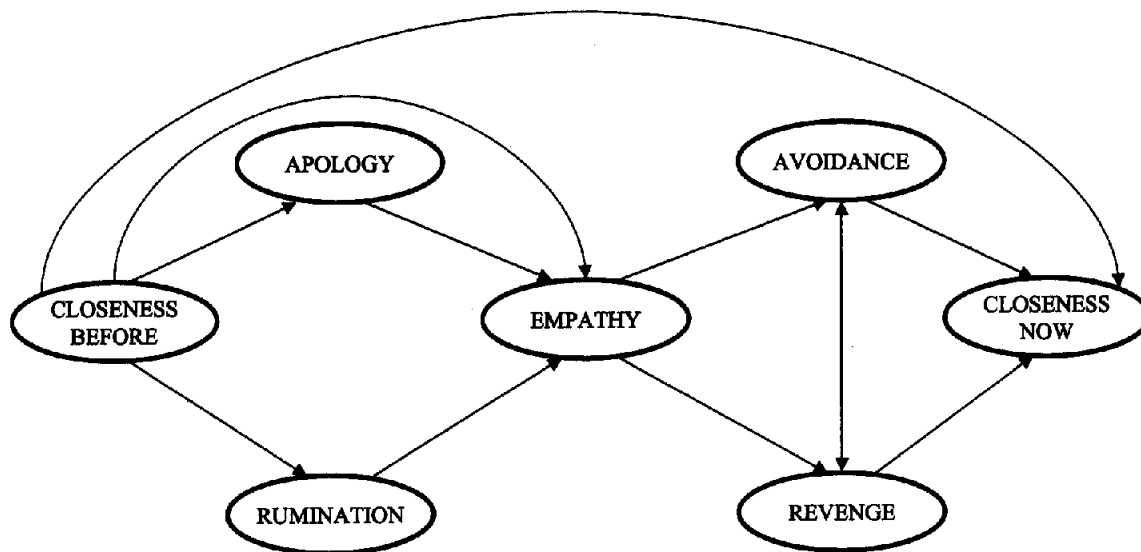


Figure 1. Hypothesized structural relations among Pre-Offense Closeness, Apology, Rumination, Empathy, Avoidance, Revenge, and Current Closeness.

attempted to explain their hurtful behavior. In the McCullough, Worthington, and Rachal study, this measure had an internal consistency reliability of .79.

Rumination. The seven-item intrusiveness subscale from the Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979) was used to measure participants' rumination about intrusive thoughts, affects, and imagery related to the offense (e.g., "I thought about it when I didn't mean to" and "I had trouble falling asleep or staying asleep because of pictures or thoughts that came into my mind"). Participants rated items on a 5-point Likert-type scale, indicating how frequently they experienced each of the intrusive experiences at the time of the assessment (1 = *not at all*, 5 = *often*). Internal consistency reliabilities frequently exceed .85 for this subscale (Zilberg, Weiss, & Horowitz, 1982).

Offender-focused affective empathy. The eight-item empathy measure used by Batson and colleagues (Coke, Batson, & McDavis, 1978; Toi & Batson, 1982) consists of eight affect adjectives that participants rated on a 6-point scale ranging from 0 (*not at all*) to 5 (*extremely*) to indicate the degree to which they felt each affect for their offender at the time of the rating. In the present study, we used a four-item version of this scale (empathic, concerned, moved, and softhearted). In previous studies, the short form's internal consistency was estimated at .88 (McCullough, Worthington, & Rachal, 1997).

Single-item measure of forgiving. We also measured forgiving with a single-item measure like the single-item measure used in Study 2. Scores ranged from 1 (*not at all*) to 6 (*completely*).

Positive and negative affectivity. We measured respondents' tendencies to experience positive and negative affect using Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Schedule (PANAS). The PANAS consists of 20 adjectives that are indicative of positive affect and negative affect. Respondents indicate their tendency toward positive and negative affect by using a 5-point Likert-type scale to indicate how much they generally experience each feeling (1 = *very slightly or not at all*, 5 = *extremely*). Internal consistency reliabilities (alpha) and test-retest reliabilities are high for both measures. PANAS scores tend to be moderately related to measures of general psychological symptoms and depression (Watson et al., 1988).

Self-deception. We measured respondents' tendency to avoid acknowledging that they possess negative or unflattering personality traits with Paulhus's (1984) 10-item measure of self-deception. Items (e.g., "I sometimes enjoy my own bowel movements") were endorsed on a 7-point Likert-type scale (1 = *agree*, 7 = *disagree*).

Impression management. We measured respondents' tendency to maintain a positive public impression with items from Paulhus's (1984) impression management scale. Items (e.g., "Once in a while I laugh at a dirty joke") were endorsed on a 7-point Likert-type scale (1 = *agree*, 7 = *disagree*). To raise the internal consistency of this scale, we had to delete 5 of the 10 constituent items. Even then, the internal consistency of this scale in the present study only reached .52.

Procedure

Aside from the additional measures that participants completed, the procedure was similar to that of Study 1.

Results

Descriptive Statistics

We determined through a series of *t* tests that males and females participants' scores on the TRIM subscales and the single-item measure of forgiving did not differ (all *ps* > .05). Thus, we conducted all analyses simultaneously for both males and female participants. Means, standard deviations, and internal

Table 5
Means, Standard Deviations, and Internal Consistency Reliabilities of Major Study Variables (Study 4)

Variable	<i>M</i>	<i>SD</i>	α
Closeness before offense ^a	4.70	1.86	—
Closeness after offense ^a	1.79	1.26	—
Apology	8.61	4.18	.84
Rumination	16.07	9.50	.88
Empathy	11.00	5.49	.90
Avoidance	19.87	8.69	.94
Revenge	8.23	4.05	.90
Single-item forgiveness measure ^a	3.73	1.63	—
Current closeness ^a	2.63	2.02	—
Positive affectivity	34.86	5.68	.85
Negative affectivity	20.00	6.11	.85
Self-deception	26.35	8.97	.77
Impression management	20.73	4.70	.52

^a Because scale was a single item, internal consistency could not be estimated.

consistency reliability estimates (alpha) for the major study variables appear in Table 5.

Relationship Among TRIM Subscales, Positive Affectivity, Negative Affectivity, and Social Desirability

We correlated the TRIM subscales with positive affectivity, negative affectivity, self-deception, and impression management measures (see Table 6). Only the Revenge subscale was substantially correlated with any of the response bias measures. It was positively correlated with negative affectivity ($r = .32$, $p < .001$), positively correlated with self-deception ($r = .30$, $p < .001$), and negatively correlated with impression management ($r = -.17$, $p < .01$). To determine the extent of the overlap between Revenge, negative affectivity, self-deception, and impression management, we regressed Revenge scores on the other four variables. The multiple correlation was .37 ($R^2 = .14$), $p < .001$.

Variations in Closeness Before and After Interpersonal Transgressions

Our theorizing about forgiving and restoration of closeness following interpersonal transgressions presupposes that the interpersonal offenses that people experienced were substantial enough to create at least a short-term disruption in relational closeness. We tested this assumption by conducting a within-subjects analysis of variance (ANOVA) with closeness (IOS) scores before the offense and after the offense as the two levels of the dependent variable. IOS scores prior to the offense ($M = 4.7$, $SD = 1.86$) were significantly higher than were IOS scores following the offense ($M = 1.79$, $SD = 1.26$), $t(184) = 21.39$, $p < .001$, $d = 1.57$.

Structural Relations Among Pre-Offense Closeness, Apology, Intrusiveness, Forgiveness, and Current Closeness

To test whether the structural relations among pre-offense closeness, apology, empathy, rumination, and current closeness

Table 6
Correlations of Transgression-Related Interpersonal Motivations Inventory Subscales With Positive Affectivity, Negative Affectivity, Self-Deception, and Impression Management (Study 4)

Subscale	Positive affectivity	Negative affectivity	Self-deception	Impression management
Avoidance	-.12	.13	.12	.03
Revenge	-.10	.32***	.30***	-.17*

* $p < .05$. *** $p < .001$.

were consistent with hypotheses, we conducted a series of structural equation models using Lisrel 8.12a (Jöreskog & Sörbom, 1993). In these models, the single-item measures of pre-offense closeness and current closeness were the only indicators of their respective latent traits, so we fixed their loadings to unity and their residuals to zero (Maruyama, 1998).

First, we estimated a measurement model with oblique factors. The measurement model was adequate, $\chi^2(305, N = 187) = 554.23, p < .05$. The CFI (Bentler, 1990) for this model was .93. The factor scores for pre-offense closeness, apology, rumination, forgiveness (Avoidance and Revenge), and current closeness were moderately correlated (see Table 7).

We then set out to test the viability of our theoretical model for the structural relations among pre-offense closeness, apology, intrusiveness, forgiveness (i.e., Avoidance and Revenge) and current closeness. Goodness of model fit was assessed in two ways. First, we used the chi-square test and the CFI to assess the absolute goodness of fit of each respective model. Second, we used nested chi-square tests to assess the relative changes in goodness of fit associated with the addition or removal of paths between constructs (Byrne, 1994; Hoyle & Panter, 1995). The nested chi-square (or change in chi-square) results from evaluating the difference of the chi-square value obtained for a given model and the chi-square value for a competing model (with exactly one path added or subtracted from the previous model). The significance of the difference in chi-square values for the two competing models is evaluated against the chi-square distribution with one degree of freedom. The model with significantly better fit is retained as the best description of the

observed data. If models are not significantly different, then the law of parsimony suggests that the model with fewer paths is a superior description of the structural relations among the constructs in the model.

Base model. We first estimated the fit for the model specified in Figure 1. This model fit the data acceptably, $\chi^2(315, N = 187) = 609.6, p < .05, CFI = .93$. However, many near-zero paths remained in the model, and many paths that were constrained to zero appeared to be significant. Thus, we estimated the importance of these apparently misspecified paths through a series of alternative models.

Alternative Model 1. We first removed the path from rumination to empathy ($\beta = -.04$). The resulting model fit the data acceptably, $\chi^2(316, N = 187) = 609.9, p < .05, CFI = .92$. Because the difference in chi-square values between Alternative Model 1 and the base model ($\Delta\chi^2 = 0.3$) was not significant, Alternative Model 1 was deemed an improvement in model fit.

Alternative Model 2. We then added a path from rumination to Avoidance. Although the resulting model fit acceptably, $\chi^2(315, N = 187) = 607.8, p < .05, CFI = .92$, it was not a significant improvement in model fit, $\chi^2 = 2.1$. Thus, Alternative Model 2 was rejected.

Alternative Model 3. We then added a path from rumination to Revenge. This model fit acceptably, $\chi^2(315, N = 187) = 596.9, p < .05, CFI = .92$, and was a significant improvement over Alternative Model 1, $\Delta\chi^2 = 13.0$. Thus, the path from Intrusiveness to Avoidance was deemed necessary for an accurate description of the data.

Alternative Model 4. We then removed the path from Pre-Offense Closeness to Current Closeness ($\beta = .06$). This model fit the data acceptably, $\chi^2(316, N = 187) = 598.9, p < .05, CFI = .92$. The difference in chi-square values between Alternative Model 4 and Alternative Model 3 was not significant, $\Delta\chi^2 = 2.0$. Thus, Alternative Model 4 (with no direct path from pre-offense closeness to current closeness) was deemed an improvement in model fit.

Alternative Model 5. We then added a direct path from empathy to current closeness. This model fit the data acceptably $\chi^2(315, N = 187) = 583.8, p < .05, CFI = .93$. The difference in chi-square values between Alternative Model 5 and Alternative Model 4 was significant, $\Delta\chi^2 = 15.1$. Thus, Alternative Model 5 was deemed an improvement in model fit.

Table 7
Intercorrelations of Factors Included in Structural Equation Models

Measure	1	2	3	4	5	6	7
1. Closeness before offense	—						
2. Apology	.24	—					
3. Rumination	.22	.04	—				
4. Empathy	.27	.56	.05	—			
5. Avoidance	-.38	-.51	-.08	-.80	—		
6. Revenge	-.13	-.32	.27	-.46	.53	—	
7. Current closeness	.34	.41	-.06	.73	-.75	-.35	—

Note. Coefficients greater than .14 are significant at $p < .05$. Coefficients greater than .18 are significant at $p < .01$. Coefficients greater than .24 are significant at $p < .001$.

Alternative Model 6. We then removed the path from Revenge to current closeness ($\beta = .06$). This model fit the data acceptably, $\chi^2(316, N = 187) = 585.7, p < .05, CFI = .93$. Because the difference in chi-square values for Alternative Model 5 and Alternative Model 6 was not significant, $\Delta\chi^2 = 1.9$, Alternative Model 6 was deemed a significant improvement in model fit.

Alternative Model 7. Alternative Models 7 and 8 were designed to test whether the apology–forgiveness relationship appeared to be completely mediated by the effects of apologies in facilitating empathy. Previous research (McCullough, Worthington, & Rachal, 1997) indicated that the apology–forgiveness relationship was only partially mediated by empathy. In Alternative Model 7, we added a path from apology to Avoidance. The resulting model fit the data acceptably, $\chi^2(315, N = 187) = 584.6, p < .05, CFI = .93$. However, the addition of this path did not significantly increase the goodness of fit, $\Delta\chi^2 = 1.1, ns$. In addition, the path from apology to Avoidance ($\beta = -.09$) was not significant ($p > .05$).

Alternative Model 8. We then added a path from apology to Revenge. The resulting model was an acceptable fit to the data, $\chi^2(315, N = 187) = 584.5, p < .05, CFI = .93$. However, the addition of this path did not significantly increase the goodness of fit, $\Delta\chi^2 = 1.2, ns$. In addition, the path from apology to Revenge ($\beta = -.09$) was not significant ($p > .05$).

Alternative Model 9. We then added a path from pre-offense closeness to Avoidance. The resulting model fit the data acceptably, $\chi^2(315, N = 187) = 575.5, p < .05, CFI = .93$. The addition of this path increased the goodness of fit with respect to Alternative Model 6, $\Delta\chi^2 = 10.2, p < .05$. The path from pre-offense closeness to Avoidance was significant ($\beta = -.27, p < .05$). Thus, Model 9 was deemed an improvement in model fit.

Alternative Model 10. Finally, we added a path from pre-offense closeness to Revenge. The resulting model fit the data acceptably, $\chi^2(314, N = 187) = 574.9, p < .05, CFI = .93$.

The addition of this path ($\beta = -.06, ns$) did not significantly increase the model’s goodness of fit with respect to Model 9, $\Delta\chi^2 = 0.6$. No other modifications were made to the model, and Alternative Model 9, as depicted in Figure 2, was deemed the best fitting description of the structural relations among the constructs.

Discussion

In Study 4, we cross-validated a two-factor measurement model comprising the 12 items on the TRIM. Analyses indicated that positive affectivity, negative affectivity, self-deception, and impression management were only weakly related to scores on Avoidance and Revenge subscales. Only the Revenge subscale had significant correlations with more than one of these variables, and regression analyses indicated that these variables predicted only a small amount (approximately 14%) of variance in Revenge scores. Given the small correlations of these potential response artifacts with the TRIM subscales, and given recent arguments (e.g., Diener, Sandvik, Pavot, & Gallagher, 1991; Pavot & Diener, 1993) that social desirability represents a substantive component of personality that shapes social interaction—including, perhaps, forgiveness—future research using the TRIM might not need to control for the effects of positive affectivity, negative affectivity, self-deception, and impression management.

Structural Relations Among Closeness, Apology, Rumination, Empathy, and Forgiveness

In addition to these basic correlational findings, we examined the structural relations among closeness, apology, rumination, empathy, and forgiveness among people who had suffered a transgression so substantial that it created a disturbance in relational closeness with the offending partner. We find it easiest to discuss the findings from our series of structural equation mod-

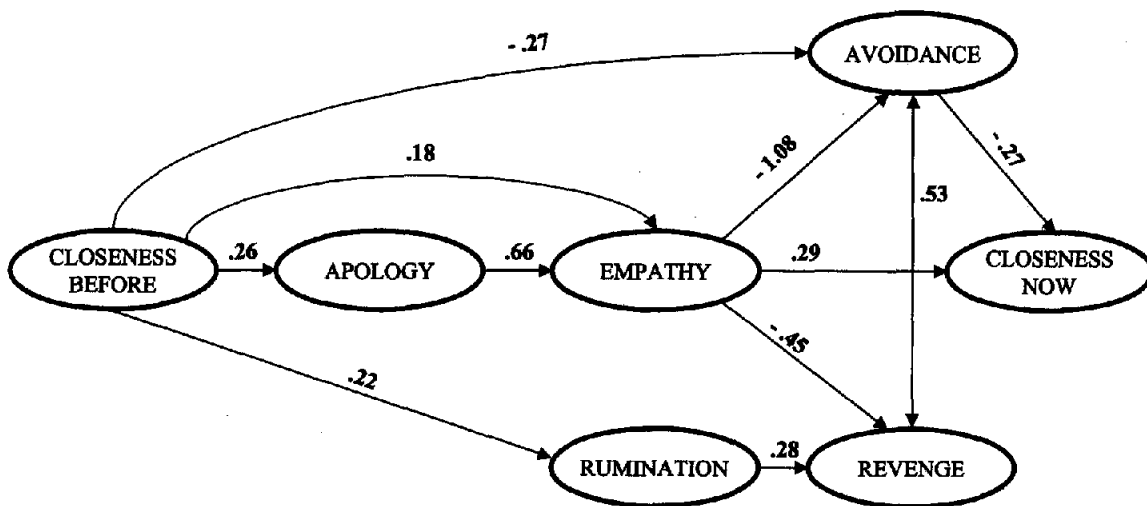


Figure 2. Best fitting model of structural relations among Pre-Offense Closeness, Apology, Empathy, Rumination, Avoidance, Revenge, and Current Closeness (Alternative Model 9).

els in terms of (a) the closeness → apology → empathy → forgiveness sequence and (b) the intrusiveness → revenge sequence, both of which appear to operate independently of each other.

Closeness and the apology → empathy → forgiveness sequence. Pre-offense relational closeness appears to facilitate forgiving, at least in part, by making apologies more likely. Offended people in relationships with initially high levels of closeness were more likely to have reported that their offenders apologized, and they were more likely to experience empathy for their offenders. Those increases in empathy were related to reductions in both avoidance motivations and revenge motivations, as well as to greater current closeness. Thus, pre-offense relational closeness appears to be an important context for facilitating the apology → empathy → forgiveness sequence that we examined in earlier research (McCullough, Worthington, & Rachal, 1997).

Indeed, in contrast to previous findings, we found that the apology → forgiveness relationship was mediated completely, rather than partially, by empathy. We suspect that this difference between the present study and our previous work actually reflects a refinement in our measurement of forgiveness. In previous studies (McCullough, Worthington, & Rachal, 1997), we measured forgiveness with a five-item measure that was based on items from the EFI.² The items on the five-item index we used previously were highly cognitive in nature, and as such, perhaps measured something in addition to (or as a proxy for) the basic motivations that we believe to be the essence of forgiveness (i.e., Avoidance and Revenge), which we attempted to measure in the present set of studies. Thus, we think that the discrepancy in results might reflect the theoretical and empirical progress that occurs when measures are designed with appropriate theoretical considerations in mind. Alternatively, the discrepancies might simply reflect the vagaries of sampling error (Hunter & Schmidt, 1990).

Comparison of competing structural equation models (Alternative Models 3 and 4) suggested that the zero-order relationship of pre-offense closeness and current closeness was completely mediated by the apology → empathy → forgiving sequence. This finding leads us to the following conclusion: Pre-offense closeness appears to be associated with current closeness because relational closeness facilitates prosocial processes in the offender (apology) and the offended partner (empathy and reductions in Avoidance motivations) that foster the reestablishment of closeness. Thus, the apology → empathy → forgiving sequence may be an important mechanism that helps to maintain continuity in close relationships that have been damaged by a significant relational offense. The present findings parallel findings from other cross-sectional studies showing that romantic partners who tend to forgive each other tend to report higher overall levels of relationship adjustment (e.g., Nelson, 1993; Rackley, 1993; Woodman, 1991) and our Study 3 findings suggesting that the association of forgiveness and closeness obtains both within partners and across partners (i.e., actor effects and partner effects). Whether forgiveness actually facilitates restored relational closeness in damaged interpersonal relationships should be studied in more rigorous (i.e., longitudinal or experimental) research.

The rumination → revenge sequence. Whereas pre-offense

closeness predicted the apology → empathy → forgiveness sequence, rumination about intrusive thoughts, affects, and images regarding the interpersonal offense appears to have been related to forgiveness (i.e., Revenge motivations) through an independent pathway. Contrary to predictions, relational closeness was related to more frequent, rather than less frequent, intrusive thoughts and images regarding the offender and the offense (although revenge itself had very little relationship with pre-offense closeness). Perhaps people in close relationships with their offenders prior to the offenses continued to maintain a degree of contact with their offenders in the aftermath of the offenses in comparison to people in more distant relationships. If so, then these additional interactions with offending relationship partners might have provided the offended partners with more raw material about which they were able to ruminate.

The fact that the rumination → revenge pathway appears to exist in relative isolation from other constructs in the model is potentially important. The near-zero associations of rumination with apology, empathy, and current closeness suggest that the rumination → revenge pathway operates more or less independently of the apology–empathy relations that we have found in this and previous studies. These findings contradict our prediction that the association of rumination and forgiveness would be mediated by the effects of rumination on empathy for the offending relationship partner (see Figure 1).

We suspect that the rumination → revenge path reflects the dispositional tendency to ruminate about interpersonal transgressions that predict aggressive behavior following provocations and self-esteem threats in laboratory studies (e.g., Caprara, 1986; Collins & Bell, 1997). These studies and others indicate that people who experience—and are unable to dissipate—high degrees of residual, intrusive, negative feelings and images regarding interpersonal offenses are significantly more likely to commit acts of aggression against someone whom they perceived to have transgressed against them. Given the pervasiveness of ruminative processes (Gold & Wegner, 1995), their pervasive effects (Greenberg, 1995), and their sensitivity to attachment-related differences in interpersonal relationships (Wegner & Gold, 1995), it would not be surprising if this psychological system, along with the closeness–empathy system, played a causal role in shaping people's inclinations to forgive.

General Discussion

Forgiving is a lay term or "folk concept" (Mauger et al., 1991) that, according to our theorizing, resides at the level of people's basic motivations toward an offending relationship partner (McCullough, Worthington, & Rachal, 1997). When people forgive, they manifest relationship-constructive levels of two motivations regarding an offender: They experience a low

² The 5-item index used in McCullough, Worthington, and Rachal (1997) consisted of 4 items from the 60-item EFI, plus a 5th item that Subkoviak et al. (1995) used to provide evidence for the validity of the EFI. We failed to cite Subkoviak et al. appropriately in our description of these items and their instructions, which we humbly acknowledge here. Dr. Enright has requested that the 5-item index not be used in future research in isolation from the full, 60-item EFI.

motivation to avoid the offender and a low motivation to seek revenge against the offender. On the basis of existing research on the psychology of close relationships (Gottman, 1993; Rusbult et al., 1991; Van Lange et al., 1997) and our own theorizing regarding interpersonal forgiving (McCullough, Worthington, & Rachal, 1997), in the present studies we developed a two-factor measure of forgiving and evaluated the relation of forgiving to a variety of relationship-level and social-cognitive variables.

Measurement Issues

The TRIM inventory—our inventory for assessing the motivations assumed to underlie forgiving—demonstrated a variety of desirable psychometric properties, including adequate internal consistency, moderate temporal stability, and a robust two-factor structure. In addition, the TRIM subscales manifested their discriminant validity through small correlations with measures of positive affectivity, negative affectivity, and social desirability (even though correlations with social desirability scales do not necessarily call the construct validity of a self-report measure into question; see Diener et al., 1991). The TRIM subscales are correlated with a variety of relationship-specific variables (relational satisfaction, commitment, and closeness), offense-specific variables (degree of apology), and social-cognitive variables (e.g., empathy for the offender and rumination about the offense). They also demonstrated strong relationships to a single-item measure of forgiving. Thus, the TRIM thus appears to be useful for assessing forgiving through self-report.

Theoretical Findings

These initial investigations using the TRIM reveal three sets of theoretically important findings regarding interpersonal forgiving that merit future exploration.

Forgiveness and the Closeness–Empathy System

First, we found additional (albeit correlational) evidence that empathy can be considered one of the most proximal determinants of the capacity to forgive others (McCullough, Worthington, & Rachal, 1997) and that pre-offense closeness, apology, empathy, and forgiveness appear to be highly interrelated. Two mechanisms appear to be partially responsible for why people are more likely to forgive in close, committed, satisfactory relationships: First, our data indicate that in close relationships, transgressors are more likely to offer apologies for their actions. Transgressors in close relationships might be more likely to apologize out of a sense of guilt that arises from their own empathy toward the offender or, perhaps, out of their own concerns about the loss of a valued relationship (Baumeister et al., 1994; Tangney, Miller, et al., 1996).

Second, victims are more likely to develop empathy for their transgressors when their relationship is close, committed, and satisfactory. In part, the association of closeness and empathy appears to be mediated by variables such as apology. However, pre-offense closeness predicted unique variance in empathy, even after controlling for the apology → empathy relationship. In addition, there is some theoretical precedent for thinking that

relational closeness itself is a unique determinant of empathy. Batson (1991; Batson & Shaw, 1991) has hypothesized that people develop empathy as a function of attachment (see also Cialdini et al., 1997). To the extent that our measures of dyadic satisfaction–commitment and closeness are attachment-related constructs, then relational satisfaction, commitment, and closeness might facilitate an affective identification with an offender that is not so easy for people to acquire in less satisfactory, less committed, more distant relationships. Structural equation models in Study 4 suggest that pre-offense closeness, apology, empathy, forgiveness, and post-offense relational closeness appear to be closely related, leading us to posit that the closeness–empathy system is a crucial psychological system underlying the human capacity for interpersonal forgiving.

Forgiveness and the Rumination System

We initially hypothesized that rumination over intrusive thoughts, images, and affects would be negatively related to forgiving by virtue of the effects of rumination in inhibiting empathic affect toward the offender. This hypothesis was not supported by the data. Although intrusive rumination was associated with higher levels of pre-offense closeness, it was uncorrelated with apology, empathy, avoidance, and current ratings of relational closeness (thus disconfirming the role of empathy as the ultimate governor over the forgiveness process). Intrusive rumination was related to participants' self-reported motivations to seek revenge against their offenders.

The unique importance of rumination for predicting Revenge motivations in our cross-sectional data leads us to conclude that rumination—which seems to come so naturally in the aftermath of negative life events—might play an important role in perpetuating interpersonal distress following interpersonal events, just as it appears to perpetuate psychological distress (Greenberg, 1995; Holman & Silver, 1996). This conclusion is consonant with a decade of research (e.g., Caprara, 1986; Collins & Bell, 1997; Emmons, 1992; Stuckless & Goranson, 1992) indicating that people who report favorable attitudes toward revenge are inclined toward cognitive rumination and are also more likely to retaliate following self-esteem threats. Along with further exploration of the closeness–empathy system and its contribution to forgiving, further exploration of the role of ruminative processes should be a priority in future research on forgiving.

Forgiveness and the Restoration of Interpersonal Closeness

The present findings augment earlier findings by providing evidence that forgiving not only occurs more frequently in the context of satisfactory, committed, close relationships but also can be understood as a psychological factor that is associated with restored relational closeness following an interpersonal transgression, just as it apparently leads to the inhibition of avoidant behaviors and the facilitation of conciliatory behaviors (McCullough, Worthington, & Rachal, 1997), as well as cooperation (Komorita et al., 1991) following interpersonal offenses. The present correlational data appear to be consistent with a conceptualization of forgiving that emphasizes its potential ef-

fects in regulating and reconciling interpersonal relations that have been damaged by the injurious behavior of a relationship partner (McCullough, Worthington, & Rachal, 1997). These observations merit further investigation in longitudinal or experimental research.

Directions for Future Research

Although the potential value of forgiving in restoring harmonious interpersonal relations is noteworthy in the context of close relations (e.g., marriages, families, romantic relationships, and friendships), it seems reasonable that forgiving might have similar effects in restoring positive social relations among any two people whose relations have become destructive following a perceived interpersonal transgression. Such contexts might include coworker relationships; employee–employer relationships; and the relationships among perpetrators of violence, the victims, and their loved ones. Our basic findings should be subjected to scrutiny in nonstudent samples as well, because the range of offenses that students are likely to encounter in their interpersonal relations might be relatively restricted (even though a considerable number of participants reported parental abandonment, relationship violence, and romantic infidelity—all serious, painful life events—as the offenses that they had incurred).

In addition, some research suggests that forgiveness might be a marker for relational disturbance in some relationships, including relationships characterized by physical abuse (Katz, Street, & Arias, 1995). The possibility that forgiving—that is, ceasing to be motivated to avoid contact with and see harm come to a violent partner—is a marker for relational and psychological difficulties must be taken more seriously (as a potentially sinister aspect of forgiveness) in future research (McCullough, Rachal, Sandage, & Worthington, 1997). Longitudinal research is needed to augment the cross-sectional and retrospective findings in the present research, as well as the cross-sectional and experimental data from our previous work (McCullough, Worthington, & Rachal, 1997). Such research would allow for more intensive examination of the unfolding of forgiving in specific relational contexts—and its links with both positive and negative relational or psychological outcomes in those contexts.

Only a small proportion of people in the U.S. population (approximately 8%) indicate that they try to “get even” when people intentionally injure them (Gorsuch & Hao, 1993). However, this figure might be deceptively low: Other data suggest that nearly half of all interpersonal delinquency (e.g., a serious fight at work or school, hurting someone badly enough to require medical attention, etc.)—at least in student samples—is motivated by anger and revenge (Pfefferbaum & Wood, 1994). Also, people who endorse vengeance have higher levels of retaliatory behavior in the laboratory, on the highways, and in their personal lives (Caprara, 1986; Collins & Bell, 1997; Stuckless & Goranson, 1992). Thus, although the base rate of seeking revenge might be rather low among all people, it seems that a substantial amount of human misery could potentially be attributed to the motive to seek revenge. To the extent that revenge is a causal motive for these acts of interpersonal violence, rather than an

epiphenomenal, post hoc rationalization for acts of counteraggression, then forgiving might be an important variable to study in the context of interpersonal conflict, aggression, and violence (McCullough, Sandage, & Worthington, 1997). The present findings yield some interesting initial clues about revenge that merit further investigation.

At the present time, laboratory studies might provide the most efficient settings for examining the role of forgiving in deterring aggression and violence following interpersonal conflict or provocation (e.g., Bushman & Baumeister, 1998; Caprara, 1986; Collins & Bell, 1997). Whether it is through the intensive study of particular interpersonal situations or experimental laboratory research involving the creation of actual offense scenarios, moving from the broad-based examinations of forgiving that we have conducted to the intensive study of particular interpersonal environments is an important priority and a potentially promising direction for future research on forgiving.

Although the present studies are helpful for illuminating the relationship-level, offense-level, and social–cognitive variables that shape specific instances of interpersonal forgiving, much work remains to be done in illuminating the personality characteristics and cognitive processes that characterize the person who is inclined to forgive. In a related vein, it should also be recognized that the present studies examined forgiving single, isolated actions. Although this approach to examining forgiving is by far the most common protocol in the extant research on forgiving, it is not the only possible approach (McCullough & Worthington, in press). To study why people sacrifice in close relationships, for instance, Van Lange et al. (1997) assessed sacrifice as a general tendency to sacrifice for the sake of one’s relationship partner. Similarly, we could have assessed forgiving as a general tendency to forgive one’s relationship partner. Further, the willingness to forgive can be conceptualized even more generally as a personality-level variable that transcends both isolated offenders and specific offenses (see, e.g., Caprara, 1986; Emmons, 1992; Mauger et al., 1991). Future research might focus on developing or refining instruments for operationalizing willingness to forgive at both the relationship and personality levels, and then examining the associations of those measures with other personality-level traits or measures of cognitive processes (e.g., Mauger et al., 1996; see McCullough, Rachal, & Hoyt, 1998).

A final direction for future research is the study of forgiving as a health-relevant phenomenon (e.g., Strasser, 1984). Some scholars (e.g., Kaplan, 1992; Thoresen, Luskin, & Harris, 1998) have suggested that the capacity to forgive others might modulate the effects of interpersonal stress on physical health. Given the clear role of hostility as a predictor of cardiovascular disease and all-cause mortality (Miller, Smith, Turner, Guisjarro, & Hallet, 1996), any variable that helps people to modulate their hostility might be an important facilitator of physical health. Furthermore, if forgiving is an alternative to cognitive rumination, the forgiving might also help to mitigate the negative effects of ruminating about negative life events (i.e., interpersonal offenses) on measures of mental health and distress (Greenberg, 1995). The health-relevant aspects of forgiving have yet to be explored in any intensive empirical fashion. Nevertheless, the relationship of forgiving to better (or, possibly, worse) mental

and physical health remains a potentially interesting topic for future research.

Conclusions

Although developmental and clinical research on forgiveness is growing admirably through the work of Enright and his colleagues (e.g., Al-Mabuk, Enright, & Cardis, 1995; Coyle & Enright, 1997; Enright, Gassin, & Wu, 1992; Enright & Human Development Study Group, 1996; Enright et al., 1989; Freedman & Enright, 1996; Hebl & Enright, 1993; see also McCullough & Worthington, 1995), scientific progress in the social-psychological study of interpersonal forgiving has been slow (Baumeister, Exline, & Sommer, 1998; McCullough, Exline, & Baumeister, 1998; McCullough, Rachal, Sandage, & Worthington, 1997; McCullough & Worthington, 1994a, 1994b). We believe that along with the slow development of theory, the slow development of psychometric instruments to measure forgiving has also been a major barrier to scientific progress in social and personality psychology (McCullough, Worthington, & Rachal, 1997). The present set of studies are intended to help remedy both deficits in the social-psychological literature on forgiving so that we can gain further insight into this important, but poorly understood, aspect of human functioning.

References

- Al-Mabuk, R., Enright, R. D., & Cardis, P. (1995). Forgiveness education with parentally love-deprived late adolescents. *Journal of Moral Education, 24*, 427-444.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596-612.
- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology, 74*, 1531-1544.
- Axelrod, R. (1980a). Effective choice in the prisoner's dilemma. *Journal of Conflict Resolution, 24*, 3-25.
- Axelrod, R. (1980b). More effective choice in the prisoner's dilemma. *Journal of Conflict Resolution, 24*, 379-403.
- Batson, C. D. (1991). *The altruism question*. Hillsdale, NJ: Erlbaum.
- Batson, C. D., & Shaw, L. L. (1991). Evidence for altruism: Toward a pluralism of prosocial motives. *Psychological Inquiry, 2*, 107-122.
- Baumeister, R. F., Exline, J. J., & Sommer, K. L. (1998). The victim role, grudge theory, and two dimensions of forgiveness. In E. L. Worthington, Jr. (Ed.), *Dimensions of forgiveness* (pp. 79-104). Radnor, PA: Templeton Foundation Press.
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin, 115*, 243-267.
- Bendor, J., Kramer, R. M., & Stout, S. (1991). When in doubt . . . Cooperation in a noisy prisoner's dilemma. *Journal of Conflict Resolution, 35*, 691-719.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.
- Bentler, P. M., & Wu, E. J. C. (1995). *EQS for Windows user's guide*. Encino, CA: Multivariate Software.
- Boon, S. D., & Sulsky, L. M. (1997). Attributions of blame and forgiveness in romantic relationships: A policy-capturing study. *Journal of Social Behavior and Personality, 12*, 19-44.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219-229.
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows*. Thousand Oaks, CA: Sage.
- Caprara, G. V. (1986). Indicators of aggression: The Dissipation-Rumination Scale. *Personality and Individual Differences, 7*, 763-769.
- Caprara, G. V., Barbaranelli, C., & Comrey, A. L. (1992). A personological approach to the study of aggression. *Personality and Individual Differences, 13*, 77-84.
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy-altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology, 73*, 481-494.
- Cohen, P. (1985). Locke Marital Adjustment Scale and the Dyadic Adjustment Scale. *American Journal of Family Therapy, 13*, 66-71.
- Coke, J. S., Batson, C. D., & McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology, 36*, 752-766.
- Collins, K., & Bell, R. (1997). Personality and aggression: The Dissipation-Rumination Scale. *Personality and Individual Differences, 22*, 751-755.
- Coyle, C. T., & Enright, R. D. (1997). Forgiveness intervention with post-abortion men. *Journal of Consulting and Clinical Psychology, 65*, 1042-1045.
- Darby, B. W., & Schlenker, B. R. (1982). Children's reactions to apologies. *Journal of Personality and Social Psychology, 43*, 742-753.
- Dawes, R. M. (1979). The robust beauty of improper linear models in decision making. *American Psychologist, 34*, 571-582.
- Diener, E., Sandvik, E., Pavot, W., & Gallagher, D. (1991). Response artifacts in the measurement of subjective well-being. *Social Indicators Research, 24*, 36-56.
- Emmons, R. A. (1992, August). *Revenge: Individual differences and correlates*. Poster presented at the 100th Annual Convention of the American Psychological Association, Washington, DC.
- Enright, R. D., Gassin, E. A., & Wu, C. (1992). Forgiveness: A developmental view. *Journal of Moral Education, 21*, 99-114.
- Enright, R. D., & Human Development Study Group (1996). Counseling within the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values, 40*, 107-126.
- Enright, R. D., Santos, M. J., & Al-Mabuk, R. (1989). The adolescent as forgiver. *Journal of Adolescence, 12*, 99-110.
- Freedman, S., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest survivors. *Journal of Consulting and Clinical Psychology, 64*, 983-992.
- Gahagan, J. P., & Tedeschi, J. T. (1968). Strategy and the credibility of promises in the prisoner's dilemma game. *Journal of Conflict Resolution, 12*, 224-234.
- Girard, M., & Mullet, E. (1997). Propensity to forgive in adolescents, young adults, older adults, and elderly people. *Journal of Adult Development, 4*, 209-220.
- Gold, D. B., & Wegner, D. M. (1995). Origins of ruminative thought. Trauma, incompleteness, nondisclosure, and suppression. *Journal of Applied Social Psychology, 25*, 1245-1261.
- Gorsuch, R. L., & Hao, J. Y. (1993). Forgiveness: An exploratory factor analysis and its relationship to religious variables. *Review of Religious Research, 34*, 333-347.
- Gottman, J. M. (1993). A theory of marital dissolution and stability. *Journal of Family Psychology, 7*, 57-75.
- Greenberg, M. A. (1995). Cognitive processing of traumas: The role of intrusive thoughts and reappraisals. *Journal of Applied Social Psychology, 25*, 1262-1296.
- Hebl, J. H., & Enright, R. D. (1993). Forgiveness as a psychotherapeutic goal with elderly females. *Psychotherapy, 30*, 658-667.

- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Hodgins, H. S., Liebeskind, E., & Schwartz, W. (1996). Getting out of hot water: Facework in social predicaments. *Journal of Personality and Social Psychology, 71*, 300-314.
- Holman, E. A., & Silver, R. C. (1996). Is it the abuse or the aftermath? A stress and coping approach to understanding responses to incest. *Journal of Social and Clinical Psychology, 15*, 318-339.
- Horai, J., Lindskold, S., Gahagan, J., & Tedeschi, J. (1969). The effects of conflict intensity and promisor credibility on a target's behavior. *Psychonomic Science, 14*, 73-74.
- Horowitz, M. J., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine, 41*, 209-218.
- Hoyle, R. H., & Panter, A. M. (1995). Writing about structural equation models. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 158-176). Thousand Oaks, CA: Sage.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis*. Newbury Park, CA: Sage.
- Jöreskog, K. G., & Sörbom, D. (1984). *LISREL VI user's guide*. Mooresville, IN: Scientific Software.
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8.12A*. Chicago: Scientific Software International.
- Kaplan, B. H. (1992). Social health and the forgiving heart: The Type B story. *Behavioral Medicine, 15*, 3-14.
- Katz, J., Street, A., & Arias, I. (1995, November). *Forgive and forget: Women's responses to dating violence*. Poster presented at the annual conference of the Association for the Advancement of Behavior Therapy, Washington, DC.
- Kelley, H. H., & Thibault, J. W. (1978). *Interpersonal relations: A theory of interdependence*. New York: Wiley.
- Komorita, S. S., Hilty, J. A., & Parks, C. D. (1991). Reciprocity and cooperation in social dilemmas. *Journal of Conflict Resolution, 35*, 494-518.
- Maruyama, G. M. (1998). *Basics of structural equation modeling*. Thousand Oaks, CA: Sage.
- Mauger, P. A., Perry, J. E., Freeman, T., Grove, D. C., McBride, A. G., & McKinney, K. E. (1991). The measurement of forgiveness: Preliminary research. *Journal of Psychology and Christianity, 11*, 170-180.
- Mauger, P. A., Saxon, A., Hamill, C., & Pannell, M. (1996, March). *The relationship of forgiveness to interpersonal behavior*. Paper presented at the annual meeting of the Southeastern Psychological Association, Norfolk, VA.
- McCullough, M. E., Exline, J. J., & Baumeister, R. F. (1998). An annotated bibliography of research on forgiveness and related concepts. In E. L. Worthington, Jr. (Ed.), *Dimensions of forgiveness* (pp. 193-317). Radnor, PA: Templeton Foundation Press.
- McCullough, M. E., Rachal, K. C., & Hoyt, W. T. (1998). *What we know (and need to know) about assessing forgiveness constructs*. Unpublished manuscript, National Institute for Healthcare Research, Rockville, MD.
- McCullough, M. E., Rachal, K. C., Sandage, S. J., & Worthington, E. L., Jr. (1997, August). *A sustainable future for the psychology of forgiveness*. Paper presented at the 105th Annual Convention of the American Psychological Association, Chicago.
- McCullough, M. E., Sandage, S. J., & Worthington, E. L., Jr. (1997). *To forgive is human*. Downers Grove, IL: InterVarsity.
- McCullough, M. E., & Worthington, E. L. (1994a). Encouraging clients to forgive people who have hurt them: Review, critique, and research prospectus. *Journal of Psychology and Theology, 22*, 3-20.
- McCullough, M. E., & Worthington, E. L. (1994b). Models of interpersonal forgiveness and their applications to counseling: Review and critique. *Counseling and Values, 39*, 2-14.
- McCullough, M. E., & Worthington, E. L. (1995). Promoting forgiveness: A comparison of two brief psychoeducational interventions with a waiting-list control. *Counseling and Values, 40*, 55-68.
- McCullough, M. E., & Worthington, E. L., Jr. (in press). Religion and the forgiving personality. *Journal of Personality*.
- McCullough, M. E., Worthington, E. L., & Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology, 73*, 321-336.
- Miller, T. Q., Smith, T. W., Turner, C. W., Guijarro, M. L., & Hallet, A. J. (1996). A meta-analytic review of research on hostility and physical health. *Psychological Bulletin, 119*, 322-348.
- Nelson, M. K. (1993). *A new theory of forgiveness*. Unpublished doctoral dissertation, Purdue University, West Lafayette, IN.
- Ohbuchi, K., Kameda, M., & Agarie, N. (1989). Apology as aggression control: Its role in mediating appraisal of and response to harm. *Journal of Personality and Social Psychology, 56*, 219-227.
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*, 598-609.
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment, 5*, 164-172.
- Pfefferbaum, B., & Wood, P. B. (1994). Self-report study of impulsive and delinquent behavior in college students. *Journal of Adolescent Health, 15*, 295-302.
- Rackley, J. V. (1993). *The relationships of marital satisfaction, forgiveness, and religiosity*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA.
- Roloff, M. E., & Janiszewski, C. A. (1989). Overcoming obstacles to interpersonal compliance: A principle of message construction. *Human Communication Research, 16*, 33-61.
- Rusbult, C. E., Verette, J., Whitney, G. A., Slovick, L. F., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology, 60*, 53-78.
- Sandage, S. J. (1997). *An ego-humility model of forgiveness*. Unpublished doctoral dissertation, Virginia Commonwealth University, Richmond, VA.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*, 15-28.
- Stanley, S. M., & Markman, H. J. (1992). Assessing commitment in personal relationships. *Journal of Marriage and the Family, 54*, 595-608.
- Strasser, J. A. (1984). *The relation of general forgiveness and forgiveness type to reported health in the elderly*. Unpublished doctoral dissertation, Catholic University of America, Washington, DC.
- Stuckless, N., & Goranson, R. (1992). The Vengeance Scale: Development of a measure of attitudes toward revenge. *Journal of Social Behavior and Personality, 7*, 25-42.
- Subkoviak, M. J., Enright, R. D., Wu, C., Gassin, E. A., Freedman, S., Olson, L. M., & Sarinopoulos, I. (1995). Measuring interpersonal forgiveness in late adolescence and middle adulthood. *Journal of Adolescence, 18*, 641-655.
- Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*, 1256-1269.
- Tangney, J. P., Wagner, P. E., Hill-Barlow, D., Marschall, D. E., & Gramzow, R. (1996). Relation of shame and guilt to constructive versus destructive responses to anger across the lifespan. *Journal of Personality and Social Psychology, 70*, 797-809.
- Thoresen, C. E., Luskin, F., & Harris, A. H. S. (1998). The science of

- forgiving interventions: Reflections and suggestions. In E. L. Worthington, Jr. (Ed.), *Dimensions of forgiveness* (pp. 163–190). Radnor, PA: Templeton Foundation Press.
- Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology, 43*, 281–292.
- Van Lange, P. A. M., Rusbult, C. E., Drigotas, S. M., Arriaga, X. B., Witcher, B. S., & Cox, C. L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology, 72*, 1373–1395.
- Wade, S. H. (1987). *A content analysis of forgiveness*. Unpublished master's project, Fuller Graduate School of Psychology, Pasadena, CA.
- Wade, S. H. (1989). *The development of a scale to measure forgiveness*. Unpublished doctoral dissertation, Fuller Graduate School of Psychology, Pasadena, CA.
- Wainer, H. (1976). Estimating coefficients in linear models: It don't make no nevermind. *Psychological Bulletin, 83*, 213–217.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Wegner, D. M., & Gold, D. B. (1995). Fanning old flames: Emotional and cognitive effects of suppressing thoughts of a past relationship. *Journal of Personality and Social Psychology, 68*, 782–792.
- Weiner, B. (1995). *Judgements of responsibility*. New York: Guilford Press.
- Weiner, B., Graham, S., Peter, O., & Zmuidinas, M. (1991). Public confession and forgiveness. *Journal of Personality, 59*, 281–312.
- Woodman, T. (1991). *The role of forgiveness in marital adjustment*. Unpublished doctoral dissertation, Fuller Graduate School of Psychology, Pasadena, CA.
- Wu, J., & Axelrod, R. (1995). How to cope with noise in the iterated prisoner's dilemma. *Journal of Conflict Resolution, 39*, 183–189.
- Zilberg, N. J., Weiss, D. S., & Horowitz, M. J. (1982). Impact of Event Scale: A cross-validation study and some empirical evidence supporting a conceptual model of stress response syndromes. *Journal of Consulting and Clinical Psychology, 50*, 407–414.

Appendix

Transgression-Related Interpersonal Motivations Inventory

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

- 1 = Strongly disagree
 2 = Disagree
 3 = Neutral
 4 = Agree
 5 = Strongly agree

- | | |
|---|--|
| 1. _____ I'll make him/her pay. (R) | 7. _____ I live as if he/she doesn't exist, isn't around. (A) |
| 2. _____ I wish that something bad would happen to him/her. (R) | 8. _____ I don't trust him/her. (A) |
| 3. _____ I want him/her to get what he/she deserves. (R) | 9. _____ I find it difficult to act warmly toward him/her. (A) |
| 4. _____ I'm going to get even. (R) | 10. _____ I avoid him/her. (A) |
| 5. _____ I want to see him/her hurt and miserable. (R) | 11. _____ I cut off the relationship with him/her. (A) |
| 6. _____ I keep as much distance between us as possible. (A) | 12. _____ I withdraw from him/her. (A) |

Note. Items on the Avoidance and Revenge subscales are denoted with (A) and (R), respectively.

Received May 4, 1998
 Revision received July 30, 1998
 Accepted August 3, 1998 ■