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UNDERSTANDING THE EFFECTS OF SUBSTANTIVE RESPONSES ON TRUST FOLLOWING A TRANSGRESSION

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Abstract

Despite the importance of trust in work relationships, and the potential for it to be violated, there is surprisingly little research on how trust can be repaired. Two studies, involving a context in which a senior executive of an organization has violated his employees' trust, were conducted to investigate the effects of two 'substantive' responses for repairing trust, which we refer to as penance and regulation. These studies also investigated the effects of such responses on the cognitive processes of the trustor to shed light onto how and when these substantive responses may effectively repair trust. Study 1 revealed that both penance and regulation increased trust following a violation, that perceived repentance was the singular mediating cognition responsible for the effectiveness of both responses, and that trustors saw repentance signals as more informative when the original transgression was due to a lapse of competence, than when it was due to a lapse of integrity. Study 2 then compared these substantive responses to apologies (non-substantive responses), which have been the focus of prior research on trust repair, and revealed that, despite their surface level differences, that they repaired trust through the same mediating cognition.

Although trust is commonly recognized as a vital foundation for work relationships (Kramer, 1999), this foundation can quickly disappear when a transgression occurs. Organizational researchers have observed that managers have experienced significant declines in trustworthiness in the eyes of their employees and members of other organizations, at least partly due to numerous and widely publicized transgressions (Tyler & Kramer, 1996). Despite this recognition, there is surprisingly little research on the steps that can be taken following a transgression to repair trust.

The following studies seek to bolster our understanding of the trust repair process in several ways. First, of the few studies that have been conducted, many have focused on apologies, or related verbal accounts, as a means of repairing trust. Despite some evidence of their success, such verbal responses might be dismissed as 'cheap talk' because trustors may want something more substantive than 'mere words' (e.g., having the transgressor pay a tangible price for past behavior or face real constraints on future behavior). The present research represents one of the few papers to address this concern by investigating the role of substantive responses for repairing trust following a transgression.

Second, given that trust is ultimately in the "eye of the beholder," it is essential to investigate the cognitive processes of the trustor to understand the means through which substantive responses affect trust. To do so we identify and assess two mediating cognitions, perceived repentance and perceived prevention, that may account for the effects of these substantive responses. To date, research on trust repair appears to have largely overlooked these cognitions or assumed their effects without actually evaluating them. In addition to investigating these two cognitions, we also examine how the efficacy of these mechanisms may depend on

cognitive processes that can affect the extent to which trustors view these mechanisms as informative. This analysis should shed light onto how and when substantive responses may repair trust effectively.

Last, while pursuing the above objectives, this paper integrates research on alternative strategies employed by transgressors - both substantive and non-substantive - that are represented in prior research and in practice. Although these different types of responses have received attention in various literatures, they have typically been considered in isolation from each other. By considering them simultaneously, we can identify their commonalities and differences, consider their advantages and disadvantages, how they relate to each other and ultimately integrate them into a parsimonious conceptual framework.

Theory and Hypotheses

Organizational researchers have defined trust as a psychological state comprising the intention of one individual to accept vulnerability based upon positive expectations of the intentions or behavior of another individual (Rousseau, Sitkin, Burt, & Camerer, 1998). Researchers have, furthermore, discussed how trust increases and decreases via an attributional process in which individuals gather information from observed behaviors and statements and draw inferences about the actor (e.g., Ferrin & Dirks, 2003; Korsgaard, Brodt, & Whitener, 2002). Consistent with this perspective, when an individual is perceived to have engaged in untrustworthy behavior, trustors can form negative expectations of the intentions or behavior of that individual and hence will be hesitant to accept vulnerability. Trust repair then involves attempting to increase trust following a situation in which a transgression (i.e., untrustworthy behavior) is perceived to have occurred. Thus, in contrast to building trust "from scratch,"

repairing trust involves the additional challenge of overcoming the negative expectations that arise from the transgression.

Verbal accounts represent one way of responding to a transgression. For example, verbal responses such as apologies, denials, justifications, and excuses are options that are often used following a transgression (e.g., Scott & Lyman, 1968; Schlenker & Darby, 1981; Shapiro, 1991). Of these options, recent studies have focused primarily on the role of apologies for repairing trust (e.g., Kim, Ferrin, Cooper, & Dirks, 2004; Kim, Dirks, Cooper, & Ferrin, 2006; Lewicki & Bunker, 1995; Schweitzer, Hershey, & Bradlow, forthcoming; Tomlinson, Dineen, & Lewicki, 2004). Apologies express regret for the violation and involve an implicit promise to avoid such transgressions in the future, which are expected to reduce perceivers' concerns about continued vulnerability and, thereby, enable trust repair. Kim and colleagues (2004; 2006) found that apologies can repair trust, although they are more effective in some situations than others. Likewise, Tomlinson et al. (2004) found that apologies increased the willingness to reconcile following a trust violation. Interest in apologies, furthermore, has not been limited to research. Apologies have been embraced as a response to transgressions to an equal or greater degree in practice, as demonstrated by high profile cases involving CEOs, political leaders, and religious leaders (e.g., see Kronholz & Harwood, 1998; Maxon, 2003; McGlaughlin, 2002).

However, despite the good intentions leaders may have when offering an apology, followers may (wisely) be looking for something more substantive than words in order to place their trust in them again (e.g., see cases of CEOs and political leaders cited in prior sentence: "…Clinton Apologizes To Nearly Everyone -- Even if Contrition Offensive Wins Forgiveness, Trust Won't Come as Quickly;" and "American CEO's Apology Unlikely to Regain Workers' Trust, Experts Say"). From the perspective of the provider, advantages of using an apology to

repair trust arise from the general ease and low cost of its provision. However, from a perceiver's perspective, these same advantages provide grounds for concern: because of the low cost of providing apologies (in many situations), they may be perceived as 'cheap talk' and consequently discounted. In other words, although apologies presumably attempt to demonstrate remorse for the act and try to provide assurance that the same thing will not occur in the future, there is nothing tangible to lend credence to these words. This concern is not without merit, as individuals are known to use cheap talk to manage impressions and subsequently improve their lot (Pillutla & Murnighan, 1995). Responses that are more 'substantive' in nature are consequently worth consideration, as they lessen concerns related to the perceptions of the response as "cheap talk" and the limitations of mere words to make individuals willing to be vulnerable again following a transgression.

Substantive Responses

To date, however, few studies have examined the repair of trust using responses that are more substantive in nature (for an exception, see Nakayachi & Watabe, 2005). Therefore, one contribution that could be made to the literature would be to identify and assess specific substantive responses that could be used to repair trust. A further step would be to identify the underlying processes through which substantive responses operate, so as to develop a more general understanding of substantive responses and the theoretical basis for their effects.

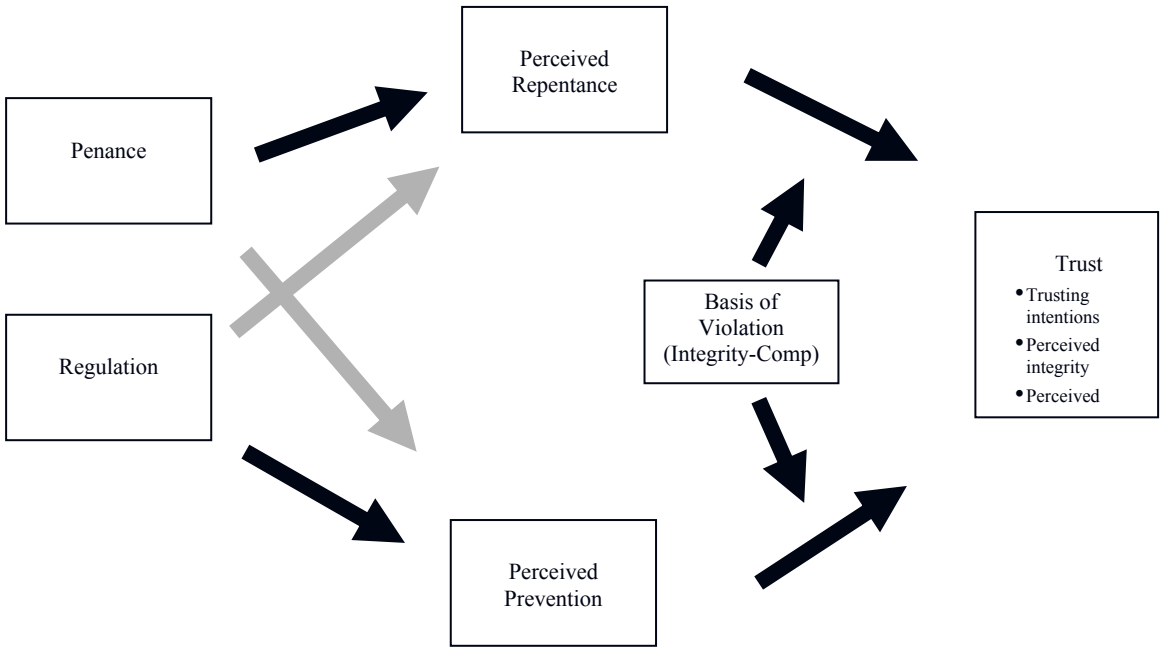
To address both of these objectives, the present paper focuses on two substantive responses. Following a transgression, offenders are sometimes expected to "pay a price" for committing the offense by suffering a meaningful cost or penalty. When imposed on the offender this is referred to as punishment (Arvey & Ivanevich, 1980), and when voluntarily undertaken it

is sometimes referred to as penance (e.g., Bottom, et al., 2000). Alternatively, following a transgression, there is often a desire for a system to constrain the future behavior of the offender (e.g., through monitoring systems, contracts, rules). Such "regulation" can also be imposed or voluntarily initiated.[1]

The present investigation models how these substantive responses by the transgressor may repair trust through their effects on two cognitive mechanisms, perceived repentance and perceived prevention (discussed below). The model also provides insight into how these mechanisms may be more or less effective depending upon the nature of the original violation (i.e., lapse of competence or integrity). The overall model is depicted in Figure 1. In this research, our focus will be on the voluntary forms of these responses as they offer the most promise for repairing trust. Attribution theory suggests that actions are more likely to result in personal attributions when they are voluntary than when they are not (Heider, 1958). Consequently, the voluntary forms of these responses will tend to be seen as more diagnostic of the individual and his or her commitment to the response than the imposed versions.

[1] Although the voluntarily initiated forms might be called 'self regulation' we will use the simpler term 'regulation' to avoid confusion, given that the former has a well established, but different, meaning in motivation theories.

Figure 1. Model of Substantive Responses on Trust Following a Transgression



Underlying processes. Penance and regulation are of particular interest in our model because they characterize two contrasting strategies for how to respond to a transgression. One of the primary reasons for an offender to offer to pay a price following a transgression is to demonstrate that he or she has learned that the behavior was unacceptable and thus that he or she will not act in that way again (Heider, 1958; Vidmar & Miller, 1980). In contrast, the primary intended effect of instituting regulation, by setting up a structure or system external to the individual (e.g., monitoring system), is to prevent or constrain the individual from engaging in future untrustworthy behavior (Sitkin & Roth, 1993)[2]. These two reasons appear to represent two of the most common strategies for repairing trust that have been advocated in the literature.

[2] Although the primary effects of penance and regulation are expected to differ, these substantive responses are also likely to have secondary effects, as we note below.

For example, some research has focused on the idea that trust may be repaired by signaling that the trustee became a "better" person following the transgression by recognizing that the behavior was unacceptable and addressing his or her shortcomings accordingly. This idea has perhaps been most apparent in research on apologies. Specifically, apologies are expected to repair trust to the extent that the expression of remorse signals that the trustee acknowledges that his or her behavior was unacceptable and, because of this realization, intends to avoid similar violations in the future (Lewicki & Bunker, 1996; Kim et al., 2004). This idea was also central to Bottom, Gibson, Daniels, and Murnighan's (2002) study of the restoration of cooperation following a transgression. Bottom et al. (2002) examined whether providing an apology and reparation following a transgression would restore cooperation, based on the idea that these actions would demonstrate remorse for the behavior and a commitment to avoid similar transgressions in the future. Data from their study demonstrated that this tactic did help restore cooperation following a transgression, and they speculated that the repair of trust was an unmeasured variable responsible for the effect.

Across these studies, the mediating cognition appears to be the trustor's perception of *repentance* by the trustee (e.g., Exline & Baumeister, 2000). Due to perceived repentance, the trustor should have more positive expectations of the intentions or behavior of the trustee, and therefore be more willing to accept vulnerability. To the extent that a substantive response can elicit this perception, it may be effective at repairing trust. This solution is based on the notion that perceivers make trust judgments based largely on their assessment of the trustee's internal characteristics, a view which is typically reflected in psychological approaches to trust. A key strength of activating perceived repentance is its focus on addressing the underlying cause of the transgression (e.g., the transgressor's values or competence). However, its biggest shortcoming is

that it provides no direct guarantee of trustworthy behavior. This concern regarding the lack of constraint on future action might be particularly salient following a transgression, because perceivers may wonder whether this repentance is merely a response to social pressure, or even strategic (e.g., a signal to set the person up for future exploitation).

Reflective of this concern, other research has focused on the efficacy of directly assuring trustworthy behavior in response to a transgression. Specifically, some scholars have suggested that trust may be repaired by providing a guarantee that future transgressions will not be committed. For example, Sitkin and Roth (1993; Sitkin, 1995) proposed that managers can sometimes repair trust by using "legalistic remedies" that ensure trustworthy behavior by individuals. More specifically, they proposed that the use of various controls (e.g., policies, procedures, contracts, monitoring) may increase the reliability of behavior and therefore restore trust. For example, they suggested that if an employee has demonstrated an inability to perform his or her job effectively, and this has engendered a lack of trust, that policies or procedures can be implemented to provide assurance to trustors that the employee will perform reliably in the future (and thus restore trust). Likewise, results of a questionnaire reported by Slovic (1993) suggested that the most effective tactic for increasing trust in a nuclear plant was to set up a system that included monitoring and the power to restrict the plant's ability to operate. Nakayachi and Watabe (2005) expanded on this idea in an empirical study and found that the ability to monitor and sanction helped restore trust following a transgression and was effective in several contexts.

Across these studies, the mediating cognition for these latter types of substantive actions appears to be the trustor's perceived *prevention* of untrustworthy behavior. Logically, when perceived prevention is activated, one should have more positive expectations of the behavior of

the trustee, and therefore be more willing to accept vulnerability. In contrast to a solution based on changes within the individual (i.e., repentance), prevention focuses on a contextual solution, which is more reflective of sociological or economic approaches to managing trust (e.g., Lorenz, 1999; Zucker, 1986). A key strength of activating prevention is the focus on directly addressing the undesirable symptom (untrustworthy behavior). However, its key limitation is that it does not directly speak to whether the underlying cause of the behavior was corrected (i.e., whether the individual has repented) and thus leaves open the question of whether the individual will re-offend (e.g., by finding a way to skirt the system).[3]

To summarize, penance and regulation represent common substantive responses to trust violations that illustrate contrasting strategies for how to increase trust following a transgression. These two responses differ in their emphasis on two mediating cognitions of the trustor, perceived repentance and perceived prevention. We identify and intend to assess these mediating cognitions for three reasons. First and most fundamentally, it is important not only to understand whether penance and regulation work, but also how they work, i.e., to better understand the cognitive processes involved as trustors react to substantive responses. Second, although a given response may be intended to influence a particular cognition of the trustor (e.g., penance affecting perceived repentance), one should not expect exclusivity in how trustors perceive the response. Specifically, although penance is expected to have a strong effect on perceived repentance and regulation is expected to have a strong effect on perceived prevention, these responses may to a lesser degree activate the other mechanism as well. For example, penance could have a secondary effect on perceived prevention (given that the cause of the behavior has presumably been fixed) and regulation could have a secondary effect on perceived repentance

[3] Another limitation can show up over time as well. Specifically, applying regulation may make it difficult for perceivers to attribute trustworthy behavior that occurs in the presence of such systems to the individual or the system (e.g., Malhotra & Murnighan, 2002; Strickland, 1958).

(given that the individual may suffer a cost due to the system being in place). Due to these secondary effects, it is important to determine whether one or both mechanisms are responsible for repairing trust. Third, these mediating cognitions can provide a more systematic understanding of responses that might otherwise appear disparate and unlinked. For example, perceived repentance may be responsible for the effects of a variety of responses such as apologies and victim reparation. Similarly, perceived prevention may be responsible for the effects of various approaches beyond those of regulation. The above arguments can be formalized in the following hypotheses.

H1a. Penance will increase trust following a violation.

H1b. Regulation will increase trust following a violation.

H2a. Perceived repentance will mediate the relationships between substantive responses (penance, regulation) and trust.

H2b. Perceived prevention will mediate the relationships between substantive responses (penance, regulation) and trust.

Cognitive processes and limitations to effectiveness of trust repair efforts. Despite these substantive efforts to repair trust by sending signals of repentance and prevention, trustors may still see them as insufficient. Indeed, it is commonly said that trust is always difficult to repair (as epitomized by adage from Publilius, "trust, like the soul, never returns once it is gone"), perhaps because of the tendency of trustors to focus on negative events (e.g., Slovic, 1993). However, some scholars have raised the more intriguing possibility that whether trust is actually more or less difficult to repair depends upon the particular type of violation that was committed. Lewicki and Bunker (1995), for example, speculated that trust may be more difficult to repair for violations that raise concerns about the fundamental values of a party, than with

other types of violations. Speaking in reference to the use of substantive responses specifically, Sitkin and Roth (1993) proposed that trust may be repaired by applying legalistic remedies when the original violations concern an ability to complete tasks in a reliable manner, but not in cases in which the violation stemmed from a difference in values. These types of observations suggest that the activation of perceived repentance and prevention may be systematically more effective for repairing trust following some types of violations than others. Nevertheless, scholars have not converged on what these contingencies might be or on the theoretical foundations that underlie them. Thus, examining the cognitive processes of trustors may not only help us understand whether perceived repentance and prevention repair trust, but also *when* those factors have a greater chance of success.

A theoretical framework for understanding how trust repair signals are seen as more or less informative by trustors was provided by Kim et al. (2004). Specifically, this study offered a basis for understanding when individuals place more versus less weight on information related to trust repair by using a schematic model of dispositional attribution. This schematic model suggests that there are inherent differences in the way people assess positive versus negative information about competence versus integrity (Reeder & Brewer, 1979). These attributions are particularly relevant for studies of trust repair because competence (i.e., the perception that the trustee possesses requisite knowledge and skills) and integrity (i.e., the perception that the trustee adheres to an acceptable set of values) have been found to represent two of the most important factors of trustworthiness (Barber, 1983; Mayer, Davis, & Schoorman, 1995).

According to the schematic model, people intuitively believe that those with high competence are capable of exhibiting many levels of performance, depending on their motivation and task demands, whereas those with low competence can only perform at levels that are

commensurate with or lower than their competence level (Reeder & Brewer, 1979). As a result, a single success may be considered to offer a reliable signal of competence, but a single failure may be discounted as a signal of incompetence. In contrast, this model contends that people intuitively believe that those with high integrity would refrain from dishonest behavior regardless of the situation, whereas those with low integrity may exhibit either dishonest or honest behaviors depending on their specific incentives and opportunities. As a result, a single honest act may be discounted as a signal of honesty, but a single dishonest act is generally considered to offer a reliable signal of low integrity.

This framework can be extended to evaluate the potential effects of perceived repentance and perceived prevention. Specifically, this logic suggests that individuals will weigh the positive signals derived from penance and regulation (i.e., perceived repentance and perceived prevention) along with the negative information derived from the violation, and that the relative weighting of such signals will differ based on the type of violation. When a violation concerns a matter of competence, the notion that people weigh positive information about competence more heavily than negative information about competence suggests that the positive signals of perceived repentance and perceived prevention are likely to outweigh the negative information arising from the transgression and thus foster some degree of trust repair (i.e., by indicating that the transgressor will correct the deficiency or put adequate safeguards in place, respectively). However, when the violation concerns matters of integrity, the notion that people weigh negative information about integrity more heavily than positive information about integrity suggests that positive signals of perceived repentance and perceived prevention would do little to foster trust repair, since the violation would be seen to offer a reliable signal that one lacks integrity and such an assessment would be difficult to disconfirm (e.g., such signals may be discounted as

merely strategic or vulnerable to exploitation through cracks in the system, respectively). The following two hypotheses formalize the above arguments and complete the model.

Hypothesis 3a. The relationship between perceived repentance and trust will be moderated by the type of the violation. Perceived repentance will be more positively related to trust for competence-based violations, compared to integrity-based violations.

Hypothesis 3b. The relationship between perceived prevention and trust will be moderated by the type of the violation. Perceived prevention will be more positively related to trust for competence-based violations, compared to integrity-based violations.

Study 1

Design

This study implemented a 2 (Violation: competence vs. integrity) x 3 (Response: Penance vs. Regulation vs. No response) between-subjects design. The "no response" conditions were added as controls. Participants were randomly assigned to the six study conditions.

Participants

To test the hypotheses, we collected data from two samples comprised of approximately equal numbers of participants representing different cultures and business contexts: the United States and Singapore. There were several reasons to take the additional step of collecting data from subjects in Singapore, instead of just the United States. Our theory relies heavily on cognition, which cross-cultural psychologists have suggested can vary across cultures and result in differences in reactions (e.g., see Markus & Kitayama, 1991). For example, some research has indicated that individuals from different cultures may differentially focus on internal versus

external determinants of social behavior (e.g., see Choi, Nisbett, & Norenzayan, 1999). Given that our predictions focus on internal (repentance) and external (prevention) factors, it was important to ascertain that the pattern of results would remain the same when tested with non-Western participants. Likewise, research from the U.S. and Europe has been used to derive and support the operation of hierarchical schemas in social perception (e.g., Martijin, Spears, Va der Plight, & Jakobs, 1992; Reeder, Hesson-McInnis, Krohse, & Scialabba, 2001), but little or no research has verified that such schemas would operate in individuals from non-Western cultures. This issue is critical for Hypothesis 3.

The sample of 143 participants from the United States was comprised of eighty-five undergraduate students, who participated for course credit, and fifty-eight graduate business students who participated as part of an in-class exercise. Participants in the undergraduate sample were 47 percent male, and possessed an average of .50 years of full-time work experience and 2.40 years part time work experience. Participants in the graduate sample were 64 percent male, and possessed an average of 7.47 years of full-time work experience and 3.33 years of part-time experience. We included undergraduate and graduate students in the study to enhance the generalizability of the results.

The Singapore sample comprised 150 undergraduate students at a university in Singapore. Ninety-one percent of participants identified themselves as being of Chinese descent, with the remainder identifying their descent as being Indian, Malaysian, and various other categories. Participants were 30 percent male and possessed an average of .34 years of full-time work experience and 1.15 years of part-time experience.

The samples collected in the United States and Singapore were combined for hypothesis testing after preliminary analysis indicated that (a) the pattern of results was the same across the

two samples when they were analyzed separately and (b) ANOVAs revealed that the factor for country was not a significant predictor of any of the dependent variables or mediator variables.

Setting

Consistent with prior research (Kim et al, 2004; Kim, et al., 2006), the present study focuses on cases in which parties have had limited or no prior interaction (as opposed to a relationship with a long history). This focus is appropriate for two reasons. First, in relationships generally, early interactions are important because they define the nature and quality of the relationship. Second, the specific setting in question in this study concerns an employee's perception of their CEO. The assumption that individuals have had little or no prior direct contact is consistent with the fact that employees outside of the upper levels typically have limited personal interactions with the CEO, particularly in medium to large companies.

Task

Participants were given materials that asked them to assume the role of an employee of a medium-sized technology firm, Wire Services. They then watched a series of video clips of news broadcasts that reported the incidents in which trust was broken the CEO responded publicly to the violation. Participants were also provided a transcript to ensure that the information was clear and consistent. After watching the video clips, participants completed a questionnaire. To maximize the realism of the videos, we worked with the film school of a major university to film the clips on which nightly news programs are broadcast to a major metropolitan community, and we used professional actors. In addition, to ensure that the incidents sounded realistic, we adapted the storyline from a situation that occurred at a Fortune 500 company.

The clips allowed the story to unfold over a period of what appeared to be several weeks. Approximately 90% of each version contained identical video footage; only the segments containing the two manipulations differed across study conditions. The first clip reported that, as a result of financial difficulties Wire Services had been experiencing, the company needed to take corrective action. The CEO, Jack Whitfield, was shown asking employees to take a wage cut of 10%. The CEO was subsequently asked whether he would match employee wage cuts. He responded that he would, by eliminating a payout of preferred stock that he was due to receive, which would represent approximately 10% of his compensation. In the second clip, the news anchor reported that employees agreed to accept the wage cuts. It was also reported that the CEO's offer to personally match wage cuts played a role in the acceptance. In the third clip, it was reported that the preferred stock was not eliminated as Whitfield had promised but was paid to the CEO in full. The reason for this breach was also described and used as the means of manipulating the type of violation. The fourth clip was portrayed "on location" at a Wire Services news conference. The CEO was reported to have admitted his role in the payout of stock. The video then depicted the CEO's response to the issue, which included penance, regulation or no substantive response (see manipulations). After watching the video, participants completed a questionnaire.

Manipulations

Type of violation. The manipulations of this variable held the transgression constant, but varied whether the reason for the transgression was a matter of competence versus integrity (Kim et al., 2004; 2006). In the integrity-based condition, during the second clip, the news anchor

reported that Whitfield was aware of the fact that the stock payout to the CEO could not be rescinded due to legal considerations. The anchor also reported that the station's investigation found that the preferred stock compensation arrangement was "complex and therefore Whitfield was deeply involved in putting together the compensation package. Thus, Whitfield would have known the details. By all appearances it seems that Whitfield clouded the truth to protect his own interests."

In the competence-based condition, the news anchor reported that Whitfield was unaware of the fact that the stock payout could not be rescinded when he made his pledge to return the shares. The anchor also reported that the station's investigation found that the preferred stock compensation arrangement was "complex and therefore the firm's lawyers, not Whitfield, put together this part of the compensation package. Thus, Whitfield would not have known the details. By all appearances it seems that Whitfield committed the error because of his lack of knowledge about the details of compensation."

Response. We operationalized penance by having the CEO voluntarily accept a real, and personal, cost that was significantly greater than the benefits he had originally gained from the trust violation. In the video, the CEO announced "I have personally and voluntarily decided to return the shares of stock … and will have stock payouts for the future cancelled. I have also decided to take an annual cut in salary of 10%. In total, I will voluntarily forgo 20% of my annual compensation..." After the statement the newscaster reported that "the company released documents demonstrating that this step has been fully and permanently implemented" in order to provide assurance that this substantive action had occurred.

We operationalized regulation by having the CEO voluntarily implement a system that would restrict his ability to engage in a similar violation in the future. In the video, the CEO

announced "I have personally and voluntarily decided to establish a new policy regarding CEO compensation. … all proposed changes to executive compensation must now be reviewed and approved by a newly formed compensation committee. The compensation committee will include one employee representative … The details of any proposed changes in executive compensation will be distributed to all employees ..." Identical to the penance condition, the newscaster verified that this substantive action had occurred.

In the control conditions, the CEO admitted his role in the competence or integrity-based transgression, but offered no substantive response.

Measures

Dependent variables. Following McKnight et al. (1998), we differentiate trust into "trusting intentions" (i.e., a willingness to make oneself vulnerable to another in the presence of risk) and "trusting beliefs" (e.g., the *perceived integrity* or *perceived competence* that may lead to trusting intentions).[4] Thus, we recognize that trust is a fairly complex, multifaceted construct, and we presume that trust repair efforts will usually need to focus on trusting beliefs as well as trusting intentions. Accordingly, we define trust repair efforts as activities directed at making a trustor's trusting beliefs and trusting intentions more positive after a violation is perceived to have occurred. In this situation, the target of trust perceptions and intentions is the CEO.

Items for trusting intentions (willingness to put themselves at risk to the CEO), perceived integrity, and perceived competence were measured using adaptations of items from Mayer and Davis (1999). Four items were used to assess perceptions of the CEO's competence (alpha = .83). These items were as follows: "Whitfield is very capable of performing his job;" "Whitfield

[4] Mayer et al., (1995) referred to trust intentions as "trust" and trusting beliefs as "perceived trustworthiness." We follow the McKnight terminology to be consistent with earlier research on trust repair (e.g., Kim et al., 2004).

is well qualified;" "Whitfield has adequate knowledge about the work he faces at Wire Services;" and "I feel very confident about Whitfield's skills as CEO." Five items were used to assess perceptions of the CEO's integrity (alpha = .96). These items were as follows: "I like Whitfield's values;" "Sound principles seem to guide Whitfield's behavior;" "Whitfield tries hard to be fair in dealings with employees;" "Whitfield will stick to his word;" and "Whitfield has a great deal of integrity." Six items were used to measure trusting intentions in the CEO (alpha = .90). These items included: "I would be comfortable having Whitfield work on a task or problem that was critical to Wire Services, even if the company could not monitor his actions;" "I would be willing to let Whitfield have complete control over the future of this company;" "I would be comfortable in having Whitfield make decisions that critically affect me (e.g., employee compensation, layoffs);" "I would keep an eye on Whitfield" (reverse-scored); "I would be willing to let Whitfield make almost all key decisions at Wire Services without oversight by others;" and "If I had my way, I would not let Whitfield have any influence over issues that are important to Wire Services" (reverse-scored). A 7-point Likert scale was used in the measurement of the dependent variables as well as the mediators.

Mediators. Because there were no established scales from which to draw, we developed scales for the two mediator variables: perceived repentance and perceived prevention. The three items for repentance were: "Whitfield has learned a valuable lesson from this experience;" "Whitfield has become a better person as a result of this experience;" and "Whitfield will work hard to correct the limitations that caused this incident." The alpha for the scale was .89. The two items for prevention were: "The current system will prevent Whitfield from engaging in similar acts in the future;" and "The current system will not deter Whitfield from engaging in similar acts" (reverse-scored). The alpha for this scale was .71.

Pilot study

A pilot study was conducted with a separate set of thirty-nine undergraduates to test our assumptions that participants would indeed possess some initial trust in the CEO and that the untrustworthy behavior would be sufficient to violate this trust. These issues were examined in a pilot study, rather than the primary study, to avoid potential demand effects (from having participants answer the same set of questions three times) that could have clouded the results of the hypothesis tests. This pilot study, therefore, asked participants to watch the videotaped interviews and assessed participants' trust in the CEO immediately before and immediately after the alleged competence- or integrity-based violation. Following the competence violation, trusting intentions decreased from 3.83 to 2.38 ($t(20) = 9.18$, $p < .01$), perceived integrity decreased from 5.22 to 3.47 ($t(20) = 7.77$, $p < .01$), and perceived competence decreased from 4.86 to 3.03 ($t(20) = 8.27$, $p < .01$). Similarly, following an integrity violation, trusting intentions decreased from 4.20 to 1.77 ($t(17) = 8.66$, $p < .01$), perceived integrity decreased from 5.51 to 1.88 ($t(17) = 12.01$, $p < .01$), and perceived competence decreased from 5.14 to 3.67 ($t(17) = 4.70$, $p < .01$. These findings provide clear and consistent support for our assumption that unproven allegations of untrustworthy behavior are sufficient to violate participants' initial trust in parties with whom they have had no history of interaction, and thereby demonstrate the suitability of this context for investigating trust repair. Finally, we checked for the perceived realism of the scenarios with two items: "The events described in this newscast seem realistic" and "It would not be surprising if the events described in the newscast actually happened." The mean score was 5.67 on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree)

suggesting that the scenarios were perceived to be highly realistic. There was no difference in the perceived realism across the two conditions.

Results

Preliminary analyses. Participants responded to two manipulation check questions that assessed whether they recognized the type of violation (competence vs. integrity) and the response to the violation (penance, regulation, no response). Manipulation checks revealed that the manipulations were successful. Of the 291 participants who responded, 275 (95%) answered the question regarding the type of violation correctly. In terms of the question regarding the response to the violation by Whitfield, 278 out of 291 (96%) responded correctly. Confirmatory factor analyses of the mediator and criterion variables (perceived repentance, perceived prevention, perceived competence, perceived integrity, and trust) indicated a good fit and supported convergent validity for a five-factor model (X^2 (160, N = 293) = 357.93, CFI = .96, NFI = .93, TLI = .94, RMSEA = .065, all item-factor loadings > |.52| (p < .01)). Discriminant analyses (Bagozzi & Phillips, 1982) indicated that the hypothesized five-factor model fit the data significantly better than any of the more parsimonious models, supporting the discriminant validity of the constructs.

Analysis of the model. Means, standard deviations, and correlations among dependent variables are reported in Table 1. Regression analysis was used to test the hypotheses. The models were initially run with two control variables, one for country of participants (U.S. versus Singapore) and one for experience level (undergrad versus MBA). With one exception,[5] neither control variable was a significant predictor of any of the dependent variables. Given this fact and

[5] The variable for experience level was a significant variable in predicting perceived competence only. In this case, undergraduate students perceived, on average, slightly higher levels of competence.

the fact that the pattern of results remained the same with and without the control variables, they were excluded for the sake of parsimony. Although H1a and H1b could be tested with t-tests alone, given that other hypotheses involved testing of mediation and moderation, regression analysis provides a more elegant method of testing the entire set of hypotheses. Independent variables were such that Penance and Regulation represent the comparison in reference to the Control condition. Violation type was coded such that 0 represented integrity-based violation and 1 represented a competence-based violation.

Table 1. Means, Standard Deviations, Intercorrelations for Study 1

	Mean	SD	1.	2.	3.	4.	5.
1. Trusting Intentions	2.94	1.23	(90)				
2. Perceived Integrity	3.40	1.77	.74**	(.96)			
3. Perceived Competence	4.30	1.19	.54**	.37**	(.83)		
4. Perceived Repentance	3.50	1.42	.61**	.75**	.30**	(.89)	
5. Perceived Prevention	3.70	1.38	.41**	.53**	.24**	.53**	(.71)

* $p < .05$; ** $p < .01$; N = 293. Alpha levels shown on the diagonal

Hypotheses 1a and 1b predicted that Penance and Regulation would significantly increase trust following a violation when compared to a Control condition. The results of the analysis are reported in step 2 of Table 2. Penance resulted in higher levels of trusting intentions ($\beta = .36$; $p < .01$), perceived integrity ($\beta = .46$; $p < .01$), and perceived competence ($\beta = .29$; $p < .01$) compared to the control condition. Likewise, Regulation resulted in higher levels of trusting intentions ($\beta = .20$; $p < .01$), perceived integrity ($\beta = .28$; $p < .01$), and perceived competence ($\beta = .18$; $p < .01$) when compared to the Control condition. Thus, the data provide support for Hypotheses 1a and 1b.

Table 2. Summary of Regression Analyses for Mediation and Moderation for Study 1

Equation	Independent Variables	Mediators		Dependent Variables			R-squared
		Perceived Repentance	Perceived Prevention	Trusting Intentions	Perceived Integrity	Perceived Competence	
1a	Type of Violation	.45**					.33
	Penance	.41**					
	Regulation	.23**					
1b	Type of Violation		.34**				.23
	Penance		.32**				
	Regulation		.36**				
2	Type of Violation			.37**	.66**	-.02	.24/.60/.06
	Penance			.36**	.46**	.29**	
	Regulation			.20**	.28**	.18**	
3	Type of Violation			.14**	.44**	-.19**	.41/.75/.14
	Penance			.14*	.26**	.14	
	Regulation			.07	.14**	.07	
	Perceived Prevention			.08	.08*	.11	
	Perceived Repentance			.46**	.43**	.29**	
4	Type of Violation			.14*	.44**	-.18**	.43/.77/.15
	Penance			.15**	.27**	.14*	
	Regulation			.07	.14**	.07	
	Perceived Prevention			.17*	.07	.12	
	Perceived Repentance			.28**	.28**	.18	
	Violation x Prevention			-.13	.00	-.02	
	Violation x Repentance			.25**	.21**	.14	

* $p < .05$; ** $p < .01$; Standardized coefficients reported in table; R-squared values for dependent variables for equations 2 – 4 are separated by "/"

Hypothesis 2 investigated whether perceived repentance and perceived prevention mediated the relationships between the responses (Penance, Regulation) and trust. To examine these hypotheses, we followed Baron and Kenny's (1986) procedure for examining mediation. Step 1 determined whether the independent variables affected each the two mediators, perceived

prevention and perceived repentance. The second step determined whether the independent variables affected each of the dependent variables (trusting intentions, perceived integrity, perceived competence). In Step 3, the mediator variables are added to the equation from step 2. If the mediators (perceived repentance, perceived prevention) account for all or most of the effect of the independent variables on the dependent variable (trusting intentions, perceived integrity, perceived competence), then the independent variables should drop in magnitude and become non-significant, whereas the mediator(s) should remain significant. We included the variable 'Type of violation' in all steps, because it was manipulated in all conditions and results indicate that it was related to the dependent variable.

Results of the mediation analyses are shown in Table 2. As shown in Equation 1a, Penance ($\beta = .41$; $p < .01$) and Regulation ($\beta = .23$; $p < .01$) predicted perceived repentance. Likewise, in Equation 1b, Penance ($\beta = .32$; $p < .01$) and Regulation ($\beta = .36$; $p < .01$) predicted perceived prevention. Hence, the first requirement for mediation is satisfied.

Equation 2 examined the effects of Penance and Regulation on the dependent variables. As reported earlier, Penance was associated with higher levels of trusting intentions, perceived integrity, and perceived competence. Likewise, Regulation was associated with higher levels of trusting intentions, perceived integrity, and perceived competence. Hence, the second requirement for mediation is satisfied.

Equation 3 included the mediators in addition to the independent variables. For the dependent variable of trusting intentions, perceived repentance was significant ($\beta = .46$; $p < .01$), whereas perceived prevention was not ($\beta = .08$; n.s.). The Penance variable dropped in magnitude, but remained significant, albeit at a lower level ($\beta = .14$; $p < .05$) while the regulation variable dropped in magnitude and became non-significant ($\beta = .07$, n.s.) with the addition of the

mediators. For the dependent variable of perceived integrity, perceived repentance was significant ($\beta = .43$; $p < .01$), as was the perceived prevention variable ($\beta = .08$; $p < .05$). Although the Penance variable ($\beta = .26$) and the Regulation variable ($\beta = .14$) remained significant ($ps < .01$), both dropped substantially in magnitude following the addition of the mediators. Finally, for the dependent variable of perceived competence, perceived repentance was significant ($\beta = .29$; $p < .01$), whereas perceived prevention was not ($\beta = .11$; n.s.). Both the Penance variable ($\beta = .14$) and the Regulation variable ($\beta = .07$) variable became non-significant with the addition of the mediators. The pattern of results from the series of equations indicate that perceived repentance mediated the relationship between the two responses (Penance and Regulation) and each of the dependent variables (trusting intentions, perceived integrity, perceived competence), either in part or in full. The results provided very little support for perceived prevention mediating the relationships; it was significant in only one case, and the beta was very small. Therefore, overall, the results suggest that perceived repentance was the primary mediating cognition responsible for the effects of both Penance and Regulation.

Finally, Hypotheses 3a and 3b predicted that the positive signals of perceived repentance and perceived prevention on trust repair would be moderated by the type of violation. To examine these hypotheses, a two-step hierarchical regression is required. In the first step, trust was regressed on the Response variable, Type of violation, and the two mediators. In the second step, the two interaction terms (Type of violation x Prevention, Type of violation x Repentance) were added to the equation. Moderation is supported to the extent that one or both of the interaction terms account for incremental variance in trust. Note that the first equation was already conducted in step 3 of Table 2. For trusting intentions, the results indicate that one interaction term, Type of violation x Repentance, was significant ($\beta = .25$; $p < .01$), while the

interaction term Type of violation x Prevention was non-significant (β = -.15, n.s.). The addition of the two interaction terms increased the R^2 from .41 to .43 (ΔR^2 = .01; $p < .01$). Likewise, for perceived integrity, the results indicate that one interaction term, Type of violation x Repentance, was significant (β = .21; $p < .01$), but the interaction term Type of violation x Prevention was non-significant (β = .00, n.s.). Adding the two interaction terms increased the R^2 from .75 to .77 (ΔR^2 = .02; $p < .01$). The interactions were not significant in the case of perceived competence.

We probed the interaction of Type of violation x Repentance following procedures from Aiken and West (1991). The results are shown in Figures 2a and 2b. For both dependent variables, trusting intentions and perceived integrity, the positive relationship between perceived repentance and trust is significantly stronger for competence-based violations than integrity-based violations. Thus, the pattern of results supports Hypothesis 3a. There was no support for Hypothesis 3b.

Discussion

Study 1 was intended to provide insight into trust repair by shifting the focus from apologies and related verbal accounts, which have received the majority of attention in the trust repair literature, to more substantive responses, which have received surprisingly little attention. First, the study provided evidence that the two different forms of substantive trustee responses, penance and regulation, can repair trust following a transgression. As noted earlier, this is one of the only studies to directly provide such evidence. Second, it provided insight into the critical role played by the cognitive processes of the trustor for determining how and when substantive responses by the trustee would be effective. Specifically, the study revealed that penance and regulation repair trust through perceived repentance but not perceived prevention (although the

trustee responses can be seen as offering both). As noted earlier, research on trust repair has either tended to overlook these cognitions or assumed their existence without examining whether one or both are responsible for the effects. As shown in the present study, such assumptions may be unwarranted. Finally, consistent with the schematic model of dispositional attribution, trustors saw signals of repentance as informative when the transgression was perceived to arise from a lack of competence, but substantially less so when the transgression was perceived to arise from a lack of integrity. Thus, the study provides evidence for not only how these responses operate, but also identifies a critical contingency that governs their effectiveness. The results were consistent across participants from two different cultures and business contexts, and they were found with individuals with varying levels of work experience (graduate students with work experience, in addition to undergraduates).

Study 1 tells us little, however, about how these substantive responses relate to responses that are non-substantive in nature (e.g., apologies). Bridging research on substantive and non-substantive responses would integrate the former into the existing literature (focused largely on non-substantive responses) and provide a broader understanding of trust repair as a whole, as opposed to allowing research on each type of response to develop independently of the other. Study 2 attempts to bridge this gap by providing a direct comparison of the operation the two types of responses, as well as to examine some specific assumptions in the literature regarding the effectiveness of substantive responses vis-à-vis non-substantive responses.

Study 2

A core finding from study 1 was that a repair attempt by the trustee should be effective to the degree that a trustor sees the act as demonstrating perceived repentance, particularly

following a competence-based violation. Study 2 was intended to test the robustness of this idea and to examine whether it can explain the relationship between our focal substantive responses (penance, regulation) and apologies, which have been the focus of current research on trust repair. Although it has not yet been empirically demonstrated, the effectiveness of apologies for repairing trust has largely been assumed to occur through the perception of repentance (Kim et al., 2004; Kim et al., 2006). If so, then perceived repentance would serve as the primary underlying mechanism across all these responses – apologies, penance, and regulation. Thus, even though these substantive and non-substantive trust repair responses may seem quite different on the surface, their functions may be identical at the core.

We tested the idea that repair attempts by the trustee should be effective to the degree that a trustor sees them as demonstrating perceived repentance by examining two specific questions that arose from the literature on the relationship between apologies and substantive responses. First, as discussed earlier, an assumption inherent in the literature is that apologies are "cheap talk" and thus should generally be less effective for repairing trust than substantive responses. If this assumption is correct, that would mean that substantive responses are always preferable to the apologies. If it turns out that these substantive and non-substantive responses operate through a common mechanism, however, this assumption would oversimplify their relative effects and may even prove to be misleading in some instances. Specifically, we would expect that a particular substantive response such as penance or regulation would *only* be more effective than an apology to the extent that it generates a greater degree of perceived repentance. Thus, there may be cases in which a strong apology could be as effective as the comparative substantive response depending upon the levels of perceived repentance that these responses convey. This

would mean that offering the more 'costly' response would not yield a greater benefit and would be unnecessary.

Second, apologies and substantive responses are not mutually exclusive, but can be (and may often be) offered together. Indeed, some researchers have suggested that apologies and substantive responses complement each other such that offering a substantive response along with an apology will prove that the latter is not just cheap talk (e.g., Bottom et al., 2002: 500). Exactly how the two operate in conjunction with each other to repair trust is not known. However, the schematic model of dispositional attribution (Reeder & Brewer, 1979) can be used to address this issue. Several points from their model regarding the operation of hierarchically restrictive schemas (which, as discussed earlier, may be used in trust judgments) have particular relevance. In the case of hierarchically restrictive schemas, perceivers assume that each person occupies a specific position on a continuum with regard to a given attribute (e.g., high to low trustworthiness). Furthermore, given that the attribute can not be observed directly, perceivers use behaviors as signals of where a person falls on the continuum. When individuals observe multiple behaviors that relate to a particular attribute, empirical research has shown they do not simply add up or average the information from these behaviors to form a judgment in a straightforward manner (see Skowronski and Carlston, 1989). Instead, the schematic model of dispositional attribution suggests that individuals may tend to focus on some signals and discount others, depending upon where the signal falls on the continuum: "the hierarchically restrictive schema dictates that the actor's disposition is determined by the most *extreme* behavior that the actor exhibits" (Reeder & Brewer, 1979; p. 69). In the case of competence, for instance, this would mean that individuals will give the greatest weight to the most positive signal in judging

where a person falls on that continuum, given that only a person at that competence level could exhibit that positive of a behavior.

This set of arguments can be directly applied to the situation in which a trustor perceives two responses (e.g., apology and penance) that provide the same information (i.e., perceived repentance). The model would suggest that, in the case of competence, if one perceives two separate positive signals of repentance, one high on the continuum, and one less so, that the perceiver will anchor on the former. Therefore, a combined response would be as effective as the response that provides the most positive signal of repentance by itself, with limited or no added consideration to the less positive signal. In the situation in which the perceiver receives two signals that are equally positive, this would imply that a person could look to both as equally informative and the combined response would be unlikely to be more effective than either one alone. In any case, the primary prediction is that a particular response (e.g., apology or penance) or combination of responses (e.g., apology + penance) should only be more effective than another to the extent that it offers a greater degree of perceived repentance.

In sum, Study 2 is intended to provide additional support for the mediating role of perceived repentance as a key mechanism by which substantive responses operate and examine if this same mechanism can help understand how substantive responses relate to apologies.

Methodology

Design. The study included 5 forms of responses for comparison: Apology; Penance; Regulation; Apology + Penance; Apology + Regulation. Participants were randomly assigned to one of the five conditions in a between-subjects design.

We focused only on the competence-based violation condition in Study 2. The findings of Study 1 suggest that substantive responses have their greatest potential to be effective following a competence-based violation, as opposed to an integrity-based violation. Likewise, Kim et al. (2004) found that apologies have the greatest potential to repair trust following a competence-based violation. Thus, by focusing on responses following a competence-based transgression, substantive responses and apologies are each examined under the condition in which they are most likely to be effective.

Participants. Two hundred seventy-six undergraduate students participated in this study. Participants were students at universities in the United States (n=135) and Singapore (n = 141). Participants were 52.5 percent female and possessed an average of .50 years of full-time work experience and 2.43 years of part-time experience. Similar to Study 1, we included students from both cultures to enhance the generalizability of the results.

Task. The task and materials used in Study 1 were adapted so as to be able to examine both substantive responses and apologies for Study 2. We used the first three video clips from Study 1 to provide information about the violation. We then asked Study 2 participants to read a newspaper clipping that reported the response. This newspaper clipping was used in place of the fourth video clip shown in Study 1 to allow the manipulation of a wider array of trust repair responses. After reading the newspaper clipping, participants completed a questionnaire.

Manipulations. The content of the operationalizations of penance and regulation were identical to what was used in Study 1. The operationalization of the apology was adapted from Kim et al., (2004; 2006). Specifically, the CEO provided the following statement: "I apologize to Wire Services employees for this event. I accept responsibility for this lapse and I regret it. You can be assured that nothing like this will happen again. It is my hope that Wire Services and its

management can move forward with the full confidence of employees." In all conditions, Whitfield acknowledged that the allegations were true: "The report that the preferred stock was paid to me is true. I did receive the stock."

In the three conditions where only a single response (penance, regulation, or apology) was provided, we sought to ensure that the effects of these verbal and substantive responses would be isolated by making it clear to participants that an apology was not offered in the penance and regulation conditions, and a substantive response was not offered in the apology condition. The following statement was provided in the apology condition: "Whitfield did not respond with a substantive action, but he did apologize to the employees: …" In the penance or regulation condition the following statement was provided: "Whitfield did not apologize to employees, but he did respond substantively: …" In the conditions where both an apology and penance or regulation was offered, the following statement was included: "Whitfield apologized to employees and he also responded substantively: …"

Measures. Subjects responded to a survey to measure trusting intentions, trusting beliefs, and perceived repentance. The scales used in study 2 were identical to those used in study 1.

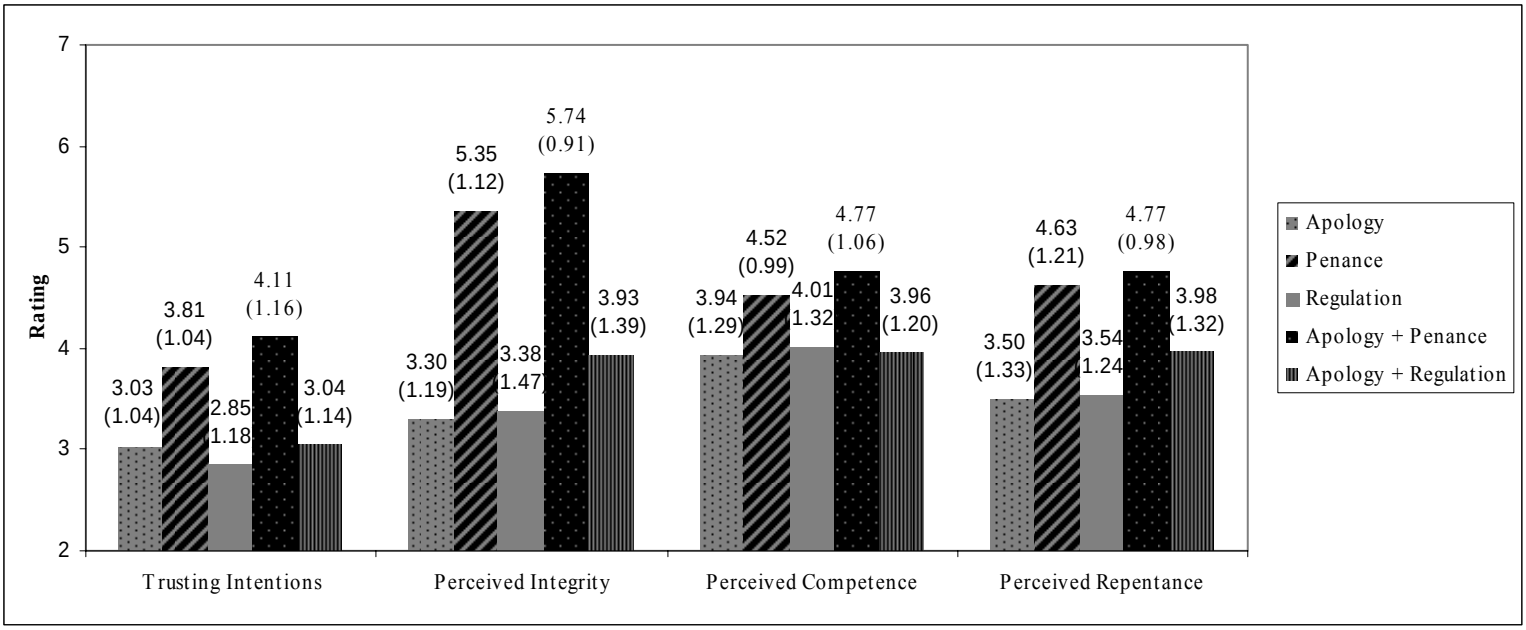
Results

Participants answered a manipulation check question that assessed whether they recognized the intended response to the violation (apology, penance, regulation, apology + penance, apology + regulation). Of the 272 individuals responding to the question, 255 (94%) provided the correct response. This result demonstrates that the responses were clear and they were successfully recognized. Confirmatory factor analyses of the mediator and criterion variables (perceived repentance, perceived competence, perceived integrity, and trust) indicated

a good fit and supported convergent validity for a four-factor model (X^2 (129, N = 276) = 293.70, CFI = .95, NFI = .92, TLI = .94, RMSEA = .068, all item-factor loadings > |.51| (p < .01)). Discriminant analyses (Bagozzi & Phillips, 1982) indicated that the hypothesized four-factor model fit the data significantly better than any of the more parsimonious models, supporting the discriminant validity of the constructs.

Means and standard deviations for each variable are provided with the plots in Figure 3. A MANOVA revealed that there was a significant main effect of the trust repair responses on trust repair, Wilks' Lambda = .56, F (16, 813) = 10.53, p < .01; η^2 = .13. Additionally, follow-up univariate analyses indicated that the effect was significant for each of the mediator and dependent variables including perceived repentance F(4, 274) = 12.82, p < .01; η^2 = .16, trusting intentions, F(4, 274) = 13.58, p < .01; η^2 = .17, perceived competence, F(4, 274) = 5.74, p < .01; η^2 = .08, and perceived integrity, F(4 ,274) = 46.61, p < .01; η^2 = .41.

Figure 3. Means for the Five Response Conditions for Study 2



Note. Means reported above bars with standard deviation in parentheses.

Apology versus substantive responses. The first question examined the relative effectiveness of the trust repair responses when offered in isolation (penance or regulation vs. apology). Post-hoc comparisons showed that penance was significantly more effective than apology in repairing trust across all three dependent variables: trusting intentions, (3.81 vs. 3.03; mean difference = .78 (*s.e.* = .21), $p < .01$), perceived competence (4.52 vs. 3.94; mean difference = .58 (*s.e.* = .22), $p < .01$), and perceived integrity (5.35 vs. 3.30; mean difference = 2.05 (*s.e.* = .23), $p < .01$). Regulation did not significantly differ from apology on any of the three dependent variables.

Our prediction is that a significant difference between one form of a response and another (e.g., penance or regulation vs. apology) should be attributable to the mediating effect of perceived repentance. We conducted regression analyses following the Baron and Kenny (1986) procedure to determine if the significant difference between an apology and penance was mediated by perceived repentance. The independent variable in the analysis was dummy coded with 0 for apology and 1 for penance to allow a comparison between the two conditions. As shown in Equation 1 of Table 3a, the apology-penance variable is significant and positive (β= .41; $p < .01$) which means that penance predicts an incrementally larger amount of perceived repentance than does an apology. Consistent with the results reported above, Equation 2 demonstrated that penance predicted an incrementally greater amount of trust intentions ($\beta = .36$, $p < .01$) perceived competence ($\beta = .25$, $p < .01$), and perceived integrity ($\beta = .67$, $p < .01$) than an apology. Equation 3 included the mediator, perceived repentance, in addition to the independent variable. For the dependent variable of trust intentions, perceived repentance was

significant (β = .45, p < .01) and the independent variable dropped in magnitude and became non-significant (β = .17, *n.s*). Likewise, for the dependent variable of perceived competence, perceived repentance was significant (β = .27, p < .01) and the independent variable dropped in magnitude and became non-significant (β = .14, *n.s*). For perceived integrity, perceived repentance was significant (β = .41, p < .01) and the independent variable dropped in magnitude but remained significant (β = .50, p < .01). In sum, results revealed that perceived repentance partially or fully mediated the difference in effectiveness between an apology and penance.

Table 3a. Summary of Regression Analyses for Mediation for Study 2

Equation	Independent Variable	Mediator	Dependent Variables			R-squared
		Perceived Repentance	Trusting Intentions	Perceived Integrity	Perceived Competence	
1	Penance	.41**				.17
2	Penance		.36**	.67**	.25**	.13/.45/.06
3	Penance		.17	.50**	.14	.30/.59/.12
	Perceived Repentance		.45**	.41**	.27**	

* p < .05; ** p < .01; Standardized coefficients reported in table; R-squared values for dependent variables for equations 2 – 3 are separated by "/"

Given that regulation was not significantly more effective than an apology at repairing trust, a mediation test was not appropriate. To be consistent with our theory, however, these two responses should also not differ in their levels of perceived repentance. Post hoc analysis indicated that regulation indeed did not result in a significantly higher level of perceived repentance than an apology (3.54 vs. 3.50, *s.e.* = .23). Although this non-significance should not be given undue weight, given that it is based on a null hypothesis, it is useful to note that the data

are consistent with expectations. Overall, the results suggested that substantive responses by trustees are more effective than apologies at repairing trust to the extent that they result in higher levels of repentance as perceived by trustors.

Single vs. combined responses. The second question concerned whether offering apologies and substantive responses together would repair trust more effectively than offering either type of response alone. Post-hoc comparisons showed that apology + penance was significantly more effective than an apology alone at repairing trust across all three dependent variables: trust intentions (4.11 vs. 3.03; mean difference = 1.08 (*s.e.* = .21), $p < .01$), perceived competence (4.77 vs. 3.94; mean difference = .83 (*s.e.* = .23), $p < .01$), and perceived integrity (5.74 vs. 3.30; mean difference = 2.44 (*s.e.* = .23), $p < .01$). The combined response of apology + penance was not more effective than penance alone for any of the three dependent variables. In addition, the apology + regulation condition was not more effective than an apology alone, or regulation alone for any of the dependent variables.

We conducted mediation analyses to determine if the significant difference between an apology and the combined apology + penance response was mediated by perceived repentance. The independent variable in the analysis was dummy coded with 0 for apology and 1 for apology + penance to allow a comparison between the two conditions. As shown in Equation 1 of Table 3b, the independent variable is significant and positive ($\beta = .49$; $p < .01$) which means that an apology + penance predicts an incrementally larger amount of perceived repentance than an apology alone. Consistent with the results reported above, Equation 2 demonstrated that apology + penance predicted an incrementally greater amount of trust intentions ($\beta = .44$, $p < .01$) perceived competence ($\beta = .33$, $p < .01$), and perceived integrity ($\beta = .76$, $p < .01$) than an apology alone. Equation 3 included the mediator, perceived repentance, in addition to the

independent variable. For the dependent variable of trust intentions, perceived repentance was significant ($\beta = .42$, $p < .01$) and the independent variable dropped in magnitude but remained significant ($\beta = .23$, $p < .01$). For the dependent variable of perceived competence, perceived repentance was significant ($\beta = .32$, $p < .01$) and the independent variable dropped in magnitude and became non-significant ($\beta = .18$, n.s). For perceived integrity, perceived repentance was significant ($\beta = .40$, $p < .01$) and the independent variable dropped in magnitude but remained significant ($\beta = .57$, $p < .01$). In sum, results revealed that perceived repentance partially or fully mediated the difference in effectiveness between apologizing and apologizing with penance.

Table 3b. Summary of Regression Analyses for Mediation for Study 2

Equation	Independent Variable	Mediator	Dependent Variables			R-squared
		Perceived Repentance	Trusting Intentions	Perceived Integrity	Perceived Competence	
1	Apology + Penance	.49**				.24
2	Apology + Penance		.44**	.76**	.33**	.19/.57/.11
3	Apology + Penance		.24*	.57**	.18	.33/.69/.18
	Perceived Repentance		.42**	.40**	.32**	

* $p < .05$; ** $p < .01$; Standardized coefficients reported in table; R-squared values for dependent variables for equations 2 – 3 are separated by "/"

The post hoc analysis also revealed that there was no significant difference in perceived repentance between penance and apology + penance (4.63 vs. 4.77, *s.e.* = .23), which would be consistent with the finding that the two did not result in different levels of trust repair. Overall, this pattern of results is consistent with the notion that a particular combination of responses is only more effective to the extent that it results in higher levels of perceived repentance.

Given that apology + regulation was not significantly more effective than an apology or regulation alone at repairing trust a mediation test was not appropriate. We examined whether the level of perceived repentance differed across these responses. Post hoc analysis indicated that apology + regulation did not result in a significantly higher level of perceived repentance than either regulation (3.98 vs. 3.54, *s.e.* = .24) or apology (3.98 vs. 3.50, *s.e.* = .23). Again, although the null finding should be interpreted with caution, this result is consistent with expectations.

Discussion

Study 2 had two objectives. First, it was intended to test the robustness of a key principle that was supported in Study 1: that repair attempts by the trustee should be effective to the degree that a trustor sees it as demonstrating perceived repentance, particularly following a competence-based violation. Second, Study 2 examined whether this idea could serve as the basis for understanding the link between substantive responses (penance, regulation) and apologies, which have been the focus of prior research on trust repair. If the mechanism proved to be similar across apologies and substantive responses, responses that may seem to be quite different on the surface may turn out be similar at their core. The data from Study 2 were consistent with our expectations and thus provided support for both objectives. The fact that substantive responses and apologies share a common mechanism allows their integration into a more parsimonious conceptual framework. The study further highlighted the importance of understanding the cognitive processes of the trustor, as opposed to simply focusing on the responses by the trustee, in order to understand the effectiveness of trust repair.

In addition to these broader considerations, Study 2 provided insight on two specific issues by drawing on the idea of the mediating role of perceived repentance. First, in contrast to

what might be sometimes assumed, non-substantive responses such as apologies are not necessarily less effective than substantive responses. In the case of the particular manipulations used in this study, although apologies proved to be less effective than penance, they were equally effective to regulation. This implies that the relative effectiveness of responses should not be judged on the basis of the type of response by the trustee, but on how trustors are likely to see the level of repentance provided by that particular response.

Second, this study provided insight into the relative benefits of offering combined responses versus single responses. The study found an interesting pattern of results whereby adding a substantive response to a non-substantive response (in this case adding penance to an apology) had some benefit, but that adding a non-substantive response to a substantive response (in this case, adding an apology on top of penance) had no appreciable benefit. Following the schematic model of dispositional attribution, this pattern is expected to arise as, in the case of a competence violation, individuals tend to anchor on the most positive signal of repentance as indicative of the level of trustworthiness. Bottom et al., (2002), had done some initial research on this issue, but only examined the case in an apology was supplemented with penance (finding that the combination was more effective than apology alone) and thus lacked the relevant comparison for identifying this asymmetry (i.e., a condition where penance was supplemented with an apology). Furthermore, their study did not examine the kinds of underlying mechanisms that proved to be crucial in explaining our results.

Looking across these two specific findings, an interesting irony was revealed. For single responses, cheap talk (apologies) proved to as effective as a substantive response, regulation, despite being much less costly. However, for combined responses, apologies were wasted breath and did not augment the effectiveness of the substantive response alone.

General Discussion

The purpose of the present research was to extend our understanding of the trust repair process. Although trust is acknowledged to be a critical element of organizations, and although quite a bit is known about transgressions and their effects (Morrison & Robinson, 1997), there are presently few studies focused on how trust might be repaired following a transgression. The present study helps address this limitation. Theory and data from two studies hold implications for the emerging literature on trust repair, as well as for research and practice of leadership.

Implications for Research

Substantive responses as a means of repairing trust. Although past research has focused largely on verbal accounts, very little research has focused on how transgressors might respond through substantive acts. The paper outlined two forms of substantive acts that might repair trust, penance and regulation, and Study 1 provided evidence that both can be effective at repairing trust, when compared to the no-response control condition. An increased focus on substantive responses is important for the trust literature given that, they are often considered to have greater potential to repair trust than non-substantive responses. Supporting this idea, Study 2 compared substantive responses to apologies and found that the former may indeed be more effective than apologies – at least in some cases. That study also revealed, however, that one should not assume that substantive responses will necessarily be more effective, and that one must take into account the extent to which they act on the mediating cognitions – i.e., recognize exactly how these responses work to repair trust.

Understanding the cognitive processes: *How* trustee responses work. Beyond investigating the potential responses of the trustee, this study examined the cognitive processes of the trustor. The first objective was to identify and assess the cognitive mechanisms that may account for the effects of substantive responses. This issue was important for several reasons. Existing papers on trust repair have focused on specific tactics used by the trustee including apologies, promises, reparations, and hostage posting, among others. The particular tactic, or type of tactic, studied in a given paper often roughly corresponds with the underlying discipline and literature base (psychological versus sociological or economic approaches to trust). This situation can result in a tendency to pursue the effectiveness of a particular type of tactic in isolation, while giving limited consideration to others. By focusing on two cognitive mechanisms by which the responses operate, perceived repentance and perceived prevention, it was possible to understand how tactics that appear quite different on the surface fit together as part of a more parsimonious theoretical framework. In sum, by identifying these cognitive mechanisms, the present paper offers a framework that can be used to understand the operation of an array of tactics for repairing trust.

Having identified these cognitions, the present study went on to test them empirically. This study is perhaps the first to do so, as prior research has either assumed the operation of these mechanisms or has given them limited consideration. The result of examining both mechanisms revealed that, contrary to what some might expect, perceived repentance transmitted the effects of both penance and regulation. Although regulation and penance did impact perceived prevention, this mechanism was not related to trusting beliefs or trusting intentions. Interestingly, by returning to the definition of trust as "a psychological state comprising the intention of one individual to accept vulnerability based upon positive expectations of the

intentions or behavior of another," one may interpret these findings as suggesting that, after a violation, perceivers focus more on *intentions* than *behavior*.

These findings may also shed additional light on prior research. For example, Nakayachi and Watabe (2005) found that voluntarily implementing hostage posting increased trust following a violation. What might account for this effect, given the present study? The argument from economics about why hostage posting should work is that a hostage (whether posted voluntarily or involuntarily) provides a disincentive for untrustworthy behavior and thus should in part serve to prevent the trustee from engaging in a transgression. But, posting a hostage may also provide additional information to a trustor in the form of a signal of repentance (e.g., the individual will pay a price for untrustworthy behavior). Although both are plausible reasons why hostage posting may repair trust, the results of our study imply that it is more likely the latter. The present studies may also provide insight into the findings of Bottom et al. (2002). Their study found that acts of reparation could increase cooperation and speculated that this was the result of increased trust. By providing evidence that reparation can indeed heighten trust, through the mechanism of perceived repentance, our studies have provided some indirect support for their claim. Finally, in addition to examining the effects of different substantive responses, this paper also compared their effects with those of non-substantive responses (apologies), which have been the focus of much of the existing literature, and revealed that both appear to operate through the same underlying cognitive mechanism. By identifying this mechanism, we were also able to get better insight into the implications of offering substantive responses along with apologies. As described earlier, we found that although some substantive responses might augment the effects of apologies, the reverse is unlikely to be the case.

Understanding the cognitive processes: *When* trustee responses work best. The prior section highlighted the crucial role played by the mediating factors, particularly perceived repentance. Our analysis also showed however that some cognitive processes will limit their effectiveness by shaping the extent to which individuals view them as informative. Drawing on the framework outlined by Kim et al. (2004; 2006), our analyses indicated that when the original transgression involved a violation of competence, perceived repentance significantly increased trust, but when the transgression involved a violation of integrity, perceived repentance was significantly less effective. Thus, despite the fact that the transgressor suffered a significant personal cost to demonstrate repentance (e.g., a 10% loss of salary, in addition to paying back the money gained), trustors were hesitant to see that individual as being significantly more trustworthy and were hesitant to accept vulnerability after an integrity-based violation.

Given the results of our study, more consideration is needed on how to most effectively repair trust following an integrity-based violation. Kim et al., (2006) examined the use of apologies and found that following competence-based violations, individuals were more successful at repairing trust by accepting full responsibility, but following an integrity-based violation, individuals were more effective when shifting responsibility to an external cause of the transgression. The ideas suggested that, in the case of an integrity-based violation, when compared to taking actions that accept culpability but show repentance (e.g., by accepting personal responsibility as part of an apology) it was more effective to take actions that avoid culpability and thus show repentance (e.g., by using a verbal account to shift responsibility to the external cause). Thus, future studies might examine whether substantive responses can work in a similar way, and thus be more effective at repairing integrity violations. If they are not able to do so, it leads to the interesting proposition that, when it comes to integrity-based violations that it

may be more effective to offer cheap talk, such as an apology that shifts blame to an external cause than to try to offer a costly substantive response.

Finally, we investigated these issues in samples comprising individuals from two different cultures and business contexts: the United States and Singapore. Although this was not intended to reveal new underlying processes, it provided important information about the generalizability of these processes. To date, research on the dispositional model of attribution, which served as a key theoretical basis for this study, has been conducted almost exclusively in Western cultures and contexts. Based on the present study, it appears safe for researchers to conclude that the cognitive processes studied operate similarly in at least some Eastern cultures as they do Western cultures. The present study is, however, only the first step in examining the cross-cultural generalizability of the processes, and future research is needed to identify the factors related to trust repair that might differ across cultures.

Limitations

As with all studies, ours had limitations. One issue that can be raised is that these studies were conducted in a laboratory setting using experimental methods. We chose this approach for several reasons. Isolating the cognitive processes of the trustor, and demonstrating how they were causally associated with trustee responses was critical to the theory. The laboratory setting was arguably more effective for this objective. In addition, our studies involved a comparison of alternative responses (i.e., penance, regulation, apology, and their combinations). The experimental approach used in this paper allowed us to investigate differences in their operation and effectiveness when the actual transgression, setting, and trustor, were identical; this type of

control would not have been possible in a field setting. Beyond these advantages related to internal validity, we also tried to limit some of the disadvantages related to external validity when designing these studies. Specifically, we took several steps (e.g., adapted storyline from real situation; filmed in a working news studio; hired professional actors) to create scenarios which were ultimately seen by participants as highly realistic and we included participants who possessed work experience. Nevertheless, future research into the generalizability of our findings is certainly warranted.

A second issue that may be raised regarding the present methodology is that it has focused on trust violations in relationships in which individuals have had limited prior contact. As noted earlier, this situation applies more to newly formed, rather than longer term, relationships or relationships in which it is typical for individuals to have limited personal interactions (e.g., with a CEO in medium to large companies), as compared to relationships which are based on a greater degree of direct contact. Although this focus may limit generalizability somewhat, it should not raise concerns regarding whether initial levels of trust existed and had been subsequently violated. Similar to prior studies using this same methodology (e.g., Kim et al., 2004), our pilot study offered clear evidence that initial trust levels were dramatically lowered by allegations of untrustworthy behavior. The focus on more distant relationships should also not limit its relevance for managerial settings, given that many workplace interactions occur in these types of relationships, particularly in relationships with more senior leaders. Readers also should not necessarily conclude that studying more distant relationships represents a weak test of trust repair, as recent research suggests that it may actually be easier to repair trust in close (long-standing) relationships, due to victims' greater pro-relationship motivation (Finkel, Rusbult, Kumashiro, & Hannon, 2002). Nevertheless, it will be

worthwhile for researchers to consider the effects of penance and regulation on trust repair when parties have emotional links and/or an extensive interaction history.

Third, the focus in the present studies were on trusting beliefs and intentions following a substantive trust repair response. To the extent that these beliefs and intentions shape future interactions with subordinates (Dirks & Ferrin, 2002), this is important. The methodology did not, however, allow us to examine what other factors operate over time. As an example, earlier research found that over time, the presence of regulation limits the development of trust because perceivers are not sure whether to attribute trustworthy behavior to the individual or the system (Malhotra & Murnighan, 2002; Strickland, 1958). To the extent that this is the case, we might speculate that trust repaired by regulation would fail to grow much beyond the initial effect produced by perceived repentance, whereas trust repaired by penance could continue to grow with trustworthy behavior. Answers to this question, however, remain a matter for future research.

Fourth, we focused on two mediating cognitions, perceived repentance and perceived prevention, because they represent two approaches present in existing research. This does not necessarily mean, however, that they are the only potential mechanisms that may exist. Indeed, our mediation analysis indicated that, although perceived repentance fully mediated some of the relationships, in other cases, only partial mediation was found. This pattern suggests that other mediators may exist.

Practical Implications

Numerous leadership theories cite trust as a central element including transformational leadership, authentic leadership, leader-member exchange theory, behavioral theories, and

models focused on leader characteristics (for a review, see Dirks & Ferrin, 2002), and they all converge on the fact that leaders must have the trust of their followers if they are to be effective. Recent surveys reveal, however, that many leaders struggle with this issue; for example Mercer Human Resource Consulting (2005) reported that only 40% of employees trust their senior leaders. The present study is, to our knowledge, the first to provide evidence regarding actions that a leader can take to repair trust and shows there exists a number of tactics, including both substantive (penance, regulation) and non-substantive (apologies) that can be employed.

What might leaders keep in mind as they face particular situations? First, as described above, the study suggests that the key mechanism to activate is perceived repentance. Managers can attempt to elicit perceived repentance in numerous ways beyond the specific approaches used in the study (e.g., paying back money; setting up monitoring system). For example, they may engage in a variety of other tactics such as giving up tangible resources (time, power) or intangible resources (e.g., reputation, loss of face; see Bottom et al. 2002 for examples across cultures). In choosing a particular response, however, Study 2 suggested that, it is important to avoid the assumption that by providing a substantive response, as opposed to an apology, that trust repair will be not necessarily be greater, as they might end up providing a response that is more costly to them, without gaining any additional benefit.

Second, the study demonstrated that managers need to keep in mind how the original transgression was seen – i.e., as one of competence or integrity. For example, the signals of repentance were much more effective when the original transgression was perceived to be one of competence, than one of integrity. Many incidents may be complex enough to be given a variety of different attributions; for example in the present study, as well as past research (Kim et al., 2004, 2006), the same transgression can be framed as related to integrity or competence. To the

extent that it is appropriate, highlighting the fact that the violation may stem from competence, rather than integrity should make trustors more likely to respond favorably. Conversely, trustors need to be mindful of the potential for the exploitation of this psychological tendency.

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Figure 2a. Plot of Interaction for Perceived Repentance and Type of Violation Predicting Trusting Intentions

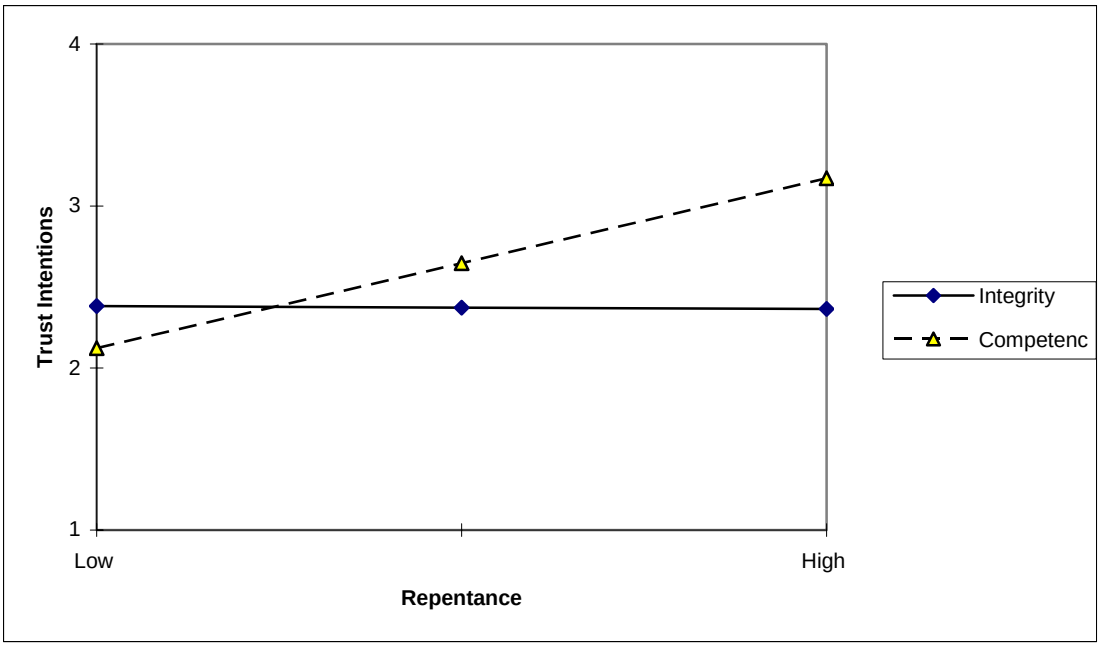

Figure 2b. Plot of Interaction for Perceived Repentance and Type of Violation Predicting Perceived Integrity