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THE LONGITUDINAL ASSOCIATION BETWEEN FORGIVENESS AND RELATIONSHIP CLOSENESS AND COMMITMENT

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This article examines the longitudinal relationship between forgiveness and the restoration of closeness and commitment in relationships that have been damaged by transgressive behavior. Participants were 201 university students who had recently incurred painful interpersonal transgressions. The revenge and benevolence dimensions of forgiveness appeared to facilitate later closeness and commitment, whereas the avoidance dimension of forgiveness appeared to have a reciprocal causal relationship with closeness and commitment. Ramifications for the association between forgiveness and reconciliation are discussed.

Conflict is an unavoidable byproduct of interpersonal relationships (Cords & Killen, 1998; Fincham, 2000). Competition for scarce resources, ambitions toward power and status, and betrayals of loyalty and trust can all have negative effects on relationships, causing them to become at least temporarily more distant and less committed (McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998). Such transgressions also exert negative psychological effects on their victims, including a desire to avoid the transgressor, a desire to seek revenge, and a

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decay of benevolence and goodwill (McCullough et al., 1998; McCullough, Worthington, & Rachal, 1997).

Despite the robust negative effects of relational transgressions on relationships, it is clear that many relationships are not irreversibly damaged by such transgressions (Couch, Jones, & Moore, 1999). A variety of factors such as relationship dependence (Drigotas & Rusbult, 1992), satisfaction level, and investment size (Rusbult, 1983) may reverse the decline in partners' closeness and commitment to one another following a transgression. Forgiveness is another construct that may help restore relationship closeness and commitment after a transgression.

POSSIBLE RELATIONSHIPS BETWEEN FORGIVENESS AND THE RESTORATION OF CLOSENESS AND COMMITMENT

We define forgiveness as a set of prosocial motivational changes that take place within an offended relationship partner such that he or she becomes less vengeful, less avoidant, or more benevolent toward a transgressing relationship partner (McCullough et al., 1997; McCullough, Fincham, & Tsang, 2003). The removal of negative motivations such as revenge and avoidance that typically occur after a transgression (McCullough et al., 2003) and the re–establishment of positive motivations such as benevolence should foster the restoration of closeness and commitment following a transgression. Given the importance of re–establishing close relationships in the aftermath of conflict for many nonhuman primates and other animals (e.g., Keltner & Potegal, 1997; Silk, 2002) it would be surprising if the human psychological repertoire did not include intrapsychic mechanisms to facilitate relationship repair.

Relationship commitment, on the other hand, can be conceptualized as a long-term orientation toward a relationship (Agnew, Van Lange, Rusbult, & Langston, 1998; Rusbult, Drigotas, & Verette, 1994; Rusbult, Martz, & Agnew, 1998), including the behavioral intent to remain with a relationship partner, and a psychological attachment to that partner (Rusbult, 1983). Numerous studies have demonstrated the positive effect of commitment on close relationships (Rusbult & Buunk, 1993). For example, individuals who are more committed to their relationships are more accommodating toward their relationship partners (Rusbult, Bissonnette, Arriaga, & Cox, 1998; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; Wieselquist, Rusbult, Foster, & Agnew, 1999), more willing to sacrifice (Van Lange et al., 1997), and likely to perceive their partners' transgressions to be less severe (Menzies–Toman & Lydon, 2005).

Commitment may also be related to increases in forgiveness (Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003). Finkel, Rusbult, Kamashiro, and Hannon (2002) theorized that when betrayal occurs in a

relationship, the individual's first impulse is to react in a relationship–destructive manner, for instance by taking revenge. However, individuals who are more committed and thus more dependent on their relationships should be more willing to forgive their relationship partners after betrayal. Finkel et al.'s (2002) findings suggested that relationship commitment was causally related to forgiveness, and this effect was mediated by positive cognitive reinterpretations of the transgression. Additionally, Karremans and Van Lange (2004) found that individuals reported more forgiveness toward relationship partners to whom they were strongly committed, compared to individuals who recalled transgressions by relationship partners to whom they were only weakly committed. Likewise, Exline, Baumeister, Bushman, Campbell, and Finkel (2004) reported that individuals who were more committed to their romantic partners were more likely to forgive those partners for transgressions. McCullough et al. (1998) found that individuals' reports of forgiveness for their partners' past transgressions were significantly correlated with their own as well as their partners' commitment and satisfaction in the relationship.

Relationship closeness can be thought of as interdependence (Berscheid, Snyder, & Omoto, 1989b; Kelley et al., 1983) or interconnectedness (Aron, Aron, & Smollan, 1992), and may contain components of love, caring, and commitment (Berscheid, Snyder, & Omoto, 1989a). Closeness and commitment often co–occur in relationships and may be related concepts. Aron et al. (1992) showed that relationship closeness was positively related to measures of marital commitment. Similarly, Agnew et al. (1998) found positive cross–sectional as well as longitudinal associations between relationship commitment and measures of "cognitive interdependence," which included many closeness–related constructs such as the use of plural pronouns when referring to the relationship, Aron et al.'s (1992) measure of relationship closeness, and relationship centrality. Rusbult et al. (1998) reported positive associations between their measure of commitment and multiple measures of relationship closeness. It is important to note that even with these positive relationships between closeness and commitment, it is possible in some cases for individuals to feel little closeness in their relationship, but still be highly committed because of other relationship variables such as poor alternatives or high investment in the relationship (Rusbult, 1983).

Closeness may also be related to forgiveness. As Fincham (2000) theorized, forgiveness should be an important tool in maintaining closeness in relationships given the inevitability of interpersonal conflict. Additionally, restoring closeness toward an offender may be the first step toward forgiving him or her (Harber & Wenberg, 2005). Individuals often report being more willing to forgive close others (Exline et al., 2004;

McCullough et al., 1998; Ohbuchi & Takada, 2001). It may be easier for partners to empathize with each other in close relationships (Batson, 1987; Batson & Shaw, 1991; McCullough et al., 1998), and empathy has been found to be positively related to forgiveness (McCullough et al., 1997, 1998, 2003; Worthington et al., 2000).

Although research has begun to document the association between forgiveness and closeness and commitment, there have been few studies examining the temporal relationship between these constructs. Do individuals need first to forgive the offender before they can repair the relationship, or does the restoration of closeness and commitment after a transgression pave the way for forgiveness? One can argue that forgiveness has to occur first in order for damaged closeness and commitment to be restored: It may be difficult for the hurt individual to feel close to an offender if he or she still harbors a grudge about the transgression. For instance, McCullough et al. (1998) conducted path analyses revealing that post–transgression closeness was facilitated by forgiveness in the form of reduced avoidance. In contrast, one can also argue that the restoration of closeness and commitment after a transgression may precede and facilitate forgiveness. This idea is consistent with classic social psychological theories such as cognitive dissonance (Festinger, 1957) and self–perception (Bem, 1967). When an individual has recommitted to a relationship with a transgressor but has yet to forgive him or her, cognitive dissonance predicts that the attitudes of closeness and commitment would be inconsistent with that individual's unforgiving cognitions and would thus cause the individual to feel uncomfortable. One avenue by which the individual can reduce this discomfort is by forgiving the perpetrator, thereby resolving the inconsistency. Similarly, according to self–perception, the individual in the above example would observe his or her close and committed behavior toward a transgressor, and make the attribution that he or she must have also forgiven that person. Therefore, in the context of cognitive dissonance and self–perception a causal path leading from restored closeness and commitment to forgiveness is theoretically feasible. McCullough et al. (1998) also reported that pretransgression closeness was related to forgiveness, raising the possibility that post–transgression closeness and commitment may also facilitate forgiveness.

The predictions that forgiveness restores relationship closeness and commitment, and that closeness and commitment facilitate forgiveness, are therefore both viable. However, we know of no studies that test both hypotheses simultaneously. In the present article, we introduce some conceptual tools for considering forgiveness and closeness and commitment using longitudinal data. Then, we present the results of a longitu-

dinal study designed to untangle the temporal relationships among these constructs.

A TEMPORAL ANALYSIS OF FORGIVENESS AND CLOSENESS AND COMMITMENT

Because we expect psychological changes in forgiveness and closeness and commitment following an interpersonal transgression, the concept of time becomes important to our analyses—change necessarily has a temporal component. For instance, a person who becomes less avoidant, less vengeful, and more benevolent over time would be said to have grown more forgiving, whereas a person who becomes more avoidant, more vengeful, and less benevolent has grown less forgiving. To capture these implicitly temporal dynamics of forgiveness, McCullough et al. (2003) showed that a person's transgression–related interpersonal motivations (TRIMs) of revenge, avoidance, and benevolence toward his or her transgressor after a discrete amount of time had passed since the transgression could be modeled using a set of multilevel equations. One can also employ a panel design to represent changes in revenge, avoidance, and benevolence in terms of residual variances in those variables that could not be predicted on the basis of prior scores on the same variables (Finkel, 1995).

We propose to extend this temporal analysis to restored closeness and commitment. Just as forgiveness unfolds over time, the re–establishment of closeness and commitment after a transgression also requires time. To model restored closeness and commitment, we examine longitudinal change in closeness and commitment, operationalized as variance in those variables at any given point in time that cannot be predicted on the basis of prior levels of the same variables.

The use of longitudinal data is essential to a temporal conceptualization of forgiveness and restored closeness and commitment. In addition, the use of longitudinal data is an important mechanism by which researchers can tentatively test for causality between forgiveness and closeness and commitment. The potential causal relation between variables in a longitudinal data set can be tested by comparing the fit of different panel models. A baseline model with no cross–lagged paths between a TRIM (i.e., avoidance, revenge, or benevolence motivation) and closeness/commitment would represent a null model that posits no causal relationship. This baseline model can be compared to alternate models with various causal effects represented by different cross–lagged paths. For example, a model in which forgiveness influences closeness/commitment would contain cross–lagged paths between the TRIM variable at one point in time, and closeness/commit-

ment at a later point in time. In contrast, a model that predicts a causal relationship from closeness/commitment to forgiveness would contain cross–lagged paths beginning with closeness/commitment and ending at a TRIM variable at a later point in time. These models could also be compared to a model with cross–lagged paths in both directions to examine whether forgiveness and closeness/commitment had a reciprocal relationship. By comparing the fit of these different models, the potential causal relationship between forgiveness and closeness/commitment can be tested.

THE PRESENT STUDY

The present research expands upon previous research by adding a longitudinal component to the analysis of forgiveness and restored closeness and commitment. Measuring these variables over multiple time points enabled us to investigate the direction of potential causal effects between forgiveness and closeness/commitment. We used panel analyses to examine the cross–lagged associations between these two constructs (Finkel, 1995). As explained above, if earlier levels of the predictor variable are associated with later levels of the criterion variable (controlling for previous values of the criterion variable), then we have stronger evidence to infer that the predictor variable exerts a causal influence on the criterion. In this way, we investigated possible causal relationships between forgiveness and the restoration of closeness and commitment after a transgression.

METHOD

PARTICIPANTS

Participants were 201 undergraduate students (109 women, 92 men; *M* age = 20.07, *SD* = 2.86) at Southern Methodist University. (The linear trajectories of the TRIMs for 89 of these participants were previously reported in Study 2 of McCullough et al., 2003.) Participants received a small amount of extra course credit for participating, and those who completed all five assessments received $10. All participants had incurred an interpersonal hurt within one to18 days prior to the study (*M* = 6.64, *SD* = 3.42).

PROCEDURE

In several undergraduate psychology courses we announced our interest in surveying people who had incurred a serious interpersonal hurt

within the past seven days. We revisited these courses throughout the semester, and as participants encountered significant hurts in their daily lives they approached us to enroll in the study. We supplied participants with initial packets including measures of current closeness and commitment, pretransgression closeness and commitment, transgression severity, and the three TRIMs. They also completed other measures not relevant to the present study. After completing the initial survey, we attempted to contact participants four additional times throughout the semester to collect follow–up data. Follow–up questionnaires assessed current closeness and commitment and the three TRIMs. These follow–up contacts occurred approximately two weeks apart. Thus, for each subject we endeavored to collect data approximately 1, 3, 5, 7, and 9 weeks following the transgression.

MEASURES

Transgression–Related Interpersonal Motivations (TRIMs). McCullough and colleagues (McCullough et al., 1998, 2003) have proposed that forgiveness can be conceptualized as a suite of prosocial motivational changes whereby a victim of a transgression becomes less vengeful, less avoidant, and more benevolent toward a former transgressor. We measured participants' motivations to seek revenge against and avoid their transgressors with McCullough et al.'s (1998) Transgression–Related Interpersonal Motivations (TRIM) Inventory. This 12–item self–report measure consists of two subscales: the 7–item Avoidance subscale, which measures the motivation to avoid contact with a transgressor, and the five–item Revenge subscale, which measures the motivation to seek revenge. Both subscales have high internal consistency (alphas = .85), moderate test–retest stability (8–week test–retest *r*s = approx. .50), and evidence of convergent and discriminant validity (McCullough et al., 1998, 2003). In addition, we measured benevolence with a scale consisting of five positively worded items (e.g., "Even though his/her actions hurt me, I have goodwill for him/her"), which have been used in previous forgiveness research (McCullough et al., 2003). This subscale has demonstrated high internal consistency, (alphas = .91–.93), and moderate test–retest stability (*r* = .52–.87) (McCullough et al., 2003). Items were rated on a 5–point Likert–type scale (1 = strongly disagree and 5 = strongly agree).

Repeated Measures of Relationship Closeness and Commitment. We measured relationship closeness and commitment at each time point using three items. The first two items read, "On a scale from 0 to 6, please indicate how **close** you are to the person who hurt you RIGHT NOW," (0 = Not at all close, 6 = Extremely close), and "On a scale from 0 to 6, please

indicate how **committed** you are to the person who hurt you RIGHT NOW," (0 = Not at all committed, 6 = Extremely committed). The third item was the Inclusion of Other in the Self Scale (Aron et al., 1992), which presents participants with a series of overlapping circles, the first pair having no overlap, and the seventh pair having extreme overlap. Participants are instructed: "Using the diagrams below, please indicate which picture best describes your relationship with the person RIGHT NOW (Circle one)." Responses were coded on a 1 to 7 scale, with "1" signifying the least overlapping diagram, and "7" signifying the most overlapping diagram. A closeness and commitment scale was created by taking the mean of the three items. This scale had good internal consistency reliability (alphas ranged from .93-.95) and good test–retest stability (*r*s ranged from .65-.94 across the five measurement occasions).

Retrospective Measures of Pretransgression Closeness and Commitment. We also asked participants during the first assessment to rate their pretransgression closeness and commitment using similar items ("On a scale from 0 to 6, please indicate how **close** you were to the person who hurt you BEFORE THE OFFENSE," "On a scale from 0 to 6, please indicate how **committed** you were to the person who hurt you BEFORE THE OFFENSE," and "Using the diagrams below, please indicate which picture best described your relationship with the person BEFORE THE OFFENSE.") This pretransgression scale had an internal consistency reliability of alpha = .87.

Painfulness of the Offense. In answer to the question, "How painful is the offense to you right now?" participants' mean was 3.88 (*SD* = 1.21) at the initial assessment on a 7–point Likert–type scale (0 = not painful at all and 6 = worst pain I ever felt).

RESULTS

DESCRIPTIVE STATISTICS

The types of relationship partners who had committed transgressions against our participants were diverse. Most transgressions were committed by boyfriends/girlfriends (48%), friends of the same gender (18%), and friends of the other gender (11%). Smaller numbers reported transgressions by relatives (9%), spouses (3%), and "others" (9%).

Participants recounted a number of different types of transgressions, including betrayals of confidence or insults by friends (28%); arguments or neglect by a romantic partner (boyfriend/girlfriend or spouse) or ex–romantic partner (22%); infidelity by a romantic partner (19%); rejection, neglect, or insult by a family member (10%); termination of a romantic relationship (11%); insults by people other than family or friends

TABLE 1. Means and Standard Deviations for Major Study Variables, Assessments 1 through 5

	Time 1		Time 2		Time 3		Time 4		Time 5	
Measure	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***
Avoidance	2.88	1.12	2.75	1.12	2.67	1.12	2.60	1.13	2.62	1.15
Revenge	1.83	0.84	1.64	0.85	1.57	0.77	1.53	0.75	1.49	0.82
Benevolence	3.31	1.01	3.46	1.01	3.47	1.06	3.46	1.06	3.44	1.11
Forgiveness (Single Item)	3.01	1.23	3.31	1.16	3.47	1.15	3.46	1.24	3.42	1.23
Closeness/ Commitment	3.42	1.95	3.34	1.85	3.14	1.90	3.07	1.91	2.89	1.90

Note. Time 1, $N = 201$; Time 2, $N = 185$; Time 3, $N = 165$; Time 4, $N = 151$; Time 5, $N = 139$.

(3%); rejection or abandonment by a prospective relationship partner (2%); and physical/sexual assault or other criminal offense (2%).

The means and standard deviations for the major study variables are displayed in Table 1.

PANEL ANALYSES

We conducted a series of panel analyses using the Mplus 2 statistical software (Muthén & Muthén, 1998) to explore longitudinal relationships between the TRIMs and relationship closeness/commitment. In order to study changes in TRIMs and closeness/commitment, we included autocorrelational paths between earlier and later occurrences of each construct. For example, closeness and commitment ratings at Time 5 included paths from closeness/commitment ratings from Time 4 and Time 3, whereas Time 4 contained paths from closeness/commitment ratings from Time 3 and Time 2, etc. Therefore, Time 2 through Time 5 ratings of closeness and commitment can be thought of as a measure of restored (or diminished) closeness/commitment, and Time 2 through Time 5 ratings of the TRIMs are conceptualized as forgiveness (i.e., changes in TRIMs).

We created a five–wave panel model for each TRIM (avoidance, revenge, and benevolence). This panel model included measures of closeness/commitment, the TRIM in question, and the time period (measured in days) between the transgression and the day the participant started the study. Additionally, we included the retrospective measure of pretransgression closeness/commitment and the measure of transgression severity as covariates in every model.

Each TRIM was examined separately, because previous theory and research has demonstrated different effects for different transgression–related interpersonal motivations (Fincham, 2000; McCullough et al., 2003). We tested four possible models for each TRIM. First, we constructed a baseline model that contained no cross–lagged paths between the TRIM and closeness/commitment. This model included paths from pretransgression closeness, transgression severity, and the "days elapsed" variable to initial measurements of closeness/commitment and TRIM variables, autoregressive paths of two time–lags for both closeness/commitment and the TRIMs, and synchronous correlations between the closeness/commitment and TRIM variables at each time point. This baseline model assumed no cross–lagged (i.e., causal) effects between forgiveness and closeness/commitment.

The second model tested was similar to the baseline model with the addition of cross–lagged paths between the TRIM variable at Time t, and closeness/commitment at Time t + 1. All of these cross–lagged paths were constrained to be equal, which is consistent with the notion that the relations between forgiveness and restored closeness/commitment are stationary (that is, that those cause–and–effect relations are invariant over time). We chose a stationary model because it expressed the most straightforward and parsimonious possible relationship between forgiveness and restored closeness/commitment. This model tested whether forgiveness played a causal role in the restoration or diminishment of closeness/commitment.

The third model was constructed in a manner similar to the second model, except cross–lagged paths went from closeness/commitment at Time t to the TRIM variable at Time t + 1. Again, cross–lagged paths were constrained to be equal for parsimony. This model tested whether changes in closeness and commitment played a causal role in forgiveness.

Lastly, the fourth model included cross–lagged paths going in both directions. Cross–lags from the TRIM to closeness/commitment were constrained to be equal, and cross–lags from closeness/commitment to the TRIM had a separate equality constraint. This model tested whether forgiveness and closeness/commitment had reciprocal causal effects.

Because many of these models differed from one another by exactly one parameter, we were able to use nested model comparisons to assess 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 value results from the comparison between the chi–square value from one model and the chi–square value from an alternate model consisting of the previous model with one path added or

subtracted. 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 the significantly better fit is retained as the better description of the observed data. If there is no significant difference in fit between models, the model with fewer paths is deemed superior based on parsimony. This process was repeated for each of the three TRIMs.

We also assessed absolute model fit using the chi–square test, the root–mean–square–error of approximation (RMSEA; Steiger, 1990), and the comparative fit index (CFI; Bentler, 1990). Because the chi–square statistic has the disadvantage of being nearly always significant with larger sample sizes, we looked to the RMSEA and the CFI as additional measures of fit. The RMSEA is relatively insensitive to sample size (Hu & Bentler, 1998). Models with RMSEA values below .05 have a good fit, whereas models above .10 have a poor fit. Nonsignificant chi–square values and CFI values over .95 also indicate a good fit to the data. Table 2 presents a summary of fit indices for the models and their comparisons.

Avoidance

In a first set of panel models, we examined the associations between closeness/commitment and avoidance motivation. We first analyzed a baseline avoidance model (Model 1), in which neither avoidance nor closeness/commitment were longitudinally associated. The baseline Model 1 fit the data adequately, $\chi^2(N = 201, df = 51) = 111.19$, $p < .01$, RMSEA = .08, CFI = .97. Next, we examined a model in which earlier avoidance was related to later closeness/commitment (Model 2). Again, this model fit the data adequately, $\chi^2(N = 201, df = 50) = 86.55$, $p < .01$, RMSEA = .06, CFI = .98. We concluded that Model 2 was an adequate fit to the data. We also looked at an avoidance model in which earlier closeness/commitment was related to later levels of avoidance (Model 3). Model 3 fit the data adequately, $\chi^2(N = 201, df = 50) = 88.74$, $p < .01$, RMSEA = .06, CFI = .98.

We compared Model 2 and Model 3 to the baseline Model 1. Both Model 2, $\Delta\chi^2 = 24.63$, $p < .01$, and Model 3, $\Delta\chi^2 = 22.44$, $p < .01$, were a better fit to the data than Model 1 because they produced smaller chi–square values than did the baseline model. We concluded that a model that posited no longitudinal relationship between avoidance and closeness/commitment was not the best fit to the data.

Model 4 contained cross–lags in both directions, which represented reciprocal longitudinal relationships between avoidance and closeness/commitment. Like the other models, although the chi–square value did not fit the data well, $\chi^2(N = 201, df = 49) = 75.93$, $p < .05$, the other

TABLE 2. Fit Indices for Nested Models of Forgiveness and Closeness/Commitment

Estimated model	χ^2	RMSEA	CFI	$\Delta\chi^2$
Avoidance				
Model 1 (baseline)	111.19**	.08	.97	
Model 2 (forgiveness to close/commit.)	86.55**	.06	.98	
Difference between Model 2 & Model 1				24.63**
Model 3 (close/commit. to forgiveness)	88.74**	.06	.98	
Difference between Model 3 & Model 1				22.44**
Model 4 (reciprocal causal model)	75.93*	.05	.99	
Difference between Model 4 & Model 2				10.63**
Difference between Model 4 & Model 3				12.81**
Revenge				
Model 1 (baseline)	71.67*	.05	.99	
Model 2 (forgiveness to close/commit.)	67.13+	.04	.99	
Model 3 (close/commit. to forgiveness)	70.43**	.05	.99	
Difference between Model 2 & Model 1				4.54*
Difference between Model 3 & Model 1				1.24
Model 4 (reciprocal causal model)	66.05	.04	.99	
Difference between Model 4 & Model 2				1.08
Difference between Model 4 & Model 3	4.38*			
Benevolence				
Model 1 (baseline)	97.67**	.07	.98	
Model 2 (forgiveness to close/commit.)	87.15**	.06	.98	
Model 3 (close/commit. to forgiveness)	89.98**	.06	.98	
Difference between Model 2 & Model 1				10.52**
Difference between Model 3 & Model 1				7.69**
Model 4 (reciprocal causal model)	83.65**	.06	.99	
Difference between Model 4 & Model 2				3.50+
Difference between Model 4 & Model 3				6.32*

Note. RMSEA = root–mean–square–error of approximation; CFI = comparative fit index. $+p < .10$. $*p < .05$. $**p < .01$.

indices of fit showed better fit, RMSEA = .05 and CFI = .99. We concluded that Model 4 fit the data adequately.

We compared both Model 2 and Model 3 with Model 4. Model 4 was superior both to Model 2, $\Delta\chi^2 = 10.63$, $p < .01$, and to Model 3, $\Delta\chi^2 = 12.81$, $p < .01$ because it led to significant reductions in chi–square. Therefore, we concluded that Model 4, which posited a reciprocal longitudinal relationship between avoidance and closeness/commitment, was the model

that best fit the data. (See Figure 1 for the best–fitting avoidance model. Paths with significance levels of at least $p < .05$ are highlighted in bold.[1]) Forgiveness and closeness/commitment were both longitudinally related to each other in this model: Earlier decreases in avoidance were associated with later increases of closeness/commitment, and earlier increases in closeness/commitment were also related to later decreases in avoidance.

Revenge

We next examined the associations between closeness/commitment and revenge motivation. As with avoidance, the baseline revenge model (Model 1) did not include any longitudinal associations between revenge and closeness/commitment. Model 1 fit the data adequately, $\chi^2(N = 201, df = 51) = 71.67$, $p < .05$, RMSEA = .05, CFI = .99. We examined Model 2, in which earlier levels of revenge were related to later levels of closeness/commitment. This model also fit the data adequately, $\chi^2(N = 201, df = 50) = 67.13$, $p < .06$, RMSEA = .04, CFI = .99. We then looked at the model in which earlier levels of closeness/commitment were associated with later levels of revenge (Model 3). Model 3 was a satisfactory fit to the data, $\chi^2(N = 201, df = 50) = 70.43$, $p < .01$, RMSEA = .05, CFI = .99. Although Model 2 was a better fit to the data than Model 1, $\Delta\chi^2 = 4.54$, $p < .05$, Model 3 was not, $\Delta\chi^2 = 1.24$, $p > .20$.

Model 4 contained reciprocal longitudinal relationships between revenge and closeness/commitment. This model fit the data adequately, $\chi^2(N = 201, df = 49) = 66.05$, $p < .06$, RMSEA = .04 and CFI = .99. We compared both Model 2 and Model 3 with Model 4. Model 4 was superior to Model 3, $\Delta\chi^2 = 4.38$, $p < .05$, yielding a significantly smaller value for chi–square. In contrast, Model 4 did not lead to a significant reduction in goodness–of–fit in comparison to Model 2, $\Delta\chi^2 = 1.08$, $p > .20$. Because Model 2 was also simpler by one parameter, this suggested that it was a better description of the data. We therefore concluded that Model 2, with longitudinal paths from revenge to closeness/commitment, was the model with the best fit to the data (see Figure 2). For the dimension of revenge, earlier values of forgiveness predicted later levels of closeness/commitment; in other words, decreases in revenge were associated with later increases in closeness and commitment, but the converse was not also true.

Benevolence

Next, we investigated the associations between closeness/commitment and benevolence motivation. The baseline Model 1, with no longitudinal

1. Because a great deal of variance was controlled for through autocorrelations, many path coefficients, though small, were statistically significant.

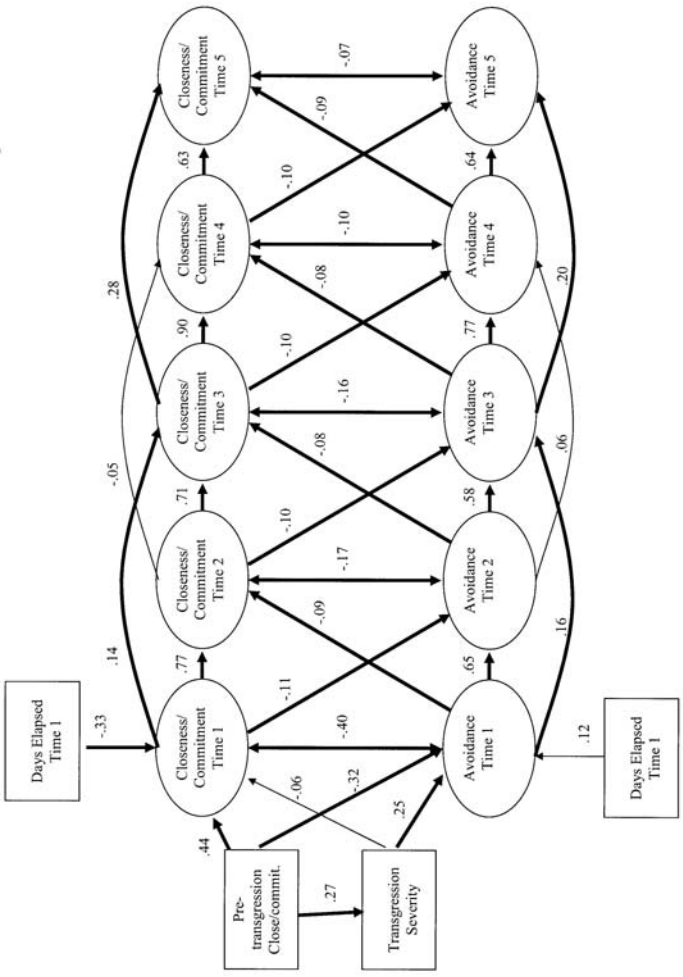

FIGURE 1. Best-fitting panel model for avoidance.

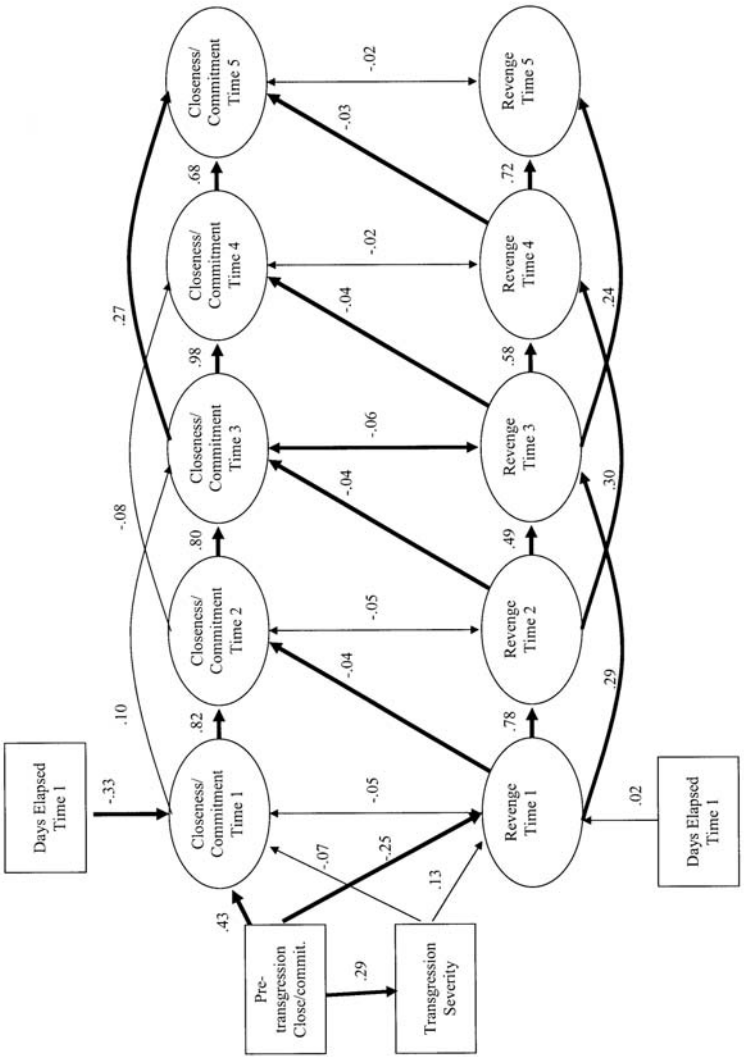

FIGURE 2. Best-fitting panel model for revenge.

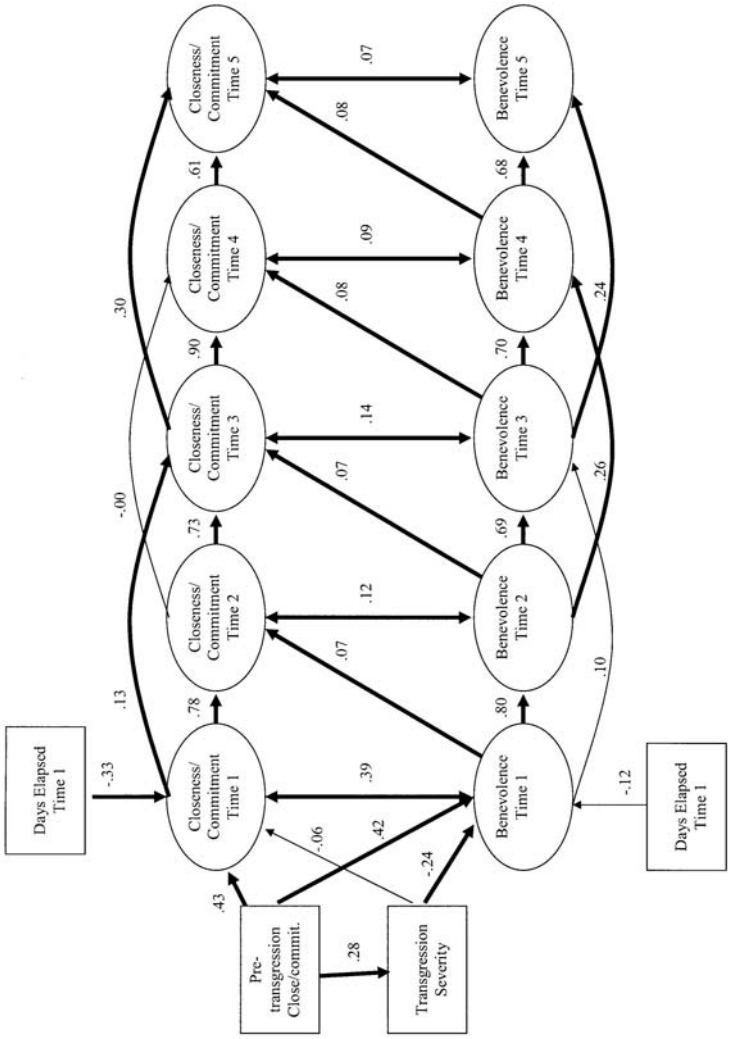

FIGURE 3. Best-fitting panel model for benevolence.

relationship between benevolence and closeness/commitment, was a satisfactory fit to the data, $\chi^2(N = 201, df = 51) = 97.67$, $p < .01$, RMSEA = .07, CFI = .98. Likewise, a model in which earlier levels of benevolence were associated with later levels closeness/commitment (Model 2) was an adequate fit to the data, $\chi^2(N = 201, df = 50) = 87.15$, $p < .01$, RMSEA = .06, CFI = .98. The benevolence model with paths from earlier closeness/commitment to later benevolence (Model 3) also fit the data adequately, $\chi^2(N = 201, df = 50) = 89.98$, $p < .01$, RMSEA = .06, CFI = .98. When compared to the baseline Model 1, both Model 2, $\Delta\chi^2 = 10.52$, $p < .01$, and Model 3, $\Delta\chi^2 = 7.69$, $p < .01$ fit the data significantly better, as evidenced by their significantly smaller chi–square values.

The benevolence Model 4, with reciprocal longitudinal associations between benevolence and closeness/commitment, fit the data adequately, $\chi^2(N = 201, df = 49) = 83.65$, $p < .01$, RMSEA = .06 and CFI = .99. Model 4 was a superior fit to Model 3, $\Delta\chi^2 = 6.32$, $p < .05$, but a marginally weaker fit than Model 2, $\Delta\chi^2 = 3.50$, $p > .06$. Again taking parsimony into consideration, we concluded that Model 2, in which earlier benevolence was related to later closeness/commitment, fit the data slightly better than a reciprocal longitudinal model (see Figure 3). For benevolence, earlier values of forgiveness predicted later increases in closeness/commitment.

DISCUSSION

Relational transgressions often have negative consequences for both the recipients of the transgressions and for the quality of the relationships in which they occur. However, our results indicate that such negative effects are not inevitable or necessarily permanent. Many victims of transgressions do overcome their negative psychological reactions to such transgressions, and many relationships are restored to health.

In spite of the relationship damage that typically occurs after transgressions, we found that forgiveness appeared to facilitate the restoration of closeness and commitment. When individuals experienced lower levels of avoidance and revenge, and higher levels of benevolence, they tended to experience increases in closeness and commitment with their transgressors as time passed. In the causal logic of panel designs, such findings would be viewed as evidence that forgiveness (i.e., increases in benevolence motivation and reductions in avoidance and revenge motivations) promotes restored closeness and commitment. We found limited evidence that effects ran in the opposite direction: People's reports of increased closeness and commitment were associated with reduced avoidance motivation at later time points.

The different pattern of relationships that we found between the various transgression–related interpersonal motivations and restored closeness and commitment over time underscore the importance of examining different facets of forgiveness separately. Revenge, avoidance, and benevolence may be qualitatively different aspects of forgiveness. Indeed, whereas the revenge and benevolence aspects of forgiveness (see also McCullough & Hoyt, 2002; McCullough et al., 2003) were related to increases in closeness and commitment later in time, avoidance and closeness/commitment showed a reciprocal relationship.

Why might earlier closeness and commitment predict later avoidance, but not later revenge and benevolence? It may be that commitment and avoidance may not be able to coexist—it is difficult to avoid someone if you are committed to a relationship with them. However, it may be possible to be committed to a relationship, but still be momentarily both lacking in benevolence and wanting revenge for a past offense. This explanation remains speculative pending further empirical data.

The association that we found between closeness, commitment, and forgiveness is consistent with previous research demonstrating links between commitment and forgiveness (Finkel et al., 2002; McCullough et al., 1998) and forgiveness–related constructs (Van Lange et al., 1997), as well as causal links between marital satisfaction and forgiveness (Fincham, Paleari, & Regalia, 2002). Because forgiveness and restored closeness and commitment probably often co–occur after relationship conflict, one would expect the size of any causal effects to be relatively small. However, these small effects remain significant and suggestive (e.g., Prentice & Miller, 1992; Rosenthal, 1990).

The positive relationship between forgiveness and restored closeness and commitment over time demonstrates a link between intrapsychic and relational processes: the reduction of intrapsychic motivations to avoid and harm one's offender, and the restoration of goodwill toward him or her may facilitate the relational process of restoring closeness and commitment to one's offender. Likewise, our data suggest that the relational variables of closeness and commitment may also facilitate some aspects of intrapsychic forgiveness, possibly through cognitive dissonance or changes in self–perception (Bem, 1967; Festinger, 1957). Whether these theoretical accounts are the best depiction of the psychological processes by which closeness and commitment foster forgiveness could be productively explored in future work.

Our article is one of the first attempts to model both forgiveness and restored closeness and commitment empirically as a process of longitudinal change. The longitudinal nature of our data and the existence of multiple time points allowed us to examine potential causal relationships between forgiveness and closeness and commitment, revealing

the possibility of a complex interplay between these constructs. Close relationship and marital researchers have noted the importance of using longitudinal data to study the processes by which relationships evolve (e.g., Bradbury, 1998; Rusbult, 1983). Therefore, our longitudinal investigation of forgiveness and relationship closeness and commitment contributes to both empirical and theoretical understandings of these important phenomena.

FORGIVENESS, CLOSENESS AND COMMITMENT, AND RECONCILIATION

Our findings on the relationship between forgiveness and closeness and commitment may have ramifications for the association between forgiveness and reconciliation in the aftermath of conflict. The processes underlying the restoration of closeness and commitment after a transgression may be similar to those underlying reconciliation.

Because reconciliation is a social phenomenon, it has both an interpersonal behavioral component and an intrapersonal psychological component. The behavioral component of reconciliation can be defined as "affiliative contact between former aggressors" (Aureli & van Schaik, 1991, p. 102). However, reconciliation can also have a psychological component of restored closeness, commitment, and trust. Fincham (2000) noted that reconciliation "involves the restoration of violated trust and requires the goodwill of both partners" (p. 7). Katz (2002) implicated closeness and commitment as important components of reconciliation, stating that "to reconcile is to restore harmony or friendship between two people" (p. 30). Finally, McCullough et al. (1997) defined reconciliation as the restoration of partners' feelings of closeness and commitment after the occurrence of a transgression. Thus, many definitions of reconciliation emphasize a psychological component of restored closeness and commitment, alongside a behavioral component of relationship repair. Accordingly, the restoration of closeness and commitment after the occurrence of a transgression may reflect a psychological component of reconciliation, suggesting that forgiveness may facilitate reconciliation in many individuals (and, in the case of avoidance motivation, reconciliation may also facilitate forgiveness).

Additionally, research has linked closeness and commitment to relationship maintenance and dissolution, concepts that are closely related to behavioral reconciliation. College students who feel more closeness in their romantic relationships are less likely to break up with their romantic partners (Berscheid et al., 1989a, 1989b; Simpson, 1987). Commitment level also predicts whether college students break up with their romantic partners (Bui, Peplau, & Hill, 1996; Drigotas & Rusbult, 1992; Lund,

1985; Rusbult, 1983; Rusbult et al., 1998), and whether victims of domestic abuse return to their abusive partner (Gordon, Burton, & Porter, 2004; Rusbult & Martz, 1995; Strube, 1988). In the context of relationship transgression and forgiveness, increases in closeness and commitment may therefore be related to reconciliation between relationship partners. Cross–sectional work has supported a relationship between forgiveness and reconciliation (McCullough et al., 1997). Additional research assessing behavioral intentions to reconcile after a transgression would lend support to these conceptual similarities.

LIMITATIONS

A few limitations of the present study should be noted. First, our measures of relationship closeness and commitment were drawn from the perspective of only one person—the victim of the transgression. It is impossible to know whether participants' reports of restored closeness and commitment would converge with reports from the transgressors. Although partners' evaluations of dyadic functioning typically do converge to some extent (e.g., Gable, Reis, & Downey, 2003; Karney & Bradbury, 2000), the convergence is not perfect. Moreover, as mentioned previously, our measures emphasized psychological relationship variables rather than behavioral reconciliation. It would be useful to know whether the apparent links between forgiveness and restored feelings of closeness and commitment are replicated with behavioral measures of reconciliation or reports of restored closeness/commitment from the perspective of the transgressor. The quasi–signal detection approach to the study of relationship events (e.g., Gable et al., 2003) might be helpful in this regard. In addition, paradigms that have been used successfully to study reconciliatory behavior in nonhuman primates (e.g., Aureli, Das, & Veenema, 1997) and children (e.g., Butovskaya & Kozintsev, 1999) might be adapted for use with adult humans as well.

An additional limitation on these results arises from the types of relationships in which we studied forgiveness. Most of these were relationships with nonmarital romantic partners or friends. Because university students presumably experience a high degree of turnover in such relationships, they might not represent well the long–term, high-investment relationships that many scholars have in mind when considering forgiveness and relationship closeness. Still, we have no reason to believe that the present results would not generalize to more long–term interpersonal relationships.

It is also important to note that although panel analyses help provide evidence in support of causal relationships between forgiveness and relationship closeness and commitment, these longitudinal analyses still

make use of correlational associations. Therefore, strong causal conclusions cannot be made in the absence of experimental research.

FUTURE DIRECTIONS

Future research might employ intervention studies to further investigate the complex causal relationship between closeness and commitment and forgiveness. For example, forgiveness might occur more quickly if individuals are provided with an intervention that enhances the closeness of their relationships with their transgressors (e.g., Harber & Wenberg 2005; Worthington & Drinkard, 2000). In a similar manner, researchers could empirically examine the effectiveness of forgiveness interventions on later closeness and commitment between two relationship partners. Intervention studies could provide experimental data and hence stronger evidence for inferring the causal relationships suggested by our longitudinal data.

Researchers could also examine the consequences that closeness, commitment, and forgiveness have for health. Does the relationship between forgiveness and decreased sympathetic nervous system arousal (Witvliet, Ludwig, & Vander Laan, 2001) vary as a function of relationship closeness/commitment? Does the restoration of closeness and commitment in relationships have similar beneficial effects on physical health, as might be expected from the associations of social support with measures of cardiovascular and immunologic measures of health (Uchino, Cacioppo, & Kiecolt–Glaser, 1996)? It is possible that researchers may uncover even stronger health benefits when forgiveness occurs within the context of close, committed relationships since individuals often rely on these relationships for social support (Karremans et al., 2003).

CONCLUSION

We discovered that forgiveness, which has typically been conceptualized as a largely intra–individual phenomenon (cf. Baumeister, Exline, & Sommer, 1998), has implications for relationships as well. Indeed, given that much of human beings' present–day repertoire of social–psychological processes arose from the necessity of maintaining small, intimate, and relatively permanent kin–based social groups, it seems only natural that evolutionary pressures would have given rise to psychological mechanisms that would foster the restoration of harmony in such relationships after acts of aggression (cf. Aureli, 1997). Forgiveness may exist in the psychological repertoire precisely because of its effectiveness in restoring damaged relationships.

The present research also suggests that the restoration of relationship closeness and commitment aids in the dissipation of negative interpersonal motivations. In this way, the social process of relationship restoration may have powerful intrapsychic effects on the victims of transgressions, just as the converse is also the case.

We believe that a great deal more work can be done to unite intra–individual processes such as forgiveness with their social–psychological precursors and interpersonal functions. By articulating the possible relationships between forgiveness and restored closeness and commitment in the present article, we have attempted to make a small contribution in this direction.

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