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Dealing With Betrayal in Close Relationships: Does Commitment Promote Forgiveness?

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This work complements existing research regarding the forgiveness process by highlighting the role of commitment in motivating forgiveness. On the basis of an interdependence–theoretic analysis, the authors suggest that (a) victims' self-oriented reactions to betrayal are antithetical to forgiveness, favoring impulses such as grudge and vengeance, and (b) forgiveness rests on prorelationship motivation, one cause of which is strong commitment. A priming experiment, a cross-sectional survey study, and an interaction record study revealed evidence of associations (or causal effects) of commitment with forgiveness. The commitment–forgiveness association appearred to rest on intent to persist rather than long-term orientation or psychological attachment. In addition, the commitment–forgiveness association was mediated by cognitive interpretations of betrayal incidents; evidence for mediation by emotional reactions was inconsistent.

Although close partners often treat one another in a positive and considerate manner, negative interactions are nearly inevitable. Such interactions result from a variety of causes, including incompatible preferences, external sources of stress, and extrarelationship temptation. We suggest that the violation of a relationship-relevant norm—or betrayal of one's partner—constitutes one of the more serious threats to a relationship, and we propose that the resolution of betrayal incidents is not easy. Indeed, forgiveness of betrayal arguably is one of the more difficult tasks in an ongoing relationship.

The film *The War of the Roses* darkly and humorously illustrates the complexities of betrayal and forgiveness: The marriage of Oliver and Barbara Rose is marked by repeated betrayal. Oliver belittles Barbara's career as a chef. Barbara fails to support Oliver during a frightening health crisis. Each humiliates the other, delivering impossible-to-forget attacks on the other's tastes and habits. Cumulatively, such incidents reduce their once-loving marriage to a sequence of vicious, increasingly deadly battles. During their marital Armageddon, the two find themselves entangled in a chandelier suspended above a hallway. The mechanism supporting the chandelier gives way, and—embraced in the arms of the chandelier—the two crash to the unyielding terazzo floor 30 feet below. With his dying breath, Oliver reaches out to touch Barbara's shoulder, offering amends and seeking forgiveness. Barbara's hand slowly rises to meet Oliver's (perhaps, one imagines, to reciprocate Oliver's act), and with her dying breath, Barbara flings Oliver's hand away from her. Again, forgiveness of betrayal arguably is one of the more difficult tasks in an ongoing relationship.

At present, psychologists' understanding of betrayal and forgiveness is somewhat limited. Although the concept of forgiveness has received considerable attention in the fields of philosophy and theology (e.g., Dorff, 1992; Nietzsche, 1887), until recently this phenomenon was largely ignored in the social sciences (for a review, see McCullough, Sandage, & Worthington, 1997). Most empirical work has sought to portray the process by which people forgive, examining the manner in which individuals perceive and explain acts of betrayal (e.g., Baumeister, Stillwell, & Wotman, 1990; Boon & Sulsky, 1997; Gonzales, Haugen, & Manning, 1994), the emotional reactions that accompany betrayal (e.g., Ohbuchi, Kameda, & Agarie, 1989; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996), or the role of interaction processes in promoting the resolution of betrayal incidents (e.g., McCullough, Worthington, & Rachal, 1997; Weiner, Graham, Peter, & Zmuidinas, 1991). Also, some work has examined the efficacy of clinical interventions designed to encourage forgiveness (e.g., Freedman & Enright, 1996; McCullough & Worthington, 1995).

Thus, the existing literature helps illuminate our understanding of *how* people forgive, identifying the cognitive, affective, and interactional concomitants of this process. Unfortunately, few prior studies have sought to explain *why* people forgive, identifying the motivational underpinnings of this phenomenon. The present work uses the principles of interdependence theory (Kelley & Thibaut, 1978) to analyze betrayal and forgiveness, emphasizing the role of commitment in motivating interpersonal forgiveness. We present the results of three studies designed to provide evidence regarding the commitment–forgiveness link. In addi-

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tion, in two studies, we extend prior research regarding the process of forgiveness by examining the role of mental events (i.e., cognition and emotion) in mediating the commitment–forgiveness association.

Norm Violations and the Experience of Betrayal

Betrayal typically is defined as "to be unfaithful or disloyal," "to reveal something meant to be hidden," or "to seduce and desert" (Steinmetz, 1993, p. 63). In the context of close relationships, we define *betrayal* as the perceived violation by a partner of an implicit or explicit relationship-relevant norm. Betrayal may be said to have occurred when the victim believes that the perpetrator has knowingly departed from the norms that are assumed to govern their relationship, thereby causing harm to the victim. Betrayal may involve minor or major normative infractions. Toward the mild end of the betrayal continuum, Oliver might embarrass Barbara during a dinner party, telling a story that makes her appear ignorant. Toward the more serious end of the continuum, Barbara might attempt to seduce Oliver's best friend.

In previous research, we have examined a variety of relationship maintenance acts, including (a) accommodative behavior—the tendency, when a partner enacts rude or inconsiderate behaviors, to inhibit destructive impulses and instead react in a constructive manner (e.g., Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991); (b) willingness to sacrifice—the tendency, when partners' interests conflict, to forego otherwise desirable behaviors or engage in otherwise undesirable behaviors (e.g., Van Lange et al., 1997); and (c) derogation of alternatives—the inclination, when confronted with an attractive alternative, to cognitively derogate that person (e.g., Johnson & Rusbult, 1989). All of these behaviors arise in response to interdependence situations involving the potential for harm. What distinguishes betrayal incidents from other sorts of negative interaction incidents?

Unlike the maintenance acts examined in previous work, betrayal incidents involve norm violations.[1] Norms are rule-based inclinations to respond to particular interdependence situations in a specified manner; norms constitute the rules by which interaction is governed, whether the rules are relationship specific or culturally shared (Rusbult & Van Lange, 1996; Thibaut & Kelley, 1959). For example, interaction partners may implicitly or explicitly agree that some courses of action are forbidden (and that other courses of action are mandated)—they agree that some interaction sequences are not to be initiated (e.g., never humiliate the partner), that some interaction contingencies are not to transpire (e.g., never fight with the partner the night before important work-related events), and that some interaction sequences are not to take place with particular sorts of partner (e.g., never become sexually intimate with an extrarelationship partner). Norms may initially be established as a simple matter of convenience. However, over time, such rules frequently "take on the characteristics of a moral obligation" (Thibaut & Kelley, 1959, p. 128).

Interaction partners develop characteristic patterns of response to recognizable interdependence situations, including habitual emotional, cognitive, and behavioral impulses (cf. Rusbult & Van Lange, 1996). Humans count on adherence to rules, so adaptation to betrayal incidents is likely to include the impulse to punish transgressors—an impulse embodied in righteous indignation and hostile behavioral tendencies. Because betrayals violate moral obligations, such incidents create an interpersonal debt. Thus, the impulse toward vengeance and other forms of debt reduction can be seen to be functionally adaptive (at least in the short run), in that the inclination to punish transgressors is a mechanism for enforcing relationship-relevant norms. Indeed, it has been argued that reactions such as victim vengeance and perpetrator guilt may have an evolutionary basis, resting on the functional value to social animals of mutual cooperation and rule adherence (cf. Ridley, 1998).

What effects do betrayal incidents exert on victims? In the aftermath of betrayal, the victim may find it difficult to depart from the negative affect associated with the incident—for instance, Oliver may experience persistent and debilitating sadness or anger (e.g., Ohbuchi et al., 1989; Rosenzweig-Smith, 1988). The victim may develop negative patterns of cognition—Oliver may feel confused by the event and its implications, may obsessively review events surrounding the betrayal, or may reinterpret prebetrayal behavior, questioning whether earlier interpretations of Barbara's behavior were correct (e.g., Baumeister et al., 1990; Boon & Sulsky, 1997; Stillwell & Baumeister, 1997). In addition, the victim may adopt negative behavioral tendencies in interaction with the perpetrator—Oliver may rather persistently seek vengeance or demand retribution and atonement (e.g., Fagenson & Cooper, 1987; Kremer & Stephens, 1983; Zillman, Bryant, Cantor, & Day, 1975).

Perpetrators may develop patterns of negative affect, cognition, and behavior that parallel the patterns evident among victims. For example, perpetrators may experience persistent negative emotions such as sadness, shame, or guilt (e.g., Baumeister, Stillwell, & Heatherton, 1995; Tangney et al., 1996). Also, victims' preoccupation and negative attributions may be met with defensive cognition on the part of perpetrators, who may seek to explain their

[1] In work regarding sacrifice arising from partners' noncorrespondent preferences, we examine noncorrespondence that arises through no fault of either partner; thus, noncorrespondent situations are not against the rules. In work regarding derogation of alternatives, it is not against the rules to be confronted with an attractive alternative; indeed, derogation of alternatives may serve to prevent situations in which norm violations might otherwise transpire. When partners create accommodative dilemmas by enacting rude or inconsiderate behaviors, such acts are unpleasant and irritating, but they are not necessarily against the rules. Of course, the boundary separating accommodation from forgiveness may be a fuzzy one, in that both accommodative dilemmas and betrayals are initiated by a partner's potentially destructive act. Potentially destructive acts such as inconsiderate behaviors may be interpreted as merely unpleasant (i.e., as accommodative dilemmas) or as rule violations (i.e., as betrayals; in fact, some norm violations studied in the present work are properly categorized as violations of decency and etiquette norms). Indeed, dictionaries describe forgiveness using norm-relevant terms such as *pardon* and *absolve*, whereas accommodation is described using norm-irrelevant terms such as *adjust*, *adapt*, and *modify*. Thus, we believe that the boundary separating accommodation from forgiveness rests on the individual's interpretation of a partner's potentially destructive act: When negative partner acts are interpreted as annoying (or even infuriating) but not necessarily against the rules, such acts are construed as accommodative dilemmas; the positive, relationship-restoring act that resolves such dilemmas is accommodation. When negative partner acts are interpreted as rule violations, they arouse righteous indignation and are construed as betrayals; the positive, relationship-restoring act that resolves such dilemmas is forgiveness.

actions in such a manner as to justify their behavior (e.g., Gonzales, Manning, & Haugen, 1992; Stillwell & Baumeister, 1997). Moreover, victims' desire for revenge and demands for atonement may be met with reciprocal behavioral negativity on the part of perpetrators, in that few perpetrators suffer endless payback and offer bottomless amends (e.g., Hodgins, Liebeskind, & Schwartz, 1996; Ohbuchi et al., 1989).

Forgiveness of Betrayal

Moving beyond this constellation of negative affect, cognition, and behavior rests on victim forgiveness. Forgiveness typically is defined as "to grant pardon" or "to cancel a debt or payment" (Steinmetz, 1993, p. 259). Previous work has adopted related definitions, including (a) "a willingness to abandon one's right to resentment, condemnation, and subtle revenge toward an offender who acts unjustly, while fostering the undeserved qualities of compassion, generosity, and even love toward him/her" (Enright & Human Development Study Group, 1996, p. 108); and (b) "the set of motivational changes whereby one becomes decreasingly motivated to retaliate against an offending partner, decreasingly motivated to maintain estrangement from the offender, and increasingly motivated by conciliation and goodwill toward the offender, despite the offender's hurtful actions" (McCullough et al., 1997, pp. 321–322). Distinguishing between intrapsychic and interpersonal events, forgiveness has also been defined in terms of (c) "[a] the inner, intrapsychic dimension involving the victim's emotional state (and the cognitive and behavioral accompaniments), and [b] the interpersonal dimension involving the ongoing relationship within which forgiveness takes place or fails to do so" (Baumeister, Exline, & Sommer, 1998, p. 80).

The extant definitions differ in the degree to which they characterize forgiveness as intrapersonal (i.e., as a within-victim mental phenomenon) versus interpersonal (i.e., as a victim–perpetrator interaction phenomenon). Indeed, lay construals of this construct seem to be rather multifaceted, including both internal qualities (e.g., mentally forgiving another's transgression) and interpersonal qualities (e.g., forgiving another by resuming prebetrayal patterns of interaction). Our work concerns forgiveness in ongoing relationships, so we emphasize the interpersonal character of this phenomenon, defining *forgiveness* as the victim's resumption of prebetrayal behavioral tendencies—as the tendency to forego vengeance and other destructive patterns of interaction, instead behaving toward the perpetrator in a positive and constructive manner. In short, the victim cancels the interpersonal debt created by the act of betrayal.[2]

As noted earlier, the victim's immediate reaction to betrayal often is antithetical to forgiveness (e.g., Barbara may want to crush Oliver's Morgan with her sports utility vehicle). Interdependence theory describes self-oriented, gut-level impulses as *given preferences* (Kelley & Thibaut, 1978). Of course, the degree to which a victim is inclined toward vengeance rather than forgiveness varies across interactions and may be moderated by the severity of betrayal, the importance of the domain in which betrayal occurs, and the specific emotions and cognitions that accompany a given act. But given that betrayals cause harm, violate moral obligations, and create an interpersonal debt, we suggest that betrayal typically engenders impulses such as vengeance and demands for retribution.

However, impulsive given preferences do not necessarily guide behavior. In reacting to an incident, individuals explicitly or implicitly take account of broader considerations such as personal values, long-term goals, and concern for a partner's well-being. This process is termed *transformation of motivation*, and the preferences resulting from this process are termed *effective preferences* (Kelley & Thibaut, 1978). The transformation process leads individuals to forego behavioral impulses based on direct self-interest and instead act on the basis of broader goals, as embodied in reconceptualized, effective preferences.[3] Sometimes the transformation process is automatic and habit driven, resting on well-established patterns of interaction; sometimes the process is mentally mediated, resting on the emergence of relatively less blameful, more benevolent emotional reactions (e.g., reduced anger) or cognitive interpretations (e.g., discounting of internal causes; cf. Rusbult & Van Lange, 1996).

It is interesting to note that there is controversy regarding the role of mental events in the forgiveness process. Why is this so? First, the philosophical literature tends to characterize intrapersonal and interpersonal events as dichotomous, all-or-nothing propositions—a victim either absolves the perpetrator of blame or does not, either forgives a perpetrator or does not (cf. North, 1987). Second, the Christian theological literature tends to regard interpersonal change in the absence of intrapersonal change as the prototype of forgiveness (cf. Marty, 1998). A rather high value is placed on saintly forgiveness, whereby the victim recognizes the full extent of a perpetrator's sin and in no way absolves blame yet nevertheless forgives. As a result of these traditions, there is a tendency to assume that forgiveness is not—or should not be—accompanied by changes in betrayal-relevant mental events. If victims achieve forgiveness because they come to understand acts of betrayal—for example, if they identify extenuating circumstances or discount the role of internal causes—such forgiveness does not count. The victim has nullified the betrayal or reinterpreted the incident in nonbetrayal terms; no real transgression is perceived to have transpired, so there is nothing to forgive.

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[2] In the case of complete forgiveness, the victim no longer exhibits interpersonal negativity in reaction to the betrayal incident. Although complete forgiveness defines the logical endpoint of the forgiveness dimension, the extent to which complete forgiveness is a practical possibility remains unclear. Thus, it is important to characterize forgiveness as a continuum rather than an all-or-nothing proposition. Indeed, we suggest that in understanding the forgiveness process, magnitude of forgiveness should be evaluated in light of the magnitude of a given betrayal. Assuming that it is more difficult to forgive relatively more serious norm violations, it may be as impressive to exhibit forgiveness of a magnitude of $x - 1$ for a serious betrayal as it is to exhibit forgiveness of a magnitude of x for a minor betrayal. Accordingly, in studies of the motives underlying forgiveness, it is important to take into consideration the severity of the betrayal for which forgiveness is relevant.

[3] Recent research supports this characterization of interpersonal forgiveness (Rusbult, Davis, Finkel, Hannon, & Olsen, 2001). For example, in responding to a series of hypothetical betrayal incidents, the behaviors that individuals endorse under conditions of limited reaction time (given preferences) are substantially more destructive and less constructive than are the behaviors they endorse under conditions of plentiful reaction time (effective preferences). Such findings support the assertions that (a) impulsive reactions to betrayal are considerably less forgiving than are actual reactions and (b) forgiveness rests on transformation of motivation.

We suggest that neither of the aforementioned assumptions is entirely valid. First, neither mental construal nor forgiveness is an all-or-nothing proposition. Individuals may come to partially understand the circumstances surrounding a betrayal; given that victim and perpetrator construals initially may differ (Stillwell & Baumeister, 1997), understanding may simply entail achieving an unbiased interpretation. Also, individuals may partially forgive—a possibility that seems particularly plausible if forgiveness unfolds over the course of extended interaction. Second, we acknowledge that victims may sometimes exhibit interpersonal forgiveness without modifying their mental construals (e.g., "I cannot find my way to anything short of full and complete blame, yet I forgive you"). At the same time, we suspect that for most people in the context of most betrayals, some degree of understanding facilitates some degree of forgiveness. Accordingly, we suggest that coming to mentally understand a betrayal incident—as evidenced by reduced negative affect and cognition—partially mediates forgiveness. Given that it may be difficult for victims to develop less blameful, more benevolent understandings, victims may rather persistently act on the basis of vengeful preferences (cf. Enright & Human Development Study Group, 1996; Gordon & Baucom, 1998). Therefore, it becomes important to ask, What inspires positive mental events, prorelationship motives, and interpersonal forgiveness?

Commitment and Forgiveness

We suggest that commitment is a fundamental property of relationships and propose that strong commitment promotes positive mental events, prorelationship motives, and forgiveness. Commitment is defined in terms of three components—intent to persist, long-term orientation, and psychological attachment. Commitment develops as a result of (a) increasing satisfaction (i.e., a relationship gratifies important needs, e.g., the needs for intimacy or security), (b) declining alternatives (i.e., important needs could not effectively be gratified by alternative partners, friends, or kin), and (c) increasing investments (i.e., resources such as personal identity, effort, or material possessions become linked to a relationship; Rusbult, 1983; Rusbult, Martz, & Agnew, 1998).

Why should commitment promote positive mental events, prorelationship motives, and forgiveness? We suggest three lines of reasoning in support of this prediction, identifying how the above-noted components of commitment might—individually or collectively—account for such associations. Our logic is based on the assumption that commitment-relevant interests may be rather immediate and direct or may be broader in either of two respects. First, individuals may be concerned about their temporally extended interests or their long-term self-interest. Second, individuals may be concerned about their interpersonally extended interests or the interests of the partners with whom they are interdependent.

The most primitive component of commitment is simple intent to persist, or the decision to remain dependent on a partner. Intent to persist is primitive because it does not in any direct manner (theoretically or operationally) involve either broadened temporal interests or broadened interpersonal interests. Because Oliver is dependent, he needs to persist—his relationship provides him with desirable outcomes, he has invested a good deal, and his alternatives are poor. Because committed individuals need their relationship and therefore intend to persist with their partner, they should be more willing to forgive a partner's transgressions: Quite simply, the more one has to lose, the more one should be willing to forego grudge and vengeance to hold on to what one has.[4]

A second component of commitment involves broadened temporal interests, or long-term orientation. Individuals with short-term orientation may achieve relatively good outcomes by behaving in accord with direct self-interest. Given long-term orientation, it behooves partners to develop patterns of reciprocal cooperation, in that Oliver's long-term well-being may be enhanced if he forgives Barbara's transgressions today so that Barbara will forgive his transgressions next month (cf. Axelrod, 1984; Wu & Axelrod, 1995). Also, with long-term orientation, the costs of forgiveness are aggregated over a longer time perspective and in light of the partner's reciprocal beneficence (cf. Kelley, 1983). Thus, forgiveness may be a conscious or unconscious means of maximizing long-term self-interest.

A third component of commitment involves broadened interpersonal interests, or psychological attachment, resting on the perception that one's own well-being and the partner's well-being are linked. In committed relationships, the self and partner may become merged to the extent that departures from self-interest benefitting the partner are not experienced as antithetical to self-interest (cf. Agnew, Van Lange, Rusbult, & Langston, 1998; Aron & Aron, 1997). Also, commitment may yield communal orientation, including tendencies to respond to a partner's needs in a rather unconditional manner. Committed individuals may exert effort without counting what they receive in return, without calculating whether their beneficence will be reciprocated (cf. Clark & Mills, 1979). Thus, commitment may inspire rather thoroughly other-oriented actions.

The empirical literature provides indirect support for this prediction, in that commitment has been shown to be associated with prorelationship maintenance acts such as derogation of alternatives, accommodative behavior, and willingness to sacrifice (e.g., Johnson & Rusbult, 1989; Rusbult et al., 1991; Van Lange et al., 1997; Wieselquist, Rusbult, Foster, & Agnew, 1999). Relatively more direct support for this proposition was reported by McCullough et al. (1998, Study 3), who found that a composite measure of commitment (Stanley & Markman, 1992) and dyadic adjustment (Spanier, 1976) was positively associated with forgiveness. However, examining the commitment–forgiveness link was a subsidiary goal in the McCullough et al. (1998) research, so the study did not provide particularly definitive evidence regarding the effects of commitment: (a) The commitment–forgiveness association was examined in only one of four studies; (b) the authors used a composite measure, examining variance attributable to the combination of commitment and adjustment; (c) retrospective reports of forgiveness were examined, such that the measure of forgiveness

[4] It might be argued that intent to persist is not so simple as we suggest. Perhaps intent to persist involves more than immediate, dependence-based need to remain in a relationship. Perhaps intent to persist, in itself, implies temporally or interpersonally extended concerns. But given that these broader concerns are directly embodied in the other two components of commitment (long-term orientation and psychological attachment), if such broad interests indeed are central to understanding why commitment promotes interpersonal forgiveness, then we should find that one or both of these components dominates intent to persist in explaining the commitment–forgiveness association.

may have been colored by self-report bias or motivated memory; and (d) the study was correlational and did not seek to rule out possible third-variable confounds, such that cause-and-effect relations remain ambiguous.

Research Overview

We conducted three studies to test the prediction that commitment motivates forgiveness, using both experimental and nonexperimental methods to obtain converging hypothesis-relevant evidence. Study 1 uses a priming procedure to manipulate commitment and assess reactions to hypothetical betrayals. Study 2 is a cross-sectional survey study in which individuals described previous betrayal incidents in their ongoing relationship. Study 3 is an interaction record study in which individuals provided in-the-moment reports of betrayal incidents over the course of a 2-week period. All three studies test the hypothesis that strong commitment is associated with (or causes) increased forgiveness. To enrich our understanding of the process by which forgiveness comes about, in Studies 2 and 3 we examined both (a) interpersonal forgiveness, or behavioral tendencies in response to betrayal, and (b) mental events, or the emotional and cognitive concomitants of such responses. To understand how commitment promotes forgiveness, in Studies 2 and 3 we assessed whether forgiving behavior was mediated by cognition and emotion. Because the transformation process by which commitment shapes motivation and behavior can be rather automatic and habit driven, we anticipated that mediation by mental events would be partial rather than complete. We also addressed two subsidiary issues: To explore lay construals of forgiveness, in Studies 2 and 3 we assessed whether answers to the statement "I forgive my partner" align with behavioral tendencies and mental events. Finally, to explore precisely why commitment promotes forgiveness, in Study 3 we administered an instrument to measure the three components of commitment—intent to persist, long-term orientation, and psychological attachment.

Study 1

In Study 1 we developed an experimental procedure to determine whether commitment causes interpersonal forgiveness in ongoing relationships. The Study 1 procedure is predicated on the assumption that individuals experience some day-to-day and moment-to-moment variation in commitment level. Although a given individual may exhibit strong commitment on average, the strength of that commitment presumably varies somewhat in response to temporal changes in interaction quality or the salience of dependence on a relationship. On the basis of this assumption, we developed a priming procedure to momentarily activate low versus high commitment to an ongoing relationship. To our knowledge, this is the first attempt to experimentally manipulate commitment level in ongoing relationships.

Following the low versus high commitment prime, participants indicated how they would react to each of several hypothetical acts of betrayal. We wished to determine whether commitment exerts differential effects on constructive versus destructive and active versus passive forgiveness-relevant reactions. Therefore, for each betrayal, we measured forgiveness with items designed to assess exit, voice, loyalty, and neglect reactions (Rusbult, 1993). Exit reactions are actively destructive (e.g., seeking vengeance), neglect reactions are passively destructive (e.g., giving the partner the cold shoulder), voice reactions are actively constructive (e.g., suggesting that the partners discuss the incident), and loyalty reactions are passively constructive (e.g., continuing to support the partner despite dissatisfaction). We predicted that in comparison with participants exposed to the low commitment prime, those exposed to the high commitment prime would exhibit greater forgiveness, reacting to betrayal with lesser exit and neglect along with greater voice and loyalty.

Method

Participants. Participants were 89 undergraduates (22 men, 67 women) who volunteered to take part in partial fulfillment of the requirements for introductory psychology at the University of North Carolina at Chapel Hill. Sign-up sheets listed the following requirement: "To participate you must currently be involved in a dating relationship of at least one month in duration." Individuals participated in groups ranging in size from 2 to 15 persons. Within each session, participants were randomly assigned to one of two experimental conditions (low vs. high commitment prime), with about equal proportions of men and women in the two conditions. Participants had been involved with their partner for 19.81 months on average. Most described their relationships as steady dating relationships (7% dating casually, 13% dating regularly, 75% dating steadily, 3% engaged or married), and most indicated that they dated their partner exclusively (91% reported that neither partner dated others, 7% reported that one partner dated others, 2% reported that both dated others). About 44% indicated that they were involved in long-distance relationships.

Procedure. In priming research, it is desirable that participants remain unaware of any link between the priming manipulation and key dependent variables. Accordingly, participants were informed that they would be asked to take part in two separate studies during the session. The first of these was described as a pilot study for work in an extended research program concerning relationships, and the second was described as a study of the positive and negative events that routinely occur in relationships. To reinforce the impression that the two portions of the study were independent, we ensured that the name of the experimenter conducting the ostensible Study 1 was different from the name of the experimenter conducting the ostensible Study 2, and we printed research materials using different fonts and print sizes.

In Study 1, participants completed a one-page questionnaire including five open-ended questions. Participants in the high commitment prime condition answered questions designed to activate thoughts regarding dependence and commitment (e.g., "If your relationship were to end in the near future, what would upset you the most about not being with your partner anymore?"; "Describe two ways in which you feel that your life has become "linked to' your partner"). Participants in the low commitment prime condition answered questions designed to activate thoughts regarding independence and lack of commitment (e.g., "Describe an activity that you enjoy engaging in when your partner is not around"; "Describe two ways in which you are independent of your partner"). When all participants had completed activities for Study 1, Study 2 commenced.

We explained that the goal of Study 2 was to determine how dating partners react to a variety of events. Participants read descriptions of 12 hypothetical acts of betrayal (e.g., "Your partner lies to you about something important"; "Your partner flirts with a classmate") and responded to four items regarding each betrayal. In keeping with previous research regarding responses to dissatisfaction, the four items for each betrayal assessed tendencies toward exit, voice, loyalty, and neglect (Rusbult & Zembrodt, 1983; one measure of each response category for each of 12 acts; e.g., "I would suggest that we go out to dinner and have a constructive talk about flirting"; 0 = *not at all likely to react this way*, 8 = *extremely likely to react this way*).

To assess the effectiveness of the commitment prime, we then measured commitment level using the Investment Model Scale (Rusbult et al., 1998; seven items; e.g., "I would feel very upset if our relationship were to end in the near future"; 0 = *do not agree at all*, 8 = *agree completely*). We also measured self-deception and impression management using the Balanced Inventory of Desirable Responding (Paulhus, 1984; 40 items; e.g., "I always obey laws, even if I'm unlikely to get caught"; 1 = *do not agree at all*, 7 = *agree completely*). At the end of the session, participants were debriefed and thanked for their assistance. During the debriefing, the experimenter carefully probed for suspicion. No participants indicated awareness of a link between Study 1 and Study 2. Also, no participants knew that whereas some people answered Study 1 questions regarding dependence and commitment, others answered questions regarding independence and lack of commitment.

Reliability and validity of measures. Reliability analyses revealed acceptable coefficients for items designed to measure exit, voice, loyalty, and neglect (αs = .78, .84, .79, and .72, respectively), commitment level (α = .86), and self-deception and impression management (αs = .64 and .78, respectively). Therefore, we developed a single measure of each variable—a count of extreme scores for self-deception and impression management (following Paulhus', 1984, procedure), and item averages for other variables. We performed correlational analyses to evaluate the validity of our measures. Consistent with expectations, destructive exit and neglect were strongly positively correlated with one another, $r(89) = .75$, $p < .01$, and were moderately negatively correlated with measures of voice and loyalty (exit, average $r = -.30$; neglect, average $r = -.26$); also, constructive voice and loyalty were strongly positively correlated with one another, $r(89) = .58$, $p < .01$, and were moderately negatively correlated with measures of exit and neglect (voice, average $r = -.37$; loyalty, average $r = -.19$).

Results and Discussion

Manipulation check. To determine whether the priming manipulation influenced momentary feelings of commitment, we performed a two-factor analysis of variance on the commitment prime manipulation check. In this analysis, commitment prime (low vs. high) and participant sex (male vs. female) were between-subjects variables. The analysis revealed a significant main effect of the commitment prime, $F(1, 85) = 11.79$, $p < .01$. Participants reported stronger subjective commitment in the high commitment prime condition than in the low commitment prime condition (*M*s = 7.06 and 5.73, respectively). In addition, the main effect of sex was significant, $F(1, 85) = 3.91$, $p < .05$. Compared with women, men reported stronger subjective commitment in both the low and the high commitment prime condition (means for low and high commitment: men = 6.14 and 7.13, respectively; women = 4.63 and 6.81).

Effects of commitment prime and participant sex. To evaluate the overall effects of the commitment prime and participant sex on exit, voice, loyalty, and neglect, we first analyzed all four measures simultaneously. The criteria in this analysis were measures of the four response tendencies; the independent variables were constructiveness of response (neglect and exit vs. loyalty and voice; a within-subject factor), activity of response (neglect and loyalty vs. exit and voice; a within-subject factor), commitment prime (low vs. high; a between-subjects factor), and participant sex (male vs. female; a between-subjects factor). To interpret the overall analysis, we also analyzed each dependent variable individually—separately for each response, we performed analyses that included as independent variables commitment prime and participant sex. Table 1 presents mean scores for each dependent variable as a function of the commitment prime along with summary statistics for the commitment prime main effect.

Table 1
Forgiveness of Partner Betrayal as a Function of Commitment Level: Study 1

Tendency	Low commitment prime	High commitment prime	Commitment main effect	
			β	$F(1, 85)$
Exit	2.51	1.85	−.42	13.15**
Voice	4.95	5.39	.17	2.10
Loyalty	3.80	4.10	.05	0.20
Neglect	3.92	3.50	−.32	6.94**

Note. Values in the Low commitment prime and High commitment prime columns are means for each experimental condition. Higher values reflect greater levels of each construct; the possible range for each variable is from 0 to 8. Each row presents findings regarding the impact of commitment on a single criterion (e.g., on exit tendencies). The β column presents standardized coefficients for the effect, and the *F* column presents *F* statistics for the effect.
** $p < .01$.

As can be seen in Table 1, compared with participants in the low commitment prime condition, those in the high commitment prime condition exhibited descriptively lower exit and neglect as well as descriptively greater voice and loyalty. The overall analysis revealed a significant interaction of Commitment Prime × Constructiveness of Response, $F(1, 85) = 6.78$, $p < .01$. Consistent with the claim that strong commitment causes forgiveness, univariate analyses revealed that the commitment main effect was significant for exit and neglect tendencies (see Table 1). However, the commitment effect was nonsignificant for voice and loyalty. Thus, the priming of commitment more powerfully influenced destructive reactions (exit and neglect) than constructive reactions (voice and loyalty).

The overall analysis also revealed a significant interaction of Participant Sex × Constructiveness of Response × Activity of Response, $F(1, 85) = 10.44$, $p < .01$. Univariate analyses revealed that the main effect of participant sex was significant for voice tendencies (see Table 1). In comparison with men, women exhibited somewhat greater forgiveness, reporting greater inclinations to react to betrayal with voice (*M*s = 4.42 and 5.42, respectively).

Finally, the overall analysis revealed several significant effects involving type of response—a main effect of constructiveness of response, $F(1, 85) = 49.70$, $p < .01$, a main effect of activity of response, $F(1, 85) = 6.06$, $p < .02$, and an interaction of Constructiveness × Activity, $F(1, 85) = 221.19$, $p < .01$. The main effects reflect the fact that participants exhibited higher scores on average for constructive than destructive responses and exhibited higher scores on average for passive than active responses. The interaction effect reflects the fact that for constructive responses, scores were higher for active voice than for passive loyalty, whereas for destructive responses, scores were higher for passive neglect than for active exit. Does this mean that in everyday life, individuals are most likely to react to betrayal with actively forgiving behaviors and are least likely to react with actively vengeful behaviors? We think not, in that absolute levels of agreement with each exit, voice, loyalty, and neglect item rest on the precise

wording of the items used in the present work. Thus, readers should exercise caution in interpreting these findings.[5]

Are the effects of the commitment prime mediated by subjective commitment? Our priming manipulation was intended to activate thoughts regarding dependence and commitment, thereby modifying participants' subjective commitment to their relationship. Are the observed effects of the prime indeed attributable to across-conditions differences in subjective commitment? To address this issue, we performed mediation analyses; examining the role of subjective commitment in mediating the impact of the prime on exit and neglect tendencies (cf. Baron & Kenny, 1986). Consistent with the requirements for assessing mediation, the measure of subjective commitment (a) differed significantly for the low and high commitment prime conditions (see earlier analyses) and (b) was significantly correlated with measures of exit and neglect, rs(89) = −.30 and −.29, respectively, both ps < .01.

To evaluate whether the effects of the commitment prime are attributable to differences in subjective commitment, we examined the impact of the commitment prime in analyses in which we included subjective commitment as a covariate. In the analysis for exit, the effect of subjective commitment was significant, $\beta(86) = .23$, $p < .03$, and the main effect of the commitment prime declined somewhat: excluding subjective commitment, $\beta(87) = .30$, $p < .01$; including subjective commitment, $\beta(86) = .22$, $p < .04$. A test of the significance of mediation (Kenny, Kashy, & Bolger, 1998) revealed that subjective commitment marginally mediated the impact of the prime on exit tendencies ($z = 1.86$, $p < .06$). In the analysis for neglect, the effect of subjective commitment was significant, $\beta(86) = .25$, $p < .02$, and the main effect of the commitment prime declined to nonsignificance: excluding subjective commitment, $\beta(87) = .22$, $p < .04$; including subjective commitment, $\beta(86) = .14$, *ns*. Subjective commitment marginally mediated the impact of the prime on neglect ($z = 1.94$, $p < .06$). Thus, the effects of the manipulation were at least partially attributable to the effects of the prime on participants' subjective commitment. (Of course, subjective commitment was assessed following measurement of exit, voice, loyalty, and neglect. Given that subjective commitment may have been influenced not only by the commitment prime but also by questions regarding betrayal and forgiveness, conclusions regarding the relationship between subjective commitment and interpersonal forgiveness should be regarded as tentative.)

Ruling out alternative explanations. Is it possible that the observed effects of the commitment prime are spurious, resulting from inclinations toward socially desirable responding? To explore this possibility, we first calculated the correlations of our exit, voice, loyalty, and neglect measures with self-deception and impression management. Self-deception was not significantly correlated with any of the measures, rs(89) = .05, .05, −.06, and −.04, respectively, all *ns*. However, impression management was significantly or marginally correlated with exit, voice, loyalty, and neglect, rs(89) = .32, −.29, −.20, and .20, respectively, all ps < .06. Subjective commitment—the priming manipulation check—was not significantly correlated with self-deception or impression management, rs(89) = .02 and .11, respectively, both *ns*.

To ensure that the earlier reported effects of the commitment prime were evident even when we controlled for socially desirable responding, we performed auxiliary analyses of covariance, examining the impact of the commitment prime and participant sex on each dependent variable; we included self-deception and impression management, in turn, as covariates. The earlier reported analyses revealed significant effects of the commitment prime for exit and neglect; in auxiliary analyses, the commitment effect remained significant in analyses that included as covariates both self-deception, Fs(1, 84) = 13.10 and 6.49, respectively, both ps < .01, and impression management, Fs(1, 84) = 9.27 and 4.84, both ps < .03. Also, the earlier reported analyses revealed a main effect of participant sex for voice; in auxiliary analyses, the sex main effect remained significant, Fs(1, 84) = 9.38 and 7.17, respectively, both ps < .01. Thus, earlier reported findings do not appear to be attributable to socially desirable responding.

Study 2

Study 1 reveals evidence that in comparison with less committed individuals, highly committed individuals are more likely to forgive partners' acts of betrayal. Given that Study 1 effected an experimental manipulation of commitment level, these findings provide good support for the assumed causal role of commitment in encouraging interpersonal forgiveness. However, Study 1 examined relatively artificial norm violations, exploring reactions to hypothetical acts of partner betrayal.

In Study 2, we used a nonexperimental method to examine associations with commitment in real betrayal incidents. Participants recalled an incident in which the dating partner violated a

[5] Are the effects of commitment evident for diverse types of betrayal? The partner acts to which participants responded involved four categories of betrayal—violations of monogamy norms (e.g., "You find out that your partner kissed someone else at a party"), dependence norms (e.g., "In a disagreement with a third person, your partner takes the other person's side"), privacy norms (e.g., "Your partner tells friends about an embarrassing secret from your past"), and decency and etiquette norms (e.g., "Your partner forgets your birthday"). We calculated measures of exit, voice, loyalty, and neglect separately for each type of betrayal and performed exploratory analyses to assess the effects of betrayal type (monogamy vs. dependence vs. privacy vs. decency and etiquette) in conjunction with constructiveness of response, activity of response, commitment prime, and participant sex.

In addition to replicating earlier reported findings, this analysis reveals that the interaction of Commitment Prime × Betrayal Type was nonsignificant—the impact of commitment did not differ as a function of betrayal type. Consistent with earlier analyses, the commitment effect was significant or marginal for exit in reaction to all four types of betrayal, Fs(1, 85) = 4.81, 7.95, 8.42, 11.90, respectively, all ps < .03, for neglect in reaction to privacy and monogamy betrayals, Fs(1, 85) = 3.92 and 4.11, both ps < .05, and for voice in reaction to privacy betrayals, $F(1, 85) = 3.67$, $p < .06$. Also, the sex effect was significant or marginal for voice in reaction to privacy betrayals, $F(1, 85) = 10.69$, $p < .01$, and for exit and voice in reaction to monogamy betrayals, respective Fs(1, 85) = 2.91 and 8.42, both ps < .09. The analysis also revealed several effects involving betrayal type: For dependence and privacy violations, participants were somewhat more constructive than destructive—they were most likely to react with voice, followed by loyalty, followed by neglect and exit. In contrast, participants were somewhat more destructive than constructive in reacting to decency and etiquette violations (e.g., lying, deliberately hurtful behavior) and were considerably more destructive than constructive in reacting to monogamy violations (e.g., flirting, sexual infidelity).

relationship-relevant norm and described their immediate and delayed reactions to the incident. We examined both immediate and delayed reactions because, unlike other sorts of interdependence dilemmas, incidents involving betrayal may not be resolved in the course of a single interaction—in reacting to real betrayals, the process by which individuals achieve forgiveness may unfold over time. In addition to assessing (a) immediate and delayed behavioral tendencies (e.g., vengeance, stated forgiveness), we also examined the mental events accompanying forgiveness, including (b) immediate and delayed cognitive interpretations (e.g., attributing the partner's actions to internal vs. external causes) and (c) immediate and delayed emotional reactions (e.g., sadness, anger).

Assuming that forgiveness is not easy and that the forgiveness process unfolds over time, we anticipated that individuals would exhibit less forgiveness immediately following betrayal than at a later time. We anticipated that we might observe one of two patterns for commitment. First, we might observe a main effect of commitment, such that strong commitment promotes forgiveness both immediately following betrayal and at a later time. Second, we might observe an interaction of commitment with time, such that highly committed individuals exhibit greater movement over time toward forgiveness. The latter possibility seems plausible in that the motives underlying forgiveness may exert their effects over the course of extended interaction—immediate, gut-level impulses may be rather negative irrespective of commitment level (immediate reactions may reflect pretransformation impulses), whereas over time, relatively committed individuals may find their way to prorelationship motives and forgiveness (delayed reactions may reflect posttransformation tendencies). Indeed, the strength of immediate and delayed associations with commitment may differ for emotion, cognition, and behavioral tendencies. We did not advance a priori predictions about whether we would observe main effects of commitment or interactions of commitment with time, nor did we specify whether patterns of association with commitment would differ for the three types of variable we examined.

Given that Study 2 uses a nonexperimental method, it is important to demonstrate—insofar as it is possible to do so—that any observed association of commitment with forgiveness is not attributable to variables that may be confounded with these variables. Accordingly, we examined the associations of duration of relationship and recency of betrayal with commitment and forgiveness, reasoning that less committed individuals might be involved in briefer relationships, might describe more recent betrayals, and might exhibit weaker forgiveness not because they are less committed but because they experienced more recent betrayal (i.e., they had less time to work through the forgiveness process). We also examined the association of severity of betrayal with commitment and forgiveness, reasoning that less committed individuals might be less committed precisely because they experienced more severe betrayals or might exhibit weaker forgiveness because they experienced more severe betrayals (rendering it more difficult to forgive). We examined six possible confounds, including (a) properties of betrayal incidents (severity of betrayal, time since betrayal), (b) features of relationships (duration of relationship, long-distance involvement), and (c) tendencies toward socially desirable responding (self-deception, impression management).

Method

Participants. Participants were 155 undergraduates (50 men, 104 women, 1 person who did not specify sex) who volunteered to take part in partial fulfillment of the requirements for introductory psychology at the University of North Carolina at Chapel Hill. As in Study 1, sign-up sheets indicated that to take part, participants must be involved in a dating relationship of at least 1 month in duration. Individuals participated in groups ranging in size from 2 to 20 persons. Participants had been involved with their dating partner for 16.56 months on average. Most described their relationships as steady dating relationships (24% dating casually, 13% dating regularly, 57% dating steadily, 6% engaged or married), and most indicated that they dated their partner exclusively (80% reported that neither partner dated others, 4% reported that one partner dated others, 16% reported that both dated others). About 29% indicated that they were involved in long-distance relationships.

Procedure. Participants were told that the goal of the study was to explore the manner in which partners react to the positive and negative events that routinely occur in dating relationships. In one portion of the questionnaire, participants were asked to describe a partner act of betrayal. We avoided using the word *betrayal* in the questionnaire, in that *betrayal* may connote exclusively sexual norm violations or may arouse anxiety or desire to present the self or the relationship in a socially desirable manner. Therefore, incidents of betrayal were described in the following manner:

> All of us have expectations about how our partners should treat us. No matter how well-behaved a partner may be in general, from time to time he or she is likely to violate those expectations; that is, your partner is likely to "break the rules" of your relationship. For example: your partner may talk to a friend about something that you believe should have remained private; your partner may do something that is hurtful to you behind your back; your partner may bring up sensitive issues from your past that you believe should have been forgotten; or your partner may otherwise behave in a way that violates your expectations about how your partner should behave.

Participants were asked to (a) write a paragraph description of what the partner did that violated their expectations, (b) write a paragraph description of how they reacted to the partner's behavior, and (c) indicate when the incident occurred (i.e., number of weeks/months/years ago).

Then participants completed a questionnaire designed to assess immediate reactions to betrayal (reactions at the time the incident occurred; i.e., "What were your immediate thoughts and feelings about the way your partner behaved; what was your initial reaction to your partner's behavior?") and delayed reactions to betrayal (reactions at present; i.e., "What are your current thoughts and feelings about the way your partner behaved; what is your present reaction to your partner's behavior?"). All participants reported immediate reactions before reporting delayed reactions. For both immediate and delayed reactions, we measured positive behavioral tendencies (seven items; e.g., "I thought that I had the right to "get even' with my partner," reverse scored; "I forgave my partner"), positive cognitive interpretations (four items; e.g., "I thought that my partner didn't try hard enough to behave in a positive manner," reverse scored), and positive emotional reactions (four items; e.g., "I felt very angry about the way my partner behaved," reverse scored; 0 = *do not agree at all*, 8 = *agree completely*). Immediate and delayed items were identical except for changes in verb tense (e.g., for delayed reactions, "I feel very upset about the way my partner behaved").

Participants also completed several other instruments. As in Study 1, we assessed commitment level using the measure from the Investment Model Scale (Rusbult et al., 1998). We also measured several potential confounds, including duration of relationship (number of months), time since betrayal

(number of weeks), and long-distance involvement ("Do you and your partner live within 60 miles of each other?"; 1 = *yes*, 2 = *no*). As in Study 1, we measured self-deception and impression management using the Balanced Inventory of Desirable Responding (Paulhus, 1984). At the end of the session, participants were debriefed and thanked for their assistance.

Measuring severity of betrayal. To assess severity of betrayal, we asked trained undergraduate research assistants to rate participants' paragraph descriptions of partner betrayal. We wished to obtain objective ratings of severity, unconfounded by the level of distress participants reported and unconfounded by the consequences of the incident. Therefore, research assistants based their ratings on participants' paragraph descriptions of betrayal incidents and were unaware of participants' reactions to the partner's behavior (as well as other questionnaire responses). Also, assistants adopted the perspective of an objective observer, rating incidents in relation to absolute standards, not in relation to the participant's perception of incident severity. Two assistants rated each description on three dimensions: (a) severity of betrayal (i.e., "In the context of the average undergraduate dating relationship, how serious a betrayal is this?"; 0 = *not at all serious*, 4 = *extremely serious*), (b) victim distress (i.e., "How distressed would the average person in the average undergraduate dating relationship feel about this incident?"; 0 = *no distress at all*, 4 = *extreme distress*), and (c) potential for relationship harm (i.e., "How much potential is there for an incident of this sort to harm the average undergraduate relationship?"; 0 = *no harm at all*, 4 = *extreme harm*).

Reliability and validity of measures. Reliability analyses revealed acceptable coefficients for items designed to measure commitment level (α = .96), self-deception (α = .54), impression management (α = .80), immediate and delayed behavioral tendencies (αs = .83 and .87, respectively), and immediate and delayed emotional reactions (αs = .82 and .90). One item measuring cognitive interpretations exhibited weak associations with the remaining items, so that item was dropped (alphas for three-item measures = .68 and .64). Research assistants' ratings of severity of betrayal exhibited good interrater agreement: for severity, distress, and harm, intraclass *r*s(155) = .52, .48, and .43, respectively, all *p*s $< .01$; for averaged measures of the three dimensions, α = .95. Therefore, we developed a single measure of each variable—a count of extreme scores for self-deception and impression management, and item averages for other variables.

To explore the lay meaning of *forgiveness*, we examined the association of the item "I forgive my partner" with immediate and delayed behavior, cognition, and emotion (dropping "I forgive. . ." from measures of behavioral tendencies; alphas for six-item measures = .84 and .88). The measures of immediate and delayed stated forgiveness ("I forgive. . .") were positively correlated with immediate and delayed behavioral tendencies, *r*s(153) = .40 and .52, both *p*s $< .01$, and cognitive interpretations, *r*s(153) = .29 and .24, both *p*s $< .01$. Delayed stated forgiveness was positively associated with delayed emotions, $r(153) = .20$, $p < .01$, but immediate stated forgiveness was not significantly associated with immediate emotions, $r(153) = .01$, *ns*. Thus, "I forgive my partner" tended to be more closely aligned with behavioral tendencies than with cognition or emotion. (In all remaining analyses, measures of behavior represent averages that include scores for stated forgiveness.)

We also examined the associations among measures of immediate and delayed behavioral tendencies, cognitive interpretations, and emotional reactions. The six measures were positively correlated, average r = .53; *r*s(153) ranged from .33 to .77, all *p*s $< .01$. As expected, measures of immediate and delayed constructs exhibited strong within-construct convergence (average correlation for immediate and delayed measures of the same construct = .66) and moderate across-constructs convergence (average correlation for immediate and delayed measures of different constructs = .48).

Content of betrayal incidents. What sorts of betrayal incidents did participants describe? Our raters' severity codings suggest that the average incident was moderately serious, distressing, and potentially harmful (M = 2.05, SD = 0.86). We examined the content of participants' paragraph descriptions and found that they concerned (a) violations of monogamy norms (22%)—the partner was emotionally or physically unfaithful or exhibited insufficient commitment (e.g., flirted without regard to participant's feelings), (b) violations of dependence norms (35%)—the partner exhibited jealous or possessive behavior or let the participant down (e.g., insisted that they have sex, even though participant did not want to or brought friends along on what was meant to be a romantic dinner), (c) violations of privacy norms (15%)—the partner shared private information with others (e.g., talked to someone else about a personal matter), and (d) violations of decency or etiquette norms (22%)—the partner lied to or misled the participant, insulted the participant, embarrassed the participant in public, was judgmental, or engaged in disapproved activities (e.g., claimed to go home after work but instead went to a party; bragged about sex in front of family; said loudly that the participant smelled bad). An additional 6% of the descriptions were unclassifiable (e.g., insufficient information to code).

Results and Discussion

Effects of commitment level, time, and participant sex. To evaluate the overall effects of commitment, time, and participant sex across our three dependent variables, we first analyzed all three measures simultaneously. The criteria in this analysis were measures of behavioral tendencies, cognitive interpretations, and emotional reactions; the independent variables were time (immediate vs. delayed reactions; a within-subject factor), participant sex (male vs. female; a between-subjects factor), and commitment level (a continuous, between-subjects factor). To interpret the overall analysis, we also analyzed each dependent variable individually, including time, participant sex, and commitment level as independent variables. Table 2 presents mean scores for each dependent variable as a function of time and commitment: means for low versus high commitment were conditioned at values of one standard deviation above and below the mean of commitment level (Aiken & West, 1991). Table 2 also presents statistics for the commitment main effect and the Time $\times$ Commitment interaction.

As can be seen in Table 2, in comparison with low commitment participants, high commitment participants exhibited descriptively more positive immediate and delayed behavioral tendencies, immediate and delayed cognitive interpretations, and delayed emotional reactions; compared with low commitment participants, high commitment participants exhibited descriptively more negative immediate emotional reactions. The overall analysis revealed significant main effects of commitment, $F(1, 148) = 4.42$, $p < .04$, and time, $F(1, 148) = 28.11$, $p < .01$, along with an interaction of Commitment $\times$ Time, $F(1, 148) = 7.65$, $p < .01$. Consistent with expectations, the main effect of commitment was significant for behavioral tendencies and cognitive interpretations (see Table 2). The Time $\times$ Commitment interaction was significant for emotional reactions—commitment was marginally negatively associated with immediate emotions, $r(153) = -.16$, $p < .06$, but was marginally positively associated with delayed emotions, $r(153) = .14$, $p < .09$. The main effect of time was significant for behavior,

Table 2
Forgiveness of Partner Betrayal as a Function of Time and Commitment Level: Study 2

Forgiveness component	Low commitment	High commitment	Commitment main effect		Time × Commitment interaction	
			β	$F(1, 148)$	β	$F(1, 148)$
Positive behavioral tendencies			.20	6.01*	.09	1.21
Immediate reactions	4.80	5.18				
Delayed reactions	6.82	7.48				
Positive cognitive interpretations			.25	8.90**	.09	1.07
Immediate reactions	4.14	4.86				
Delayed reactions	4.95	5.89				
Positive emotional reactions			.00	0.00	.28	11.73**
Immediate reactions	2.64	2.12				
Delayed reactions	5.16	5.68				

Note. Values in the Low commitment and High commitment columns are means for each condition. Higher values reflect greater levels of each construct; the possible range for each variable is from 0 to 8. Predicted means were conditioned at values of one standard deviation above and below the mean of commitment level (Aiken & West, 1991). For each dependent variable, we present findings regarding the association of commitment with that single criterion only (e.g., with positive behavioral tendencies). The β columns present standardized coefficients for the effect, and the F columns present F statistics for the effect.
* $p < .05$. ** $p < .01$.

$F(1, 148) = 25.63$, $p < .01$, cognition, $F(1, 148) = 4.59$, $p < .03$, and emotion, $F(1, 148) = 15.67$, $p < .01$.[6]

The overall analysis also revealed two significant effects involving participant sex—a main effect of participant sex, $F(1, 148) = 10.20$, $p < .01$, and an interaction of Commitment × Sex, $F(1, 148) = 5.40$, $p < .02$. Univariate analyses revealed that the main effect of participant sex was significant for behavior, $F(1, 148) = 4.49$, $p < .04$, cognition, $F(1, 148) = 5.75$, $p < .02$, and emotion, $F(1, 148) = 10.42$, $p < .01$—in Study 2 (inconsistent with the results of Study 1), compared with men, women exhibited fewer positive behavioral tendencies (*M*s = 6.29 and 5.87, respectively), cognitive interpretations (*M*s = 5.20 and 4.76), and emotional reactions (*M*s = 4.26 and 3.76). The interaction of Commitment × Sex was significant for emotional reactions, $F(1, 148) = 7.47$, $p < .01$—on average, commitment was more strongly associated with immediate and delayed emotion among women (average $r = .32$) than among men (average $r = .13$).

Thus—and consistent with the assumption that forgiveness is not easy—individuals' immediate reactions to betrayal were more negative than were their delayed reactions. Also, the commitment main effect was significant for behavior and cognition—to the degree that individuals were committed, they formed more benign interpretations of the partner's acts and reported more positive behavioral tendencies. Also—and consistent with the claim that the motives underlying forgiveness may work their magic over time—the Commitment × Time interaction was significant for emotions: Compared with less committed individuals, highly committed individuals exhibited marginally more negative immediate emotions (perhaps reflecting pretransformation impulses) and exhibited marginally more positive delayed emotions (perhaps reflecting posttransformation tendencies). That is, committed individuals were more interpersonally forgiving despite the fact that they initially were more hurt and angered by betrayal. (However, note that the time perspective for reporting commitment was concurrent with that for reporting delayed reactions.) Finally, in Study 2 men exhibited more positive emotions, cognitions, and behavior on average than did women, and the association of commitment with emotions was stronger among women than men.

Are associations with commitment mediated by mental events? Earlier, we suggested that the association of commitment with interpersonal forgiveness may be partially mediated by mental events. To address this issue, we performed mediation analyses, examining the role of cognitive interpretations and emotional reactions in mediating the association of commitment with behavioral tendencies (cf. Baron & Kenny, 1986). Consistent with the requirements for assessing mediation, our measures of cognition and emotion were significantly associated with behavioral tendencies; although cognition was significantly associated with commitment, the positive association of emotion with commitment was evident only for delayed reactions (see earlier analyses).

To evaluate whether the association of commitment with behavioral tendencies is attributable to cognitive interpretations, we regressed our measure of behavioral tendencies simultaneously onto commitment and cognition. In this analysis, the association with cognition was significant, $\beta(148) = .55$, $p < .01$, and the

[6] We also reasoned that if the motives underlying forgiveness exert their effects over the course of extended interaction, then we should observe an interaction of commitment with time since betrayal (number of weeks). To explore this line of reasoning, we examined the effects on delayed behavioral tendencies, cognitive interpretations, and emotional reactions of commitment, time since betrayal, and the interaction of these variables. These analyses revealed marginally significant Time × Commitment interactions for emotional reactions and behavioral tendencies, Fs(1, 141) = 3.00 and 3.13, respectively, both ps $< .09$; the interaction was nonsignificant for cognitive interpretations, $F(1, 141) = 0.10$, *ns*. That two of three associations with commitment were marginally stronger to the extent that more time had elapsed since the betrayal is compatible with the claim that, over time, committed individuals find their way to prorelationship emotional reactions and interpersonal forgiveness.

association with commitment declined substantially: excluding cognition, $\beta(149) = .20$, $p < .02$; including cognition, $\beta(148) = .06$, *ns*. A test of the significance of mediation revealed that cognitive interpretations significantly mediated the association with commitment ($z = 2.82$, $p < .01$). In contrast, when we regressed behavioral tendencies onto commitment and emotional reactions, the association with emotion was significant, $\beta(148) = .54$, $p < .01$, but the association with commitment remained sizeable: including emotion, $\beta(148) = .20$, $p < .01$. (It is not appropriate to test for the significance of mediation by emotional reactions because this variable did not meet the prerequisites for assessing mediation.) Thus, committed individuals may feel quite hurt or angry following betrayal—indeed, high commitment participants experienced more negative immediate emotion than did low commitment participants—yet still find their way to forgiveness. In contrast, developing benevolent (or less malevolent) cognitive interpretations of a partner's behavior appears to be a key to understanding the association of commitment with interpersonal forgiveness.

Ruling out alternative explanations. It is possible that the association of commitment with interpersonal forgiveness is spurious, resulting from confounds such as the recency or severity of partner betrayal? To explore this possibility, we first calculated the correlations of commitment and both immediate and delayed behavioral tendencies with severity of betrayal, time since betrayal, duration of relationship, long-distance involvement, self-deception, and impression management; for the duration measures (time since betrayal, duration of relationship), we examined both simple and log-transformed measures. Commitment was negatively associated with long-distance involvement, $r(154) = -.23$, $p < .01$, was positively associated with severity of betrayal, time since betrayal (simple and transformed), duration of relationship (simple and transformed), and impression management, *r*s(145 to 155) ranged from .18 to .47, all *p*s $< .05$, and was essentially unrelated to self-deception, $r(155) = .03$. Measures of immediate and delayed behavior were negatively associated with severity of betrayal, *r*s(148) $= -.40$ and $-.38$, respectively, both *p*s $< .01$, but were weakly or inconsistently related to time since betrayal (simple and transformed), duration of relationship (simple and transformed), long-distance involvement, self-deception, and impression management, *r*s(145 to 150) ranged from $-.25$ to .17, 10 of 14 were *ns*.

To ensure that the earlier reported findings are evident even when we control for each potential confound, we performed auxiliary analyses of covariance, examining the associations of commitment and sex with behavioral tendencies. In these analyses, time was a within-subject variable and commitment and sex were between-subjects variables; we included each potential confound, in turn, as a covariate (e.g., one analysis examined the effects of time, sex, commitment, and severity of betrayal on behavior). The earlier reported analysis revealed a main effect of commitment on behavioral tendencies; auxiliary analyses revealed that when we control for each potential confound, the commitment main effect remains significant, *F*s(1, 139 to 147) ranged from 4.10 to 11.64, all *p*s $< .04$. Thus, the commitment–forgiveness association is not entirely attributable to any of several variables with which commitment and interpersonal forgiveness were associated.[7] In addition, the earlier reported analysis revealed a main effect of time; auxiliary analyses revealed that the time effect remains significant in analyses in which we control for each potential confound, *F*s(1, 139 to 147) ranged from 10.66 to 31.22, all *p*s $< .01$.

Finally, the earlier reported analysis revealed a main effect of participant sex; auxiliary analyses revealed that the sex effect remains significant in analyses in which we control for all but one potential confound, *F*s(1, 139 to 147) ranged from 4.33 to 12.97, all *p*s $< .04$. In the analysis controlling for severity of betrayal, the sex effect declined to nonsignificance, $F(1, 147) = 2.43$, *ns*, suggesting that the earlier reported sex effect might be attributable to sex differences in severity (e.g., perhaps men experienced less severe betrayals). However, men's and women's betrayal descriptions did not differ significantly in rated severity (*M*s = 1.95 and 2.10, respectively), $F(1, 147) = 1.00$, *ns*. (Moreover, severity did not significantly mediate the association of sex with behavioral tendencies, $z = 1.47$, *ns*.) Given that severity did not meet the requirements for assessing mediation, these results are inconclusive.

Study 3

Study 1 reveals evidence that commitment is causally linked with forgiveness, and Study 2 reveals that in people's reactions to real betrayal incidents in ongoing relationships, commitment is positively associated with forgiveness. However, the results of Study 2 rest on retrospective accounts of prior betrayal incidents, so it is possible that individuals' accounts are colored by motivated memory processes. For example, it is possible that strong commitment yields tendencies to reconstruct the past in a benevolent manner, such that highly committed individuals recall their emotion, cognition, and behavior as more positive than they were in fact. (Also, given that the time perspective for reporting commitment was concurrent with that for reporting delayed reactions, reports of immediate reactions may have been colored by malevolent reconstruction, with less committed individuals justifying their weak commitment by describing betrayals more negatively.)

Therefore, in Study 3 we measured reactions to betrayal using daily interaction records, testing the hypothesis that commitment is positively associated with forgiveness of routine (as well as not so routine) betrayals. In Study 3 participants described all betrayals that occurred over a 2-week period, reporting on the degree to which they felt committed to their partners and describing their reactions to each incident. As in Study 2, in addition to assessing behavioral tendencies, we also examined the mental events accompanying forgiveness (i.e., cognitive interpretations, emotional reactions). Assuming that the forgiveness process may unfold over

[7] Participants described betrayal incidents that varied in severity, including some minor norm violations and some relatively more serious violations. Does commitment exert differential effects depending on the severity of betrayal incidents? To address this question, we analyzed immediate and delayed behavioral tendencies, including as independent variables time, commitment level, severity of betrayal, and participant sex; scores for commitment and severity were centered. The interaction of Commitment × Severity was nonsignificant, $F(1, 144) = 0.60$, *ns*, suggesting that the association of commitment with interpersonal forgiveness did not differ substantially as a function of severity of betrayal. (Indeed, parallel analyses examining possible interactions with commitment for the remaining seven potential confounds revealed no significant interactions. Thus, our findings do not appear to be moderated by variations in commitment level.)

time, why should we anticipate that commitment will be associated with in-the-moment forgiveness, as reported in interaction records? In light of the assumption that the process by which commitment inspires prorelationship motivation may become relatively automatic and habitual—and in light of the fact that Study 2 reveals commitment effects for both immediate and delayed reactions to betrayal—it seemed reasonable to anticipate that, on average, we would observe positive commitment–forgiveness associations even within the context of specific interactions.

Given that Study 3 is nonexperimental, it is important to demonstrate that any observed association of commitment with forgiveness is not attributable to factors that may be confounded with these variables. Therefore, we sought to demonstrate that commitment accounts for unique variance in forgiveness beyond properties of betrayal incidents, features of relationships, and tendencies toward socially desirable responding. In addition, in Study 3 we obtained exploratory data to address the question, Why does commitment promote forgiveness? Specifically, we administered a new instrument including subscales to measure the three components of commitment (intent to persist, long-term orientation, psychological attachment) and pitted the three components against one another to determine which aspect of commitment most reliably predicts forgiveness.

Method

Participants. Participants were 78 undergraduates (20 men, 58 women) who volunteered to take part in partial fulfillment of the requirements for introductory psychology at the University of North Carolina at Chapel Hill. As in Studies 1 and 2, sign-up sheets indicated that to take part, participants must be involved in a dating relationship of at least 1 month in duration. Sign-up sheets also indicated that it was necessary that participants interact with their partner almost every day, either on the telephone or in person. The analyses reported below are based on data from 64 participants (18 men, 46 women) who reported at least one betrayal incident over the course of the 2-week study; 14 individuals (2 men, 12 women) reported no betrayal incidents. Participants had been involved with their partner for 17.16 months on average. Most participants described their relationship as a steady dating relationship (6% dating casually, 3% dating regularly, 81% dating steadily, 9% engaged or married), and most indicated that they dated their partner exclusively (97% reported that neither partner dated others, 3% reported that both dated others). About 44% indicated that they were involved in long-distance relationships.

Procedure. Our materials and procedures were modeled after those used in research with the Rochester Interaction Record (Reis & Wheeler, 1991). Each participant attended two research sessions—one at the start of the 2-week study (Time 1), and a second at the end of the study (Time 2). During Time 1 sessions, we explained that the study concerned negative incidents in dating relationships. As in Study 3, we avoided the word *betrayal*, defining betrayal incidents as follows:

> Please use one record sheet to record each incident in which your partner made you feel upset, angry, or hurt. . . no matter how small or big the incident is. . . For example: your partner may tell a friend something that you believe should have remained private; your partner may do something that is hurtful behind your back; your partner may flirt with someone else at a party; or your partner may forget to call you when your partner said he/she would.

We asked participants to record all such incidents, even if an incident was quite brief, even if they felt fine by the end of the incident. If the same incident came up later during the 2-week period they were to complete a second record. We said we were interested in "incidents that involved talking as well as incidents that didn't necessarily involve talking (e.g., your partner behaves in a way that upsets you, you hear about something your partner did)." We asked participants to complete records as soon as possible following each incident and to turn in booklets every Monday, Wednesday, and Friday (as a reminder, we telephoned participants Sunday, Tuesday, and Thursday evenings).

These instructions were summarized on the cover sheet for each record booklet. The remaining sheets were forms on which betrayal incidents were recorded. For each incident, participants were asked to (a) record the date and time at which the incident occurred, (b) record the date and time at which the record sheet was completed, (c) record the duration of the incident, (d) provide a description of the incident (i.e., "Describe the incident in which your partner upset you [made you feel angry or hurt]"), and (e) answer several questions about the incident, including the manner in which they felt, thought, and behaved. We assessed positive behavioral tendencies (three items; e.g., "My partner ought to be especially nice to me to make up for what he/she did," reverse scored; "I forgive my partner"), positive cognitive interpretations (two items; e.g., "My partner upset me on purpose," reverse scored), and positive emotional reactions (two items; e.g., "I feel very hurt by the way my partner behaved," reverse scored; 1 = *do not agree at all*, 7 = *agree completely*). Also, one item assessed commitment level (i.e., "I feel committed to maintaining my relationship with my partner"), one item assessed severity of incident (i.e., "When this incident occurred, I thought it had the potential to seriously harm our relationship"), and one item assessed strength of betrayal (i.e., "When this incident occurred, I thought my partner had 'broken the rules' of our relationship").

At Time 1 research sessions, participants also completed several other instruments. As in Studies 1 and 2, we measured self-deception and impression management using the Balanced Inventory of Desirable Responding (Paulhus, 1984). We measured duration of relationship and long-distance involvement as in Study 2. In addition, at Time 1 and Time 2 sessions, participants completed a new instrument designed to measure the three components of commitment (Arriaga & Agnew, in press; five items for each construct)—intent to persist (e.g., "I intend to stay in this relationship"), long-term orientation (e.g., "When I make plans about future events in my life, I think about the impact of my decisions on our relationship"), and psychological attachment (e.g., "In all honesty, my family and friends are more important to me than this relationship," reverse scored). At the end of Time 2 sessions, participants were debriefed and thanked for their assistance.[8]

Reliability and validity of measures. Reliability analyses revealed acceptable coefficients for items designed to measure self-deception (α = .78) and impression management (α = .87), for Time 1 and Time 2 items measuring intent to persist (αs = .88 and .93, respectively), and for interaction record items measuring behavioral tendencies (α = .74) and emotional reactions (α = .76). One interaction record item measuring cognitive interpretations exhibited weak associations with other positively

[8] During Time 2 sessions, participants answered questions regarding the validity of their data. Participants reported that they recorded 94% of the betrayal incidents that occurred, completing interaction records an average of 91 min following each incident; 92% indicated that the records accurately reflected the incidents they experienced during the past 2 weeks, and 79% indicated that this period was typical of the sorts of incidents they experienced with the partner. They reported that it was not particularly difficult to maintain the interaction records (M = 2.42, SD = 1.43), they did not talk to their partner about the records (M = 1.52, SD = 1.17), participating in the study did not interfere with their everyday lives (M = 2.08, SD = 1.38), and participating in the study did not affect the activities in which they engaged (M = 1.44, SD = 1.11; for all items, 1 = *do not agree at all*, 7 = *agree completely*).

toned items, so that item was dropped. One item measuring Time 1 and Time 2 long-term orientation exhibited weak associations with the remaining items, so that item was dropped (alphas for four-item measures = .75 and .86, respectively). Also, one item measuring Time 1 and Time 2 psychological attachment exhibited weak associations with the remaining items, so that item was dropped (alphas for four-item measures = .85 and .80). We developed a single measure of each variable—a count of extreme scores for self-deception and impression management, and item averages for other variables.

To explore the lay meaning of *forgiveness*, we examined the association of the interaction record item "I forgive my partner" with measures of behavior, cognition, and emotion (dropping "I forgive. . ." from the measure of behavior; alpha for two-item measure = .69). Given that the multiple interaction records provided by a given participant are not independent, we used hierarchical linear modeling to perform these analyses (see below for additional information regarding this technique; cf. Bryk & Raudenbush, 1992). The measure of stated forgiveness ("I forgive. . .") was positively associated with measures of behavior, $\beta(87) = .53$, $p < .01$, cognition, $\beta(87) = .26$, $p < .01$, and emotion), $\beta(87) = .44$, $p < .01$. Thus, and as expected, "I forgive my partner" tended to be somewhat more closely aligned with behavioral tendencies than with cognition or emotion. (In all remaining analyses, measures of behavior represent averages that include scores for stated forgiveness.) We performed additional hierarchical analyses to examine the associations among behavioral tendencies, cognitive interpretations, and emotional reactions. The three measures were positively associated: average $\beta = .29$; βs(87) ranged from .15 to .49, all ps $< .05$.

Content of betrayal incidents. What sorts of betrayal incidents did participants describe? Participants reported an average of 2.38 betrayal incidents (range = 1 to 11), described incidents that had moderate potential for harm ($M = 2.51$, $SD = 1.70$), and indicated that the incidents broke the rules to a moderate degree ($M = 3.23$, $SD = 1.92$). We examined the content of their descriptions and found that they generally paralleled the Study 2 descriptions: (a) violations of monogamy norms (12%; e.g., disappeared into a bedroom for an hour with an ex-partner; said he or she was bored with participant, then claimed it was a joke), (b) violations of dependence norms (56%; e.g., accused participant of cheating; failed to provide assistance when it was greatly needed), (c) violations of privacy norms (2%; e.g., told a friend an important secret), and (d) violations of decency and etiquette norms (22%; e.g., made cruel accusations; played a trick on participant with a friend, then lied about it). An additional 7% of the descriptions were unclassifiable (e.g., insufficient information to code).

Results and Discussion

Analysis strategy. As noted above, data from the multiple interaction records provided by a given participant are not independent. Therefore, we used hierarchical linear modeling to analyze our data (cf. Bryk & Raudenbush, 1992). Hierarchical linear modeling simultaneously examines within-subject (lower level) and between-subjects (upper level) variance, thereby modeling each source of variation while accounting for statistical characteristics of the other level. Our design includes two levels of variable, in that data from one or more interaction records are nested within participants. Variables that were measured in interaction records are represented in our analyses as lower level variables (e.g., interaction record reports of commitment, behavior, cognition, emotion). Variables that were measured during Time 1 or Time 2 research sessions are represented as upper level variables. Participant was the upper level unit.

We initially performed key analyses allowing intercepts and slopes to vary randomly across participants (for lower level slopes, the analyses use data for participants with two or more lower level observations). Tests examining the variance and covariance components in these preliminary analyses revealed nonsignificant across-participants differences in slopes (zs ranged from 0.18 to 1.14, all *ns*) and nonsignificant covariance between intercepts and slopes (zs ranged from −0.89 to 1.61, all *ns*). Therefore, we allowed intercepts to vary randomly but represented slopes as fixed effects (the analyses reported below revealed patterns of significance vs. nonsignificance that were identical to those obtained in preliminary analyses). Also, preliminary analyses revealed no significant effects involving participant sex, so this variable was dropped from the analyses.

Effects of commitment level. To examine the association of commitment with interpersonal forgiveness and mental events, we performed hierarchical analyses on each dependent variable. The lower level criteria in these analyses were interaction-based reports of behavior, cognition, and emotion; the lower level predictor was interaction-based reports of commitment; participant was the upper level unit. The results of these analyses are summarized in Table 3. Consistent with predictions, the analyses revealed significant associations of commitment with behavioral tendencies, cognitive interpretations, and emotional reactions. Thus, in the course of everyday interaction, during betrayal incidents in which individuals felt strongly committed to their relationships, they exhibited more positive emotion, cognition, and behavior; during incidents in which they felt less committed, they exhibited reduced positivity and lesser tendencies toward interpersonal forgiveness.

Are associations with commitment mediated by mental events? To determine whether the association of commitment with interpersonal forgiveness was partially mediated by mental events, we examined the role of cognitive interpretations and emotional reactions in mediating the association of interaction-based reports of commitment with behavioral tendencies (cf. Baron & Kenny, 1986). Consistent with the requirements for assessing mediation, our interaction-based measures of cognition and emotion (a) were significantly associated with behavioral tendencies and (b) were significantly associated with interaction-based reports of commitment (see earlier analyses).

To evaluate whether the association of commitment with behavioral tendencies is attributable to cognitive interpretations, we regressed behavioral tendencies simultaneously onto commitment

Table 3
Association of Commitment Level With Forgiveness of Partner Betrayal: Study 3

	Commitment main effect	
Forgiveness component	β	$F(1, 87)$
Positive behavioral tendencies	.48	20.59**
Positive cognitive interpretations	.30	6.66**
Positive emotional reactions	.29	5.17*

Note. Table values are from hierarchical linear modeling analyses including commitment as a lower level predictor variable, with participant as the upper level unit. Each row presents findings regarding the association of commitment with a single criterion (e.g., with positive behavioral tendencies). The β column presents standardized coefficients for associations with commitment, and the F column presents F statistics for the commitment effect.
* $p < .05$. ** $p < .01$.

and cognition. In this analysis, the association with cognition was significant, $\beta(86) = .17$, $p < .03$, and the association with commitment declined somewhat: excluding cognition, $\beta(87) = .48$, $p < .01$; including cognition, $\beta(86) = .30$, $p < .01$. A test of the significance of mediation revealed that cognition significantly (yet partially) mediated the association with commitment ($z = 2.06$, $p < .04$). Similarly, when we regressed behavioral tendencies onto commitment and emotion, the association with emotion was significant, $\beta(86) = .51$, $p < .01$, and the association with commitment declined somewhat: including emotion, $\beta(86) = .24$, $p < .01$. A test of the significance of mediation revealed significant (yet partial) mediation by emotion ($z = 3.97$, $p < .01$). Thus, in Study 3 the association of commitment with interpersonal forgiveness was significantly (yet partially) mediated not only by cognitive interpretations (as in Study 2) but also by emotional reactions (unlike Study 2).[9]

Why does commitment promote forgiveness? What is it about the commitment construct that accounts for the association of commitment with interpersonal forgiveness? To address this question, we examined the associations of Time 1 and 2 measures of the three components of commitment—intent to persist, long-term orientation, and psychological attachment—with interaction-based reports of behavioral tendencies. Preliminary analyses performed separately for Time 1 and Time 2 components revealed parallel results, and Time 1 and Time 2 measures of each component were positively correlated, *r*s(147) ranged from .81 to .83, all *p*s $< .01$. Therefore, we performed key analyses using averaged measures of Time 1 and Time 2 intent to persist, long-term orientation, and psychological attachment.

First, we examined the simple association of each commitment component with behavioral tendencies. We represented behavioral tendencies as a lower level criterion and represented each commitment component, in turn, as an upper level predictor. These analyses revealed significant or marginal associations with behavioral tendencies for all three components—intent to persist, $\beta(88) = .48$, $p < .01$, long-term orientation, $\beta(88) = .24$, $p < .07$, and psychological attachment, $\beta(88) = .46$, $p < .01$. Next, we performed hierarchical analyses in which we pitted all possible pairs of commitment components against one another as predictors of behavioral tendencies. Coefficients for intent to persist consistently were significant, βs(87 or 88) = .76 and .60, both *p*s $< .01$, whereas coefficients consistently were nonsignificant for long-term orientation, βs(87 or 88) = $-.14$ and .19, both *ns*, and psychological attachment, βs(87 or 88) = $-.37$ and .23, both *ns*. Of course, these analyses should be interpreted as exploratory, in that they rest on a relatively new instrument for assessing the three components of commitment. However, these findings suggest that the commitment–forgiveness association may rest more on simple intent to persist than on components of commitment that capture broadened temporal or interpersonal interests.

Ruling out alternative explanations. Is it possible that the commitment–forgiveness association is attributable to confounds such as strength of betrayal? To explore this possibility, we first performed hierarchical analyses to examine the association of interaction-based measures of commitment and behavioral tendencies with each of several potential confounds; for duration of relationship, we examined both simple scores and log-transformed scores. Commitment was negatively associated with severity of incident and strength of betrayal, βs(87) = $-.45$ and $-.35$, both *p*s $< .01$, was positively associated with duration of relationship (simple and transformed), βs(88) = .20 and .20, both *p*s $< .04$, and impression management, $\beta(88) = .19$, $p < .08$, and was essentially unrelated to long-distance involvement and self-deception, βs(87) = .12 and $-.05$, both *ns*. The measure of behavioral tendencies was negatively associated with severity of incident and strength of betrayal, βs(87) = $-.32$ and $-.46$, both *p*s $< .01$, was positively associated with impression management, $\beta(88) = .37$, $p < .01$, and was essentially unrelated to duration of relationship (simple and transformed), long-distance involvement, and self-deception, βs(88) ranged from $-.03$ to .18, all *ns*.

To ensure that the earlier reported association with commitment was evident even when we controlled for each potential confound, we performed auxiliary analyses, including interaction-based reports of commitment along with each potential confound, in turn, as predictors. The earlier reported analyses revealed a significant association of commitment with behavioral tendencies; auxiliary analyses revealed that when we controlled for each potential confound, the association with commitment remained significant, *F*s(1, 86 to 87) ranged from 5.79 to 21.77, all *p*s $< .02$. Thus, the commitment–forgiveness association is not entirely attributable to any of several variables with which commitment and interpersonal forgiveness are associated.[10]

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[9] At Time 1 and Time 2 sessions, we also administered the commitment instrument used in Studies 1 and 2 (αs = .95 and .93, respectively). We were mainly interested in associations with interaction-based reports of commitment, in that reports from interaction records represent what we assume to be the proximal cause of forgiveness. In addition assuming that Time 1 and Time 2 instruments assess relatively stable levels of commitment, we replicated key analyses to examine associations with these measures. Preliminary analyses performed separately for Time 1 and Time 2 commitment measures revealed parallel results, and Time 1 and 2 commitment were positively correlated, $r(147) = .83$, $p < .01$, so we performed key analyses using an averaged measure of Time 1 and 2 commitment. A hierarchical analysis representing commitment as an upper level variable revealed that commitment was positively associated with behavioral tendencies, $\beta(88) = .47$, $p < .01$. In a mediation analysis including cognition as a covariate, the association of behavioral tendencies with cognition was significant, $\beta(87) = .20$, $p < .01$, and the association with commitment declined somewhat, $\beta(87) = .27$, $p < .01$. A test of the significance of mediation revealed significant (yet partial) mediation by cognition (zs = 2.11, $p < .03$). Beyond the association with commitment, emotional reactions, too, accounted for unique variance in behavioral tendencies, $\beta(87) = .54$, $p < .01$. We could not test the significance of mediation by emotion because our measure of emotional reactions was not significantly associated with commitment, $\beta(88) = .08$, *ns*.

[10] Participants described betrayal incidents that varied in severity of incident (potential for serious harm) and strength of betrayal (extent to which the incident broke the rules). Does commitment exert differential effects depending on severity of incident or strength of betrayal? To address this question, we performed a hierarchical analysis on interaction-based reports of behavioral tendencies, including as lower level predictors interaction-based reports of commitment, severity of incident, and the interaction of these variables; scores for commitment and severity were centered. The interaction of Commitment × Severity was nonsignificant, $F(1, 85) = 2.15$, *ns*. We performed a parallel analysis substituting strength of betrayal for severity of incident; the interaction of Commitment × Strength was nonsignificant, $F(1, 85) = 0.08$, *ns*. Thus, the commitment–

General Discussion

Why Do Victims Forgive?

The present work seeks to illuminate our understanding of why victims forgive norm violations by examining the role of commitment in motivating forgiveness. Three studies using diverse methods and diverse measurement techniques provide converging evidence relevant to this hypothesis. All three studies reveal positive associations of commitment with interpersonal forgiveness. The results of Study 1 are particularly noteworthy, in that they provide the first extant evidence that commitment level can be experimentally primed, enabling us to examine the causal effects of commitment. In all three studies, we took care to demonstrate that the commitment–forgiveness association is not attributable to potential confounds such as the severity or recency of betrayal, properties of relationships such as duration or long-distance involvement, or socially desirable response tendencies. Also, in Studies 2 and 3 we demonstrate that the strength of the commitment–forgiveness association does not differ significantly as a function of severity of incident or strength of betrayal (see Footnotes 7 and 10).

In Study 1 we used the exit, voice, loyalty, and neglect typology to determine whether our commitment prime exerted differential effects on constructive versus destructive and active versus passive forms of forgiveness (Rusbult, 1993). The results reveal that strong commitment reliably inhibited inclinations to react to betrayal with destructive exit or neglect (or, alternatively, weak commitment failed to yield such inhibition). However, the effect of commitment was not significant for constructive voice and loyalty. These results are particularly interesting in light of prior evidence that in ongoing relationships, the harmful effects of negative acts are substantially greater than the beneficial effects of positive acts—that is, it is less important that close partners enact constructive behaviors than that they not enact destructive behaviors (e.g., Drigotas, Whitney, & Rusbult, 1995; Rusbult, Johnson, & Morrow, 1986). To the extent that these results are replicated in future work, such findings suggest that commitment exerts its motivational effects precisely where such effects are most critical, functioning as a deterrant to potentially devastating destructive impulses.

Precisely why does commitment promote forgiveness? In Study 3 we administered a new instrument to measure the three components of commitment—intent to persist, long-term orientation, and psychological attachment. These data allow us to explore what it is about the commitment construct that accounts for its association with interpersonal forgiveness. Earlier, we suggested that commitment-relevant interests may be relatively direct and primitive (as embodied in simple intent to persist) or may be relatively more extended, resting on broadened temporal interests (as embodied in long-term orientation) or on broadened interpersonal interests (as embodied in psychological attachment). In Study 3 we performed analyses to pit these components against one another. The results of these analyses suggest that in understanding the commitment–forgiveness association, it is not so much that commitment involves the broadened temporal interests embodied in long-term orientation, yielding reciprocal cooperation or long-term aggregation of beneficent acts. Nor is it that commitment involves the broadened interpersonal interests embodied in psychological attachment, yielding self–other merger or communal orientation. Instead, the commitment–forgiveness association appears to rest on simple intent to persist. The more individuals intend to persist and remain dependent on their relationship, the more they are willing to forego vengeance to hold on to what they have.

Granted, it could be argued that intent to persist may not be so simple and may, in itself, imply temporally or interpersonally extended concerns. However, if such concerns were central to why commitment motivates forgiveness, then measures of long-term orientation and psychological attachment should have captured unique variance in forgiveness. Instead, we found that for individuals to forgive their partner it is not necessary that they adopt the long view from either a temporal or an interpersonal point of view; it is only necessary that they intend to remain in their relationship. Of course, it is possible that intent to persist dominated the commitment–forgiveness association because this component tapped temporally or interpersonally extended concerns that are not tapped by the other two components of commitment (e.g., social obligations, moral commitment) or because this component was more reliably measured (alphas were somewhat higher for this component). Moreover, the instrument we used is relatively new, and we were able to perform these analyses in only one of three studies. Therefore, we should form tentative conclusions about the centrality of intent to persist in explaining the commitment–forgiveness association, pending replication in future research and in work concerning maintenance acts other than forgiveness.

How Do Victims Forgive?

How does commitment promote forgiveness? The present work examines the role of mental events in bringing about prorelationship transformation of motivation. Interdependence theory suggests that the transformation process sometimes is automatic and habit driven and sometimes is mediated by internal events. Therefore, we reasoned that mental events would partially mediate the association of commitment with behavioral tendencies. We tested this prediction in Studies 2 and 3.

Both studies revealed that the commitment–forgiveness association was significantly mediated by positive cognitive interpretations—by the extent to which individuals discounted internal causes, identifying extenuating circumstances and forming relatively more positive, external explanations for partner betrayal

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forgiveness association did not differ significantly as a function of either severity of incident or strength of betrayal. (Indeed, parallel analyses examining possible interactions with commitment for the remaining five potential confounds revealed no significant interactions. Thus, our findings do not appear to be moderated by variations in commitment level.)

Which factor plays a greater role in influencing interpersonal forgiveness—the degree to which an incident has the potential to harm a relationship (severity of incident), or the degree to which an incident represents a norm violation (strength of betrayal)? We regressed interaction-based reports of behavioral tendencies simultaneously onto the severity and strength variables, both of which were represented as lower level variables. Behavioral tendencies were significantly influenced by strength of betrayal, $\beta(85) = -.33$, $p < .01$, but not by severity of incident, $\beta(85) = -.10$, *ns*, suggesting that the key issue in understanding behavioral tendencies is the degree to which a given betrayal incident breaks the rules, not the simple potential for harm inherent in a given incident.

(i.e., chance or situational variables rather than disposition, effort, or intent). Thus, commitment is associated with forgiveness in part because committed individuals develop more benevolent (or less malevolent) betrayal-relevant cognitions. For example, committed individuals may engage in relatively more systematic processing—they may carefully attend to the circumstances surrounding a betrayal incident, they may be willing to give their partner the benefit of the doubt, or they may be willing to accept some personal responsibility for betrayal incidents. In turn, the relatively benevolent understandings they develop help them find their way to forgiveness.

We also examined possible mediation by emotional reactions—by the absence of sadness, hurt, and anger. In Study 3, positive emotional reactions partially mediated the association of interaction-based reports of commitment with interpersonal forgiveness. Unfortunately, measures of emotional reactions did not meet the requirements for the assessment of mediation in Study 2 or in Study 3 analyses that examined commitment as measured at Time 1 and 2 research sessions (see Footnote 9). Moreover, in all relevant analyses, both commitment and emotion accounted for unique variance in positive behavioral tendencies. The full complement of evidence suggests that whether an individual achieves reduced betrayal-relevant negative emotion may be irrelevant to an understanding of how commitment promotes forgiveness, in that committed individuals may experience a good deal of negative emotion yet still find their way to forgiveness. Thus, to the extent that the commitment–forgiveness association rests on internal events, such events appear to be largely cognitive in character.

These findings are relevant to controversy in the forgiveness literature surrounding the role of mental events in mediating interpersonal forgiveness. As noted earlier, authors operating in the philosophical and Christian theological traditions tend to hold as a prototype saintly forgiveness, whereby victims do not cognitively nullify betrayal and do not absolve the perpetrator of blame yet find their way to forgiveness. In the present work, committed individuals were relatively capable of forgiving their partner despite persistent negative affect but were not so saintly that achieving some degree of benevolent cognition—or understanding—was irrelevant to the forgiveness process. Of course, it could be argued that by defining forgiveness in terms of positive behavioral tendencies, we have failed to capture the true meaning of forgiveness. For example, authors operating in alternative traditions might define forgiveness in terms of changes in behavioral tendencies that are not accompanied by parallel changes in cognitive interpretations. At the same time, it is important to note that in the present work, responses to "I forgive my partner" tended to be closely aligned with behavioral tendencies; mediation analyses performed on responses to this item revealed findings that paralleled those observed for our measure of behavioral tendencies. Thus, it seems safe to conclude that when forgiveness is defined in a manner that aligns with lay construals of this construct, the commitment–forgiveness association is significantly mediated by changes in cognitive interpretations.

In Study 2, we pursued a subsidiary, process-relevant goal, examining temporal properties of forgiveness. Given that betrayal incidents create an interpersonal debt, we speculated that the process by which individuals forgive may not be immediate but instead may unfold over the course of extended interaction. Study 2 reveals that, in comparison with individuals' later reactions, immediately following betrayal they exhibit more negative emotion, cognition, and behavior. Also, the Time × Commitment interaction was significant for emotional reactions, such that commitment was marginally negatively associated with immediate emotional reactions but was marginally positively associated with later emotional reactions. In addition, the association of commitment with emotion and behavior was marginally stronger to the extent that more time had elapsed since a given act of betrayal (see Footnote 6). Thus, the immediate response to norm violations does appear to be relatively negative. Moreover, the role of commitment in yielding prorelationship internal events, motivation, and behavior appears to increase over the course of postbetrayal interaction.

Our understanding of interpersonal forgiveness would benefit from further examination of the temporal properties of this phenomenon. Such an analysis would extend our knowledge of the precise character of the transformation process—the motivational shift that is argued to underlie forgiveness. Kelley (1984) proposed that for some sorts of interdependence situation, it is suitable to represent interaction using a temporally extended transition list. The transition list representation is predicated on the assumption that, in addition to selecting specific behaviors, consciously or unconsciously, interacting individuals also select future interactions, creating some sorts of future interaction opportunities and eliminating others.

The transition list representation highlights the role of both partners' actions in promoting forgiveness, including the actions of victim and perpetrator. For example, in *The War of the Roses*, when Oliver destroys the fish entrée that Barbara has prepared for her friends, he does more than simply betray her—his act leads the two down a fork in the road on which forgiveness by Barbara is not an available response. Had Oliver exhibited remorse and offered amends, he would have made available a domain of interactions in which forgiveness continued to be viable. An act of atonement would have provided Barbara with a more constructive (and potentially forgiving) set of behavioral options, thereby not only (a) enhancing the positivity of the immediate interaction but also (b) enhancing the positivity of the future interactions available to the pair. In ongoing work (Hannon, Finkel, Rusbult, & Kumashiro, 2001), we are examining the effects of perpetrator behavior on the forgiveness process.

Sex Differences in Reactions to Betrayal

Studies 1 and 2 reveal evidence of sex differences in inclinations toward forgiveness. In Study 1, men were less forgiving than women, as evidenced in their lesser inclination to react to betrayal with constructive voice; this difference is not attributable to socially desirable responding. In Study 2, men exhibited more forgiving feelings, thoughts, and behavioral tendencies than did women; this difference is not attributable to time since betrayal, properties of relationships, or socially desirable responding, but there was inconclusive evidence that severity of betrayal might be an issue in understanding this effect. We believe it is somewhat imprudent to speculate on the meaning of these effects, given that sex differences were observed in only two of three studies and given that the direction of such effects differed. We leave it to future work to determine whether there are reliable differences between women and men in inclinations toward forgiveness and to

determine whether men may appear more forgiving because they tend to suffer less severe betrayals than do women.

Broader Implications

What does an interdependence-based model buy us that other orientations may not? First, our interdependence theoretic analysis highlights the importance of norms in governing interaction in ongoing relationships. Earlier, we suggested that although norms initially may emerge as a matter of convenience, over time such rules acquire the properties of moral obligation. Accordingly, individuals feel betrayed when their partner violates relationship-relevant norms. Betrayals involve norm violations that harm the victim, so such incidents produce an interpersonal debt, yielding characteristic profiles of negative emotion, cognition, and behavior. Indeed, findings from Study 3 suggest that the harmful consequences of a given incident result more from the fact that the incident broke the rules than from the negativity of the act per se (see Footnote 10). Thus, norm violations appear to be relatively distinct and powerful threats to couple well-being, differing in important ways from other sorts of noncorrespondent interactions, such as accommodative dilemmas.

Second, whereas many social scientists might feel inclined to explain forgiveness largely by reference to properties of individuals (e.g., dispositions such as vengefulness or a forgiving personality), interdependence theory suggests that behavior frequently is shaped by properties of relationships (cf. Kirby, Rusbult, & Kilpatrick, 2001). (It sometimes seems that the field of psychology is subject to the fundamental attribution error that governs lay cognition—the ready inclination to identify internal, individual-based causes and to downplay situational causes, e.g., properties of relationships.) Of course, interdependence theory does not focus exclusively on properties of relationships as the cause of interpersonal behavior. This theory merely argues that prosocial motivation may be embodied not only in properties of individuals but also in properties of dyads and groups.

Third, many social scientists might feel inclined to explain forgiveness largely by reference to the process by which forgiveness comes about—in terms of the cognitive or affective concomitants of forgiveness or in terms of critical events en route to forgiveness. An interdependence analysis also highlights the motivational basis of forgiveness: In addition to explaining how Oliver comes to forgive Barbara, it may be equally important to ask why he forgives her. Typically, answers to "how?" complement answers to "why?" Such complementarity becomes evident when one considers the therapeutic implications of answers to "how?" and "why?": An emphasis on how informs interventions oriented toward skills training relevant to achieving forgiveness (e.g., perspective taking). An emphasis on why informs complementary interventions centering on forgiveness-relevant motivation. For example, our Study 1 priming results suggest that increasing the salience of commitment-relevant thoughts may enhance motivation to forgive (e.g., on awaking in the morning, one may ask, "Why am I committed to thee? Let me count the ways").

Fourth, because an interdependence-based analysis emphasizes the causes and consequences of interaction, this orientation helps us identify important impediments to reconciliation following betrayal. In previous work, we have demonstrated that commitment-inspired interaction behaviors such as accommodation and willingness to sacrifice strengthen partner trust (Wieselquist et al., 1999). Specifically, people come to trust their partner as a consequence of observing the partner behave well in situations involving noncorrespondent preferences or as a consequence of observing the partner depart from his or her direct self-interest to benefit the relationship (cf. Holmes & Rempel, 1989). Given that commitment reliably motivates such prosocial acts, trust can be construed as an implicit gauge of the strength of a partner's commitment. Thus, acts of betrayal may be problematic in part because such acts imply a lack of commitment, undermine trust, and upset the balance of power. If this is so, then it becomes even more evident why betrayal incidents are a seriously destabilizing force. In ongoing work, we are examining the role of trust in the forgiveness process, both as cause (e.g., commitment and trust may interact in motivating forgiveness) and as effect (e.g., restoring trust may be a key issue in understanding reconciliation following betrayal).

Limitations and Directions for Future Research

Before closing, we comment on several limitations of this work. One limitation centers on our participant populations. We examined the forgiveness process among young adults who were largely North American, most of whom were involved in relatively short-term relationships and few of whom were married to their partner. It is possible that in other populations, the commitment–forgiveness association does not rest so thoroughly on the emergence of benevolent betrayal-relevant cognition. For example, for married partners, among deeply religious individuals, or in cultures that regard marriage as relatively inviolable, forgiveness may be so thoroughly obligatory that forgiveness following betrayal is a relatively habitual phenomenon (e.g., partners may rather automatically and effortlessly turn the other cheek). On the other hand, we suspect that the general principles outlined herein—for example, the principle that forgiveness is more probable given strong interdependence—may be valid across specific populations, situations, and times. In future work, it will be important to examine forgiveness in relationships of varying type and duration as well as among individuals from varying cultures. In particular, it will be important to examine forgiveness among marital partners, for whom there may be strong norms regarding betrayal and forgiveness and for whom variables other than (or in addition to) commitment may be relevant to understanding the motivation to forgive.

A second limitation centers on the fact that our studies rely entirely on self-report measures. Thus, our work is subject to common critiques of self-report measurement—our findings might be colored by socially desirable responding, acquiescence, retrospective reconstruction, and the like. On the other hand, across the three studies we obtained not only retrospective but also concurrent reports, we assessed both internal events and behavioral tendencies, and we ensured that our findings were not attributable to self-deception or impression management. Moreover, in Study 1, commitment was an experimentally manipulated variable rather than a self-report measure (i.e., we did not simply examine correlations among multiple self-report variables), in Studies 2 and 3 our findings were replicated in analyses controlling for other self-report measures that arguably share related response biases, and in Study 3 our findings were replicated in analyses using a

within-subject analysis strategy (i.e., a strategy that controls for individual differences in response bias). In future work, researchers might explore the forgiveness process through the use of physiological indices, unobtrusive measures, or alternative behavioral indices—for example, by coding videotapes of betrayal-relevant conversations and by examining unambiguous indices of commitment such as persistence in a relationship. (However, for inherently internal experiences e.g., commitment, it could be argued that self-report indices are preferable to behavioral indices.)

Conclusions

We advance a conceptual analysis of forgiveness using the principles of interdependence theory. On the basis of existing work, it seems clear that betrayal incidents are problematic, yielding a signature constellation of negative affect, cognition, and behavior. One obstacle to proceeding on a positive path in the aftermath of betrayal is that the victim's immediate inclinations generally are antithetical to forgiveness, favoring self-oriented impulses such as grudge, vengeance, and the expectation of atonement. We suggest that interpersonal forgiveness rests on prorelationship transformation of motivation, one cause of which is strong commitment. Three studies reveal convergent evidence in support of the claim that commitment promotes prorelationship mental events, prorelationship motives, and interpersonal forgiveness. The studies also shed light on the transformation process by which commitment promotes forgiveness, demonstrating the role of cognitive interpretations in mediating the commitment–forgiveness association. The present work thus complements existing research regarding *how* people come to forgive their partner by highlighting the role of commitment in explaining *why* people forgive their partner.

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