

HOW DO WE FORGIVE?: AN EMPIRICAL FRAMEWORK FOR THE UNDERLYING  
PROCESSES OF OVERCOMING INTERPERSONAL BETRAYAL

A Thesis  
By  
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## **Abstract**

### **HOW DO WE FORGIVE?: AN EMPIRICAL FRAMEWORK FOR THE UNDERLYING PROCESSES OF OVERCOMING INTERPERSONAL BETRAYAL**

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Few studies have empirically examined the underlying processes of forgiveness. Perspective-taking has been depicted as an important precursor to forgiveness, specifically by means of empathic responding toward the offender (e.g., McCullough, Worthington, & Rachal, 1997). By contrast, Takaku (2001) proposed that forgiveness is merely a means of reducing cognitive dissonance that results from perspective-taking. The ultimate goal of this study was to test the dissonance model of forgiveness in an experimental design. Tesser and Cornell's (1991) self-affirmation method of dissonance reduction was included to capture evidence of dissonance indirectly. A series of two-way ANOVAs was conducted to examine 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interactions for self-reported feelings of dissonance, forgiveness, positive and negative emotional reactions, and unforgiveness. The proposed dissonance-reduction model of forgiveness was not supported; however, findings did reveal an indirect effect of perspective-taking on forgiveness outcomes. Additional exploratory analyses addressed alternative causal paths between

perspective-taking, attributions, and empathy for the offender. Implications are directed toward better understanding the ambiguous nature of the cognitive and emotional processes that help victims cultivate forgiveness and overcome the psychological burden of betrayal.

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## **Dedication**

This work is dedicated to all of those who have been influential educators in my life – the majority of whom are faculty in the psychology departments at Appalachian State University and The University of North Alabama. Thank you for cultivating my love for learning and research.

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How Do We Forgive?: An Empirical Framework for the Underlying Processes of  
Overcoming Interpersonal Betrayal

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### Abstract

Few studies have empirically examined the underlying processes of forgiveness. Perspective-taking has been depicted as an important precursor to forgiveness, specifically by means of empathic responding toward the offender (e.g., McCullough, Worthington, & Rachal, 1997). By contrast, Takaku (2001) proposed that forgiveness is merely a means of reducing cognitive dissonance that results from perspective-taking. The ultimate goal of this study was to test the dissonance model of forgiveness in an experimental design. Tesser and Cornell's (1991) self-affirmation method of dissonance reduction was included to capture evidence of dissonance indirectly. A series of two-way ANOVAs was conducted to examine 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interactions for self-reported feelings of dissonance, forgiveness, positive and negative emotional reactions, and unforgiveness. The proposed dissonance-reduction model of forgiveness was not supported; however, findings did reveal an indirect effect of perspective-taking on forgiveness outcomes. Additional exploratory analyses address alternative causal paths between perspective-taking, attributions, and empathy for the offender. Implications are directed toward better understanding the ambiguous nature of the cognitive and emotional processes that help victims cultivate forgiveness and overcome the psychological burden of betrayal.

How Do We Forgive?: An Empirical Framework for the Underlying Processes of  
Overcoming Interpersonal Betrayal

Social interaction guarantees conflict. Interpersonal betrayals are common, with offenses including dishonesty, deception, infidelity, abuse, and abandonment, which can apply to victims ranging from friends and family members to romantic significant others. The effects of betrayal can be large and may include an array of negative consequences such as insecurity, sadness, guilt, confusion, loneliness, anger and anxiety; all of which elicit the potential for emotional suffering. The intensity of these feelings may prevent victims from being able to “move on” to modify a hurtful situation into an opportunity for psychological and social restoration (Valadez & Evans, 2005).

Forgiveness has consistently been shown to reduce such negative feelings for victims (Cerney, 1988; Fitzgibbons, 1986; Freedman & Enright, 1996); as such, therapists, counselors and researchers agree that forgiveness can be essential for emotional healing (Valadez & Evans, 2005). It can mend broken relationships and restore psychological well-being in victims suffering from past betrayals or offenses (Hill, 2010).

In addition to emotional healing, forgiveness has been argued to be a cornerstone for successful relationships. The negative feelings, such as resentment and anger, that result from hurtful transgressions can be problematic to both current and future relationships (Valadez & Evans, 2005). Victims who are unable to overcome their pain may fear future disappointment, become distrustful of others, and consequently, doubt the potential for successful relationships and friendships in the future (Ellison, 2002). Reconciliation with offenders can assist victims in regaining that trust (Hargrave, 1994). Moreover, victims who

sustain an overwhelming amount of emotional damage might reduce the psychological burden when they are able to forgive the offender.

Contemporary counseling often encourages victims to forgive their transgressors, but this can be a difficult and confusing process that requires a great deal of commitment and energy (Valadez & Evans, 2005). As such, researchers have emphasized the importance of studying the forgiveness process, understanding what it is, how it develops, and its contributions to both individual and social progress (Eaton, Ward Struthers, & Santelli, 2006; Konstam, Chernoff, & Deveney, 2001).

### **Forgiveness Defined**

According to Konstam et al. (2001), there is evidence of uncertainty surrounding forgiveness in the variety of its definitions. The confusion does not necessarily exist because researchers are unable to come to an agreement about what forgiveness is, but because forgiveness is a complicated process (Worthington, 2005). It has been generally defined as overcoming resentment toward past offenders (Takaku, 2001), but this requires a series of changes that are difficult to operationalize (Valadez & Evans, 2005). As such, forgiveness has been consistently portrayed as a multifaceted process, not a single product (Takaku, 2001), which involves a complex sequence of emotional, motivational, and cognitive changes (e.g., McCullough et al., 1997; Wade & Worthington, 2003; Welton, Hill, & Seybold, 2008; Worthington, 2005).

Interestingly, research has suggested that forgiveness requires the victim to abandon his or her right to resentment (e.g., Enright & the Human Development Study Group, 1996), but it should not require forgetting, excusing, or condoning the offense (Enright & Zell, 1989). It involves cultivating undeserved positive emotions in order to view the offender with

empathy, compassion, or love (e.g., Berry, Worthington, O'Conner, Parrott, & Wade, 2005; Konstam et al., 2001; Rusbult, Verrete, Whitney, Sovik, & Lipkus, 1991), while also eliminating negative emotions, such as anger and sadness (Berry et al., 2005; Exline & Zell, 2009).

Similarly, McCullough et al. (1997) have suggested that forgiveness is a set of motivational changes that require (a) decreased motivation to retaliate, (b) decreased motivation to withdraw from the offender, and (c) increased motivation to reconcile. Additionally, Valadez and Evans (2005) described forgiveness as a cognitive transformation that involves redirecting one's thoughts in order to achieve insight, mindfulness, and alter perspectives of the self and others.

Regardless of the complexity of forgiveness, there are several points of agreement in its various definitions: Forgiveness is both an interpersonal and intrapersonal process that takes place over time (e.g., Konstam et al, 2001; Valadez & Evans, 2005) and requires that one responds constructively, rather than destructively, to offensive behavior (e.g., McCullough et al., 1997; Rusbult et al., 1991; Takaku, 2001).

### **Forgiveness, Empathy, and Perspective-Taking**

Much research concerning forgiveness has focused on emotional empathy. McCullough et al. (1997) stated, "When people forgive, they become motivated to pursue relationship-constructive, rather than relationship-destructive, actions toward an offending relationship partner. This set of motivational changes is facilitated by the development of empathy for the offender" (p. 333). Specifically, empathy has been shown to mediate the relationship between an apology and forgiveness (e.g., Davis & Gold, 2011; McCullough et al., 1997) possibly because the victim is able to imagine the distress and guilt that the

transgressor is feeling (Baumeister, Stillwell, & Heatherton, 1994). Moreover, other situational factors besides an apology, such as clinical interventions, have been shown to increase forgiveness specifically by fostering empathy toward the transgressor (McCullough et al., 1997). This empathy-based model (see Model 1, *Figure 1*) suggests that forgiveness is largely inspired by empathic responding (Davis & Gold, 2011; McCullough et al., 1997).

Empathy has been broadly defined as reacting to the experiences of another. These reactions have been classified as two types of responses: a cognitive reaction (the ability to take another person's perspective) and an emotional reaction (the ability to feel what others are feeling). Rather than assuming empathy to be a unidimensional construct, it has been described as a multidimensional construct, with four sub-dimensions: fantasy, empathic concern, personal distress, and perspective-taking (Davis, 1983). The four components of empathy all relate to sensitivity to others but are distinguishable from each other. The fantasy component refers to an ability to imagine thoughts and feelings of fictitious characters. Empathic concern refers to feelings or sympathy for those less fortunate than the self. Personal distress involves anxiety that arises in interpersonal situations and conflicts. Finally, perspective-taking is said to be the main component of empathy; it is the adoption of another's psychological viewpoint (Davis, 1983).

While empathy and perspective-taking are distinct concepts, both have been linked to forgiveness (e.g., Welton et al., 2008). According to Davis (1996), perspective-taking is an advanced cognitive process that generates empathic outcomes. Perspective-taking shifts the victim's focus from the self to the transgressor (McCullough et al., 1997) to imagine what he/she may be thinking and feeling in order to better understand the potential cognitive, affective, and environmental factors that contribute to the psychological experience and

behavior of the other person (e.g., Davis, 1996; McCullough et al., 1997). More specifically, perspective-taking has been portrayed as a precursor to empathy. McCullough et al. (1997) stated, “Although empathy is primarily an affective phenomenon, [perspective-taking ability] appears to be an important analogue to empathetic affect ... and understanding how [empathy] develops” (p. 322). Given that perspective-taking has been illustrated as an antecedent to empathic responses (e.g., Davis, 1996; McCullough et al., 1997) and empathy as an essential condition for forgiveness (McCullough et al., 1997), perspective-taking may be a critical piece of the forgiveness process.

In general, perspective-taking has been linked to better social functioning. It allows people to predict others’ reactions and behaviors, therefore facilitating social interaction (Davis, 1983). By facilitating a general understanding of the offender’s behavior, perspective-taking can minimize the impact of an offense and increase the likelihood of forgiveness (Exline, Baumeister, Zell, Kraft, & Witvliet, 2008). Manipulations of perspective-taking have emerged in literature involving altruism, empathy, and relationships.

For example, Oswald (2002) designed a study to examine the influence of perspective-taking interventions on helping behavior. Participants who focused on another person’s thoughts and feelings were more likely to help the person than those who did not focus on the other person’s thoughts and feelings. Similarly, Batson, Duncan, Ackerman, Buckley, and Birch (1981) showed that participants assigned to a high empathic response condition were more likely to help a female confederate receiving electric shock than participants in the low empathic response condition because they could identify with her thoughts and feelings. Feelings of empathy were manipulated experimentally by telling subjects that their responses to a personality assessment were similar to the victim, which

elicited empathic identification. Indeed, the results indicated that those who were in the “high empathy” condition showed greater physiological arousal when the confederate reported feeling pleasure or pain, reported identifying with her on a psychological level, and were more likely to help than those in the “low empathy” condition (Batson et al., 1981).

Leith and Baumeister (1998) examined the link between empathy, perspective-taking, and relationship outcomes after an interpersonal conflict. In order to determine if a transition from self-to-other perspective can actually occur, participants were asked to write two stories. First, they were asked to describe a conflict they had recently experienced and were then asked to describe that conflict again from the other person’s point of view. The researchers compared the differences in the first and second accounts to determine objectively if perspective-taking had occurred before coding each story for relationship outcomes on a 3-point scale (1 = relationship deterioration, 2 = maintenance of relationship status quo, and 3 = ultimate improvement of relationship). It should be noted that personal accounts that did not indicate a relationship outcome were not included in the analysis. Additionally, inter-rater reliability (100% agreement) was only calculated for 45 randomly selected stories of a total 69 stories. The findings suggested that (a) the perspective-taking interventions did influence a change in the perspective of victims, and (b) failure to shift one’s perspective was strongly correlated with relationship deterioration. While these shifts in perspective-taking were indirectly linked to a better understanding of the other person’s thoughts and feelings, to relationship repair, and to relationship improvement (Leith & Baumeister, 1998), results were strictly correlational so no causal direction can be inferred.

Exline and Zell (2009) conducted an experiment to examine perspective-taking as an empathy-inducing strategy to decrease vengefulness and hostility. Participants were asked to

recall a past offense and were then randomly assigned to 1 of 4 conditions. Two of the conditions involved recalling a time they committed a similar offense or imagining the offender's perspective (e.g., his/her feelings, thoughts, and other situational factors). A third condition required participants to recall a time when they felt positive feelings about themselves (self-affirmation condition), while the fourth involved recalling a normal week (control group). Results showed that the perspective-taking interventions did elicit lower vengefulness and expressed hostility in the victims compared to those in the self-affirmation and control groups, but forgiveness was not measured specifically. Exline and Zell (2009) interpreted vengefulness and hostility as measures of "unforgiveness." Measures of forgiveness as positive emotional expressions were never included, but it is likely that negatively-valenced emotions like vengefulness and hostility would be present in the absence of forgiveness, and thus, strengthen an argument for the relationship between perspective-taking and forgiveness.

While perspective-taking has been causally linked to other behaviors, more studies are needed to illustrate its influence on forgiveness. One of the few studies to have examined experimentally the effects of perspective-taking on interpersonal forgiveness was conducted by Takaku (2001). Participants were randomly assigned to 1 of 4 perspective-taking conditions before reading a scenario describing a situation in which a student apologized after losing another student's notes before an exam. In one condition, participants were instructed to reflect on a time they had intentionally or unintentionally hurt someone and to remember their own thoughts and feelings in that situation (Recall-Self-as-Transgressor). In another condition, participants were instructed to imagine what the classmate/transgressor would think and feel when he/she was confronted by the participant (Imagine-Other

condition). A third condition involved participants concentrating on their own thoughts and feelings as if they were the classmate who lost the notes and to visualize how they would behave in that situation (Imagine-Self). These three conditions served as variations of perspective-taking. Finally, the control condition instructed participants to imagine themselves as if they were the victim in the situation. It should be noted that Takaku did not discuss – nor make predictions about – any theoretical differences between the perspective-taking manipulations (i.e., Recall-Self-as-Transgressor, Imagine-Other, Imagine-Self). This will be addressed further in the prospective discussion of limitations and modifications to his design.

Following the manipulation, Takaku (2001) assessed attributions about the classmate, emotions, and forgiveness. Two items were used to determine whether the participants perceived the cause of the offense to be due to an internal characteristic of the offender or due to an external factor of the situation. Participants also indicated whether or not they thought the event was avoidable or unavoidable. Various measures were selected to assess what Takaku labeled as *positive emotional reactions* (e.g., compassion) and *negative emotional reactions* (e.g., anger) toward the offender. Finally, four items were used to measure forgiveness: (a) “I forgive my classmate,” (b) “My classmate should be given a second chance,” (c) “I would like to study with him again in the future,” and (d) “I would let him borrow my notes again in the future” (Takaku, 2001, p. 500).

Overall, Takaku (2001) found that the perspective-taking manipulation did influence forgiveness responses. Participants in the Recall-Self-as-Transgressor and Imagine-Other conditions were significantly more likely to forgive the offender and more likely to elicit positive emotional responses than those in the control group. Furthermore, participants who

recalled themselves as the transgressor were also less likely to elicit negative emotional responses than participants in the control and Imagine-Other conditions. There were no significant differences between those in the Imagine-Self condition and all other conditions. Takaku argued that those instructed to recall themselves as a transgressor or to imagine the transgressor tended to be more forgiving than participants in the control condition, given the greater expression of emotions such as compassion over emotions like anger and vengefulness.

Takaku (2001) has proposed a dissonance-attribution model (see Model 2, *Figure 1*) to explain the relationship between perspective-taking and forgiveness by suggesting that forgiveness is merely a way to reduce cognitive dissonance that results from taking the perspective of the transgressor. According to Takaku, victims experience dissonance as a result of the perspective-taking manipulations (i.e., Recall-Self-as-Transgressor and Imagine-Other conditions) rather than empathizing with the transgressor. Similarly, Thompson et al. (2005) explained that transgressions create a need to resolve psychological distress because they require people to accommodate information that is dissonant with beliefs about the self and others. Consequently, forgiveness can be conceptualized as a coping mechanism: a way to modify reactions to these negative events and reduce cognitive dissonance in the victim.

Takaku (2001) argued that when participants are instructed to consider the transgressor's thoughts and feelings or when they are instructed to recall themselves as the transgressor, they are reminded of times in the past when they were in the transgressor's position – presumably making them aware of self-concept-violating actions. This increases awareness of the inconsistency between the victim's own behavior and the grudge he or she may be holding against the transgressor. Victims may then feel that their judgments are

hypocritical, and consequently, be more inclined to forgive the offender in order to reduce feelings of psychological discomfort and hypocrisy (Takaku, 2001).

### **Cognitive Dissonance as an Effect of Perspective-Taking**

Cognitive dissonance, originally defined by Leon Festinger (1957), is known as “a state of tension that occurs whenever an individual simultaneously holds two cognitions (ideas, attitudes, beliefs, opinions) that are psychologically inconsistent [with each other]” (as cited in Aronson, 2011, p. 180) and has been depicted as a powerful motivator of human behavior and cognition (Aronson, 2011). According to Festinger, there is “a kind of consistency between what a person knows and believes and what [he/she] does” (Festinger, 1957, p. 1). In other words, people tend to believe that one’s behavior should be consistent with one’s beliefs about the behavior. If an individual believes a behavior is inconsistent with his/her beliefs then he/she should want to refrain from that behavior or modify it, but this is not always the case. While individuals prefer this psychological consistency, there are situations of psychological inconsistency in which people will attempt to reconcile their beliefs and behaviors. When they fail to do so, the two cognitions are dissonant and result in psychological discomfort (Festinger, 1957).

Cognitive dissonance is uncomfortable and aversive; as such, individuals seek to reduce dissonance and eliminate the discomfort by convincing themselves that their behavior and beliefs are compatible in some way. Additionally, Aronson (2011) elaborated on Festinger’s theory by suggesting that the purpose of dissonance reduction is not simply to align two competing cognitions, but also to maintain specifically a positive view of the self. According to Aronson, a positive self-concept revolves around ideas that suggest the self is good, smart, and worthwhile; therefore, competing cognitions usually pose a threat to the

self-concept and consequently arouse feelings of dissonance that activate a need for dissonance reduction (Aronson, 2011).

Interestingly, cognitive dissonance may also occur when one feels threatened by the performance of another person. This performance may introduce conflicting information and challenge one's positive view of the self. As a result, people may initiate cognitive or behavioral techniques to protect or confirm what they believe about themselves; this protection is achieved by cognitive dissonance reduction (Tesser & Cornell, 1991).

Thus, dissonance reduction can occur via multiple means surrounding the restoration of the self-concept. This may be achieved by aligning behaviors with self-concept-consistent beliefs, such as believing oneself to be smart, and consequently making smart choices. It may also be achieved by alternative self-evaluation maintenance behaviors that turn attention to other indicators of positive self-achievement. For example, in order to feel favorable about the self, one might reflect upon a time in which he/she outperformed others on a difficult task (Tesser & Cornell, 1991). Aronson (2011) has argued that because dissonance is aroused by recognizing a violation of the self-concept, other cognitive appraisals that serve as a means to restore the self-concept should be effective in reducing the psychological discomfort and eliminating the need for dissonance reduction (Tesser & Cornell, 1991).

Tesser and Cornell (1991) supported this rationale by arousing dissonance in participants and then showing that dissonance reduction is unnecessary if the self-concept can be protected in some other way. In order to demonstrate the influence of such self-evaluation processes, participants were placed in one of two conditions: positive comparison and negative comparison. In the positive comparison condition, participants wrote about a time they outperformed a close other on a task that was important to them (self-affirming). In

the negative comparison condition, participants wrote about a time when they were outperformed by another person on a task that was important to them. They were then asked to participate in a second, seemingly unrelated study in which they wrote an essay in support of or against a tuition increase. Two conditions were implemented to determine if dissonance reduction was actually occurring: high choice and low choice. In the high choice condition (high dissonance), participants could choose to argue in favor of the increase or against the increase; however, the experimenter suggested they write in support of the increase so that experimenters could get a better understanding of both sides of the issue. In the low choice condition (low dissonance) participants were assigned to either write in support of or against the increase. After they wrote the essay, participants indicated their true opinion toward the increase (Tesser & Cornell, 1991).

Results showed that those in the high dissonance condition were more likely than those in the low dissonance condition to say they agreed with the increase (dissonance reduction). Furthermore, those in the negative comparison condition who wrote in favor of the increase (high dissonance condition) were more likely than those who wrote in opposition of the increase (low dissonance condition) to say that they agreed with the increase, thus aligning their beliefs with their behavior (i.e., believing that they wrote the essay because they supported the cause) and providing evidence of dissonance reduction. As expected, writing about a time when one performed better than a close other (positive comparison condition) blocked dissonance reduction. In other words, there was no need for dissonance reduction because self-affirmation had already restored the self-concept and consequently eliminated psychological discomfort (Tesser & Cornell, 1991). As such, self-affirmation may

be critical to understanding how dissonance can be manipulated and also in determining when dissonance occurs.

Likewise, cognitive dissonance has been shown to co-occur with hypocrisy induction. Stone, Aronson, Crain, Winslow, and Fried (1994) elicited dissonance by having participants advocate the importance of condom use and then systematically reminding them of their own failures to use condoms in the past. The results indicated that there were more condom purchases at the end of the study for those in the hypocrisy condition than for those in the control conditions. These findings suggest that in order to reduce cognitive dissonance, people are motivated to change their behaviors when they are made mindful of the inconsistency between their true behaviors and the behaviors they advocate (Stone et al., 1994).

According to Takaku's (2001) dissonance-attribution model, perspective-taking elicits hypocrisy dissonance that leads to more positive attributions toward the offender so that one can then justify more positive attributions toward the self. These positive attributions toward the offender give rise to more positive emotions that inspire forgiveness (e.g., sympathy and compassion). Victims modify their view of the offender, because if one is to hold the offender accountable for his or her reprehensible behavior, he or she may also be forced to admit, as a result of perspective-taking, one's own similar mistakes. Consequently, the victim may be held equally accountable, and thus, equally worthy of the same grudge he or she may hold against the offender. As such, victims forgive not so much due to empathizing as a result of perspective-taking, but because they are forced to re-evaluate their own behavior and may conclude that the other is not so different from the self. Therefore, they make more positive and benevolent attributions about the offender which

simultaneously cultivate the willingness to forgive while also relieving psychological discomfort and maintaining a positive self-concept (Takaku, 2001).

It is important to note that although other researchers have agreed dissonance may motivate forgiveness processes (e.g., Thompson et al., 2005), this explanation contrasts with traditional explanations, which portray forgiveness as the product of empathizing with the transgressor. While some have suggested that “the ability to overcome such self-serving cognitions may facilitate forgiveness” (e.g., Welton et al., 2008, p. 169), Takaku’s (2001) argument depicts forgiveness as a self-serving cognition in itself, in that the perceiver allegedly realizes the uncomfortable implications of his/her own previous transgressions. Subsequently, forgiveness is a self-motivated action.

### **The Current Study**

Takaku (2001) argued that perspective-taking increased forgiveness responses by invoking the self-concept due to feelings of hypocrisy, thus creating dissonance for the perceiver of the event; however, several limitations warranted additional investigation into his dissonance-forgiveness model. The purpose of this study was to replicate Takaku’s investigation with multiple modifications designed to test this model of forgiveness more systematically.

First, Takaku (2001) did not assess dissonance directly, but only speculated about its mediation in the forgiveness process. One of the primary modifications of his study was to include measures of cognitive dissonance. Elliot and Devine (1994) argued that dissonance research has primarily focused on the arousal component of dissonance as compared to the psychological component. They conducted a study in which they found that participants who wrote a counter-attitudinal essay reported more discomfort than participants in the control

group. These findings suggested that researchers should also measure self-reported dissonance to demonstrate better the psychological experience of dissonance, attitude change, and the effect of dissonance reduction. A measure of self-reported discomfort was included in this study to examine further the relationship between perspective-taking and cognitive dissonance.

An indirect measure of dissonance was included by introducing a self-affirmation manipulation in order to determine if cognitive dissonance did in fact influence forgiveness responses. To achieve this, Tesser and Cornell's (1991) positive comparison condition was implemented. Specifically, participants wrote about a time they performed better than a close other on a task that was important to them after being exposed to one of the perspective-taking manipulations (i.e., self-affirmation). If cognitive dissonance was occurring, the self-affirmation manipulation would serve as an alternative opportunity to restore the self-concept and consequently eliminate the need for dissonance reduction (i.e., forgiveness; see Model 3, *Figure 2*). Therefore, there would be no observed increase of forgiveness responses in the perspective-taking conditions compared to the control condition after participants self-affirmed.

Additional modifications in the current study involved limitations concerning the nature of the offense and measurement of forgiveness in Takaku's (2001) study. First, in the former study, participants were asked to imagine an offense (i.e., losing a student's exam notes) that may have been perceived as unintentional, regardless of whether they thought the situation was avoidable. It may also be reasonable to consider that the effects of this type of offense may not have elicited significant emotional pain. That is, perceptions of a clear betrayal might have been questionable. Dodd (2010) found that 49% of the transgressions

recalled by undergraduate participants involved the betrayal of a romantic partner. This offense was chosen in order to illustrate a more deliberate, personal, and emotional betrayal of a close other rather than a careless mistake made by a classmate, whose relationship to the victim may be ambiguous.

More detailed and subtle measurements of forgiveness were also utilized. The transparency of Takaku's (2001) four forgiveness items (e.g., "I forgive my classmate") should be considered, in that the direct wording may have revealed the purpose of the study to the participants. Rather than specifically asking about intentions to forgive, the current method included a more empirically-validated measure of forgiveness.

Finally, review of Takaku's study revealed a lack of a rationale behind the inclusion of each of the three perspective-taking instructional sets. Takaku grounded his rationale in Batson, Early, and Salvarani's (1997) suggestion that different kinds of perspective-taking elicit emotional responses other than empathy. Specifically, perspective-taking that involves imagining oneself as the perpetrator should lead to personal distress when they are reminded that they too have committed personal transgressions. Nevertheless, Takaku did not make predictions about differences between the types of perspective-taking instructional sets (e.g., Recall-Self-as-Transgressor, Imagine-Other, and Imagine Self). The current study only included the two instructional sets found to influence forgiveness – remembering a time he/she was a transgressor (Recall-Self-as-Transgressor) or imagining the transgressor's perspective in the scenario (Imagine-Other) – as a conceptual replication.

Theoretically, both perspective-taking prompts should have directed the perceiver's awareness to his/her own past transgressions, as this was a fundamental component of Takaku's argument that perspective-taking elicits dissonance by essentially arousing the self-

concept. Takaku's argument suggested this awareness is achieved by either (a) guiding one to remember a past situation in which he/she hurt a close other or (b) guiding one to imagine the transgressor's experience in the hypothetical situation. Specifically, the Recall-Self-as-Transgressor instructions would evoke memories of a specific situation in which the perceiver was in the transgressor's position. This would prompt participants to consider the situation from a perspective similar to the hypothetical transgressor's by imagining the past experience of being a transgressor themselves. Similarly, instructions to imagine the transgressor (Imagine-Other) would prompt the consideration of the transgressor's psychological and situational experience. By considering the transgressor's perspective, one is ultimately projecting him/herself into the transgressor's place, which in turn should evoke personally relevant examples (established by one's prior experience as a transgressor in a similar circumstance) as a means to understanding the potential factors contributing to the transgressor's behavior (Takaku, 2001). Since inclusion of these two conditions replicated Takaku's design, the current study provided an opportunity to examine further whether these instructional sets yielded different outcomes.

### **Design Overview and Predictions**

In summary, the current study was a 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) factorial ANOVA design. Participants were randomly assigned to one of three perspective-taking conditions (modifications of Takaku, 2001) and then read a scenario illustrating a situation of betrayal in which a romantic partner (transgressor) was caught texting a former romantic partner. Participants were randomly assigned to two levels of self-affirmation, during which they either described a time they out-performed a close other on a

task that was important to them or wrote about a previous summer vacation (Tesser & Cornell, 1991). Following the manipulation, self-reported dissonance, positive and negative emotional reactions, revenge and avoidance, and forgiveness were assessed.

### **Hypotheses**

It was predicted that perspective-taking should only increase forgiveness responses if participants were not given the opportunity to self-affirm. That is, participants' cognitive dissonance caused by perspective-taking should have been eliminated when given the opportunity to restore the self-concept. Three main hypotheses were proposed to examine Takaku's model of dissonance-based forgiveness (see *Figure 1*, Model 2).

**Hypothesis 1.** A significant 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interaction between factors was expected to occur such that (1.a.) participants who did not self-affirm and who engaged in perspective-taking, by either recalling a time they hurt someone (Recall-Self-as-Transgressor) or imagining the transgressor (Imagine-Other) would show higher levels of self-reported dissonance than those in the control condition. (1.b.) By contrast, if cognitive dissonance was occurring as a result of perspective-taking, participants who self-affirmed were expected to have shown no differences in self-reported dissonance across perspective-taking conditions.

**Hypothesis 2.** Again, a significant 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interaction was expected to emerge demonstrating that (2.a.) participants who did not self-affirm and who engaged in perspective-taking, by either recalling the self as the transgressor or imagining the transgressor, would have reported (a) more forgiving

responses and (b) more positive emotions than those in the control condition (replication of Takaku). (2.b.) By contrast, if cognitive dissonance was occurring as a result of perspective-taking, participants who self-affirmed should have shown no differences in reported forgiveness and positive emotional reactions across perspective-taking conditions.

**Hypothesis 3.** Finally, a significant interaction would have demonstrated that (3.a.) participants who did not self-affirm and who engaged in perspective-taking, by either recalling the self as the transgressor or imagining the transgressor, would report (1.) less negative emotional reactions and (2.) less avoidant and vengeful responses (“unforgiveness”) than those in the control condition (replication of Takaku). (3.b.) By contrast, if cognitive dissonance was occurring as a result of perspective-taking, participants who did self-affirm would show no differences in negative emotional reactions or avoidant and vengeful responses across perspective-taking conditions.

**Exploratory Analyses.** Further exploratory analyses were conducted to examine any additional underlying mechanisms that may have augmented or explained these hypothesized findings. While the ultimate goal of this study was to test for cognitive dissonance, Takaku (2001) noted the potential influence of causal attributions in the apology-forgiveness process. A series of multiple regressions were used, following Baron and Kenny’s (1986) conditions for mediation, to determine if causal attributions explained the effect of perspective-taking on forgiveness.

Empathy was also included as the dependent variable in a 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) ANOVA to see if empathic responding would offer alternative explanations to Takaku’s (2001) theory that perspective-taking elicited cognitive

dissonance, not empathy; however, no predictions were made about these additional constructs. Rather, measures of empathy were included to determine if cognitive dissonance and empathy were truly mutually exclusive mediators of the relationship between perspective-taking and forgiveness or if empathy explained the effect of perspective-taking on forgiveness in the event that evidence of cognitive dissonance was not found.

Additionally, correlational analyses were used to assess whether certain empathic traits were related to forgiveness outcomes. Finally, a 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 3 (Personal Experience: experience as the offender, experience as the victim, no experience) ANOVA was conducted to explore differences in forgiveness across participants' self-reported personal experience. Personal experience was categorized based on whether participants reported previously having been in a similar situation to the offender or victim in the scenario. This analysis was intended to determine whether perceived similarity to the offender was a necessary condition for the experience of dissonance (if it occurred).

## **Method**

### **Participants**

Two-hundred-ninety-four undergraduate students (204 women, 85 men) were recruited through an online subject pool from a comprehensive Southeastern University in the United States and received course credit for their participation. A statistical power analysis using G\*Power (Buchner, Erdfelder, Faul, & Lang, 2009) indicated that a sample of at least 216 participants would be required to detect a medium effect ( $f = .25$ ,  $\alpha = .05$ ,  $\beta = .20$ ; Cohen, 1988). All procedures were in compliance with the American Psychological

Association's ethical guidelines (2010) and were approved by the university's Institutional Review Board on October 1, 2013 (see Appendix A).

### **Materials**

**Scenario.** All participants considered the following scenario and then read a conversation depicted in a smart phone texting format:

Alan and Anna have been in a committed relationship for almost one year. While staying at Alan's house, Anna's cell battery died while she was trying to make a call to her workplace. She grabbed Alan's phone to make the call and noticed a recent stream of texts passed between Alan and his ex-girlfriend.

Participants will then read the following conversation:

Ex-Girlfriend: "Thanks for giving me a ride home the other day when my car broke down. Did I leave my sunglasses in your car by chance?"

Alan: "Yeah, I found them."

Ex-Girlfriend: "Cool – I love those sunglasses."

Alan: "Yeah, they look good on you."

Ex-Girlfriend: "When can I grab them?"

Alan: "You should come to my apartment on Saturday. Anna will be visiting her folks."

**The Apology.** After the scenario, participants read the following description of Alan's apology:

Alan had always told Anna that he had no desire to stay in touch with his ex-girlfriend. Given this, Anna confronted Alan about the text messages, to which he said, "I am so sorry. When she called me, she was in a bind and needed a ride home.

She couldn't get in touch with anyone else. I invited her to come over while you were gone because I thought it might make you uncomfortable. It is entirely my fault. I'm so sorry for betraying your trust. I feel awful; I realize how hurtful that was. I will do anything to make up for this." Anna then left to think about what had happened.

**Perspective-Taking Manipulation.** Perspective-taking prompts were presented prior to the scenario and modeled after the instructions implemented by Takaku (2001). Minimal changes were made to make the wording applicable to the current scenario and to avoid ambiguity. Review of Takaku's instructions demonstrated that some of the wording was specific to the original scenario in which the classmate damaged the exam notes (e.g., "imagine how the classmate would think, feel, and behave when confronted by you"). As such, the modifications made the instructions more specific to the scenario used in the current study (e.g., "imagine how Alan would think, feel, and behave when confronted by Anna"), based on the expectation that participants' levels of engagement might be enhanced with specific wording to guide them through the perspective-taking activity. To ensure minimal ambiguity, slight modifications were also made to the Recall-Self-as-Transgressor instructions by further emphasizing the recall of a similar situation – as this may be essential to the potential experience of dissonance.

*Recall-Self-as-Transgressor.* Participants in the Recall-Self-as-Transgressor condition read the following instructions to elicit memories of a time when they hurt a close other in the past:

While you read the following scenario, please take a moment and visualize an event in which you intentionally or unintentionally hurt someone close to you (e.g., romantic partner, friend, family member, etc.) in the past. Please try to remember how

you thought, felt, and behaved in that situation. If possible, try to imagine a situation that is similar to the one described. Briefly describe below the event you just considered.

*Imagine-Other.* Participants in the Imagine-Other condition read the following instructions to prompt the imagination of the offender's perspective and what it might have been like to have been in his position:

While you read the following scenario, please take a moment and visualize possible events, feelings, and/or thoughts that may have contributed to Alan's behavior. Try to imagine how Alan would think, feel, and behave when confronted by Anna. Try to consider all of the information presented. Briefly describe below the events you just considered.

*Control Condition.* Participants in the control condition read the following instructions:

While you read the following scenario, please try to imagine how you would think, feel, and behave if something like this really happened to you as a victim. Try to consider all of the information presented. Concentrate on visualizing how you would think, feel, and behave if you were in Anna's position.

**Self-Affirmation Manipulation.** Participants in the self-affirmation condition received the following instructions (see Tesser & Cornell, 1991):

Please take a moment to write about a time when you outperformed a close associate (e.g., friend or co-worker) while doing some task or activity in which it was important for you to do well. Try to relive that experience. Describe how you thought and felt at that moment in as much detail as possible.

Those in the self-affirmation control condition received the following instructions:

Please take a moment to write about a recent summer vacation you took. Briefly describe when and where the vacation took place, the people with you (e.g., friends or relatives), and the activities involved.

### Measures

**The Affect Scale.** Items from the Affect Scale (Elliott & Devine, 1994) were used to measure psychological discomfort (i.e., feelings of dissonance). Responses indicated how participants felt at that moment on a 7-point Likert scale (1 = does not apply, 7 = applies very much). An index of discomfort was created by averaging responses to three adjectives: “uncomfortable,” “uneasy,” and “bothered” ( $\alpha = .84$ ). Total possible scores ranged from 1 to 7.

**Positive Emotional Reactions.** Following Takaku’s (2001) methodology, three items originally derived from Toi and Batson (1982) were used to measure positive emotional reactions (see Appendix B). Specifically, items assessed the participants’ experience of an emotion on a 7-point Likert scale (1 = not at all, 7 = very much). Participants’ responses to three adjectives (sympathetic, moved, and compassionate) were summed to create a total score of positive emotional reactions toward the offender. A reliability analysis indicated that internal consistency ( $\alpha = .64$ ) could be improved if the second item (“indicate how moved you are by Alan”) were removed from the measure. As such, only items 1 and 3 were used in the analyses ( $\alpha = .75$ ) and total scores could have ranged from 2 to 14. It should be noted that while Takaku interpreted the responses as an index of positive emotional reactions, the items were derived from a scale that was originally intended to measure empathy and personal distress. To maintain compliance with Takaku’s method, this response index was

referred to as “positive emotional reactions,” with acknowledgement to the previously stated difference in interpretation.

**Negative Emotional Reactions.** An index of negative emotional reactions was derived from the source of negative emotions that was utilized by Takaku (2001): specifically, items in the anger and sadness emotion clusters determined by Shaver, Schwartz, Kirson, and O’Connor (1987). In a study that examined the hierarchical organization of emotion concepts, participants indicated emotions from a list of 213 terms (4-point scale; 1 = definitely not an emotion, 4 = definitely an emotion). Mean ratings were used to determine appropriate examples of emotion domains. Cluster analyses revealed six basic emotion categories (of interest for this particular measure: anger and sadness). Takaku’s results suggested high internal consistency for the negative emotional response items (Cronbach’s  $\alpha = .90$ ); however, it should be noted that it was unclear which affective items were specifically chosen by Takaku from the original emotion clusters and subclusters outlined by Shaver et al. (1987). As such, items for negative emotional reactions included the affective responses listed in the two subclusters of anger (rage and disgust) and three subclusters of sadness (suffering, sadness, and disappointment). A total of six items assessed participants’ experience of each emotion (e.g., anger, hurt, vengefulness) on a 9-point Likert scale (1 = not at all, 9 = very much). See Appendix C. Participants’ responses for each item were summed to create a total score for negative emotional reactions toward the offender; possible total scores ranged from 6 to 54. A reliability analysis produced a moderately high estimate of internal consistency for the scale,  $\alpha = .84$ .

**The Transgression Related Interpersonal Motivations Scale (TRIM-12).** Seven items from the TRIM-12 (McCullough et al., 1998) assessed feelings of avoidance ( $\alpha = .85$ )

and five items assessed feelings of revenge ( $\alpha = .83$ ). Agreement with each statement was measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), with possible total scores ranging from 12 to 60. Higher scores indicated increased avoidance and revenge (McCullough et al., 1998). Items were reworded so that responses were applicable to the scenario. Responses for each of the items were summed to create two subscale scores for avoidance and revenge. The subscale scores were combined to form an overall measure of avoidance and vengefulness (i.e., “unforgiveness”),  $\alpha = .87$ ). Further examination of the scale’s convergent validity demonstrated a moderately high, negative correlation between TRIM-12 scores and The Forgiveness Scale (Rye et al., 2001),  $r = -.73, p < .01$ .

**The Forgiveness Scale.** Forgiveness toward the offender was measured using items from The Forgiveness Scale (Rye et al., 2001). Participants responded to 14 items on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) with higher scores indicating increased forgiveness. Questions were modified to assess how participants would have responded to the offense if it had occurred to them since they considered a scenario from a third person perspective, not a personal situation. The sixth item in the original scale, “I would pray for the person who wronged me”, was removed given that it was not applicable to participants who do not pray. As such, the total score for the measure could have ranged from 14 to 70 and was calculated by summing participants’ responses to each item. A reliability analysis indicated moderately strong internal consistency,  $\alpha = .81$ .

**Manipulation Check.** The following true-false statements (modifications of Takaku, 2001) were used to determine if the perspective-taking manipulation was effective: (a) “Before I answered the questions, I tried to imagine how I thought, felt, and behaved when I hurt a romantic significant other”; (b) “Before I answered the questions, I tried to imagine

what Alan was thinking and feeling and what factors may have contributed to the situation”; and (c) “Before I answered the questions, I tried to imagine how I would think, feel, and behave if I were in Anna’s position.”

### **Exploratory Measures**

**Situational Empathy.** Four items, originally used by Exline et al. (2008), were included to measure empathic responding toward the offender. Responses were rated on a 10-point Likert scale (0 = not at all; 10 = totally). The measure assessed the extent to which the participants (a) understood the offender’s behavior, (b) saw the situation from the offender’s perspective, (c) thought the offender’s behavior made sense, and (d) could think of valid reasons for the offender’s actions. A total empathy score was calculated by summing participants’ responses to each of the four items, with possible scores ranging from 0 to 40. A reliability analysis indicated a strong estimate of internal consistency,  $\alpha = .91$ .

**Interpersonal Reactivity Index.** The Interpersonal Reactivity Index (IRI; Davis, 1980) was included as a measure of individual differences in empathy (i.e., trait empathy). Participants indicated how much each item applied to them on a 5-point Likert scale (0 = does not describe me well; 4 = describes me very well). A total of 28 items composed 4 subscales (9 items each): Fantasy ( $\alpha = .78$ ), Perspective-Taking ( $\alpha = .79$ ), Empathic Concern ( $\alpha = .77$ ), and Personal Distress ( $\alpha = .74$ ). Scale scores were obtained by summing responses to items for each subscale. An overall score for the Interpersonal Reactivity Index was computed by summing scores for each subscale ( $\alpha = .82$ ). Possible scores ranged from 28 to 140.

**Causal Attributions.** Causal attributions were assessed with two, one-item measures that were modeled after Takaku’s (2001) measures of control and stability. The first item

measured external controllability (i.e., a cause outside of the offender's control). Participants indicated the extent to which they believed the cause of the offensive behavior was due to situational factors on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The second item measured behavioral variability. Participants rated the extent to which they thought the offender's behavior would change over time (i.e., differ across situations) on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Both items were positively correlated,  $r = .22, p < .01$ .

**Other Measures.** Participants were asked to indicate whether they had previously experienced a similar personal situation to the one depicted in the scenario. Participants who indicated that they had no similar experience (by selecting "no") were directed to the next set of items. Participants who indicated that they had previously been in a similar situation (by selecting "yes") were then asked to elaborate by explaining whether they had been in the offender's position, victim's position, or both the offender's and victim's position. Relationship status, sexual orientation, and additional demographics were also assessed (see Appendix D).

### **Procedure**

Participants were recruited through an online subject pool of undergraduate students to earn course credit for their participation in the study. They came in to the laboratory to complete a computer-based survey. An electronic consent form was presented prior to the survey (see Appendix E); after agreeing to continue, participants were randomly assigned to one of three perspective-taking conditions and received one of the following perspective-taking instructional sets: Recall-Self-as-Transgressor, Imagine-Other, or Control. After the perspective-taking prompt, participants read the scenario depicting a situation of betrayal

between two romantic partners (i.e., Alan and Anna), which included the screenshot that depicted the conversation in a smartphone format. Participants then read Alan's apology to Anna and typed a brief description of the perspective they just considered. Following this portion of the survey, participants were redirected to the next phase of the study and randomly assigned to one of two self-affirmation instructional sets (i.e., Self-Affirmation or Summer Vacation Control). After reading the instructions, participants typed a brief description of the event they just considered. After they completed their responses, a transitional statement was presented to guide them to subsequent questionnaires (e.g., "We would now like to ask you questions about yourself"). The Affect Scale, Forgiveness Scale, measures of positive and negative emotional reactions, and TRIM-12 were then administered. Finally, personal experience and additional demographics were assessed.

### **Analyses**

A two-way ANOVA was conducted for each dependent variable – feelings of dissonance, forgiveness, positive emotional reactions, negative emotional reactions, and avoidant and vengeful responses – in order to test the proposed 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interaction. First, an overall *F* test was conducted to determine significant interactions and main effects for each outcome. A *Least Significant Difference* (LSD) *post hoc* analysis was used to make additional pairwise comparisons.

## **Results**

### **Manipulation Check**

A total of 31 participants failed the manipulation check by indicating that they did not follow the directions in their assigned perspective-taking instructional sets and were

eliminated from the analyses. Specifically, 14 participants in the Recall-Self-as-Transgressor condition were eliminated by indicating that they did not try to imagine a time when they had hurt someone close to them. An additional 14 participants in the Imagine-Other condition were eliminated because they did not try to imagine what it would be like to be in the transgressor's position. Three participants in the control group were excluded by indicating that they did not try to imagine the victim's perspective. The manipulation was deemed effective for a remaining 263 participants (184 women, 78 men) who indicated that they did engage in their assigned perspective-taking instructions by recalling the self as the transgressor ( $n = 77$ ), imagining the transgressor ( $n = 86$ ), or imagining the victim ( $n = 100$ ).

### **Main Hypotheses**

Contrary to Takaku's (2001) theory that perspective-taking would induce cognitive dissonance in participants, none of the main hypotheses were supported. That is, there were no significant 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interactions for the five dependent variables: feelings of dissonance, forgiveness, positive and negative emotional reactions, or avoidant and vengeful responses. Findings are presented in Table 1. Participants who did not self-affirm and who engaged in perspective-taking, by either recalling the self as the transgressor or imagining the transgressor, did not report increased feelings of dissonance, forgiveness, or positive emotional reactions compared to those in the perspective-taking control group. Furthermore, participants who did not self-affirm and who engaged in perspective-taking did not show a significant decrease in avoidant and vengeful responses compared to those in the perspective-taking control.

While there was no significant 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) interaction, results yielded a significant main effect of perspective-taking on negative emotional reactions toward the offender,  $F(2, 254) = 4.562, p = .01, \eta^2 = .035$ . An LSD *post hoc* analysis indicated that individuals in the perspective-taking control group were more likely to report increased negative emotional reactions toward the offender ( $M = 19.80, SD = 5.45$ ) than individuals who engaged in perspective-taking, by either recalling the self as the transgressor ( $M = 17.59, SD = 5.24$ ) or imagining the transgressor ( $M = 17.62, SD = 6.42$ ),  $p$ 's = .01, CI's [.4839, 3.9278] and [.5049, 3.8440], respectively.

### **Exploratory Analyses**

**Situational Empathy.** In order to examine an alternative empathy-based model of forgiveness (e.g., McCullough et al., 1997), first, a 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) ANOVA was conducted to explore group differences in situational empathy. There was no significant interaction for empathy; however, findings revealed a significant main effect of perspective-taking instructions on empathy for the offender,  $F(2, 256) = 3.427, p < .05, \eta^2 = .026$ . Additional pairwise comparisons indicated that participants who engaged in perspective-taking by imagining the transgressor's perspective (Imagine-Other condition;  $M = 22.65, SD = 10.17$ ) reported increased empathy for the transgressor compared to participants who did not engage in perspective-taking (Perspective-Taking Control;  $M = 18.77, SD = 10.68$ ),  $p = .01, CI [.9119, 6.8550]$ . There were no significant differences in empathic responding for participants who recalled the self as the transgressor ( $M = 21.02, SD = 9.72$ ).

Given that perspective-taking was shown to influence empathic responding, a subsequent, simple regression analysis was conducted to examine the influence of empathy on forgiveness. Findings suggested an indirect effect of perspective-taking on forgiveness, in that empathy explained 41% of the variance in forgiveness responses,  $R = .64$ ,  $r^2 = .41$ ,  $p < .001$ , 95% CI [.203, .358].

**Trait Empathy.** Two simple regression analyses indicated that individuals' total scores on the IRI (a measure of trait empathy) did not significantly predict forgiveness,  $\beta = .09$ ,  $r^2 = .007$ ,  $p = .192$ , 95% CI [-.023, .115], nor situational empathy for the offender,  $\beta = .06$ ,  $r^2 = .004$ ,  $p = .317$ , 95% CI [-.148, .048]. Additional correlational analyses indicated that only two of the IRI subscales, perspective-taking and personal distress, were related to forgiveness,  $r$ 's = .19 and -.15,  $p$ 's < .01 and .05, respectively. Only one of the IRI subscales, empathic concern, related to situational empathy for the offender,  $r = -.17$ ,  $p < .01$ . Correlations among the dependent measures are listed in Table 2.

**Causal Attributions.** A 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) ANOVA revealed a significant main effect of perspective-taking on ratings of the offender's external controllability,  $F(2, 257) = 3.533$ ,  $p < .05$ ,  $\eta^2 = .027$ . An LSD *post hoc* indicated that participants who engaged in perspective-taking, by either recalling the self as the transgressor ( $M = 4.70$ ,  $SD = 1.31$ ) or imagining the other ( $M = 4.66$ ,  $SD = 1.39$ ) were more likely to attribute the cause of the offender's behavior to external, situational factors (i.e., external controllability) compared to those in the perspective-taking control ( $M = 4.19$ ,  $SD = 1.70$ ).

Furthermore, there was a significant main effect of perspective-taking on attributions of behavioral instability (i.e., the belief that the behavior would vary over time),  $F(2, 257) =$

6.839,  $p < .01$ ,  $\eta^2 = .051$ . An LSD *post hoc* showed participants who engaged in perspective-taking by imagining the transgressor ( $M = 4.40$ ,  $SD = 1.161$ ) were more likely to see the offender's behavior as more variable (i.e., less stable) over time than participants who recalled the self as a transgressor ( $M = 3.96$ ,  $SD = 1.332$ ) and participants who did not engage in perspective-taking ( $M = 3.74$ ,  $SD = 1.151$ ).

A subsequent multiple regression analysis indicated that both types of causal attributions predicted forgiveness. Specifically, increased ratings of external controllability and behavioral instability explained 5.3% of the variance in forgiveness responses,  $R = .25$ , adjusted  $r^2 = .053$ ,  $p < .001$ ,  $\beta$ 's = .18 and .14, 95% CI's [.245, 1.395] and [.097, 1.507], respectively.

Additional multiple regression analyses were conducted to test for mediation following the procedures outlined by Baron and Kenny (1986). In order to include the perspective-taking manipulation in the regression model, the 3 perspective-taking conditions (Recall-Self-as-Transgressor, Imagine-Other, and Control) were recoded into two dummy variables: as 1 (Recall-Self-as-Transgressor) vs. 0 (Imagine-Other and Control) and 1 (Imagine-Other) vs. 0 (Recall-Self and Control). Thus, participants who recalled the self as the transgressor were denoted with 1, 0; those who imagined the transgressor were denoted with 0, 1; and those in the perspective-taking control were denoted with 0, 0. Findings revealed that the effect of perspective-taking on empathy toward the offender was mediated by participants' rating of external controllability and behavioral instability. Specifically, the effect of the perspective-taking manipulation on empathy was no longer significant when accounting for attributions of external controllability (i.e., belief that the cause of the offense was due to situational factors) and behavioral instability (i.e., the belief that the offender's

behavior would not be the same across time). The regression coefficients for both mediation models are presented in Figure 3.

Moreover, the positive relationships between the causal attributions (i.e., external controllability and behavioral instability) and forgiveness were mediated by empathy for the offender. That is, the relationship between the causal attributions and forgiveness became non-significant when accounting for empathic responding (see Figure 4 for both mediation models and the standardized regression coefficients).

**Past Experience.** One-hundred thirty-eight participants (approximately 53%) reported that they had been in a personal situation that was similar to the situation in the scenario. The remaining 125 (48%) indicated that they had not been in a similar situation. Forty-three of the participants with a similar personal experience identified with the offender's position. By contrast, 91 participants with a similar personal experience identified with the victim's position. Four participants indicated that they had been in similar situations in which they had been in both the offender's and victim's position; they were excluded from these analyses exploring the influence of personal experience.

An exploratory 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 3 (Past Experience: offender, victim, no similar experience) ANOVA revealed a significant main effect of past experience on empathy for the transgressor,  $F(2, 249) = 14.76$ ,  $p < .001$ ,  $\eta^2 = .11$ . An LSD *post hoc* analysis indicated that participants who had personally been in a situation similar to the offender's reported greater empathic responding ( $M = 27.77$ ,  $SD = 8.50$ ) than participants who had personally been in a situation similar to the victim's ( $M = 17.59$ ,  $SD = 9.70$ ) and participants who had no similar personal experiences ( $M = 20.14$ ,  $SD = 10.12$ ). By contrast, there was no significant main effect of perspective-taking in this

model,  $F(2, 249) = 1.42, p = .245, \eta^2 = .01$ . However, there were no significant 3 (Perspective-Taking) x 3 (Past Experience: offender, victim, no similar experience) interactions for forgiveness,  $F(4, 242) = 2.17, p = .073, \eta^2 = .04$ , or self-reported dissonance,  $F(4, 250) = .313, p = .869, \eta^2 = .005$ .<sup>1</sup>

**Gender.** Independent samples t-tests were conducted to explore gender differences in forgiveness responses. There were no differences in men's and women's forgiveness toward the offender,  $t(252) = .672, p = .502, CI [-1.26014, 2.56585]$ ; however, men did report greater empathic responding ( $M = 23.35, SD = 11.41$ ) than women ( $M = 19.57, SD = 9.68$ ),  $t(126) = 2.56, p = .01, CI [.85454, 6.70116]$ . Levene's test indicated unequal variances for men and women ( $F = 3.932, p = .048$ ), so degrees of freedom were adjusted from 259 to 126.

### Discussion

Few studies have examined the underlying causal mechanisms of forgiveness empirically. Researchers have depicted perspective-taking as a precursor to forgiveness (e.g., Exline et al., 2008; McCullough et al., 1997; Takaku, 2001); however, inconclusive findings and methodology have illustrated an incomplete understanding of key influences in the forgiveness process. Takaku was one of the few researchers to examine the effects of perspective-taking on forgiveness by having participants adopt the transgressor's perspective in a situation of conflict. The ultimate goal of this study was to determine whether Takaku's proposed dissonance-reduction-based model of forgiveness could be replicated by including a measure and manipulation designed to capture feelings of dissonance evoked by taking the perspective of the transgressor by imagining the self as that transgressor or imagining the transgressor.

Takaku's model explained forgiveness as the result of reducing cognitive dissonance that was caused by recognizing that holding the transgressor accountable for the undesired action while acknowledging one's own capability of performing the action would lead to the experience of hypocrisy. Takaku argued that taking the transgressor's perspective in this way prompted dissonance in the participant by emphasizing the similarities between the transgressor and self. Because Takaku speculated about the experience of dissonance but never measured it, the current study included both a direct and indirect measure of dissonance.

The findings did not support Takaku's (2001) dissonance-reduction-based model of forgiveness in multiple ways. First, this study failed to replicate Takaku's findings that imagining a transgressor's perspective – either via remembering one's own perspective as the transgressor or imagining the perspective of the transgressor – facilitated forgiveness relative to those who did not engage in perspective-taking. Additionally, there was no evidence of self-reported dissonance, in that ratings of discomfort were similar for those who did engage and those who did not engage in perspective-taking, regardless of whether they self-affirmed. Furthermore, providing individuals with an opportunity to restore the self-concept and alleviate the need for dissonance reduction (i.e., through self-affirmation; Tesser & Cornell, 1991) did not produce a change in feelings of dissonance or forgiveness responses.

In fairness, it is important to note the methodological differences of the current study when considering the lack of support for Takaku's (2001) model. First, the nature of the offense in the current study (a relational deception) was different from the offense used in Takaku's study (carelessness with a friend's notes). It is possible that the effect of perspective-taking on forgiveness may vary across types of offenses, depending on the

severity of the situation (e.g., Fehr, Gelfand, & Nag, 2010) and one's ability to imagine the event occurring. A situation of conflict with a romantic partner is likely perceived as more severe than a situation of conflict with another friend or casual acquaintance (Shackelford & Buss, 1996), such as the classmate. Additionally, Shackelford and Buss found that a romantic partner's extra-relationship involvement with a perceived enemy is more hurtful than involvement with an unknown party. The ex-girlfriend in the current scenario may have been perceived as an enemy, given that the victim had expressed her distrust for her and requested that the partner (Alan) not contact her. Moreover, it is important to note that approximately half of the participants in the current study reported that they had never experienced a similar situation to the one depicted in the scenario. It is possible that Takaku's (2001) scenario in which a classmate damaged someone's notes was more applicable to the participants' personal experiences.

Likewise, a similar personal experience may be an important condition for dissonance arousal. If dissonance is evoked due to perceived hypocrisy about the potential for the self to commit the same act as the transgressor, it seems possible that those who have not been in a similar situation may lack the ability to project themselves into the transgressor's position. Of the participants who had been in a similar personal situation, only 31% identified with the offender's position compared to 66% who identified with the victim's position. Consequently, the requirements for Takaku's (2001) theoretical framework may not have been met by the majority of participants. As a result, participants may not have fully experienced the proposed dissonant realizations about the self. As such, it is important to consider that cognitive dissonance could potentially explain forgiveness in a larger sample of

individuals with similar personal experiences as the transgressor; however, it was not supported as an explanation for participants' forgiveness in this study.

Contrary to Takaku (2001), Worthington and Kuru (2000) suggested that inducing feelings of hypocrisy in the victim may actually be counter-therapeutic. If such feelings of hypocrisy degrade one's self concept (Aronson, 2011), this may only strengthen negative emotions in the victim, which hinder emotional healing and constructive responses to an offense (e.g., Berry et al., 2005). Additionally, traditional explanations of forgiveness have suggested that a focus on the self is not conducive to forgiveness (e.g., Welton et al., 2008). Valadez and Evans (2005) noted the importance of being mindful of perspectives that are different from one's own perspective. Mindfulness of the other person's experience can redirect the focus from one's own emotional suffering as well as assist him/her in better understanding the overall experience of what has happened. An other-oriented approach not only facilitates a greater understanding of the situation, but also of the offender. This understanding may evoke an emotional connection with the offender, which can strengthen a relationship and inspire compassion for the other person as well as the self. Moreover, previous research has argued that forgiveness is cultivated when victims direct their focus to the transgressor's distress and guilt (e.g., Baumeister et al., 1994) – not their own pain and discomfort.

Batson et al. (1997) argued a fundamental difference between taking the perspective of another person in need and imagining the self as experiencing that need. Both of these perspective-taking strategies were analogous to Takaku's (2001) Recall-Self and Imagine-Other instructions, in that participants were instructed to either imagine another person in need of forgiveness or imagine a time when they were in need of forgiveness. Contrary to

Takaku's (2001) rationale that both types of perspective-taking should elicit the same outcome and cause one to project the self into the transgressor's position, Batson et al. (1997) showed that imagining the other person's feelings did not produce the same emotional outcomes as imagining one's self in the other person's position. Specifically, the former, other-oriented type of perspective-taking cultivated empathy and prosocial responses to the person in need, while the latter, self-oriented type of perspective-taking, cultivated personal distress, in addition to empathy. Self-oriented perspective-taking is linked to an egoistic motivation only to respond constructively when prosocial behavior will alleviate personal distress felt from empathizing. Particularly, this type of self-centered focus may cause one to project inaccurate feelings onto the other person (Batson et al., 1997). This is important when considering that the current findings may have largely been dependent on the self-centered projections of individuals with different personal experiences than the offender.

It is important to understand that these common depictions of forgiveness processes are not inherently mutually exclusive with cognitive dissonance; however, these established notions have seemingly promoted an "other-oriented" approach to forgiveness and opposed Takaku's (2001) argument, which has suggested the essential forgiveness mechanisms are actually augmented by focusing on the self. This alternative, "other-oriented" explanation can be conceptualized with the traditional empathy-based model of forgiveness.

While Takaku depicted cognitive dissonance as an alternative explanation to the traditional empathy-based model of forgiveness, exploratory measures of empathy were included to determine if perspective-taking facilitated forgiveness, specifically by means of empathic responding toward the offender. Both perspective-taking and empathy have been linked to forgiveness (e.g., Welton et al., 2008). Specifically, McCullough et al. (1997)

argued that perspective-taking facilitates forgiveness by directing one's focus to the transgressor and away from the self, a process which acts as a precursor to empathy. Likewise, Davis (1996) explicitly stated that perspective-taking fosters empathic outcomes. Consistent with Davis's description of empathy, participants who took the offender's perspective were more empathic than those who took the victim's perspective or those who recalled their own perspectives in the offender's position; however, there was no evidence to suggest that perspective-taking directly influenced forgiveness.

By contrast, findings suggested that perspective-taking had an indirect influence on forgiveness by facilitating empathy for the offender, which in turn, predicted increased forgiveness. These findings amplified the claim by McCullough et al. (1997) that empathy not only influences forgiveness, but also may be an essential piece of the forgiveness process. Additionally, explanations from other researchers (e.g., Davis & Gold, 2011; McCullough et al., 1997) who described empathy as the important link between an apology and forgiveness were upheld. The offender in the current scenario apologized for his hurtful behavior. Overall, findings were consistent with the empathy-based model of forgiveness; thus, providing empirical support for empathy as a critical component of the forgiveness process and, subsequently, perspective-taking as an important precursor to empathic responding.

A measure of interpersonal sensitivity (IRI; Davis, 1980) was included to examine the influence of personal characteristics on forgiveness responses. Interestingly, the four trait subscales (fantasy, perspective-taking, empathic concern, and personal distress) presumably measure an overall empathic tendency; however, interpersonal reactivity of participants did not relate to their forgiveness or empathic responses toward the offender. Moreover, empathic concern in participants was negatively, yet weakly, related to empathy for the

offender. This correlation was unexpected, but may be explained by differences in the qualitative nature of the empathic concern subscale and the situational measure of empathy for the offender.

A face valid interpretation of the empathic concern items suggested that individuals who scored higher on this trait may be more sensitive to a victim's situation than an offender's situation and therefore, less likely to identify (cognitively or emotionally) with the offender. For example, the items generally assessed a tendency to feel protective toward people who are being mistreated and to feel sympathy and concern for individuals in unfortunate (or "less fortunate") situations. By comparison, the situational measure of empathy focused on understanding the offender's behavior and feelings. It is possible that these individuals may only tend to be empathic toward victims compared to offenders. It is also noteworthy that Takaku (2001) did not assess dispositional or situational empathy, so it is impossible to know whether participants in his study would have responded similarly.

While findings did not depict an influential role for overall trait empathy in the forgiveness process, these results may further augment the importance of perspective-taking interventions as an indirect facilitator of forgiveness compared to empathic tendencies of the individual. Indeed, previous research has examined relationships between forgiveness and various dispositional constructs, such as the Big Five personality traits (McCullough & Hoyt, 2002), trait anger (Berry, Worthington, Parrott, O'Conner, & Wade, 2001), and narcissism (Exline, Baumeister, Bushman, Campbell, & Finkel, 2004); however, these current findings for trait empathy coincide with a recent meta-analysis of 175 forgiveness studies conducted by Fehr et al. (2010), which suggested that situational factors tend to influence forgiveness more than the victim's disposition. Consequently, the significance and development of

effective forgiveness strategies (such as the perspective-taking intervention) emits a hopeful prospect for victims coping with psychological pain and betrayal.

Previous research has noted the link between attributions and forgiveness (e.g., Struthers, Eaton, Santelli, Uchiyama, & Shirvani, 2008; Takaku, 2001). Similarly, the current study found that attributions of external control and behavioral instability further illustrated the indirect path between perspective-taking and forgiveness. Seeing the cause of the offender's behavior as the result of external factors and believing the offender's behavior would be different across situations was an important predictor of empathy and forgiveness. Moreover, both attributions explained the effect of perspective-taking on empathy, in that those who engaged in perspective-taking (by recalling themselves as transgressors or imagining the transgressor in the scenario) were more likely to attribute the cause of the offense to situational factors and see the offender's behavior as variable over time compared to those who did not engage in perspective-taking. When controlling for causal attributions, perspective-taking no longer influenced empathic responding toward the offender. Thus, findings suggested that the indirect link between perspective-taking and forgiveness was upheld by causal attributions that relieved the offender of responsibility, which in turn predicted increased empathy.

Likewise, the relationship between causal attributions (i.e., external controllability and behavioral instability) and forgiveness was fully explained by empathy for the offender. In other words, participants' attributions about the offender influenced their forgiveness through empathic responding. These findings may suggest that participants need to view the offender's behavior in a certain way (and arguably more positive way) before they can

empathize with the offender; however, further research is needed for these proposed causal statements to be conclusive.

Much research has examined the link between causal attributions and forgiveness through the lens of Weiner's (1986) Attribution Theory and Jones and Davis's (1965) Correspondence Inference Theory, both of which have noted the role of an apology in conflict resolution. According to Correspondence Inference Theory, negative perceptions of the transgressor's character may be attenuated by an apology. Comparable to this theory, previous research has found that forgiveness is hindered if the offender's actions are perceived as intentional and if the offender is held responsible for his/her behavior (Fehr et al., 2010). According to Goffman (1967), apologies may also influence a disassociation of the offender and the offense. Particularly, an apology can be understood within a broad framework of excuses, explanations, and justifications and it implies that the transgression will not be repeated (Ohbuchi, Kameda, & Agarie, 1989; Schlenker & Darby, 1981; Schmitt, Gollwitzer, Forster, & Montada, 2004; Weiner, 1995). As such, the apology in the current scenario may have legitimized the external attributions of the offender's behavior. Takaku (2001) found that the offender's behavior was perceived as more stable over time when participants took the victim's perspective than when they imagined themselves in the transgressors position. This finding did illustrate a causal link between perspective-taking and causal attributions; however, to my knowledge, no studies have demonstrated causal attributions as an essential condition for the connection between perspective-taking and forgiveness. Such findings in the current study introduce profound implications, not only for how the cognitive and motivational processes of forgiveness unfold, but for the overall understanding of what forgiveness is and the components said to define its construct.

While this study did not find evidence of cognitive dissonance, the implications of the current study may not be exempt from controversy when interpreted through the lens of the current forgiveness literature. Traditional theorists have established that forgiveness is beyond justice and fairness and should subsequently occur even when the offense is not excused or condoned (e.g., Enright & the Human Development Study Group, 1996; Enright & Zell, 1989). Specifically, it has been argued that forgiveness may require the victim to forfeit justified feelings of resentment and, moreover, cultivate responses toward the offender that are not deserved (e.g., Berry et al., 2005; Konstam et al., 2001; Rusbult et al., 1991); however, the empirical evidence presented in this study does not support this perspective. Rather, forgiveness was only related to attributions that depicted the offender as less responsible for causing the conflict. Moreover, perspective-taking did not cultivate empathy for the offender when excluding the contribution of such attributions.

The evidence potentially suggests that forgiveness was not independent of excuse and responsibility, in that it was dependent on the perceived nature of causal influences. The effectiveness of perspective-taking when an offense is seen as the direct result of the offender's character and intentions remains unclear. Regardless, future replication of the relationships modelled in this study could alleviate the ambiguity of forgiveness definitions by further clarifying these underlying cognitive, motivational, and emotional mechanisms.

That said, many of the participants in the study admitted having little experience with the nature of this transgression – perhaps a criterion for truly understanding and then forgiving someone for the behavior. In addition to apologies and perspective-taking, similarity among perceiver and actor has also been linked to empathic responding (e.g., Batson et al., 1981). Assessments of participants' own experience were included, specifically

to examine empathy and forgiveness in participants who had been in a situation similar to Alan's situation (i.e., the offender) in the scenario. Not surprisingly, participants who had previously been in a situation similar to Alan's were more likely to empathize with Alan than those who had previously been in the victim's situation (i.e., Anna's situation) and those who had no previous experience in a similar situation; however, they did not differ in their forgiveness responses. These findings were particularly salient when considering that perspective-taking no longer explained any meaningful differences in empathy for the offender when accounting for participants' personal experiences. Perspective-taking was a useful strategy for empathizing and subsequently forgiving the transgressor, but it is important to acknowledge that imagining the transgressor's perspective may be difficult when individuals have no personal experience to serve as a point of reference. As such, personal experience may not only be a cornerstone of Takaku's proposed dissonance-reduction-based model of forgiveness but also for the traditional empathy-based model.

### **Limitations and Future Research**

Additional research is needed to examine the ecological validity and generalizability of findings. A hypothetical scenario allowed for empirical control and replication of Takaku's (2001) study. While hypothetical scenarios provide an experimental advantage, they lack the realism of personal recollections. Particularly, hypothetical scenarios have been shown to enhance cognitive processes, while personal recollections tend to enhance affective reactions (Fehr et al., 2010). As such, it is important to note that participants considered a hypothetical situation from a third-party perspective. Additional research is needed to determine how the effect of the perspective-taking intervention would translate to responses

of interpersonal conflict involving a real couple. Findings could have differed if participants considered a personal situation that had previously happened to them.

Previous research has examined gender differences in response to hypothetical situations of infidelity (e.g., Buss, Larsen, Westend, & Semmelroth, 1992). When participants were asked to imagine a committed relationship and whether an emotional or sexual case of infidelity would be more hurtful to them, men were more likely than women to report greater upset in the event of sexual infidelity. Women were more likely than men to report greater upset in the event of emotional infidelity (Buss et al., 1992). The current findings did not reveal any differences in forgiveness for men and women; however, men were more empathic toward the offender than women. It is important to consider that the male gender of the offender could have influenced the ability of women to identify with him in the scenario. In future research, matching the gender of the offender with the gender of participant would be helpful in identifying whether perspective-taking instructions are more effective if one is identifying with a same-sex versus opposite-sex individual.

Additionally, it is unclear whether the empathy-based model of forgiveness in the current study would apply across types of offenses that vary in levels of severity and duration. Furthermore, an apology is largely seen as the most effective means of conflict resolution (e.g., Darby & Schlenker, 1982; Gonzales, Manning, & Haugen, 1992; Weiner, Graham, Peter, & Zmuidinas, 1991); however, it is not uncommon for offenders to be unapologetic or even unaware of their offensive behavior, in which case the victim must attempt forgiveness without receiving an apology. Likewise, the perspective-taking intervention may vary in effectiveness across different contexts. The conflict described in the scenario could be considered less severe (i.e., presumably one case of dishonesty) in

comparison to offenses that may occur repeatedly for an extended period of time (e.g., an affair that lasts for years).

Finally, forgiveness is a complicated process that takes place over time (Konstam et al., 2001). Worthington and Kuru (2000) found that forgiveness workshops that lasted for 2 hours had only a small influence on forgiving responses. While a 2-hour intervention designed to cultivate empathy did increase forgiveness in victims, it did not decrease unforgiving responses (avoidance and revenge). Consequently, the absence of a direct link between perspective-taking and forgiveness in the current study may be the result of perspective-taking interventions that only lasted a few minutes. Realistically, forgiveness is a difficult and confusing sequence of emotional changes that may vary across situations (e.g., McCullough et al., 1997; Wade & Worthington, 2003); as such, extending the duration of perspective-taking interventions may be necessary for promoting forgiveness processes that will ensure emotional healing and fully restore psychological well-being in the victim.

### **Conclusions**

Forgiveness has been depicted as critical to relationship maintenance and psychological well-being; however, the complex, ambiguous nature of the underlying emotional and cognitive processes has clouded researchers understanding of what forgiveness is and how it can be facilitated. These findings further solidify current theories of forgiveness by illustrating the underlying influences in an empirical framework. First, this study was the only study to implement an experimental design to determine if perspective-taking causes cognitive dissonance, as proposed by Takaku (2001). Findings not only failed to support the dissonance-based model of forgiveness, but offered evidence, instead, of the

traditional empathy-based model. Thus, it offers useful descriptions and explanations of the potential causal paths between perspective-taking and forgiveness.

Previous findings in the literature have largely been correlational or inconclusive. While it is important to identify the factors related to forgiveness, this study emphasizes how mental health professionals can cultivate predictors of forgiveness through perspective-taking interventions and deliberate cognitive exercises. As such, potential theoretical and practical implications of these findings may be widely applicable to clinical practice, and subsequently, individual well-being, relationship quality, and overall social functioning.

### References

- American Psychological Association. (2010). American Psychological Association ethical principles of psychologists and code of conduct. Retrieved from <http://www.apa.org/ethics/code/index.aspx?item=4>
- Aronson, E. (2011). *The Social Animal* (11th ed.). New York, NY: Freeman and Company.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective taking: Imagine how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin, 23*, 751-758.
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology, 40*, 290-302.
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin, 115*, 243-267.
- Berry, J. W., Worthington, E. L., O'Connor, L. E., Parrott, L., & Wade, N. G. (2005). Forgiveness, vengeful rumination, and affective traits. *Journal of Personality, 73*, 183-225. doi:10.1111/j.1467-6494.2004.00308.x
- Berry, J. W., Worthington, E. L., Jr., Parrott, L., O'Connor, L. E., & Wade, N. G. (2001). Dispositional forgiveness: Development and construct validity of the Transgression

- Narrative Test of Forgiveness (TNTF). *Personality and Social Psychology Bulletin*, 27, 1277–1290. doi:10.1001/jama.298.5.555
- Buchner, A., Erdfelder, E., Faul, F., & Lang, A. (2009). G\*Power (Version 3.1.2) [Computer program]. <http://www.psych.uni-duesseldorf.de/aap/projects/gpower/>
- Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological Science*, 3, 251 – 255.
- Cardi, M., Milich, R., Harris, M. J., & Kearns, E. (2007). Self-esteem moderates the response to forgiveness instructions among women with a history of victimization. *Journal of Research in Personality*, 41, 804–819. doi:10.1016/j.jrp.2006.09.007
- Cerney, M. S. (1988). “If only...” remorse in grief therapy. *Psychotherapy Patient*, 5, 235-248.
- Cohen, J. (1988). *A Statistical Power Analysis for the Behavioral Sciences*. Hillsdale, NJ: Erlbaum.
- Darby, B. W. & Schlenker, B. R. (1982). Children’s reactions to apologies. *Journal of Personality and Social Psychology*, 43, 742–753.
- Davis, J. R., & Gold, G. J. (2011). An examination of emotional empathy, attributions of stability, and the link between perceived remorse and forgiveness. *Personality and Individual Differences*, 50, 392–397. doi:10.1016/j.paid.2010.10.031
- Davis, M., & Conklin, L. (1996). Effect of perspective taking on the cognitive representation of persons: a merging of self and other. *Journal of Personality and Social Psychology*, 70, 713–726.

- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *Journal Supplemental Abstract Service: Catalog of Select Documents in Psychology, 10*, 85–103.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113–126.
- Davis, M. H. (1996). *Empathy: a social psychological approach*. Boulder, CO: Westview Press.
- Dodd, J. C., (2010). *The effects of a laughter manipulation on rumination regarding an interpersonal transgression in close relationships*. Unpublished master's thesis. Appalachian State University, Boone, NC.
- Eaton, J., Ward Struthers, C., & Santelli, A. G. (2006). Dispositional and state forgiveness: The role of self-esteem, need for structure, and narcissism. *Personality and Individual Differences, 41*, 371–380. doi:10.1016/j.paid.2006.02.005
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67*, 382–394.
- Ellison, S. (2002). *The courage to love again: Creating happy, healthy relationships after divorce*. New York, NY: Harper Collins.
- Enright, R. D., & the Human Development Study Group. (1996). Counseling with the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values, 40*, 107-126.

Enright, R. D., & Zell, R. L. (1989). Problems encountered when we forgive one another.

*Journal of Psychology and Christianity*, 8, 52-60.

Exline, J. J., Baumeister, R. F., Bushman, B. J., Campbell, W. K., & Finkel, E. J. (2004). Too

proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of*

*Personality and Social Psychology*, 87, 894 – 912. doi: 10.1037/0022-3514.87.6.894

Exline, J. J., Baumeister, R. F., Zell, A. L., Kraft, A., & Witvliet, C.V.O. (2008). Not so

innocent: Does seeing one's own capability for wrongdoing predict forgiveness?

*Journal of Personality and Social Psychology*, 94, 495-515.

Exline, J. J., & Zell, A. L. (2009). Empathy, self-affirmation, and forgiveness: The

moderating roles of gender and entitlement. *Journal of Social and Clinical*

*Psychology*, 28, 1071–1099. doi:10.1521/jscp.2009.28.9.1071

Fehr, R., Gelfand, J., & Nag, M. (2010). The road to forgiveness: A meta-analytic synthesis

of its situational and dispositional correlates. *Psychological Bulletin*, 136, 894 – 914.

doi:10.1037/a0019993

Festinger, L. (1957). A theory of cognitive dissonance. Evanston, IL: Row, Peterson.

Fitzgibbons, R. P. (1986). The cognitive and emotional uses of forgiveness in the treatment

of anger. *Psychotherapy*, 23, 629-633.

Freedman, S. R., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest

survivors. *Journal of Consulting and Clinical Psychology*, 64, 983-992.

Goffman, E. (1967). *Interaction ritual: Essays on face-to-face behavior*. Garden City, NY:

Anchor Books.

- Gonzales, M. H., Manning, D. J., & Haugen, J. A. (1992). Explaining our sins: Factors influencing offender accounts and anticipated victim responses. *Journal of Personality and Social Psychology, 62*, 958–971.
- Hargrave, T. (1994). *Families and forgiveness: Healing wounds in the intergenerational family*. New York, NY: Brunner/Mazel.
- Hill, E. W. (2010). Discovering forgiveness through empathy: Implications for couple and family therapy. *Journal of Family Therapy, 32*, 169–185. Retrieved from <http://www.lavoisier.fr/livre/notice.asp?id=O3OWA2AA6OAOWD>
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 219 – 266). San Diego, CA: Academic Press
- Konstam, V., Chernoff, M., & Deveney, S. (2001). Toward forgiveness: The role of shame, guilt, anger, and empathy. *Counseling and Values, 46*, 26–39.
- Leith, K., & Baumeister, R. (1998). Empathy, shame, guilt, and narratives of interpersonal conflicts: Guilt prone people are better at perspective taking. *Journal of Personality, 66*, 1–37.
- McAuley, E., & Shaffer, S. (1993). Affective responses to externally and personally controllable attributions. *Basic and Applied Social Psychology, 14*, 475-485.
- McCullough, M. E., & Hoyt, W. T. (2002). Transgression-related motivational dispositions: Personality substrates of forgiveness and their links to the Big Five. *Personality and Social Psychology Bulletin, 28*, 1556–1573. doi:10.1037/0022-3514.28.9.1556
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical

- elaboration and measurement. *Journal of Personality and Social Psychology*, *75*, 1586–1603.
- McCullough, M. E., Worthington, E. L., & Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology*, *73*, 321–336.
- Ohbuchi, K., Kameda, M., & Agarie, N. (1989). Apology as aggression control: Its role in mediating appraisal of and response to harm. *Journal of Personality and Social Psychology*, *56*, 219–227. doi:10.1037/0022-3514.56.2.219
- Oswald, P. A. (2002). The interactive effects of affective demeanor, cognitive processes, and perspective-taking focus on helping behavior. *The Journal of Social Psychology*, *142*, 120–32. doi:10.1080/00224540209603890
- Rusbult, C. E., Verette, J., Whitney, G. A., Slovik, L. F., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology*, *60*, 53–78.
- Rye, M. S., Loiacono, D. M., Folck, C. D., Olszewski, B. T., Heim, T. A., & Madia, B. P. (2001). Evaluation of the psychometric properties of two forgiveness scales. *Current Psychology*, *20*, 260–277. doi:10.1007/s12144-001-1011-6
- Schlenker, B., & Darby, B. (1981). The use of apologies in social predicaments. *Social Psychology Quarterly*, *44*, 271–278. doi:10.2307/2022840
- Schmitt, M., Gollwitzer, M., Forster, N., & Montada, L. (2004). Effects of objective and subjective account components on forgiving. *The Journal of Social Psychology*, *144*, 465–485. doi:10.3200/SOCP.144.5.465-486
- Shackelford, T. K., & Buss, D. M. (1996). Betrayal in mateships, friendships, and coalitions. *Personality and Social Psychology Bulletin*, *22*, 1151–1164.

- Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, *52*, 1061-1086.
- Stone, J., Aronson, E., Crain, A., Winslow, M., & Fried, C. (1994). Inducing hypocrisy as a means of encouraging young adults to use condoms. *Society for Personality and Social Psychology*, *20*, 116–128.
- Struthers, C. W., Eaton, J., Santelli, A. G., Uchiyama, M., & Shirvani, N. (2008). The effects of attributions of intent and apology on forgiveness: When saying sorry may not help the story. *Journal of Experimental and Social Psychology*, *44*, 983–992. doi: 10.1016/j.jesp.2008.02.006
- Takaku, S. (2001). The effects of apology and perspective taking on interpersonal forgiveness: A dissonance-attribution model of interpersonal forgiveness. *The Journal of Social Psychology*, *141*, 494–508.
- Tesser, A., & Cornell, D. (1991). On the confluence of self processes. *Journal of Experimental Social Psychology*, *27*, 501–526.
- Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L. S., ... Roberts, D. E. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, *73*, 313–359. doi:10.1111/j.1467-6494.2005.00311.x
- Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology*, *43*, 281-292.
- Valadez, A. A., & Evans, M. (2005). A novel approach: Using literary writing and creative interventions for working toward forgiveness after relationship dissolution and divorce. *Journal of Creativity in Mental Health*, *1*, 103–121. doi:10.1300/J456v01n03

- Wade, N. G., & Worthington, E. L., Jr. (2003). Overcoming interpersonal offenses: Is forgiveness the only way to deal with unforgiveness? *Journal of Counseling and Development, 81*, 343-353.
- Weiner, B. (1986). *Attribution theory of motivation and emotion*. New York, NY: Springer-Verlag.
- Weiner, B., (1995). *Judgment of responsibility*. New York, NY: Guilford.
- Weiner, B., Graham, S., Peter, O., & Zmuidinas, M. (1991). Public confession and forgiveness. *Journal of Personality, 59*, 289–312.
- Welton, G., Hill, P., & Seybold, K. (2008). Forgiveness in the trenches: Empathy, perspective taking, and anger. *Journal of Psychology and Christianity, 27*, 168–177.
- Worthington, E. L., Jr. (2005). More questions about forgiveness: Research agenda for 2005-2015. In E. L. Worthington, Jr. (Ed.), *Handbook of forgiveness* (pp. 557-573). New York, NY: Bamner-Routledge.
- Worthington, E. L., & Kurusu, T. (2000). Forgiving usually takes time: A lesson learned by studying interventions to promote forgiveness. *Journal of Psychology and Theology, 28*, 3–20.

**Endnote**

<sup>1</sup> Three exploratory 3 (Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2 (Self-Affirmation: Self-Affirmation; Summer Vacation Control) ANOVA's were conducted to determine if Takaku's proposed dissonance-reduction model would apply to the 43 participants who reported that they had experienced a similar situation as the offender. However, for these individuals, there were no significant interactions for self-reported dissonance,  $F(2, 37) = .826, p = .446, \eta^2 = .043$ , forgiveness,  $F(2, 34) = .133, p = .278, \eta^2 = .073$ , or empathy,  $F(2, 37) = .152, p = .859, \eta^2 = .008$ .

Table 1

*3(Perspective-Taking: Recall-Self-as-Transgressor; Imagine-Other; Control) x 2(Self-Affirmation: Self-Affirmation; Summer Vacation Control) interactions for each outcome: self-reported dissonance, forgiveness, positive and negative emotional reactions, and unforgiveness.*

	RST		IO		Control		<i>F</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
The Affect Scale							.259	(2, 257)	.772
Self-Affirm	2.10	1.25	2.25	1.41	2.03	1.18			
SA control	1.91	1.20	1.84	1.23	1.85	1.05			
Forgiveness Scale							.426	(2, 249)	.654
Self-Affirm	48.94	5.69	49.64	8.17	48.12	6.51			
SA control	47.82	6.05	49.30	6.68	48.96	8.41			
Positive emotions							1.54	(2, 257)	.217
Self-Affirm	5.00	3.17	5.60	2.90	4.21	2.38			
SA control	4.39	2.51	5.09	2.59	4.83	2.40			
Negative emotions							1.17	(2, 254)	.313
Self-Affirm	16.70	5.31	18.05	6.54	20.02	5.16			
SA control	18.44	5.10	17.19	6.35	19.59	5.73			
TRIM-12							.571	(2, 252)	.566
Self-Affirm	32.24	6.59	29.00	7.03	31.43	7.09			
SA control	31.31	6.84	30.45	6.94	31.04	9.69			

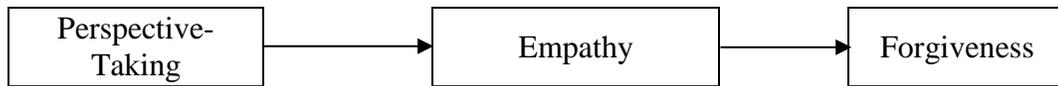
*Note:* RST = Recall-Self-as-Transgressor condition. IO = Imagine-Other condition. SA control = Summer Vacation Control. Higher scores indicate an increase in each outcome.

Table 2

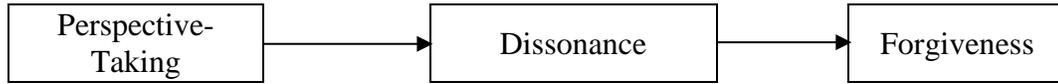
*Correlations between IRI subscales, empathy and forgiveness measures*

Measures	Perspective-Taking	Empathic Concern	Personal Distress	Forgiveness	Empathy
Fantasy	.22**	.36**	.18**	.09	.02
Perspective-Taking		.28**	-.10	.19**	.09
Empathic Concern			.25**	.07	-.17**
Personal Distress				-.15*	-.11
Forgiveness					.41**

*Note: \*p < .05, \*\*p < .01*

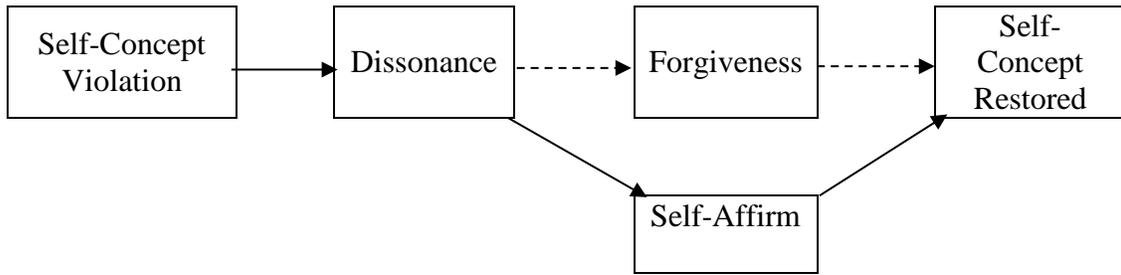


a) Model 1: Traditional empathy-based model of forgiveness



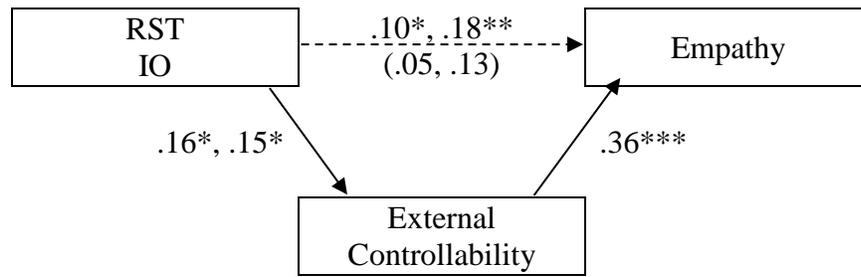
b) Model 2: Takaku's dissonance-based model of forgiveness

*Figure 1.* This figure depicts the traditional model (a) and Takaku's (2001) model (b) of forgiveness.

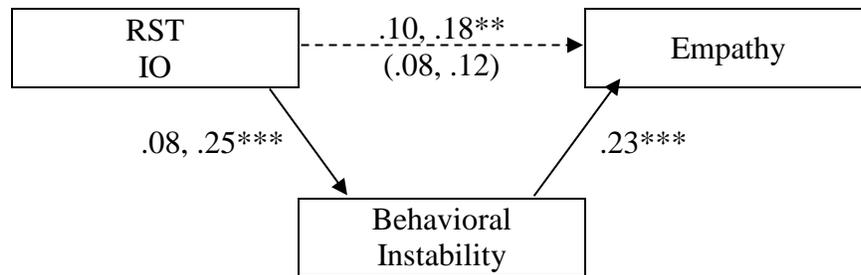


a) Model 3: Self-Affirmation Model

*Figure 2.* This model demonstrates the self-affirmation rationale for dissonance reduction.



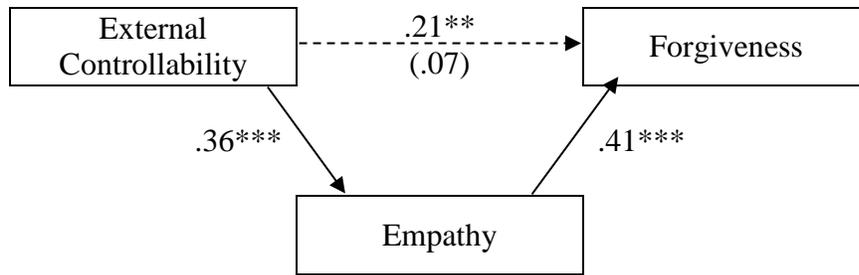
a) External controllability mediation model



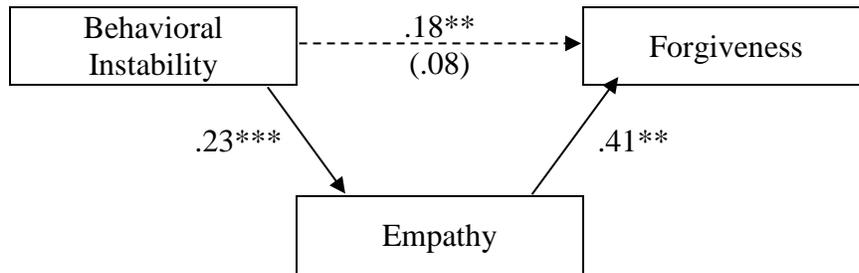
b) Behavioral instability mediation model

Figure 3. The standardized regression coefficients with both causal attributions included as mediators. RST = Recall-Self dummy variable. IO = Imagine-Other dummy variable. The regression coefficients for the relationship between perspective-taking and forgiveness after accounting for the attributions are noted in parentheses. Both regression coefficients for RST and IO are noted in their respective order.

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



a) Empathy mediating the relationship between external controllability and forgiveness



b) Empathy mediating the relationship between behavioral instability and forgiveness

Figure 4. The standardized regression coefficients when empathy is included as a mediator between causal attributions and forgiveness. The regression coefficients for the relationship between both causal attributions (i.e., external controllability and behavioral instability) and forgiveness after accounting for the attributions are noted in parentheses.

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

**Appendix A**

**To:** Karly Cochran  
EMAIL

**From:** Dr. Stan Aeschleman, Institutional Review Board Chairperson  
**Date:** 10/01/2013  
**RE:** Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)  
**Study #:** 14-0056

**Study Title:** Effects of Perspective-Taking on Forgiveness  
**Submission Type:** Initial  
**Expedited Category:** (7) Research on Group Characteristics or Behavior, or Surveys, Interviews, etc.  
**Approval Date:** 10/01/2013  
**Expiration Date of Approval:** 9/30/2014

The Institutional Review Board (IRB) approved this study for the period indicated above. The IRB found that the research procedures meet the expedited category cited above. IRB approval is limited to the activities described in the IRB approved materials, and extends to the performance of the described activities in the sites identified in the IRB application. In accordance with this approval, IRB findings and approval conditions for the conduct of this research are listed below.

**Regulatory and other findings:**

The IRB waived the requirement to obtain a signed consent form for some or all subjects because the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

**Approval Conditions:**

Appalachian State University Policies: All individuals engaged in research with human participants are responsible for compliance with the University policies and procedures, and IRB determinations.

Principal Investigator Responsibilities: The PI should review the IRB's list of PI responsibilities. The Principal Investigator (PI), or Faculty Advisor if the PI is a student, is ultimately responsible for ensuring the protection of research participants; conducting sound ethical research that complies with federal regulations, University policy and procedures; and maintaining study records.

Modifications and Addendums: IRB approval must be sought and obtained for any proposed modification or addendum (e.g., a change in procedure, personnel, study location, study instruments) to the IRB approved protocol, and informed consent form before changes may be implemented, unless changes are necessary to eliminate apparent immediate hazards to participants. Changes to eliminate apparent immediate hazards must be reported promptly to the IRB.

Approval Expiration and Continuing Review: The PI is responsible for requesting continuing review in a timely manner and receiving continuing approval for the duration of the research with human participants. Lapses in approval should be avoided to protect the welfare of enrolled participants. If approval expires, all research activities with human participants must cease.

Prompt Reporting of Events: Unanticipated Problems involving risks to participants or others; serious or continuing noncompliance with IRB requirements and determinations; and suspension or termination of IRB approval by an external entity, must be promptly reported to the IRB.

Closing a study: When research procedures with human subjects are completed, please complete the Request for Closure of IRB review form and send it to [irb@appstate.edu](mailto:irb@appstate.edu).

**Websites:**

1. PI responsibilities: <http://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/PI%20Responsibilities.pdf>

2. IRB forms: <http://researchprotections.appstate.edu/human-subjects/irb-forms>

CC:

Doris Bazzini, Psychology

**Appendix B**

Positive Emotional Reactions (Toi & Batson, 1982)

Please indicate how much the following emotions describe your current feelings [toward

Alan] (1 = not at all; 7 = very much):

1. Sympathetic
2. Moved
3. Compassion

### **Appendix C**

#### Negative Emotional Reactions (Shaver et al., 1987)

Please indicate how much you feel the following emotions [toward Alan] (1 = not at all; 5 = very much).

1. Anger
2. Hurt
3. Vengefulness
4. Disgust
5. Sadness
6. Disappointment

**Appendix D**

Demographics

1. Age
2. Sex
3. What is your race/ethnicity?
4. What is your sexual orientation?
5. What is your current relationship status?  
Single, In a relationship, Married, Divorced, Widowed
6. What is the highest education level you plan to earn?
7. What is the highest education level your mother earned?
8. What is the highest education level your father earned?
9. Are you currently a student?
10. What is your classification?  
Freshman, Sophomore, Junior, Senior, Graduate
11. What is your GPA?
12. Are you currently employed?
13. What is your household income?  
< 25K, 25-50K, 50-75K, 75-100K, > 100K

## **Appendix E**

### Consent to Participate in Research: Information to Consider About this Research

#### Conflict in Relationships

##### **Principal Investigator:**

Karly Cochran  
Dept. of Psychology  
Appalachian State University  
cochranka@appstate.edu  
828.262.2272

##### **Faculty Advisor:**

Doris Bazzini, Ph.D.  
Dept. of Psychology  
Appalachian State University  
bazzinidg@appstate.edu  
828.262.2272

You are being invited to take part in a study that examines how people approach conflict in relationships. You will be asked to complete a brief writing activity before and after reading a description of conflict between two romantic partners. You will then be asked to answer a series of questions based on your response to the situation.

##### **What are the possible benefits and risks of the research?**

Your participation may or may not directly benefit you, but this research may help others in the future by furthering our understanding of relationships and social interactions.

To the best of our knowledge, there are no risks that might result from participating in this study.

No identifying information will be collected. All responses will be anonymous and will not be linked to you in any way.

##### **Who can I contact if I have questions?**

Research assistants are available to answer questions you may have concerning the research. You may also contact the Principal Investigator (cochranka@appstate.edu) if you have any questions in the future.

**Your participation is completely voluntary.**

This survey should take approximately 30 - 45 minutes to complete. You may decide to stop at any time for any reason without consequences, or you may choose not to answer any of the survey questions. If you decide to participate in this study, please advance to the next page using the button below.

You will receive 1 Experiential Learning Credits for your participation in this study. Please note that your participation in research is optional; you may fulfill your Experiential Learning Credit requirements for a course by choosing to complete alternative activities.

This research project has been approved by the Institutional Review Board of Appalachian State University on 10/1/2013.

Questions regarding the protection of human subjects may be addressed to:

IRB Administrator  
Research and Sponsored Programs  
Appalachian State University  
Boone, NC 28608  
Phone: (828)262 – 2130  
Email: irb@appstate.edu

**By continuing to the survey, I acknowledge that I am at least 18 years old, have read the above information, and provide my consent to participate under the terms above.**

### **Vita**

Karly Ann Cochran was born in Florence, Alabama, the daughter of Bill and Lisa Cochran. She graduated from Florence High School in 2008 and began undergraduate study at the University of North Alabama. She received her Bachelor of Arts in Psychology with minors in Spanish and Sociology in May 2012. In the following autumn, Karly began study toward a Master of Arts degree in General Experimental Psychology at Appalachian State University and was awarded the degree in May 2014. She plans to begin study at Kent State University in August 2014, where she will pursue a doctorate degree in Experimental Psychology with a specialization in Social Psychology and a minor in Quantitative Methodology.