A Time for Cognitive Change: The Reappraisal of Anger, Interpersonal Injustice, and Counterproductive Work Behaviors

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Abstract

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This dissertation looks to the emotional regulation literature, specifically the cognitive change stage (i.e. reappraisal) of Gross's (1998) process model of emotional regulation, to help employees adaptively regulate their justice perceptions. Thus, the focus of this dissertation is to explore the influence of reappraisal training on anger and interpersonal justice perceptions, and subsequently, on counterproductive workplace behavior. By extending Gross's (1998) work on reappraisal to the context of organizational justice, this dissertation contributes to theory by exploring adaptive forms of employee justice regulation and by being among the first to examine reappraisal in the context of organizational justice and deviance. In this dissertation, two studies were conducted to test the effect of reappraisal training on experienced anger, interpersonal justice perceptions, and counterproductive workplace behaviors. Significant moderating effects suggest that this dissertation helps to explain how reappraisal training may influence different groups of people. Post-hoc analyses revealed encouraging results for the theoretical model. To conclude, I provide theoretical and practical limitations of the dissertation and offer directions for future research.

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INTRODUCTION

Overview of Dissertation

Interpersonal justice is one of four recognized dimensions of organizational justice, and it is evaluated based on the dignity and respect with which employees perceive they are treated (Colquitt, 2001). Low levels of interpersonal justice have been found to be strongly related to anger in the workplace as well as to harmful interpersonal deviant behavior (Bies, 1987; Bies & Shapiro, 1988; Harlos & Pinder, 2000; Gibson & Callister, 2010). In response to interpersonal justice events, employees are likely to experience pressure to regulate their anger and perceptions of injustice, particularly if their interaction happens to be with a higher-status individual, such as a supervisor (Kuppens, Van Mechelen, & Meulders, 2004). Moreover, it can be reasonably argued that organizations are likely to have more control over their distribution of outcomes, enactment of procedures, and the information they provide to employees, than they will the interpersonal treatment received by their employees at the hands of supervisors, peers, and customers.

And yet, in the existing organizational justice literature, there is a shortage of research on adaptive forms of employee-centered regulation. Consequently, this dissertation looks to the emotional regulation literature, specifically, the fourth stage (i.e. cognitive change) of Gross's (1998) five stage process model of emotional regulation to help employees better regulate their justice perceptions (see Figure 1 for Gross's 2001 process model). During emotional regulation, individuals can either draw from *antecedent focused* strategies that occur before experiential, behavioral, and physiological response tendencies are experienced, or they can draw from *response focused strategies* that focus on regulating their response tendencies (Gross, 1998).

The first four stages of the process model of emotional regulation are what Gross (1998) calls antecedent focused strategies. During the last antecedent focused stage, the *cognitive change stage* of emotional regulation, (see Figure 1) individuals select which of the possible meanings they will attach to the event (Gross, 2001; 216). The cognitive change stage involves the strategy of *reappraisal*, an antecedent focused form of cognitive change used *before experiential, behavioral, and physiological response tendencies are fully generated*. This antecedent focused form of cognitive change makes reappraisal one of the healthiest and most adaptive forms of emotional regulation studied in the emotions literature (Gross, 1998; 2001; 2002). Thus, the focus of this dissertation is to explore the influence of reappraisal training on the reduction of anger and interpersonal justice perceptions, and subsequently, on the reduction of counterproductive work behaviors, or CWBs, (see Figure 2). To accomplish this, I will first explain in more detail the current gap in the justice literature regarding adaptive forms of regulation, and I will follow this discussion by exploring how the emotional regulation literature might be able to help.

A lack of adaptive regulation strategies in the justice literature

The existing organizational justice literature has predominantly focused on the prevention of injustice perceptions and on their negative consequences. This focus has provided considerable insight into the antecedents of justice perceptions as well as into their significant impact on both personal and organizational outcomes (Adams, 1965; Leventhal, 1980; Bies & Moag, 1986; Daly & Geyer, 1994; Greenberg & Scott, 1996; Skarlicki & Latham, 1996; Skarlicki & Folger, 1997; Barclay, Skarlicki, & Pugh, 2005). Additionally, this body of research has the potential to influence how organizations respond to impending justice scenarios. For example, organizations may attempt to buffer the negative consequences of low distributive and

procedural justice by increasing the informational and interpersonal justice provided to their employees prior to impending justice events, such as downsizing (Skarlicki & Folger, 1997).

However, many instances of injustice cannot be planned for or avoided by organizations. Despite the best efforts of managers to ensure that rewards are distributed equitably, policies and procedures are enacted fairly, and managerial and customer interactions are carried out with dignity and respect, employees may still harbor feelings of unjust treatment by their employers, peers, or customers. The existing justice literature has examined how employees regulate their perceptions of injustice by exploring strategies such as 1) the adjustment of ratios of inputs to outputs as described in equity theory (Adams, 1965) (e.g. reducing effort in response to decreased wages), and 2) behavioral solutions such as engaging in counterproductive work behaviors, or CWBs (e.g. retaliation, theft, abuse, and sabotage) (Barclay, et al, 2005; Ilies, Hauserman, Schwochau,& Stibal, 2003). CWBs are related to a variety of negative workplace outcomes such as reduced morale, absenteeism, turnover, and decreased productivity (Mount, Ilies, Johnson, 2006; Hoel, Einarsen, & Cooper, 2003; Keashly & Jagatic, 2003). In fact, theft and fraud alone cost U.S. organizations approximately $50 billion annually (Coffin, 2003). Thus, organizations are experiencing serious negative effects that may very well be due to maladaptive regulation strategies (i.e. CWBs) used by employees in response to a perceived injustice (Spector, Fox, Penney, Bruursema, Goh, & Kessler, 2006). And while research on maladaptive forms of justice regulation has helped to inform management research of the strong connection between justice perceptions and important workplace outcomes (Ambrose, Seabright, & Schminke, 2002; Skarlicki & Folger, 1997; Greenberg, 1993; Colquitt, et al, 2001), there is a gap in the justice literature evidenced by the lack of information on adaptive strategies of justice regulation. As a way of addressing this gap in the justice literature, I turn to research on

emotional regulation to identify adaptive strategies that can be used in the context of justice events.

Emotional regulation as a source of potential adaptive justice regulation strategies

Much of the emotional regulation literature stems from a large body of social psychology research by Gross (1998; 1999; 2001; 2002) who has argued that there are differences in both the effectiveness and consequences associated with different emotional regulation strategies. In his process model of emotional regulation, Gross (1998; 2001) describes five different regulation strategies. While all five strategies will be discussed in greater detail later in this chapter, the focus of this dissertation is on Gross's fourth stage of the process model. During the *cognitive change stage*, individuals select which of the possible meanings they will attach to an event (Gross, 2001; 216). As stated previously, the cognitive change stage involves the strategy of *reappraisal*, an antecedent focused form of cognitive change used *before experiential, behavioral, and physiological response tendencies are fully generated*. Gross has consistently found reappraisal to be an adaptive strategy in the face of emotion-inducing events (Gross, 1998; 1999; 2001; 2002; Gross & John, 2003). Moreover, reappraisal has been found to decrease both experienced negative emotion and its behavioral expression while having no negative impact on the individual's memory or overall well-being (Gross 2002).

Theoretical Contributions of this Research

By extending Gross's (1998; 2001) work on reappraisal to the context of employee justice regulation, this dissertation contributes to theory in at least three major ways. First, this dissertation adds to the justice literature's identification of adaptive regulation strategies. As previously stated, the existing justice literature has predominately focused on the connection

between justice and maladaptive forms of employee regulation, such as destructive behavioral strategies (e.g. engaging in CWBs). Therefore, there is a gap in the justice literature that has yet to focus on emotion and cognition centered approaches that act as adaptive forms of employee justice regulation. Second, this dissertation adds to the emotions literature by answering the call for continued research on discrete emotions (Grandey, 2008). Specific to the focus of this dissertation, we know from previous research that anger and justice perceptions are strongly linked to one another (Gibson, 1997; Cropanzano, Weiss, Suckow, & Grandey, 2000; Fitness, 2000; Bies & Tripp, 2002: Robinson & Bennett, 1995). And yet, despite this established connection between justice and anger, researchers have yet to examine the influence of emotions on the formation of justice perceptions (Grandey, 2008). Accordingly, this dissertation adds to the emotions literature by exploring how specific emotions and emotional regulation strategies influence the formation of justice perceptions. By focusing specifically on the discrete emotion of anger, this dissertation adds to the body of emotions literature focused on understanding the role of anger and anger regulation on important workplace outcomes, such as CWBs. Thus, this dissertation addresses a theoretical gap in the emotions literature by investigating whether emotional regulation strategies that reduce experienced anger can reduce perceptions of injustice as well. Finally, this dissertation not only extends Gross's work (1998; 1999; 2001; 2002) on reappraisal by being the first to examine the strategy in the context of organizational justice, it is also the first to explore the influence of reappraisal on costly and damaging CWBs.

LITERATURE REVIEW

Emotions Literature Review

After providing an overview of this dissertation, as well as its implications for theory, I will now review relevant portions of the emotions literature that will be used as a foundation for the development of both the hypotheses and model later in this dissertation. The first section of the emotions literature review will discuss the dimensions of affect as well as give a brief review of important terminology, including the definitions of trait and state affect as well as moods and emotions. Understanding the different dimensions of affect helps to later differentiate various discrete emotions from one another, and specifically, how anger is different from other negative emotions, such as guilt. Additionally, a discussion of terminology, separating out the levels of affect, allows for a better understanding of the differences between general negative affect, versus negative mood, versus the specific discrete emotion of anger. Following this initial review, I will continue forward with a discussion and brief historical account of how affect and cognition have been argued to influence one another in order to help flesh out how emotional regulation strategies can influence both affect and cognition through the reciprocal influence of affect and cognition. I will also provide a detailed discussion of Gross's (1998; 2001) five stage process model of emotional regulation, with specific attention paid to the cognitive change stage, during which reappraisal takes place. This review section is meant to provide more detail on the construct of reappraisal and to help distinguish reappraisal from other emotional regulation strategies, such as suppression, as well as the related concept of emotional labor. And finally, I will conclude by discussing past work on the discrete emotion of anger, its regulation, and its strong connection to organizational justice.

Affect: Trait & State; Moods & Emotions. Russell (1980) proposed that all affective experience could be represented using a circle and two axes that represent a bipolar *valence* dimension of affect and an orthogonal *activation* dimension of affect. In response to Russell (1980), Watson and Tellegen (1985) developed a second circumplex model that had a similar bipolar valance dimension, but was different from Russell's (1980) circumplex in that this circumplex rotated the activation axes 45 degrees. Watson and Tellegen (1985) also argued for two orthogonal dimensions, positive and negative activation. More recently, Cropanzano, Weiss, Hale, and Reb (2003) restructured the circumplex to include 4 axes: 1) pleasantness versus unpleasantness, 2) high versus low level of activation, 3) high versus low positive affect, and 4) high versus low negative affect. This circumplex is considered the most descriptive model in understanding the dimensions that affect operates within (Cropanzano, et al, 2003). And while the debate over the dimensions of affect helps us to categorize the properties of various emotional experiences, (i.e. anger can be described as having high activation, unpleasant hedonic tone, and is considered low on positive affect and high on negative affect) the present focus of emotions research has shifted away from the broader dimensions of affect toward a discussion of specific, targeted forms of affect (Grandey, 2008).

The word, *affect*, is often used as an umbrella term that encompasses both emotions and moods. It is important to note that affect can also be conceptualized as *trait-like*, or stable, genetically based, and unlikely to change in the short or long term (Tellegen, Lykken, Bouchard, Wilcox, Segal, & Rich, 1988). Under this stable conceptualization, individuals can have *positive trait affect*, a disposition to experience positive moods and emotions, or *negative trait affect*, a disposition to experience negative moods or emotions. Positive and negative trait affect are independent dimensions and individuals can be high on both, low on both, or chronically

disposed toward one or the other. Lazarus (1991) described *trait affect* as being a generalized tendency toward having a specific level of positivity or negativity which influences all of the individual's experiences.

Lazarus (1991) also argued that trait affect largely determines *state affect*, a conceptualization that includes both moods and emotions, which are distinguished from one another by their intensity, duration, and specificity. *Moods* are generally longer lasting, diffuse, and usually less intense (Watson, et al, 1988). *Emotions*, on the other hand, are intense, short-term affective reactions directed toward a specific stimulus (Frijda & Mesquita, 1994). Emotions also demand attention, disrupt cognitive processes, and are tied to specific events, and as a result, they are particularly important to study in the context of interpersonal justice (Watson, et al. 1988; Lazarus, 1991).

Affect & Cognition. In his foundational paper, Lazarus (1991) argued that there are a certain order of events that occur regarding emotions, starting with a stimulus, followed by a cognition, then an emotion, and then a physiological change. He also argued that the appraisal of emotions is a two-step process that includes both a primary appraisal and a secondary appraisal. In the primary appraisal stage, individuals determine whether an event has relevance for their well-being and goals. In the secondary appraisal stage, individuals go through a more specific assessment to interpret and determine the meaning of the event, usually producing a discrete emotion (Lazarus, 1991). In 1998, Zajonc challenged Lazarus' perspective by making a different argument regarding the influence of affect and cognition on one another.

In contrast to Lazarus (1991), Zajonc (1998) proposed that affect and cognition are actually two independent processes that are in constant interaction with one another. He argued

that while affective reactions can be independent of cognitive processing, cognitive factors can and do play an important role in forming emotions. Zajonc (1998) proposed a different order of events regarding emotions, starting with a stimulus, followed by a physiological change, then an emotional stimulus, and finally a cognition. This spirited debate between Lazarus (1991) and Zajonc (1998) was extremely influential in forming our current understanding of the reciprocal influence of affect and cognition (Forgas & George, 2001).

The focus over understanding the relationship between affect and cognition has moved from a debate over the order of influence into a discussion of *when* and *how* affect and cognition influence one another (Forgas & George, 2001). Specifically, the literature on affect and cognition now suggests that affect influences cognition through both content (i.e. what we remember) and process (i.e. how we process information) (Forgas & George, 2001). For example, if an employee is in a negative mood, he or she will be more likely to make negative evaluations, recall and retrieve negatively valenced information more readily, and be more likely to filter information using systematic processing and narrow categorizations.

In their Affect Infusion Model, or AIM, Forgas and George (2001) explain how the influence of affective states on judgments and behaviors depends on the kind of information processing strategies that are in place. Specifically, they argue for low affect infusion (i.e. less impact of affect) when individuals engage in motivated processing in the service of a pre-existing goal. In other words, when the individual has a vested interest in the decision, affect will likely have less influence on cognition. Additionally, they argue that we are likely to see low affect infusion when direct access processing is involved (i.e. there is a preexisting response, and behaviors and judgments are guided by well-established routines and habits).

Conversely, they also suggest there will be high affect infusion (i.e. more impact of affect) when the individual is involved in substantive processing that involves cognitive tasks that require the active elaboration and transformation of stimulus information. Essentially, when the individual needs to select, learn, and interpret new information about a task, he or she is more likely to be influenced by affect in the cognitive judgments he or she makes. Moreover, Forgas and George (2001) suggest that high affect infusion is likely to be observed when the individual has no preexisting response or motivational goal in regard to the situation. In this type of situation, the individual is more likely to use heuristic processing and respond with a "how-do-I-feel-about-it?" heuristic that relies on his or her current affective state to provide information to make the cognitive judgment (Schwarz & Clore, 1983).

Emotional Regulation. *Emotional regulation* is defined by Gross (1998: 275) as the "processes by which individuals influence the emotions they have, when they have them, and how they experience and express them." Although it is not always done consciously, emotional regulation can be used to increase, decrease, or maintain both negative and positive emotions (Gross, 2002). An important distinction that Gross (2001) makes in the emotion-generative process is between antecedent-focused and response-focused regulation strategies. This distinction refers to whether the individual acts, or regulates, before the event or in response to the event. Gross (1998; 2001) describes five different regulation strategies in his process model of emotional regulation. The model begins first with *situation selection* and is followed by *situation modification*. During these first two stages individuals have the opportunity to choose/select and/or modify their environments in order to regulate the types of emotion-inducing events to which they might be exposed. These can be very effective strategies, but in

the case of an unexpected event, the employee is likely not to have the option to choose/select and/or modify his environment.

The third stage described by Gross (2001) is *attentional deployment*, or how individuals select what aspects of the event, person, situation, etc. they will pay attention to. While also a potentially effective strategy, once again, employees may not be able to selectively ignore certain aspects of the event, person, situation, etc. As Kahneman (1973) suggests in his classic model of selective attention, some activities and events are more demanding than others. Moreover, one's available processing capacity may be increased or decreased by factors such as arousal, and one's attentional capacity will reflect the demands made on the individual at the perceptual level (Kahneman, 1973). In their chapter on emotional regulation and justice, Cropanzano, et al (2000) argue that employees may not be able to control the external processes, such as the context or situation, that precipitate a justice event, and therefore, their internal processes may be the only adaptive options left to regulate their emotions.

The fourth stage, *cognitive change,* is the last stage of the model at which individuals can use an antecedent-focused strategy to regulate emotion. It is during the *cognitive change stage* when individuals select which of the possible meanings they will attach to the event (Gross, 2001; 216). According to Gross (2001), during the cognitive change stage, the individual must select one of many possible meanings (see Figure 1) for an event. For example, an individual might choose to view a customer yelling at them (i.e. justice event) as 1) a chance to be empathetic and improve the customer's experience, 2) as an anger inducing event where he or she is a victim of an interpersonal injustice, or conversely, 3) an ordinary and common work experience that isn't worth getting upset about because in another five minutes, they will have forgotten all about this customer. As Gross (2001) points out, the meaning the individual assigns

to the situation is crucial because *it determines which experiential, behavioral, and physiological response tendencies will be fully generated*. The fifth and final stage in the process model, *response modulation*, is where individuals attempt to influence and regulate their emotional expression after the emotions have been fully generated. This fifth stage is when the *suppression* strategy of emotional regulation is enacted (Gross, 1998; 2001). Suppression, unlike reappraisal, has been associated with a variety of negative outcomes with potentially harmful long-term effects (Gross, 2002; Schmeichel, Vohs, & Baumeister, 2003).

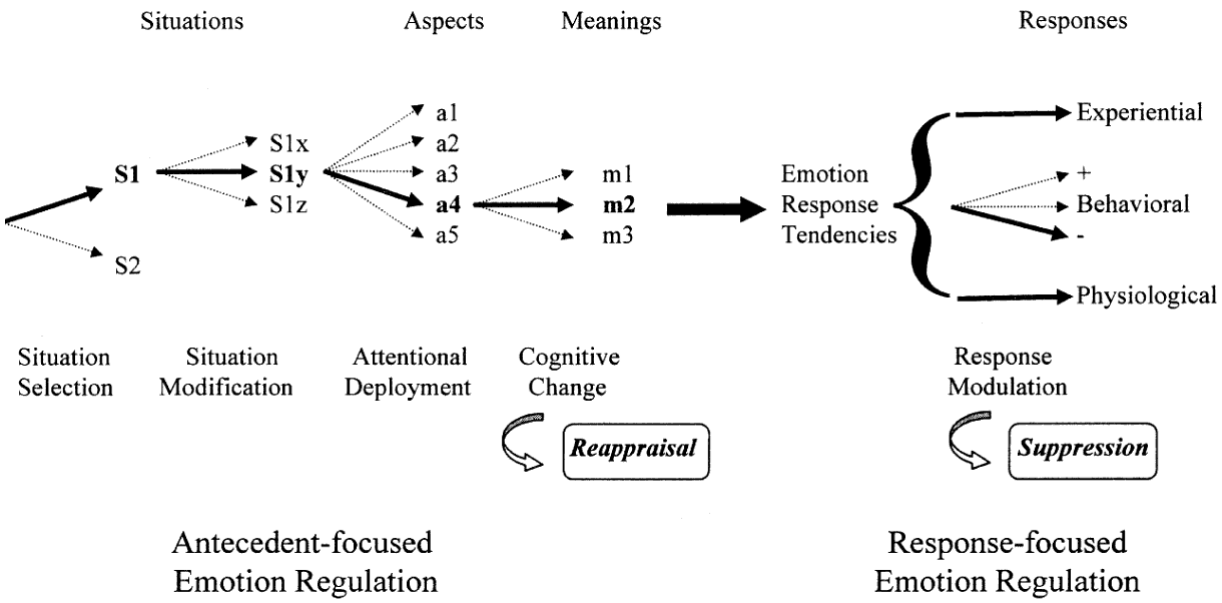

Figure 1. Emotional Regulation Process Model ***Adapted from Gross (2001)***

Related to the fifth stage of Gross's (2001) process model, is the management concept of *emotional labor*. Brought to the forefront by the book, *The Managed Heart*, Hochschild (1983) defines *emotional labor* as the effort consumed by the employee to show organizationally "expected" emotions when his or her internal emotions are different. The act of engaging in emotional labor means that the employee's true emotions must be hidden away, or *suppressed*, during interactions such as impression management with a supervisor or service interaction with a customer, such that different emotions can be worn on the surface like a mask. The expression of emotions that conflict with experienced emotions results in *emotional dissonance*, which causes psychological strain and negatively impacts employees' well-being (Hochschild, 1983). In other words, if an employee tries to suppress his or her behavioral expression of a negative emotion, his or her experienced negative emotion may remain, create feelings of inauthenticity and dissonance, and potentially create problems down the road for the employee, his or her team, and the organization. According to Morris and Feldman (1996), emotional labor has four dimensions that include 1) the frequency of mandated emotional display, 2) duration and intensity of required display rules, 3) the variety of emotions that must be displayed, and 4) emotional dissonances.

However, an important distinction made in the emotional labor literature is between surface acting versus deep acting. Specifically, s*urface acting,* as described above, is where an individual tries to suppress his or her true emotions while displaying conflicting emotions to others. Conversely, *deep acting* emotional labor encourages the individual to really feel and genuinely experience the emotion he or she is trying to express to others (Hochschild, 1983). Deep acting emotional labor seeks to remove the harmful effects of suppression by not having

the employee hide or suppress negative emotions. At first glance, deep acting emotional labor may sound very similar to reappraisal. However, reappraisal is different from deep acting emotional labor in that, during reappraisal, the individual actively cognitively reframes the situation and attributes meaning to the event before the experiential, behavioral, and physiological response tendencies are fully generated. In deep acting emotional labor, the individual has already generated some forms of response tendencies, and is instead trying to experience a different, likely positive, emotion. It is one thing to try to reframe a situation to neutralize negative emotions, and it quite another to be empathetic with another person.

Discrete Emotion of Anger. Currently, there is a movement in the emotions literature toward the study of *discrete emotions*, defined as affective reactions which are intense, transitory, and directed toward a specific stimulus (Frijda, 1993; Weiss & Cropanzano, 1996; Frijda & Mesquita, 1994; Barsade, Brief, & Sataro, 2003; Brief & Weiss, 2002; Briner & Keifer, 2005). Many arguments support this movement, but one of the most compelling is that discrete emotions can sometimes explain what broader categories of affect cannot. There are a wide variety of workplace behaviors that stem from various discrete emotions that all fall under the category of negative affect (Lerner & Keltner, 2000). For example, although anger and guilt are both forms of negative affect, they are responsible for very different work behaviors. Because anger is considered to be an "other-focused emotion," as opposed to guilt which is a "self-focused" emotion, anger is more likely to be linked to employee retaliation (Barclay, Skarlicki, & Pugh, 2005; Lee & Allen, 2002), whereas guilt is more likely to result in reconciliation attempts by the employee (Tangney, 1995). In Lee and Allen's (2002) study on the role of affect and cognition in predicting workplace deviance, anger had an impact on workplace deviance, but the broader construct of negative affect did not.

In their recent review of the anger literature, Gibson and Callister (2010) differentiate between state anger and trait anger. State anger involves episodic experiences of anger that can range from slight irritation to intense range. In contrast, trait anger is a longer-term dispositional tendency to perceive situations as anger provoking, often resulting in frequent and intense episodes of state anger (Spielberger, 1999). In their review, which is primarily focused on state anger, Gibson and Callister (2010: 68) define *anger* as "*an emotion that involves an appraisal of responsibility for wrongdoing by another person or entity and often includes the goal of correcting the perceived wrong.*" Additionally, Gibson and Callister (2010) offer four points of distinction with which to separate anger from other negative emotions. First, the authors point out that anger is a discrete emotion with universally recognizable expressions with specific types of physiological reactions (Gibson & Callister, 2010). Second, anger is a social emotion that is often generated in response to the actions of others and, as such, it is often directed at others (Averill, 1982; Gibson & Callister, 2010). Third, anger serves a social function of signaling to the individual that a justice violation has occurred, and in this way, anger acts as a transaction between the individual and his or her environment. And fourth, anger episodes usually begin with work-related events, which result in what Gibson & Callister (2010) identify as the three primary causes of anger; perceptions of fairness and justice, goal interference, and interpersonal conflict.

The justice literature has long suggested that there is a strong relationship between negative emotions and perceptions of injustice (Adams, 1965; Pillutla & Murnighan, 1996). Additionally, there is research that suggests that feelings of anger, frustration, and resentment over workplace injustice can motivate the desire to harm another person or the organization (Skarlicki & Folger, 1997). There has been specific research on the connection between anger

and injustice perceptions identifying “unjust treatment” (felt most strongly with supervisors) as the most common cause for workplace anger, often prompting unethical behavior toward the offending parties (Schweitzer & Gibson, 2008). Fairness theory (Folger & Cropanzano, 1998) argues that individuals form their justice perceptions through asking themselves a series of questions about 1) what things would have been like had the perpetrator acted differently, 2) what should the perpetrator have done instead, and 3) could the perpetrator have behaved differently if he or she had wanted to (Rupp, McCance, & Grandey, 2007). This series of questioning leads to a comparison between the treatment received and the moral and ethical standards held by the individual (Folger & Cropanzano, 1998).

Another primary cause of anger according to Gibson and Callister (2010) is interpersonal conflict (Davidson & Greenhalgh, 1999; Lazarus, 1991). The expression of anger in response to interpersonal conflict has been found to increase levels of conflict, retaliation, and reduce trust (Allred, Mallozzi, Matsui, & Raja, 1997). Allred (1999) argues that interpersonal conflict leads to anger and retaliation when the individual holds another person, or entity, responsible for their unjust treatment. And finally, in addition to interpersonal conflict, Gibson and Callister (2010) point out that anger is also often the result of interference in employee goal directed behavior (Shaver, Schwartz, Kirson, & O’Connor, 1987), leading to harmful CWBs (Fox & Spector, 1999)

On the whole, anger has been connected to a host of negative outcomes including increased blood pressure, heart disease (Begley, 1994), desire for interpersonal revenge (Bies & Tripp, 1998), blame (Aquino, Tripp, & Bies, 2001), destructive organizational climates (Aquino, Douglas, & Martinko, 2004), decreased job satisfaction (Glomb, 2002), and even violence (Fox & Spector, 1999). And yet, there is a collection of anger research that suggests that the

expression of anger, at low intensity levels, can lead to positive outcomes (Glomb, 2002; Frijda, 1986; Keltner & Gross, 1999). They argue that anger does this through employees choosing to communicate their anger such that they can make changes to better clarify their needs and reach interpersonal and intrapersonal goals (Keltner & Gross, 1999). A recent theoretical paper on anger by Geddes and Callister (2007) introduced a dual threshold model of anger that explains how anger can lead to either positive or negative consequences. The authors argue that anger is particularly destructive when it meets either of the following two conditions: 1) it does not cross the threshold of expressivity (i.e. it is suppressed), and 2) it crosses the threshold of impropriety (i.e., it is considered deviant; Geddes & Callister, 2007). The authors argue that if an individual suppresses anger, there is no opportunity to fix the situation that caused the anger in the first place. This perspective is supported by Gross's (2001) work on the negative consequences of using suppression as a regulation strategy. However, it is important to note that in this dissertation, I am focusing on the positive effects of reappraisal and not the negative effects of suppression.

Specifically, Geddes and Callister (2007) limited their discussion to the suppression, moderate expression, or deviant expression of anger, and they failed to discuss possible reappraisal of the anger inducing event. The authors argued that moderate levels of expression of anger can be beneficial, in that they allow decision makers to be aware of the problem and to search for solutions together with the employee. And yet, relevant to the main focus of this dissertation, the expression of anger may not always be possible (Ashforth & Humphrey, 1995), and there is risk involved to the employee. If an individual expresses anger, he or she may not be able to predict or control the reaction of their interaction partner. By expressing his or her anger, an employee runs the risk of being considered a "problem" in the organization (Geddes &

Callister, 2007). For instance, employees may find themselves in situations where the expression of anger would result in long term damage to an important relationship (e.g. an airline customer service attendant who expresses his or her anger toward a customer could result in the customer severing their relationship with the airline, or it could result in a customer complaint that the employee may believe could put his or her job at risk). Similarly, an employee may not wish to express his or her anger to a supervisor or peer out of a fear of retaliation. Specifically, Gibson and Callister (2010) point out that there has been research on status and anger that would suggest that differences in status (i.e. structural position and control over resources) will influence the expression of anger such that lower status individuals 1) are more likely to experience anger due to unjust treatment by supervisors, 2) are more likely to experience more intense and longer lasting anger episodes, 3) are less likely to express their anger to higher status individuals, and 4) even if they express their anger, they are less likely to think that their anger incident with a higher status individual has been successfully resolved (Fitness, 2000).

Thus, in response to a justice event (e.g. rude, disrespectful treatment by a customer), the expression of anger may not always be possible, and if it is possible, it may not be wise or in the employee's best interest (Ashforth & Humphrey, 1995; Gibson & Callister, 2010). For example, Gibson et al (2009) found that anger expression by women was associated with less positive organizational outcomes than for men, suggesting that there are different display norms for anger in the workplace depending on one's gender. Moreover, even though Fitness (2000) found that many employees felt that the expression of their anger resulted in the successfully resolution of the initial anger-inducing event, interestingly, employees who were angered by their supervisors were much less likely to think that the anger-provoking event was successfully resolved. Therefore, if only given the choice between expression and suppression in environments where it

may not be favorable to express their anger, employees may find themselves holding onto anger, and potentially perceptions of injustice. This suppression may result in increased stress for the employee, continued negative emotions, and impaired performance due to the consumption of cognitive resources required by suppression (Gross 2002).

Summary. From the above emotions literature review, we can draw four major takeaways. First, there is a distinct movement in the emotions literature toward the exploration of discrete emotions. Importantly, this focus on discrete emotions has allowed us to begin to understand and explain behaviors that broader conceptualizations of affect cannot. Second, in describing specific discrete emotions, we can use the affective circumplex to distinguish emotions from one another (e.g. anger can be described as having high activation, low positive affect, high negative affect, and unpleasant hedonic tone). Third, reappraisal can influence affect through the reciprocal influence of affect and cognition. And fourth, there is a strong case for studying the discrete emotion of anger and its regulation in the context of justice and CWBs.

Justice Literature Review

Affective events theory, or AET, introduced by Weiss and Cropanzano (1996), was one of the first to argue that affective experiences at work are a function of specific work events (e.g. justice events). Because justice events are often perceived as stressful, they often act as antecedents of negative emotions in the workplace (Brief & Weiss, 2002). Specifically, Weiss, Suckow, and Cropanzano (1999) argued that unfavorable outcomes alert the individual that something is wrong, and that more specific emotional responses occur depending on the perceived fairness of the process and the treatment and explanations the employee receives.

Folger and Cropanzano (2001) later established that violations of all forms of organizational justice can trigger an appraisal by the employee, resulting in a specific emotion, often anger.

Organizational justice has been described as a literature that aims to explain the role and importance of fairness perceptions in the workplace (Greenberg, 1987). According to Colquitt, et al (2001), the concept of organizational justice can be defined in terms of four distinct dimensions; *distributive, procedural, interpersonal, and informational*. I will review each of these dimensions and the formative research within in each dimension, starting with the oldest form of organizational justice, distributive justice.

Distributive Justice. *Distributive justice* is defined as the perception of fairness regarding outcomes received as a result of an allocation decision (Greenberg, 1987). It is often discussed starting with Homan's (1961) rule of distributive justice, which states that in a social exchange relationship, rewards and outcomes should be proportional to the effort invested and costs incurred. Equity theory (Adams, 1965) takes this a step further by explaining that individuals strive to create and maintain equity and experience tension if they perceive inequity. Adams (1965) also argued that individuals are motivated to reduce negative inequity until their ratio of outcomes and inputs are perceived as equitable once again. Moreover, he argued that when faced with an inequity, individuals may either change their inputs (e.g. decrease effort), change their outcomes (e.g. ask for a raise), distort their inputs or outcomes, select a different comparison other, or alternatively, they may choose to leave (Adams, 1965).

Important in the list of potential reactions to restore equity, when confronted with issues concerning distributive justice, is the idea of selecting a different comparison. This implies that equity is not only based on what the individual receives, but also in the comparison to a referent

standard (Cropanzano & Greenberg, 1997). Goodman (1974) articulated several forms that the referent standard may take. Specifically, the individual may compare their ratio of outputs and inputs to 1) another person in a similar job, organization, etc., 2) a system, or initial exchange between the organization and the employee such that an "initial contract" serves as the referent, or 3) to themselves in a past or future job.

Distributive justice has been tied to a series of important work outcomes. Research has established that distributive justice is most often linked to personal outcomes such as pay satisfaction and job satisfaction (McFarlin & Sweeney, 1992), organizational commitment (Brockner, Wisenfeld, & Martin, 1995), as well as to performance (Ball, Trevino, & Sims, 1994). Additionally, employees who see lower levels of distributive justice have been found to have higher rates of withdrawal behavior such as turnover and absenteeism (Cropanzano & Greenberg, 1997). Importantly, it has been long argued in the justice literature that inequitable outcomes lead to discrete emotions such as anger and guilt (Homans, 1961).

Procedural Justice. *Procedural justice* is defined as the perception of fairness regarding the policies and procedures used to decide outcome allocation (Thibaut & Walker, 1975; Leventhal, 1980). In other words, procedural justice is focused on how the decision is made while distributive justice is about the fairness of the decision outcome (Konovsky, 2000). Following distributive justice, procedural justice was the second dimension of justice to really capture organizational researchers' attention.

Thibaut and Walker (1975) argued that it was not just the outcome allocation that mattered to people, but rather, that people wanted voice and control over the process stage of the decision making. Leventhal (1976; 1980) took this argument one step further by saying that

procedural justice was much more than just having a voice in the process. Specifically, Leventhal (1976; 1980) argued that for a process to be considered fair it had to 1) be applied consistently across people and across time, 2) be free from bias, 3) insure that accurate information is collected and used in making decisions, 4) have some mechanism to correct flawed decisions, 5) conform to moral and ethical standards, and 6) insure that the opinions of all parties affected by the decision have been taken into account. Greenberg (1987) applied these concepts from Leventhal (1976; 1980) to organizations by including the following components in determining process fairness in an evaluation: 1) rater familiarity with the ratee's work, 2) consistent application of standards, 3) soliciting input prior to an evaluation and using it, 4) two way communication during an interview, and 5) ability to challenge an evaluation.

Higher levels of procedural justice have been found to be related to increased trust (Konovsky & Pugh, 1994), organizational citizenship behaviors (Moorman, 1991), performance (Colquitt, et al, 2001), and decreased retaliation behaviors (Skarlicki & Folger, 1997). And unlike distributive justice, procedural justice tends to influence an employees' general evaluation of systems and authorities within their organization, and it is most often linked to organizational outcomes such as supervisor evaluations and organizational commitment (Colquitt, et.al, 2001; McFarlin & Sweeney, 1992).

Folger and Cropanzano (1998, 2001) found that violations of procedural justice often lead to "other focused" emotions—specifically, anger. Moreover, research has shown that procedural fairness can interact with outcome favorability to predict discrete emotions, like anger and guilt (Weiss, Suckow, & Cropanzano, 1999). Cropanzano and Greenberg (1997) also point out that distributive justice perceptions can actually translate into procedural justice perceptions over the long term. For instance, if an employee continues to experience unfair outcome

distribution over time, he or she may begin to question the fairness of the decision making process that decides the outcome distribution.

Brockner and Wiesenfeld (1996) have argued for a two way interaction model of organizational justice where employees react most strongly to a distributive injustice event when procedural justice is low. In other words, distributive justice motivates action while the level of procedural justice directs action (i.e. low levels of procedural justice lead to destructive behavior, while positive levels lead to constructive behavior). Thus, high levels of procedural justice lessen the negative effects of low levels of distributive justice (Konovsky, 2000). Skarlicki and Folger (1997) added to this interaction argument by suggesting a three way interaction model where the effects of distributive justice can be moderated by both procedural and interactional justice.

Informational & Interpersonal. The next two dimensions of justice, interpersonal and informational, were first subsumed under the same category of interactional justice. *Interactional justice* is broadly defined as the quality of interpersonal treatment received during procedures and outcome allocations (Bies & Moag, 1986). Originally, interactional justice was not well received as a third dimension of justice, even though it was shown to have discriminate validity by Moorman (1991). For example, Greenberg (1997) argued that interactional justice was just the social aspect of procedural justice and that formal procedures and treatment both make up the decision making process that leads to outcome allocation. However, Colquitt, et al (2001) provided a compelling argument in his meta-analysis of the organizational justice literature that interactional justice actually consists of two types of discriminately valid interpersonal treatments; 1) *interpersonal justice,* the degree to which people are treated with dignity and respect during the execution of procedures or allocation of outcomes, and 2)

informational justice, the quality of explanations provided to people to explain why procedures were used or outcomes allocated in a particular way.

Colquitt, et al (2001) calls attention to the fact that informational and interpersonal justice have received less attention in the literature than distributive and procedural justice. In his meta-analysis of 183 studies, Colquitt, et al (2001) was only able to assess 16 studies for interpersonal justice and 31 studies for informational justice (Colquitt, et al, 2001). Colquitt et al (2001) argued that the newness of the interpersonal and informational justice concepts, relative to distributive and procedural justice, has resulted in a need for more work exploring, specifically, interpersonal justice (Colquitt, et al, 2001). We do know from the existing literature that both interpersonal and informational justice have been found to decrease retaliation (Bies & Shapiro, 1988), increase the perceived fairness of the interview process (Bies & Shapiro, 1988), increase commitment, and decrease turnover intentions and absenteeism (Colquitt et al, 2001). Directly relevant to this dissertation, interpersonal justice has been found to be strongly related to anger and interpersonally directed deviant behavior (Colquitt, et al, 2001). Specifically, incivility, disrespect, and condescending treatment (all core aspects of interpersonal justice) have been found to be primary sources of anger in the workplace (Fitness, 2000).

Summary. From the above justice literature review, we can draw three major takeaways. First, there is an established connection between negative affect and justice perceptions following justice events. Second, our understanding of organizational justice has expanded slowly over time to now include four dimensions: distributive, procedural, informational, and interpersonal. Third, of the four justice dimensions, interpersonal justice has received the least attention, represented with only 16 out of 183 studies in Colquitt et al's (2001) meta-analysis. Accordingly, there has been a call to balance the justice literature by focusing on this particular

dimension of justice in future research (Colquitt, et al, 2001). Moreover, incivility, disrespect, and condescending treatment (all core aspects of interpersonal justice) have been found to be primary sources of anger in the workplace (Fitness, 2000).

MODELS & HYPOTHESES

In this dissertation, I focus specifically on *interpersonal justice events.* This focus was chosen for several reasons. First, as argued by Colquitt, et al (2001), there is a lack of research, specifically on interpersonal justice, that future research must begin to address. Second, research on emotional labor and perspective taking (Rupp, et al, 2008; Diefendorff, Richard, & Yang, 2008) has begun to establish possible links between anger, reappraisal, and interpersonal justice. By focusing on interpersonal justice, this dissertation begins to fill in gaps in this emerging area of inquiry. Third, it could be reasonably argued that organizations have more control over their distribution of outcomes, enactment of procedures, and the information they provide to employees than the interpersonal treatment employee's receive from peers, supervisors, or customers. Thus, the argument could be made that organizations are least able to predict and or control interpersonal justice events. Therefore, a focus on interpersonal justice helps organizations, teams, and individuals where they are least prepared, by exploring adaptive strategies for employees to regulate their interpersonal injustice perceptions as they come face to face with interpersonal justice events.

Evidence for Training Reappraisal

Although there has been no explicit research on training reappraisal within an organizational setting, there have been similar constructs that have been successfully trained in both the management and psychology literatures that would lend credence to the argument that reappraisal, conceptualized as a strategy and not an individual difference can be trained. In the management literature, Nelis, Quoidbach, Mikolajczak, and Hansenne (2009) found that

participants who participated in an empirically-derived emotional intelligence (EI) training showed a significant increase in emotion management abilities compared with the control group. Specifically, their EI intervention consisted of four different training sessions on 1) perception of emotion, 2) emotional facilitation of thinking, 3) understanding and analyzing emotions, and 4) the reflective regulation of emotion. The fourth training section, most relevant to this dissertation, focused on training techniques such as short lectures, role plays, group discussion, partner work, and readings to help enhance their subjects' skills (Nelis et al, 2009).

According to the authors, participants were also asked to keep a diary in which they had to report an emotional experience and analyze it at the end of each day (Nelis et al, 2009). In this study, emotional regulation ability was measured using the Emotion Regulation Profile Questionnaire (ERP-Q) (Mikolajczak, Nelis, Hansenne, & Quoidbach, 2008). The ERP-Q is a scenario based study with twelve scenarios targeting six emotion categories, one of which being anger/frustration. Participants are given the choice between six possible reactions, three of which were considered adaptive (i.e. positive reappraisal, social support seeking, and acceptance), and three of which were considered maladaptive (i.e. avoidance, substance abuse, and rumination). Participants were asked to circle the two strategies they would most likely use and the two they would most likely not use. Participants were either awarded one point for selecting an adaptive strategy or rejecting a maladaptive strategy, or subtracted one point for selecting a maladaptive strategy or rejecting an adaptive strategy. The ERP-Q was assessed at three points in time with time one being before the training, time two being after the four week training and time three being six months after the initial training. The group that received training showed a significant increase on the ERP-Q between times one and two and between times one and three. The control group did not show any significant changes over the three time periods (Nelis et al, 2009).

Using a very different training approach geared toward clinical application, Schartau, Dalgleish, and Dunn (2009) found that systematically practicing appraisal skills using a computer-mediated cognitive bias modification (CBM) methodology resulted in reduced levels of negative emotions and electrodermal (i.e. stress) responses. Often used in therapy, the first CBM methodologies tried to expose participants, over a series of trials, to a particular way of processing emotional information. The idea behind this type of training was that systematic exposure to certain ways of processing information should result in a shift in the way participants process similar information in the future. However, unlike previous CBM methodologies, Schartau et al (2009) focused instead on teaching the systematic practice of broader rules or strategies that could be used such that participants could apply these more generalized skills to process new potentially distressing stimuli across situations. This type of training has two advantages over more traditional forms of cognitive behavior therapy. First, CBM can influence cognitive processing in ways that more traditional forms of therapy can only influence indirectly (MacLeod, Rutherford, Campbell, Ebsworthy, & Holker, 2002). And second, CBM can be self-administered by participants as a less-intensive form of therapy.

Specifically, Schartau et al (2009) trained participants to use four specific appraisal themes; 1) *every cloud has a silver lining*, to capture the idea that even if some aspects of an event are negative, not all aspects of the event may be negative, 2) *broader perspective*, to capture the idea that even if an event is negative, there are positive aspects outside of the event worth focusing on, 3) *time heals*, to capture the idea that the negative event will seem less negative as time passes, and 4) *bad things happen*, to capture the idea that negative events happen that are outside of our control (Schartau, et al, 2009). Participants followed a study procedure involving eight steps; 1) participants were given examples of each of the four themes

and allowed to practice using the themes to generate specific appraisals using practice films prior to assessment with the first test film, 2) participants were then given a pre-training resting session and baseline emotions and physiological ratings were collected, 3) participants were then given the first test film and all participants were asked to appraise using the four themes, 4) participants followed the test film with six distressing training films, separated by one-minute rest breaks, and participants were either asked to a) watch, b) appraise using the themes, or c) detach (i.e. adopt the view of the film maker), 5) following the six training films, participants then watched a neutral film to bring their affect back to the baseline, 6) participants were then given a post-training resting session and baseline emotions and physiological ratings were collected a second time, 7) all participants were given a second test film and all were asked to use the four appraisal themes, 8) a happy film was viewed to return affect to the baseline. Emotions were rated on a 9-point Likert-type scale, physiological responses (i.e. heart rate and galvanic skin response) were recorded while viewing each film, and change scores were computed between the baseline and film ratings.

Recent Work on Reappraisal & Anger

In addition to the previously discussed work on reappraisal by Gross (1998; 2000; 2001; 2002), there have been recent advances in the study of reappraisal focusing specifically on its relationship with anger. These advances in reappraisal and anger research can be categorized into three general topics: 1) affective, cognitive, and physiological outcomes, 2) individual differences, and 3) reappraisal in an applied context.

First, regarding the influence of reappraisal on affective, cognitive, and physiological outcomes, recent studies have examined the effect of reappraisal on specific discrete emotions.

Specifically, Ray, Wilhelm, and Gross (2008) found that in contrast with rumination, reappraisal was related to decreased anger experience, increased cognitive preservation, and lower sympathetic nervous system activation. Second, regarding individual differences in reappraisal use, Mohr, Howells, Gerace, Day, and Whartona (2007) found that individual differences in *perspective taking*, or the ability to visualize a situation from another point of view, negatively predicted experienced anger. In other words, the ability to take on another perspective improved the individual's ability to regulate and reappraise experienced anger.

And third, regarding the use of reappraisal in applied contexts, management researchers have recently begun to include reappraisal in their discussion of emotions in the workplace (Diefendorff, Richard, & Yang, 2008). Specifically, research on emotional regulation in the workplace has found that employees use a wide variety of emotional regulation strategies, and in fact, these strategies tend to line up with certain negative emotions and affective events (Diefendorff, et al, 2008). Diefendorff, et al (2008) found that reappraisal strategies were most often linked to customer affective events as well as negative discrete emotions such as annoyance, anger and frustration. Seeing customers as a potential source of anger is in line with what Rupp, McCance, Spencer, and Sonntag (2008) found in their study where they examined customer interpersonal and informational injustice experienced by customer service workers. Interestingly, the authors found that the negative effect on employees' surface acting in response to customer injustice was strongest for those low in perspective taking. Thus, employees who had difficulty taking another point of view, or reframing the event, experienced the highest levels of perceived injustice and anger in addition to the strain caused by the emotional labor they were forced to play out with the customer. Thus, based on the extensive work by Gross (1999; 2001; 2002) that has established reappraisal as an effective emotional regulation strategy, as well the

more recent work on the influence of reappraisal on anger (Ray, et al, 2008; Diefendorff, et al, 2008), I offer the following hypothesis regarding the negative relationship between reappraisal and anger (see Figure 2)

Hypothesis One: Reappraisal is negatively related to experienced anger.

Cognitive Change Stage and Interpersonal Justice Perceptions

As previously mentioned, Gross's (2001) process model indicates that *reappraisal* occurs during the *cognitive change stage* when the individual assigns meaning to the event (Gross, 2002; 281). Gross (2001) uses the cognitive change stage to describe how reappraisal allows individuals to effectively reduce the negative emotions that they may have. Building on Gross's (2001) work, I would also argue that because reappraisal influences and alters both cognition and emotion simultaneously during the cognitive change stage, reappraisal can effectively regulate cognitions, such as perceptions of injustice, that accompany feelings of anger (Gross, 2001; Forgas & George, 2001). For example, an employee who experiences harsh criticism from her supervisor (e.g. "*This is terrible! Go back and do it again*!") can either respond with anger and perceptions of interpersonal injustice (e.g. "*I'm so furious! He treated me so rudely!*"), or she could use reappraisal to cognitively reframe the event by rethinking the criticism she received (e.g. "*Mike just has high expectations of me. That's a good thing! This will just push me to be better in the long run.*"). By reframing the meaning of the event, the employee regulates any anger she might have had in response to the harsh criticism, and she *also* simultaneously alters her cognitive perceptions of interpersonal justice (e.g. "*He wasn't being rude. He was trying to help me improve.")*. Based on the above discussion, and the previous discussion of theory by Gross (2001) on the cognitive change stage of emotional regulation, I argue that reappraisal

should result in higher perceived levels of interpersonal justice. Accordingly, I provide the following hypothesis (see Figure 2).

Hypothesis Two: Reappraisal is positively related to perceived levels of interpersonal justice.

Reappraisal and CWBs

CWBs are defined as being voluntary in nature, in violation of organizational norms, and threatening to the well-being of the organization and its members (Robinson & Bennett, 1995). Justice research has shown that anger is strongly related to retaliation (Allred, 2000; Bies & Tripp, 2002; Skarlicki & Folger, 1997; Gibson, 1997; Fitness, 2000). Specifically, we know that anger is a predictor of workplace deviance behaviors (Greenberg & Scott, 1996; Lee & Allen, 2002; Glomb, 2002; Judge, Scott, & Ilies, 2006) and that it motivates employees to restore equity (Bies & Tripp, 2002). Perceptions of injustice are often accompanied by anger, and anger is a strong motivator for employees to restore equity by taking action against either another individual or toward the entire organization (Bies & Tripp, 2002: Robinson & Bennett, 1995). Moreover, the consuming presence of anger instills a need for revenge, retribution, and retaliation, and as such, anger is the discrete emotion that most often leads to CWBs (Averill, 1982; Weiner, 1985; Lazarus, 1991; Allred, 1999).

Additionally, there has been some interesting discussion as to the influence of cognition versus affect in the prediction of CWBs, and the overall consensus is that both affect and cognition play a role in motivating CWBs. Specifically, there are two basic motives that lead to CWBs, 1) instrumental (cognitive) motives, and 2) expressive (affective) motives (Greenberg & Scott, 1996; Robinson & Bennett, 1995; Sheppard, Lewicki, & Minton, 1992). Instrumental motives are “exchange-based explanations of deviant behavior” that involve the use of equity

theory to restore and repair perceived justice perceptions for the individual (Robinson & Bennett, 1995). Expressive motives, on the other hand, arise from an individual's "need to vent, release, or express feelings of outrage, anger or frustration" to others following unjust events (Robinson & Bennett, 1995). Supporting this theory, Lee & Allen (2002) found that both job affect (as represented by anger/hostility) and job cognition played a crucial role in predicting retaliation. Notably, interpersonal justice has been found to be a strong predictor of CWBs (Colquitt, et al, 2001).

In this dissertation, I argue that that the use of reappraisal has the ability to influence anger (affect) and justice perceptions (cognition). Through these two avenues, reappraisal also has the power to reduce both the instrumental and expressive motives behind CWBs. Thus, employees who engage in reappraisal will not only regulate their anger and injustice perceptions, but they will also simultaneously remove the motivation for engaging in CWBs. Thus, the relationship between reappraisal and CWBs is one that is mediated by both anger and justice perceptions. However, Spector, Fox, Penney, Bruursema, Goh, and Kessler (2006) found that certain CWBs may be caused by predominately instrumental motives and others primarily by expressive motives. Specifically, Spector, et al (2006) found that abuse and sabotage were most strongly related to anger and stress and that theft was unrelated to emotion. Accordingly, I offer the following hypotheses (see Figure 2).

Hypothesis Three: Anger mediates the relationship between reappraisal and expressive CWBs (i.e. retaliation, sabotage, abuse).

Hypothesis Four: Interpersonal justice perceptions mediate the relationship between reappraisal and instrumental CWBs (i.e. theft).

Individual Difference and Situational Moderators

Additionally, I would argue that there are four primary moderators that influence the relationship between reappraisal and anger and justice perceptions, two of which are individual difference moderators (i.e. Chronic Reappraisal, Perspective Taking) and two of which are situational moderators (i.e. Strength of Anger Norms, Strength of Justice Norms).

First, *reappraisal*, defined earlier in the dissertation as an antecedent focused form of cognitive change used *before experiential, behavioral, and physiological response tendencies are created* (Gross, 2001), can also be conceptualized as an individual difference variable, known as *chronic reappraisal.* After a series of studies experimentally manipulating reappraisal as a regulation strategy (Gross 1999; 2002), Gross and John (2003) shifted their focus to investigating the frequency with which individuals use different emotional regulation strategies in their daily lives. In their work on chronic reappraisal and chronic suppression, Gross and John (2003) found that *chronic reappraisers* (i.e. individuals that regularly use reappraisal as a regulation strategy) experienced and expressed greater positive emotion (and less negative emotion) in both self-reported and peer reported measures. Additionally, Mauss, Cook, Cheng, and Gross (2007) concluded that even in the face of anger inducing stimuli, chronic reappraisers were able to successfully reframe the event and were consequently adaptive to the situation (Mauss, et al, 2007). However, Gross, Richards, and John (2006) point out that the individual difference measure of chronic reappraisal only measures the frequency with which individuals use reappraisal, and that it does not speak to an individual's ability to use reappraisal when confronted with the instructions to do so (Gross & John 2003; Gross, Richards, & John, 2006). However, in situations where reappraisal is not trained, or a subject is not instructed to use a particular emotional regulation strategy, chronic reappraisers should theoretically be more likely to engage in reappraisal in response to anger-inducing events. Thus, in this dissertation, there

should be a moderating effect of chronic regulatory style such that chronic reappraisers should have lower levels of anger and higher levels of interpersonal justice perceptions in the control training condition. Accordingly, I offer the following hypothesis (see Figure 2).

Hypothesis Five: Chronic reappraisal moderates the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high chronic reappraisers will have low anger and high justice perceptions in both training conditions.

Second, *perspective taking*, or the tendency to take another's perspective during interpersonal interaction, may also play a role as a moderator. Davis (1980) was among the first to really examine dispositional empathy, and he created the *interpersonal reactivity index* to measure four different dimensions; *perspective taking* (i.e. tendency to see things from another person's point of view), *empathetic concern* (i.e. tendency to experience feelings of sympathy and concern for others), *fantasy* (i.e. tendency to involve oneself in fictional situations and identify with fictional characters), and *personal distress* (i.e. the tendency to experience anxiety and panic in emotional interpersonal situations). Of these four dimensions, the first, *perspective taking*, is a key strategy that helps facilitate reappraisal and the subsequent reduction of anger and injustice perceptions. Mohr, Howells, Gerace, and Day (2007) confirmed this relationship between perspective taking and anger in their recent study which found that participants who were higher in perspective taking reported lower levels of anger following an interpersonal provocation. Interestingly, the authors also found that individuals higher in perspective taking also assigned less importance to the provocation and less blame to the actor/provoker (Mohr, et al, 2007). In a justice context, this finding would suggest that perspective taking is important to the reappraisal process used to reduce anger and perceptions of injustice. Therefore, I argue in this dissertation that individuals higher in perspective taking capacity should be better able to

apply the reappraisal training to reduce both their anger and perceptions of interpersonal injustice, thus having a moderating effect such that it strengthens the relationship between reappraisal training and anger/justice perceptions. Accordingly, I offer the following hypothesis (see Figure 2).

Hypothesis Six: Perspective taking moderates the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high perspective taking will have low anger and high justice perceptions in both training conditions.

In addition to the two abovementioned individual difference moderators, there is also an important situational moderator that may influence the relationship between reappraisal and anger/justice perceptions. In particular, the norms for interpersonal justice and anger expression should theoretically influence the relationship between reappraisal and anger/justice perceptions. Employees are usually socialized in their organization to behave in ways consistent with these norms (Kelly & Barsade, 2001; Rafaeli & Sutton, 1989). This can vary widely depending on the organization and its leaders. The concept of specific norms for how, when, and what emotions should be displayed are defined as d*isplay rules* (Ekman & Friesen, 1974). *Norm strength* (Gibson, et al, 2009) is defined as the degree to which there is agreement on, or a shared understanding of the expected norms as well as the punishment for violating those norms. For instance, the norms held by organizations regarding anger or injustice influences how employees will react to expressions of anger or violations of interpersonal justice, and they also influence whether the employees perceive there will be punishment for violating those norms (Hareli & Rafaeli, 2008). In other words, the stronger the norm, the more obvious it is when someone violates the norm and the less likely it is for someone to choose to violate the norm (Gibson & Callister, 2010). For example, in an organization with strong anger expression norms (e.g. the

employee believes that expressing anger is desirable and acceptable), the connection between reappraisal and reduced anger should be weakened. Moreover, when an employee perceives strong interpersonal justice norms, any violations of interpersonal justice would stand out as a clear violation that carries with it a clear punishment. Accordingly, I offer the following hypotheses.

Hypothesis Seven: Strength of Anger Expression Norms moderates the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high strength of anger expression norms (i.e. the expression of anger is desirable in the organization) will have higher anger and lower justice perceptions in both training conditions.

Hypothesis Eight: Strength of Interpersonal Justice Norms moderates the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high strength of interpersonal justice norms will have higher anger and lower justice perceptions in both training conditions.

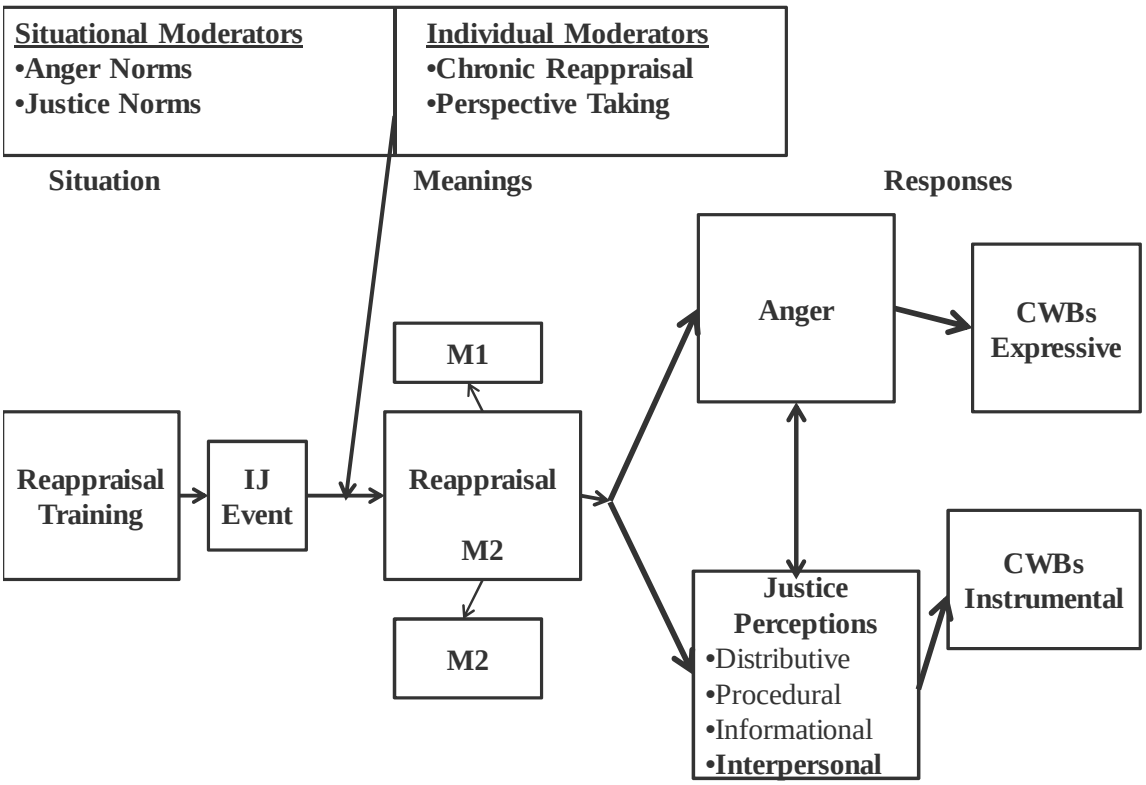

Figure 2. Hypothesized Training Model

METHODS

Overview

Reappraisal training in this dissertation was developed based on methods used in the CBM training approach, from Schartau, et al. (2009), as well as from the emotional intelligence training approach, from Nelis, et al (2009). Prior to both study one and study two, I conducted a pilot study to establish that the proposed reappraisal training would effectively teach reappraisal strategies. The pilot study examined whether there were significant differences between the reappraisal and control conditions (in terms of anger and justice perceptions), and it also examined whether the confederates were perceived as violating sincerity and propriety norms compared to a non-confederate student partner. Following the completion of the pilot study, I moved forward with study one. The purpose of study one was to perform a behavioral test to determine if reappraisal training had the hypothesized effect on anger, justice perceptions, and CWBs. Study one was done in a controlled laboratory setting using trained confederates. After the completion of study one, study two examined the hypothesized relationships in a real world work setting using an interrupted time series with switching replications experimental design in order to address the generalizability limitations of study one. Study two also examined situational moderators (i.e. strength of anger expression/interpersonal justice norms) and used online diaries to reinforce the training. In the pilot study and in study two, there were two training conditions (reappraisal; control). In study one, there was an additional control training condition (reappraisal; control 1; control 2). For each study, I will discuss the purpose of the study, the characteristics of the sample, the procedures and measures used, and conclude with a summary of the analyses and an interpretation of results.

PILOT STUDY

The objectives of this pilot were threefold. First, this pilot was designed to test the reappraisal training in a laboratory setting in order to make sure that the reappraisal strategies described in Schartau, et al (2009) would be effectively trained, or learned by the subjects. Second, this pilot study was also designed to check for significant differences between the training and control conditions regarding participant experienced anger and justice perceptions. And third, this pilot study was also designed to verify that participants perceived the confederate actor in the study to behave in ways that had higher levels of insincerity and impropriety than an average business student. In this laboratory experimental design, there were two conditions, reappraisal and suppression. Participants were randomly assigned to each condition.

Participants

The participants for this pilot were 20 business school undergraduates from a large university in the Pacific Northwest. They were volunteers from a departmental subject pool, and they were recruited to participate in a laboratory study designed to test out various forms of interpersonal training for class credit. The ethnic breakdown of the sample was: White/Caucasian = 50%, Asian = 40%, Black/African = 5%, Other= 5%. English was reported as the first language for 70% of the sample. The gender breakdown for the sample was: Male = 55%, Female = 45 %. The average age was 21.25 years (*SD* = 2.00), and the average GPA was 3.50 (*SD* = .23). Approximately 70% of the sample was currently working, and the average job tenure at their most recent job was 16.70 months (*SD* = 21.67).

Procedure

Training Materials. Before discussing the specific steps that took place in the pilot study, I will first discuss the training materials that were used. As previously mentioned, the study took place in a laboratory environment. Participants were seated at computer cubicles and each given a headset for the duration of the study. The entire study was done via an electronic survey website, Catalyst WebQ. Participants were randomly assigned to their experimental condition before their arrival. There were two conditions in the pilot study; one that trained reappraisal strategies and one that trained suppression strategies. Both conditions were modeled after the CBM training approach used by Schartau, et al. (2009).

The four strategies taught to the participants in the reappraisal condition were; 1) every cloud has a silver lining (*i.e. even if a situation seems bad, not everything about it might be bad*), 2) broader perspective (*i.e. take a step back, zoom out, from the situation and try to see it from another perspective,* 3) time heals (*i.e. things may seem terrible now, but it won't always be this way),* and 4) bad things happen *(i.e. bad things happen in this world that are out of my control)* (Schartau, et al, 2009).

The four strategies that were taught to participants in the suppression condition were; 1) fake positive emotions can hide negative emotions (*i.e. when you're feeling angry, you should smile so people can't see it*), 2) all emotions are controllable (*i.e. emotions don't control us because we control our emotions*), 3) we must always wear a mask (*i.e. it's inappropriate to display emotions at work, and employees should come to work with the face the customer wants to see*), and 4) bad things can happen if you express your emotions (*i.e. expressing negative emotions leads to trouble*).

Just as Schartau, et al (2009) used video scenarios in his reappraisal training, this training used eight interpersonal justice videos, created for the purpose of this dissertation. The eight animated videos were created using avatars from a movie-making website, Xtranormal.com. Each video was approximately 30 seconds long and involved an interaction between an employee and his/her coworker, customer, or supervisor. The interactions involved violations of sincerity and propriety rules (i.e. interpersonal justice rules (Colquitt, et al 2001)) by the coworker, customer, or supervisor. In each video, the study participant was asked to take the perspective of the employee (see Appendix A for descriptions of each video scenario).

Training Steps. As previously mentioned, the study was done via an electronic survey website, and participants were first asked to fill out a series of demographic measures before the start of the training. For both conditions, the training was composed of the following steps: Step 1) baseline emotions were collected; Step 2) participants were asked to recall a challenging interpersonal experience, Step 3) participants were then given examples of each of the four strategies, tested on their knowledge, and allowed to practice by writing about how they used, or could have used, the four strategies in their challenging experience; Step 4) participants watched the first test video scenario and emotions and justice perceptions were collected with participants responding from the perspective of the employee in the video; Step 5) participants watched the next six video scenarios and practiced using the four strategies by writing about they could use the four strategies (from the perspective of the employee) in the scenario video; and Step 6) participants watched second test video scenario where emotions and justice perceptions were collected again.

Participants were then asked to return within 2-3 days to complete the behavioral test of the training. At this second session, participants were told that they would be teamed up into

pairs with another subject (i.e. a confederate pretending to be another study participant). Participants were randomly assigned to either receive a normal undergraduate participant or the confederate as their partner. Before breaking off into the partner task, participants were asked to fill out a series of individual difference measures as well as a baseline emotions measure. Participants were then paired with their partner and were given thirty minutes to create a justice scenario script, similar to the eight videos they watched during their training. Before starting on their script, participants were told that the best ten scenarios would be used by future test participants and that the top performing groups would receive a $100 award based on the quality of their scenario. The confederate was instructed to use flexible scripted responses to violate both sincerity and propriety rules when interacting with the participant (see Appendix C for the actor script). At the end of thirty minutes, participants were asked to submit their justice scenario and return to their computer to report their emotions and justice perceptions. Participants were also asked to give feedback on their partner. Participants were then debriefed at the end of the study as to the true role of the confederate.

Measures

Training Condition was operationalized as a categorical variable such that those randomly assigned to the reappraisal condition were assigned the value of "0", and the participants that were assigned to the suppression condition were assigned the value of "1". See above descriptions of the training materials to review the strategies taught in both conditions.

Anger was measured using a single item from the PANAS-X (Watson & Clark, 1994). This emotion was rated on a five-point scale that ranges from (1=very slight/not at all to

5=extremely). Participants were asked to respond "to what extent do you feel this emotion at this moment."

Organizational justice perceptions were measured using Colquitt's (2001) four dimensions of justice; distributive, procedural, interpersonal, informational. All items used a five point scale ranging from (1=to a small extent, to 5=to a large extent). Distributive justice was a four item scale, procedural justice was a seven item scale, informational justice was a five item scale, and interpersonal justice was a four item scale. Cronbach's alpha for distributive, procedural, informational, and interpersonal justice was calculated to be .79, .71, .86, and .94 respectively. This dissertation focused on the interpersonal dimension of justice.

Demographic Variables included Gender, Age, and Ethnicity. Gender was measured as 1) male or 2) female. Age was measured in years as a self-reported continuous variable. Ethnicity was measured using six categories 1) White/Caucasian, 2) Asian, 3) Hispanic, 4) Black/African American, 5), Native American, and 6) Other.

Results

Analysis & Interpretation. In order to make sure that participants were effectively learning the four strategies of reappraisal, participants took a multiple choice test evaluating their understanding of the four strategies. I then evaluated the data to determine if participants were performing better than chance on this four-question test. In order to test this, I ran a one-sample t-test with the test value set to 1.00 (i.e. chance of randomly picking the right answer of four multiple choice options). The average score for the reappraisal multiple choice test was M = 4.00, SD = 0.00, out of 4.00. I also tested the knowledge of strategies trained in the suppression condition. The average score for the suppression multiple choice test was M = 3.50, SD = 1.27,

out of 4.00. The one-sample t-test for suppression showed $t = 6.23$, $p < .01$. This would suggest that participants performed statistically better than chance on the multiple choice questions testing their knowledge of both reappraisal and suppression strategies. In sum, participants were able to define and distinguish the four strategies from one another. Moreover, participants in the reappraisal condition rated their satisfaction with their training as $M = 2.60$, $SD = 1.07$, and they rated the effectiveness of the training as $M = 2.70$, $SD = 1.06$. Participants in the suppression conditions rated their satisfaction with the training as $M = 2.75$, $SD = 1.04$, and they rated the effectiveness of the training as $M = 3.00$, $SD = 1.12$. Thus, the satisfaction and effectiveness ratings for both training conditions were above average in the pilot study.

In order to test for significant differences between the two training conditions, I ran a series of one-way ANOVAs and calculated effect sizes, η^2. I found that there were differences in participant anger and interpersonal justice levels following the first test video scenario (see Step 4 in Training Steps). A one-way ANOVA revealed the following differences between the two groups for anger; ($F = 1.58$, $p = .22$(*two-tailed*)), ($\eta^2 = .09$), ($M_{reappraisal} = 3.60$, $SD = .84$; $M_{suppression} = 4.11$, $SD = .93$). Additionally, another one-way ANOVA revealed the following differences between the two groups for interpersonal justice; ($F = .29$, $p = .60$ (*two-tailed*)), ($\eta^2 = .02$), ($M_{reappraisal} = 2.20$, $SD = .97$, $M_{suppression} = 1.97$, $SD = .87$). Although these differences were not statistically significant ($p < .05$), the effect sizes (η^2) were promising. Cohen (1988) suggested that for η^2; "0.01" can be considered a small effect, "0.06" a medium effect, and "0.14" a large effect. In sum, the participants' strong performance on the multiple choice questions, combined with the medium effect size for anger and the small effect size for interpersonal justice, between training conditions was encouraging.

In order to test for significant differences between perceptions of impropriety and insincerity between the confederate partner and the non-confederate student partner, I ran a one-way ANOVA to determine if the confederates were perceived as being significantly more insincere and improper. The ANOVA revealed that subjects who partnered with the confederates perceived the confederate to be more improper ($F = 32.4$, $p < .01$ (*two-tailed*)), ($\eta^2 = .6$), ($M_{confederate} = 4.10$, $SD = .74$, $M_{student} = 2.30$, $SD = .67$). They also perceived the confederate to be more insincere ($F = 32.11$, $p < .01$ (*two-tailed*)), ($\eta^2 = .6$), ($M_{confederate} = 4.20$, $SD = .79$, $M_{student} = 2.50$, $SD = .53$). This would suggest that confederates were indeed perceived as violating the interpersonal justice rules of propriety and sincerity when compared to a non-confederate student partner. These findings in the pilot study allowed me to move forward to study one where I could perform a behavioral test of the reappraisal training while in a controlled laboratory setting.

STUDY ONE

Study one was designed to be a behavioral test of the reappraisal training, and specifically, confederates (i.e. trained actors impersonating business school study participants) were used to create a challenging interpersonal justice scenario for participants. As mentioned in the overview, the primary objective of study one was to determine if the reappraisal training tested in the pilot would have the hypothesized effect on anger, justice perceptions, and CWBs. Just as in the pilot study, study one was a laboratory experiment but with three conditions; reappraisal, suppression, and communication. A second control condition was added in order to give participants a condition that was not related to emotional regulation strategies. Participants were, once again, randomly assigned to each condition before their arrival.

Participants

The sample for this study was composed of 105 undergraduate business school students from a large Northwestern University, just as in the pilot studies. However, only 91 participants (36 reappraisal; 30 suppression, and 25 communication) returned to complete both parts of the study. The participants were volunteers from a departmental subject pool, and they were recruited to participate in a laboratory study designed to test out various forms of interpersonal training for class credit. The ethnic breakdown of the sample was: White/Caucasian = 43%, Asian = 42%, Hispanic=2%, Black/African = 4%, Native American=2%, Other= 8%. English was reported as the first language for 68% of the sample. The gender breakdown for the sample was: Male = 48%, Female = 52 %. The average age was 21 years (*SD* = 1.48), and the average

GPA was 3.48 (*SD* = .26). Approximately 50% of the sample was currently working, and the average job tenure at their most recent job was 10 months (*SD* = 13.71).

In the reappraisal condition, the ethnic breakdown of the sample was White/Caucasian = 34.1%, Asian = 48.8%, Black/African = 2.4%, Native American=2.4%, Other= 12.2%. English was reported as the first language for 59% of the sample. The gender breakdown for the sample was: Male = 46%, Female = 54 %. The average age was 21 years (*SD* = 1.88), and the average GPA was 3.51 (*SD* = .23). In the suppression condition, the ethnic breakdown of the sample was White/Caucasian = 41.7%, Asian = 38.9%, Hispanic=5.6%, Black/African = 8.3%, Other= 5.6%. English was reported as the first language for 72% of the sample. The gender breakdown for the sample was: Male = 47%, Female = 53 %. The average age was 21 years (*SD* = 1.24), and the average GPA was 3.45 (*SD* = .30). In the communication condition, the ethnic breakdown of the sample was White/Caucasian = 57.7%, Asian = 34.6%, Native American = 3.8%, Other = 3.8%. English was reported as the first language for 77% of the sample. The gender breakdown for the sample was: Male = 50%, Female = 50 %. The average age was 21 years (*SD* = 1.01), and the average GPA was 3.48 (*SD* = .25).

Procedure

Training Materials. Just as in the pilot study, participants were seated at computer cubicles and each given a headset for the duration of the study. The entire study was done via an electronic survey website, Catalyst WebQ, and all three conditions (reappraisal, suppression, and communication) were modeled after the CBM training approach used by Schartau, et al. (2009).

The four strategies taught to the participants in the reappraisal and suppression conditions were the same as in the pilot study (see Training Materials in the Pilot Study section to review

the strategies). However, as mentioned above, a second control condition that was unrelated to the experience of emotion was added to study one. The communication control condition trained the participants in four strategies for improving communication skills; 1) communication begins before conversation (*i.e. most of what's communicated comes through body language and tone of voice*; *both must match the message being imparted*), 2) name your interaction partner (*i.e. nothing establishes rapport better than acknowledging others by name*), 3) meet when it makes sense to meet (*i.e. meet only when you need to, only with whom you need, and always with a formal agenda*), and 4) tailor your conversation to your audience (*i.e. talks with a boss, co-worker, or customer each require a different style*). The same eight video scenarios that were used in the pilot study were also used in study one (see Training Materials in the Pilot Study section).

Training Steps. In study one, the steps that comprised the pilot study training were performed in the three training conditions just as they were in the pilot study (see Training Steps in the Pilot Study section to review the steps in detail). However, in study one, participants were asked to return within 2-3 days to complete the behavioral test of the training. At this second session, participants were told that they would be teamed up into pairs with another subject (i.e. a confederate pretending to be another study participant). Before breaking off into the partner task, participants were asked to fill out a series of individual difference measures as well as a baseline emotions measure. Participants were then paired with a confederate and were given thirty minutes to create a justice scenario script, similar to the eight videos they watched during their training, with their partner. Before starting on their script, participants were told that the best ten scenarios would be used by future test participants and that the top performing groups would receive a $100 award based on the quality of their scenario. The confederate was

instructed to use flexible scripted responses to violate both sincerity and propriety rules when interacting with the participant (see Appendix C for the actor script). At the end of thirty minutes, participants were asked to submit their justice scenario and return to their computer to report their emotions and justice perceptions. Participants were also asked to report their behaviors during the partner task and then give feedback on their partner. Participants were then debriefed at the end of the study as to the true role of the confederate.

Measures

Training Condition was operationalized as a categorical variable such that those randomly assigned to the reappraisal condition were assigned the value of "0", those assigned to the suppression condition were assigned the value of "1", and those assigned to the communication condition were assigned the value of "2". See above descriptions of the training materials to review the strategies taught in all three conditions. Notably, conditions were dummy-coded for the regression analyses.

Counterproductive work behaviors were operationalized in several different ways. First, participants were asked to rate how much credit they believe their partner should receive for completing the study (ranging from 1= no credit, 3=half credit, 6=full credit) and their rationale for choosing that credit. Second, participants were asked how their partner performed (ranging from 1=very poorly, 3=average, and 6=extremely well). Third, participants were asked if they ranked as one of the top performing teams, out of $100, how they would split the award money between themselves and their partner and why. Participants were also asked to fill out a shorter 20-item version of the 45-item Counterproductive Work Behavior Checklist survey (Spector, et

al, 2006). In study one, Cronbach's alpha for the CWB Checklist measure for the Expressive CWBs was .79, and for Instrumental CWBs it was .81

Anger was measured using a single item from the PANAS-X (Watson & Clark, 1994). This emotion was rated on a five-point scale that ranges from (1=very slight/not at all to 5=extremely). Participants were asked to respond "to what extent do you feel this emotion at this moment."

Organizational justice perceptions were measured using Colquitt's (2001) four dimensions of justice; distributive, procedural, interpersonal, informational. All items use a five-point scale ranging from (1=to a small extent, to 5=to a large extent). Distributive justice was a four-item scale, procedural justice was a seven-item scale, informational justice was a five-item scale, and interpersonal justice was a four-item scale. The scale was adapted to fit the partner scenario. Cronbach's alpha was calculated in study one for distributive, procedural, interpersonal, and information justice to be .89, .83, .91, and .91 respectively.

Chronic Reappraisal was measured using the ten-item Emotional Regulation Questionnaire, or ERQ, by Gross and John (2003). This dissertation focused on the chronic reappraisal subscale, and for the purpose of this dissertation, the scale was shortened to five items. All items used a seven-point scale ranging from "1=strongly disagree", to "7=strongly agree". In study one, Cronbach's alpha for this scale was calculated to be .76.

Perspective Taking was measured using the Interpersonal Reactivity Index (Davis, 1980), a 28-item self-report scale that measures four different components of dispositional empathy. This dissertation focused on the first component; perspective taking. The perspective taking scale measures an individual's ability to take another person's perspective. For the

purpose of this dissertation, the scale was shortened to a 2 item subscale using a 5-point Likert-type scale, ranging from "5=describes me very well" to "1=does not describe me well." In study one, Cronbach's alpha for this measure was calculated to be .75.

Trait Anger was measured using the State-Trait Anger Expression Inventory-2, a 57-item self-report measure designed by Spielberger (1999) to assess state anger, trait anger, and styles of anger expression and control. This dissertation focused on the ten-item trait anger scale which measures an individual's general propensity to experience anger. All items use a 4-point Likert-type rating scale from "1=almost never" to "4=always". In study one, Cronbach's alpha for the scale was calculated to be .85.

Demographic Variables included Gender, Age, and Ethnicity. Gender was measured as 1) male or 2) female. Age was measured in years as a self-reported continuous variable. Ethnicity was measured using six categories 1) White/Caucasian, 2) Asian, 3) Hispanic, 4) Black/African American, 5), Native American, and 6) Other.

Results

Analysis & Interpretation. Means, standard deviations and correlations among the main study one variables are listed in Table 1 and Table 2. Subjects in study one were given the same multiple choice tests to determine if they had learned the meanings of the four strategies taught in each condition. One-sample t-tests were calculated (test value = 1.00) to determine if subjects performed better than chance on their questions. The average score for the reappraisal multiple choice test was M=3.80, SD=.68, out of 4.00. The one-sample t-test for reappraisal showed t = 16.45, $p < .01$. The average score for the suppression multiple choice test was M=3.64, SD=.87, out of 4.00. The one-sample t-test for suppression showed t = 18.26, $p < .01$. The average score

for the communication multiple choice test was *M*=4.00, *SD*=.00, out of 4.00. This suggests that all three groups performed better than chance on their multiple choice tests, and it suggests that subjects were able to identify and distinguish between the four strategies they were taught. Additionally, subjects in the reappraisal condition rated their satisfaction over their training as *M* = 3.23, *SD* = 1.01, and they rated its effectiveness as *M* = 3.25, *SD* = 1.01. The subjects in the suppression condition rated their satisfaction over the training to be *M* = 3.18, *SD* = 1.07, and its effectiveness to be *M* = 3.20, *SD* = .95. And finally, subjects in the communication condition rated their satisfaction to be *M* = 3.09, *SD* = .97, and the effectiveness of their training to be *M* = 3.22, *SD* = .90. In sum, the rated satisfaction and effectiveness of the training for all three conditions was above average.

Table 1. Study One: Means, Standard Deviations, and Intercorrelations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Dummy 1R	**0.39**	**0.49**												
2. Dummy 1C	**0.27**	**0.44**	-.48**											
3. Anger Post Partner	**1.62**	**1.04**	-.05	-.03										
4. Interpersonal Justice Post Partner	**3.17**	**1.14**	-.03	.05	-.50**									
5. Perspective Taking	**3.51**	**0.90**	-.01	.10	.08	.11								
6. Chronic Reappraisal	**2.97**	**0.40**	.05	.02	-.15	.07	-.04							
7. Trait Anger	**1.82**	**0.48**	.15	-.03	.25*	.05	.04	-.05						
8. CWB Instrumental Partner	**1.12**	**0.31**	.09	-.03	.07	-.03	-.03	-.12	.32**					
9. CWB Expressive Partner	**1.05**	**0.31**	.18	-.09	.03	.02	-.03	-.06	.19	.83**				
10. Money shared with Partner	**46.32**	**16.57**	.01	-.09	-.44**	.40**	-.12	.07	.04	.22*	.23*			
11. Partner rated Performance	**3.66**	**1.15**	-.13	.12	-.46**	.64**	.02	-.10	-.09	-.08	-.13	.54**		
12. Partner rated Credit	**4.10**	**1.12**	-.15	.17	-.43**	-.43**	-.02	-.02	-.05	.02	.05	.54**	.69**	
13. Gender	**1.52**	**0.50**	.02	-.03	-.09	-.23*	.10	.16	-.15	-.16	-.15	-.01	-.06	-.06

Dummy 1R is Reappraisal=1, Dummy 1C is Communication=1
Gender is coded 1 = male, 2 = female *p < .05, ** p <.01

Table 2. Study One: Means & Standard Deviations by Condition

	Reappraisal		**Suppression (Control)**		**Communication (Control)**	
	M	*SD*	*M*	*SD*	*M*	*SD*
Anger Pre-Partner	1.18	0.52	1.34	0.67	1.21	0.51
Anger Post-Partner	1.56	0.91	1.73	1.14	1.56	1.12
Interpersonal Justice Perceptions	3.13	1.09	3.14	1.16	3.27	1.21
Trait Anger	1.91	0.55	1.74	0.47	1.80	0.36
Perspective Taking	3.44	0.96	3.55	.84	3.63	0.79
Chronic Reappraisal	3.00	0.33	2.95	0.51	2.99	0.34
CWB Expressive	1.12	0.49	1.01	0.03	1.01	0.03
CWB Instrumental	1.15	0.44	1.09	0.16	1.11	0.19
Partner Performance	3.47	1.11	3.70	1.15	3.88	1.20
Money Allocated to Partner	46.42	18.35	48.17	11.18	43.96	19.44
Partner Credit	3.89	1.14	4.10	1.03	4.40	1.15

In order to test hypothesis one (i.e. H1: Reappraisal is negatively related to experienced anger) and hypothesis two (i.e. H2: Reappraisal is positively related to perceived levels of interpersonal justice), I conducted a series of one-way ANOVAs. In conducting the one-way ANOVAs, I used an *F*-test to determine whether there were significant mean differences in anger (following their interaction with the confederate) between reappraisal and the two control training conditions. The *F*-test revealed that there were no significant mean differences in anger for the three conditions following interaction with the confederate; ($F = .28$, $p = .76$ (*two-tailed*)), ($\eta^2 = .01$), ($M_{reappraisal} = 1.56$, $SD = .91$; $M_{suppression} = 1.73$, $SD = 1.73$; $M_{communication} = 1.56$, $SD = 1.12$). The same analytical method was used to test hypothesis two which argued that reappraisal training would result in higher perceptions of interpersonal justice (following their interaction with the confederate) when compared to the two control conditions. Once again, using one-way ANOVAs, the *F*-test revealed that there were no significant differences between the mean interpersonal justice perceptions for the three conditions; ($F = 1.21$, $p = .90$(*two-tailed*)), ($\eta^2 = .00$), ($M_{reappraisal} = 3.13$, $SD = 1.09$; $M_{suppression} = 3.14$, $SD = 1.16$; $M_{communication} = 3.27$, $SD = 1.21$). Thus, because there were no significant differences between conditions for either anger or interpersonal justice perceptions (and notably, the calculated effect sizes were small or negligible), neither hypothesis one nor hypothesis two was supported by the data in study one.

Hypothesis three and hypothesis four were designed to test whether anger and interpersonal justice perceptions would mediate the relationship between reappraisal and CWBs. I followed the recommendation of Baron and Kenny (1986) to determine whether there were 1) main effects of the independent variable on the mediators and 2) of the independent variable on the dependent variables. Using general linear modeling, I tested for main effects of the

independent variable (training condition) on the mediators (anger and interpersonal justice perceptions) and the dependent variables (CWBs). Using a two-tailed test, I found that the effect of the training condition on anger was not significant ($F = .28$, $p = .75$), nor was the effect of the training on interpersonal justice perceptions ($F = .12$, $p = .89$). Additionally, when I tested for the effect of the training condition on the various CWBs, I found ($F = .39$, $p = .68$) for Instrumental CWBs; ($F = 1.42$, $p = .25$) for Expressive CWBs; ($F = 1.57$, $p = .22$) for partner credit rating; ($F = .96$, $p = .39$) for partner performance rating; and ($F = .44$, $p = .65$) for partner's allocated money award.

In order to test to see if there were any effects of the mediators on the dependent variables, I used bivariate correlations to examine the relationships between anger and interpersonal justice perceptions and the five measures of CWBs. The correlation matrix (see Table 1) does show that there were significant ($p < .01$, *two-tailed*) correlations between experienced anger and three (partner credit rating, partner performance rating, and partner's allocated money award) of the five CWB measures (credit rating, $r = -.43$, $p < .01$; performance rating, $r = -.46$, $p < .01$; partner money, $r = - .44$, $p < .01$). Additionally, the analysis revealed similar significant correlations between perceptions of interpersonal justice and the same three CWBs (partner credit rating, partner performance rating, and partner's allocated money award) (credit rating, $r = .50$, $p < .01$; performance rating, $r = .64$, $p < .01$; partner money, $r = .40$, $p < .01$). Unfortunately, although there were significant effects for the mediators on some of the dependent variables, the lack of main effects of the independent variable on the mediators and on the dependent variables does not support a test of mediation (Baron & Kenny, 1986). Thus, for study one, hypothesis three and hypothesis four were not supported by the data.

In testing the moderating hypotheses five and six, I conducted multiple linear regression analyses to determine whether I would find the predicted moderating effects for the individual difference moderators on both anger and interpersonal justice perceptions (see Table 3 & Table 4). In the first step of my analysis, I entered the training condition and chronic reappraisal (H5)/perspective taking (H6). In the second step of the analysis, I added the interactive terms using the two independent variables of training conditions (dummy coded for analysis) and chronic reappraisal (H5)/perspective taking (H6). Both the perspective taking and chronic reappraisal variables were centered to help with interpretability before creating the interaction terms (Aiken & West, 1991). In testing chronic reappraisal as a moderator, regression revealed nonsignificant (*two-tailed*) results for predicting anger (F = .75, ΔR^2 =.02; β = -.07; β = .11) and for predicting interpersonal justice (F=.29, ΔR^2=.00, β = .02, ; β = .08). In testing perspective taking as a moderator, regression revealed more nonsignificant results for predicting anger (F = .48, ΔR^2 =.01; β = -.17, ; β = -.01) and for predicting interpersonal justice (F = 1.02, ΔR^2= .05; β = .27, ; β =.20). As a result, neither hypothesis five nor hypothesis six was supported by the data in study one (see Table 3 & Table 4).

Table 3. Study One: Testing of Chronic Reappraisal as Moderator

	Anger		**Interpersonal Justice**	
	Step 1	Step 2	Step 1	Step 2
Dummy 1R	-.08	-.08	-.01	-.01
Dummy 1C	-.05	-.05	.09	.09
Chronic Reappraisal	-.05	-.18	.07	.01
Chronic Reappraisal x Training Dummy 1R		-.07		.02
Chronic Reappraisal x Training Dummy 1C		.11		.08
F	.80	.75	.36	.29
R	.17	.21	.11	.13
ΔR^2	.03	.02	.01	.00

N = 91
Chronic Reappraisal was centered before being entered into regression
Dummy 1R is Reappraisal= 1, Dummy 1C is Communication= 1
† $p < .10$, *$p < .05$, **$p < .01$ (two-tailed)

Table 4. Study One: Testing of Perspective Taking as Moderator

	Anger		**Interpersonal Justice**	
	Step 1	Step 2	Step 1	Step 2
Dummy 1R	-.09	-.10	-.00	.02
Dummy 1C	-.07	-.08	.08	.10
Perspective Taking	.09	.20	-.07	-.32†
Perspective Taking x Training Dummy 1R		-.17		.27†
Perspective Taking x Training Dummy 1C		-.01		.20†
F	.39	.48	.32	1.02
R	.12	.17	.11	.24
ΔR^2	.01	.01	.01	.05

N = 91
Perspective Taking was centered before being entered into regression
Dummy 1R is Reappraisal= 1, Dummy 1C is Communication= 1
† $p < .10$, *$p < .05$, ** $p < .01$ (two-tailed)

In sum, in study one, hypotheses one through six were not supported by the data. While these findings may be discouraging, study two was designed to address many of the limitations of study one by testing the reappraisal training in a sample of working professionals (in a highly stressful environment) using an interrupted time series with switching replications experimental design, which allowed for the examination of the effects of the reappraisal training across time. In an interrupted time series with switching replications design, the dependent variable is measured at multiple points in time, and the different training groups act as control groups for one another (Cook & Campbell, 1979). Moreover, study two was also designed to take into consideration situational moderators that might have an impact. And finally, study two took steps to reinforce the reappraisal training by having participants complete two weeks of daily diaries. Thus, following the positive results of the pilot study and the disappointing results of study one, I moved forward to testing the proposed hypotheses in study two.

STUDY TWO

The purpose of study two was to examine the training in a workplace environment where employees were under emotional stress (see below for a detailed description of the sample and why it is particularly appropriate) and to examine situational moderators that may play a role in the effectiveness of the training. Accordingly, the design of the training was adapted to fit into a workplace environment. One particular way study two is different from the pilot and study one is that the training was done on-site at the organization and in-person by a trained experimenter. Participants were taught the same four reappraisal strategies as before, but they were asked to keep two weeks of daily diaries as an extension/reinforcement of the reappraisal training, similar to Nelis, et al (2009).

As previously mentioned, another important way study two differs from the pilot and study one is that it used an interrupted time series with switching replications experimental design (Cook & Campbell, 1979). Cook and Campbell (1979) pointed out that this design is particularly powerful because it controls for most threats to internal validity and because it enhances external validity by demonstrating an effect in two different groups, at two different moments in time. In study two, half of the participants were randomly assigned to receive one of the two training conditions first (reappraisal or personality/control). Then, after two weeks, participants switched to the other training condition (personality or reappraisal). Additionally, in an interrupted time series with switching replications design, the mediators and dependent variables are measured at multiple points throughout the course of the study to allow for tracking of the variables of interest over time. Figure 3 illustrates when variables were collected in study two. Specifically, data was collected at three points in time 1) before the first training, 2) before

the second training, and 3) two weeks after the second training. Training took place 1) right after the first data collection and 2) right after the second data collection.

With an interrupted time series with switching replications experimental design, if the reappraisal training has an immediate effect, it is expected to show up at Time 2 in the reappraisal training group but not the control group (i.e. personality training). At Time 3, after both groups have received the training, there should be no difference between groups. If the effect of reappraisal training builds over time, then the group that received training first should show stronger effects at all times than then group that received training second (Cook & Campbell, 1979) (see Figure 3).

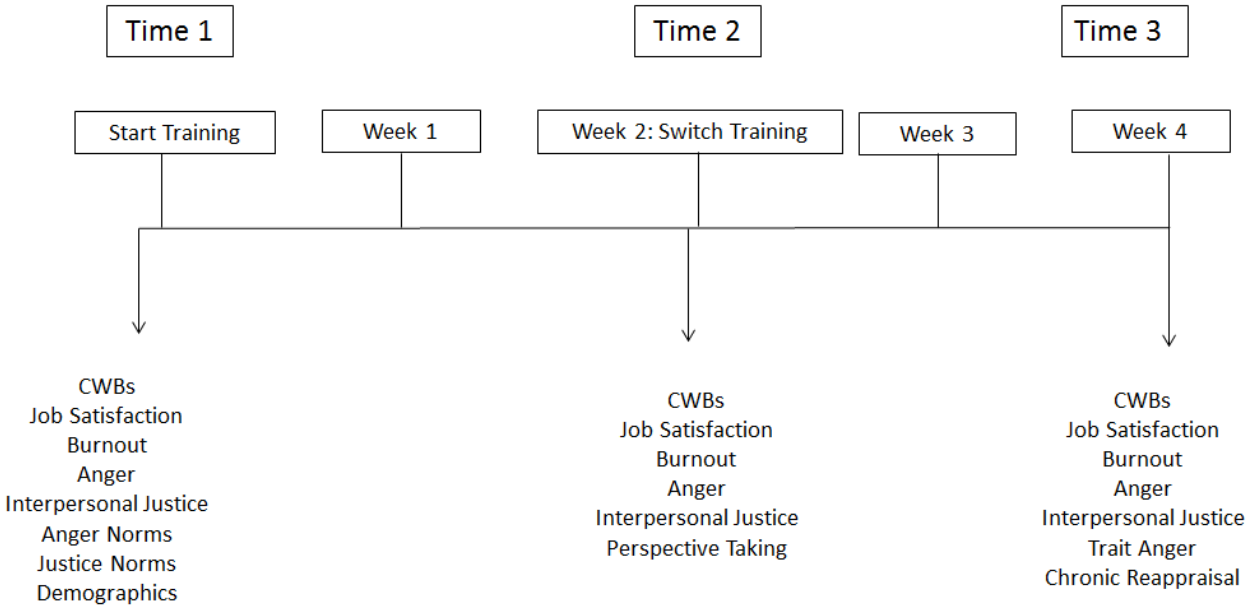

Figure 3. Study Two: Data Collection Timing

Participants

The sample for this study was composed of 107 full time animal rescue employees recruited from two large humane societies in the in Pacific Northwest. However, only 73 (44 reappraisal training first; 29 personality training first) employees completed all three rounds of data collection. Moreover, only 41 employees completed half or more of the diaries, and only 35 completed the full two weeks. According to the U.S. Bureau of Labor Statistics (2010-11), animal rescue employees regularly deal with animal cruelty cases, ill and injured animals, emotionally distraught members of the public, and challenging budgets and workloads. The result is an environment with a great deal of emotional strain, physical risk, and increased pressure to control negative emotions (Bureau of Labor Statistics, 2010-11). Thus, this sample of animal rescue employees was particularly relevant for the testing of emotional regulation training due to the stressful nature of the work. In order to account for the fact that I worked with two different organizations, I controlled for organization in all of my analyses.

The participants for study two were recruited to participate in a field experiment designed to examine training methods in dealing with difficult interpersonal situations in the workplace. The ethnic breakdown of the sample was: White/Caucasian = 82%, Asian = 1%, Hispanic = 3%, Black/African = 8%, Native American = 1%, Other = 6%. The gender breakdown for the sample was: Male = 27%, Female = 73 %. The average age was 36 years (*SD* = 10.95), and the average tenure was 5.86 years (*SD* = 6.19). The highest reported education level of the sample was 7% other, 19% high school, 25% associates, 34% bachelors, 9% masters, and 6% doctoral level.

For the reappraisal first training condition, the ethnic breakdown of the sample was: White/Caucasian = 81.6%, Asian = 2%, Hispanic = 4.1%, Black/African = 6.1%, Native American = 2.0%, Other = 4.1%. The gender breakdown for the sample was: Male = 22%, Female = 78 %. The average age was 35 years (*SD* = 9.74), and the average tenure was 4.62 years (*SD* = 4.04). The highest reported education level of the sample was 8.2% other, 20.4% high school, 20.4% associates, 34.7% bachelors, 14.3% masters, and 2% doctoral level. For the personality first training condition, the ethnic breakdown of the sample was: White/Caucasian = 85%, Black/African = 7.5%, Other = 7.5%. The gender breakdown for the sample was: Male = 32%, Female = 68 %. The average age was 36 years (*SD* = 12.36), and the average tenure was 6.36 years (*SD* = 7.55). The highest reported education level of the sample was 5% other, 22.5% high school, 22.5% associates, 32.5% bachelors, 5% masters, and 12.5% doctoral level.

Procedure

Training Materials. Just as in the pilot study and study one, data was collected for study two via an electronic survey website, Catalyst WebQ. As mentioned in the introduction to study two, this study used an interrupted time series with switching replications experimental design (Cook & Campbell, 1979). Accordingly, the mediators and the dependent variables in study two were collected, via electronic survey, at three points in time. Participants were randomly assigned to either receive the reappraisal or the personality training first, and then after two weeks, participants switched conditions to receive the other training. Once again, Figure 3 illustrates when variables were collected in study two. Specifically, data was collected at three points in time 1) before the first training, 2) before the second training, and 3) two weeks after the second training. Training took place 1) right after the first data collection and 2) right after the second data collection.

The four strategies taught to the participants in the reappraisal condition were the same as in the pilot study (see Training Materials in the Pilot Study section to read the complete description). However, subjects were taught these four strategies by a trained experimenter in-person at the shelter facility. This was done so that animal rescue employees would be allowed to practice the four reappraisal strategies in a group setting and using commonly experienced interpersonal events from animal rescue (see Appendix D for a list of events used during training). Drawing from work in the emotional intelligence literature (Nelis et al, 2009), participants in study two were also asked to keep daily online diaries for two weeks following the reappraisal training session. In the daily diaries, subjects were asked to evaluate a challenging interpersonal event and talk about how they used, or could have used, the four reappraisal strategies to help reduce their negative emotions. The purpose of the diaries was to give subjects a place to practice the strategies and reinforce the training (see Appendix F for a copy of the diary instructions).

The control training condition in study two consisted of a session devoted to personality assessment and development. The purpose of this training was to provide organizations with a useful training session (i.e. unlike suppression which could have a negative impact on employees) that would not strongly influence the dissertation's variables of interest. Thus, in the control training, subjects completed a 60-item version of the NEO-PIR (Costa Jr. & McCrae, 1992) personality test. The meaning of the different dimensions within each measure was explained in detail, and subjects were able to ask questions about their scores on each dimension (see Appendix E for personality measure). No daily diaries were completed during the two weeks following the personality training.

Training Steps. As an incentive to participate in the study, subjects were told that twenty, $25 Amazon gift cards would be raffled off at the completion of the study (i.e. ten at each organization). At the start of the study, participants were asked to fill out an electronic introductory survey before coming to the first training session (Time 1). Following the introductory survey, participants were randomly assigned to first receive either the control (personality) training or the reappraisal training, both of which took place at the shelter facility. Participants met for an hour with the trained experimenter in groups of ten to receive training. An introduction to the study was provided, and detailed descriptions of each of the four strategies followed. Participants were then able to practice, as a group, applying the strategies to commonly experienced interpersonal events in animals rescue (see Appendix D for list of events used in the training by the experimenter). Following the reappraisal training, participants were asked to keep an online (two-week) diary of their daily challenging interpersonal experiences, and they were instructed to reflect on how they did use, or could have used, the strategies they learned in the training. After the two weeks of diary entries, measures collected at the start of the study were collected again (Time 2). Participants then switched training conditions and received the other training. Participants receiving the personality training followed the same protocol for meeting with the trained experimenter, but instead of engaging in the training described above, participants completed personality assessments and were then debriefed on the meaning of the different personality dimensions. Once again, no diaries were completed following the personality training. And finally, four weeks from the start of the study, a final survey with the study measures was collected (Time 3) (see Figure 3).

Measures

Training Condition was operationalized as a categorical variable such that those randomly assigned to the reappraisal condition were assigned the value of "0", and the participants that were assigned to the personality condition were assigned the value of "1". See above descriptions of the training materials to review the strategies taught in both conditions.

CWBs were measured by asking employees to fill out a shortened version of the 45-item Counterproductive Work Behavior Checklist survey (Spector, et al, 2006) designed to measure both instrumental (e.g. theft, production deviance, withdrawal) and expressive (e.g. abuse) CWBs. In study two, Cronbach's alpha for the CWB Checklist measure for the Expressive CWBs (two items) was .70, and for Instrumental CWBs (three items) it was .79.

Anger was measured using a single discrete emotion item from the PANAS-X (Watson & Clark, 1994). This emotion was rated on a five-point scale that ranged from "1=very slight/not at all" to "5=extremely". Participants were asked to respond "to what extent do you feel this emotion at this moment."

Organizational justice perceptions were measured using Colquitt's (2001) four dimensions of justice; distributive, procedural, interpersonal, informational. All items used a five point scale ranging from "1=to a small extent" to "5=to a large extent". The scale for distributive justice was shortened to two items, procedural to four items, interpersonal to two items, and informational to three items. Cronbach's alpha in study two for distributive, procedural, interpersonal, and information justice was calculated to be .91, .90, .80, and .92 respectively.

Chronic Reappraisal was measured using the ten-item Emotional Regulation Questionnaire, or ERQ, by Gross and John (2003). All five reappraisal items use a seven point scale ranging from “1=strongly disagree” to “7=strongly agree”. Cronbach’s alpha was calculated to be .95.

Perspective Taking was measured using the Interpersonal Reactivity Index (Davis, 1980), a 28-item self-report scale that measures four different components of dispositional empathy. This dissertation focused on the first component; perspective taking. The Perspective Taking scale measures an individual’s ability to take another person’s perspective. The shortened five-item subscale uses a 5-point Likert-type scale that ranges from “1=describes me very well” to “7=does not describe me well.” Cronbach’s alpha for this study was calculated to be .83.

Strength of Interpersonal Justice Norms was measured by adapting Colquitt’s (2001) measure of interpersonal justice. Participants were asked to respond generally about treatment given by supervisors and peers in their organization. All four items used a five point scale ranging from “1=to a small extent” to “5=to a large extent”. Cronbach’s alpha for this interpersonal justice norms measure was calculated to be .71.

Strength of Anger Expression Norms was measured and adapted from Eid and Diener’s (2001) measurement of norms for emotions in different cultures. The instructions read, "In the following question we would like you to indicate how appropriate or desirable it is to experience the following emotion in your workplace. Please use the following scale to give your answer (Eid & Diener, 2001; 873)." This single item scale used a five-point scale ranging from “5=extremely desirable and appropriate” to “1=extremely undesirable and inappropriate”.

Trait Anger was measured using the State-Trait Anger Expression Inventory-2, a 57-item self-report measure designed by Spielberger (1999) to assess state anger, trait anger, and styles of anger expression and control. This dissertation focused on the ten-item Trait Anger subscale which measures an individual's general propensity to experience anger. All items use a 4-point Likert-type rating scale from "1=almost never" to "5=always". Cronbach's alpha for the scale was calculated to be .75.

Demographic Variables included Gender, Age, and Ethnicity. Gender was measured as 1) male or 2) female. Age was measured in years as a self-reported continuous variable. Ethnicity was measured using six categories 1) White/Caucasian, 2) Asian, 3) Hispanic, 4) Black/African American, 5), Native American, and 6) Other.

Results

Means, standard deviations, and correlations among the main study two variables for Time 1, 2, and 3 are listed in Tables 5 through 12. Similar to study one and the pilot, participants took a multiple choice test during their training session to evaluate their understanding of the four reappraisal strategies. The data was analyzed to determine if participants were performing better than chance on this four-question test. In order to test this, I ran a one-sample t-test with the test value set to 1.00 (i.e. chance of randomly picking the right answer of four multiple choice options). The average score for the reappraisal multiple choice test was $M = 3.48$, $SD = 0.75$, out of 4.00. The one-sample t-test for reappraisal training showed $t = 24.45$, $p < .01$. Thus, participants performed better than chance on their multiple choice test, and it would appear that they could distinguish and identify the four strategies.

In addition to testing the knowledge of the four strategies, participants in the reappraisal first condition rated their satisfaction over the reappraisal training as *M* = 2.98, *SD* = .89, and they rated its effectiveness as *M* = 2.82, *SD* = .82. At time two, they ranked their satisfaction of the personality training to be *M* = 3.20, *SD* = .88, and the effectiveness of the training to be *M* = 2.98, *SD* = .94. The subjects in the personality first condition rated their satisfaction over the personality training to be *M* = 3.34, *SD* = 1.17, and its effectiveness to be *M* = 3.10, *SD* = 1.44. At time two, they ranked their satisfaction of the reappraisal training to be *M* = 3.18, *SD* = 1.34, and the effectiveness of the training to be *M* = 2.93, *SD* = .99.

In order to test hypothesis one (i.e. H1: reappraisal is negatively related to experienced anger) and hypothesis two (i.e. H2: reappraisal is positively related to perceived levels of interpersonal justice), I conducted a series of ANCOVAs (controlling for organization) to determine whether there were significant mean differences between the two groups at Time 1, Time 2, and Time 3, and I also conducted repeated measures ANOVAs to see if there were within-group differences. According to my hypotheses, there should be no difference between the groups at Time 1, but the reappraisal first training group should have an effect at Time 2. If the effects of the reappraisal training build over time, then the reappraisal training group should show stronger effects at Time 3 as well. If the effects of the reappraisal training wane over time, then the most recent group (i.e. personality training first) to receive reappraisal training will have an effect at Time 3.

Table 5. Study Two: Means & Standard Deviations

		M	*SD*
	1. First Training Condition	0.44	0.50
	2. Chronic Reappraisal	2.69	0.78
	3. Perspective Taking	3.75	0.83
	4. Anger Norms	1.80	0.95
	5. Interpersonal Justice Norms	3.65	0.71
	6. Trait Anger	1.69	0.40
	7. Organization	0.79	0.41
Time 1	8. Anger	2.09	1.15
	9. Interpersonal Justice (Supervisor Directed)	4.10	1.07
	10. Interpersonal Justice (Peer Directed)	3.95	0.90
	11. Instrumental CWBs	1.33	0.45
	12. Expressive CWBs	1.32	0.50
Time 2	13. Anger	2.00	1.14
	14. Interpersonal Justice (Supervisor Directed)	4.18	0.92
	15. Interpersonal Justice (Peer Directed)	3.87	0.89
	16. Instrumental CWBs	1.15	0.37
	17. Expressive CWBs	1.22	0.44
Time 3	18. Anger	2.10	1.18
	19. Interpersonal Justice (Supervisor Directed)	4.14	0.89
	20. Interpersonal Justice (Peer Directed)	3.76	0.99
	21. Instrumental CWBs	1.25	0.39
	22. Expressive CWBs	1.29	0.51

Table 6. Study Two: Means & Standard Deviations by Condition

		Reappraisal First		Personality First	
		M	*SD*	*M*	*SD*
	1. Chronic Reappraisal	2.65	0.77	2.74	0.82
	2. Perspective Taking	3.71	0.80	3.78	0.87
	3. Anger Norms	1.94	0.99	1.75	0.98
	4. Interpersonal Justice Norms	3.57	0.65	3.73	0.75
	5. Trait Anger	1.72	0.37	1.64	0.44
Time 1	6. Anger	2.08	1.15	2.22	1.19
	7. Interpersonal Justice (Supervisor Directed)	4.13	0.97	4.11	1.19
	8. Interpersonal Justice (Peer Directed)	3.92	0.88	3.90	0.92
	9. Instrumental CWBs	1.42	0.50	1.25	0.42
	10. Expressive CWBs	1.35	0.51	1.24	0.42
Time 2	11. Anger	2.00	1.10	2.03	1.22
	12. Interpersonal Justice (Supervisor Directed)	4.18	0.94	4.16	0.91
	13. Interpersonal Justice (Peer Directed)	3.95	0.84	3.73	0.93
	14. Instrumental CWBs	1.18	0.30	1.12	0.45
	15. Expressive CWBs	1.24	0.51	1.21	0.32
Time 3	16. Anger	2.16	1.22	2.00	1.13
	17. Interpersonal Justice (Supervisor Directed)	4.07	0.94	4.24	0.82
	18. Interpersonal Justice (Peer Directed)	3.69	0.96	3.86	1.05
	19. Instrumental CWBs	1.27	0.32	1.23	0.48
	20. Expressive CWBs	1.34	0.54	1.21	0.47

Table 7. Study Two: Intercorrelations at Time 1

	1	2	3	4	5	6	7	8	9	10
1. First Training Condition										
2. Anger	.06									
3. Interpersonal Justice Peers	-.01	-.39**								
4. Interpersonal Justice Supervisor	-.01	-.36**	.34**							
5. Perspective Taking	.04	-.40**	.23*	.31**						
6. Chronic Reappraisal	.06	-.33**	.17	.07	.27*					
7. Anger Expression Norms	-.10	.04	-.11	.24*	-.09	.00				
8. Interpersonal Justice Norms	.12	-.50**	.64**	.48**	.30**	.37**	-.04			
9. CWB Instrumental	-.18	.01	-.16	-.01	.11	-.04	-.11	-.21*		
10. CWB Expressive	-.12	.41**	-.36**	-.51**	-.18	-.13	-.03	-.49**	.25**	
11. Organization	-.14	.02	-.04	.09	.02	.04	-.08	-.01	.00	-.14

First Training Condition is coded 0= Reappraisal, 1= Personality
* $p < .05$, ** $p < .01$ (two-tailed)

Table 8. Study Two: Intercorrelations at Time 2

	1	2	3	4	5	6	7	8	9	10
1. First Training Condition										
2. Anger	.01									
3. Interpersonal Justice Peers	-.12	-.34**								
4. Interpersonal Justice Supervisor	-.02	-.26*	.36**							
5. Perspective Taking	.04	-.17	.19	.36**						
6. Chronic Reappraisal	.06	-.29*	.36**	.30*	.27*					
7. Anger Expression Norms	-.10	.03	.03	.25*	-.09	.00				
8. Interpersonal Justice Norms	.12	-.35**	.44**	.39**	.30**	.37**	-.04			
9. CWB Instrumental	-.08	.23*	-.07	.03	.05	-.03	-.01	-.06		
10. CWB Expressive	-.04	.30**	-.26*	-.20	-.14	-.12	.04	-.27*	.16	
11. Organization	-.14	.00	-.13	.09	.02	.04	-.08	-.01	.13	.02

First Training Condition is coded 0= Reappraisal, 1= Personality
* $p < .05$, ** $p < .01$ (two-tailed)

Table 9. Study Two: Intercorrelations at Time 3

	1	2	3	4	5	6	7	8	9	10
1. First Training Condition										
2. Anger	-.07									
3. Interpersonal Justice Peers	.08	-.25*								
4. Interpersonal Justice Supervisor	.10	-.19	.49**							
5. Perspective Taking	.04	-.32**	.33**	.50**						
6. Chronic Reappraisal	.06	-.27*	.35**	.38**	.27*					
7. Anger Expression Norms	-.10	.20	.09	.24*	-.09	.00				
8. Interpersonal Justice Norms	.12	-.46**	.52**	.36**	.30**	.37**	-.04			
9. CWB Instrumental	-.04	-.16	-.00	-.05	.07	-.22	-.05	-.17		
10. CWB Expressive	-.13	.41**	-.25*	-.10	-.23	-.24*	.14	-.37**	.16	
11. Organization	-.14	-.08	-.15	-.22	.02	.04	-.08	-.01	-.02	.05

First Training Condition is coded 0= Reappraisal, 1= Personality
* $p < .05$, ** $p < .01$ (two-tailed)

Table 10. Correlations between variables at Time 1 & Time 2

Time 2 → / Time 1 ↓	Anger	IPJ Peers	IPJ Supervisor	CWB Instrumental	CWB Expressive
Anger	.60**	-.28*	-.33**	-.04	.16
Interpersonal Justice Peers	-.27*	.64**	.28*	-.05	-.26*
Interpersonal Justice Supervisor	-.23*	.20	.62**	.06	-.19
CWB Instrumental	.07	.01	-.04	.54**	.15
CWB Expressive	.21	-.09	-.27*	-.06	.42**

* $p < .05$, ** $p < .01$ (two-tailed)

Table 11. Correlations between variables at Time 1 & Time 3

Time 3 → / Time 1 ↓	Anger	IPJ Peers	IPJ Supervisor	CWB Instrumental	CWB Expressive
Anger	.60**	-.41**	-.43**	-.01	.28*
Interpersonal Justice Peers	-.29*	.65**	.34**	-.05	-.31**
Interpersonal Justice Supervisor	-.16	.33**	.53**	-.02	-.06
CWB Instrumental	-.04	-.14	-.09	.49**	.09
CWB Expressive	.31*	-.27*	-.15	.07	.44**

* $p < .05$, ** $p < .01$ (two-tailed)

Table 12. Correlations between variables at Time 2 & Time 3

Time 3 → / Time 2 ↓	Anger	IPJ Peers	IPJ Supervisor	CWB Instrumental	CWB Expressive
Anger	.60**	-.25*	-.22	.16	.38**
Interpersonal Justice Peers	-.28*	.72**	.25*	-.03	-.37**
Interpersonal Justice Supervisor	-.18	.36**	.67**	-.03	-.22
CWB Instrumental	-.01	-.01	-.05	.61**	.15
CWB Expressive	.36**	-.16	-.11	.11	.83**

* $p < .05$, ** $p < .01$ (two-tailed)

In testing hypothesis one, ANCOVAs (*two-tailed*) revealed no significant differences between the two groups for experienced anger at Time 1; (F = .39, p = .54; $M_{reappraisal}$ = 2.08, SD = 1.15; $M_{personality}$ = 2.22, SD = 1.20; η^2= .00), at Time 2; (F = .01, p = .92; $M_{reappraisal}$ =2.00, SD = 1.10; $M_{personality}$ =2.03, SD = 1.22; η^2= .00), or at Time 3; (F = .41, p = .52; $M_{reappraisal}$ =2.16, SD = 1.22; $M_{personality}$ =2.00, SD = 1.13; η^2= .01). After testing for between-group differences, I then tested for within group changes in experienced anger using repeated measures ANOVA (*two-tailed*). For the reappraisal first group, there were no significant within-group changes (F = .96, p = .40), and for the personality first group, there were also no significant within-group changes (F = .74, p = .74). Thus, hypothesis one was not supported by the data in study two.

Similarly, in testing hypothesis two, the ANCOVAs (*two-tailed*) revealed no significant differences between the two groups for interpersonal justice perceptions (*supervisor-directed*) at Time 1; (F = .00, p = 1.00; $M_{reappraisal}$ =4.13, SD=.97, $M_{personality}$ =4.11, SD = 1.20; η^2=.00), at Time 2; (F = .00, p = 1.00; $M_{reappraisal}$ = 4.18, SD = .94, $M_{personality}$ = 4.16, SD =.91; η^2=.00), or at Time 3; (F = .27, p = .62; $M_{reappraisal}$ =4.07, SD = .94, $M_{personality}$ =4.24, SD = .82; η^2=.00). I then tested for within-group changes in supervisor directed interpersonal justice perceptions using repeated measures ANOVA (*two-tailed*). For the reappraisal first group, there were no significant within-group changes (F = 1.28, p = .28). Similarly, for the personality first group, there were no significant within-group changes (F = .11, p = .90).

A final round of ANCOVAs (*two-tailed*) revealed no significant differences between the two groups for interpersonal justice perceptions (*peer-directed)* at Time 1; (F = .00, p = 1.00; $M_{reappraisal}$ =3.92, SD = .88; $M_{personality}$ =3.90, SD = .79; η^2= .00), for Time 2; (F = 1.76, p = .20; $M_{reappraisal}$ =3.95, SD = .84, $M_{personality}$ =3.73, SD = .93; η^2= .02 **small effect*), or for Time 3; (F =

.31, p = .60; $M_{reappraisal}$ =3.70, SD = .96; $M_{personality}$ =3.86, SD = 1.05; η^2= .00). I then tested for within-group changes in peer directed interpersonal justice perceptions using repeated measures ANOVA (*two-tailed*). For the reappraisal first group, there were significant within-group changes for peer-directed interpersonal justice perceptions (F = 3.25, p = .04). The results show the reduction of interpersonal justice perceptions at Time 3. This supports idea of the effects of reappraisal training waning over time for the reappraisal first group. However, for the personality first group, there were no significant within-group changes (F = 1.83, p = .18). Accordingly, hypothesis two was not supported by the data in study two.

Before I could test for whether anger (H3) and interpersonal justice perceptions (H4) were mediators of the relationship between reappraisal and retaliation, I followed the recommendation of Baron and Kenny (1986) to check if there were main effects 1) of the independent variable on the mediators, 2) of the mediators on the dependent variables, and 3) of the independent variable on the dependent variables. Using general linear modeling, I tested for main effects of the independent variable (training condition) on the mediators (anger and interpersonal justice perceptions) and the dependent variables (CWBs) at Time 2 and Time 3. Using a two-tailed test, I found that the effect of the training condition on anger was not significant at Time 2 (F = .01, p = .92) or at Time 3 (F = .31, p = .58). Moreover, the effect of the training on supervisor-directed interpersonal justice perceptions was not significant at Time 2 (F = .02, p = .92) or at Time 3 (F = .64, p = .42). Similarly, the effect of the training on peer-directed interpersonal justice perceptions was not significant at Time 2 (F = 1.21, p = .18) or at Time 3 (F = .50, p = .48). And finally, the effects of the training on CWBs (Instrumental/Expressive) were not significant at Time 2 (*Instrumental*, F = .53, p = .46;

Expressive, $F = .10$, $p = .76$) or at Time 3 (*Instrumental*, $F = .12$, $p = .74$; *Expressive*, $F = 1.20$, $p = .28$).

In order to test to see if there were any effects of the mediators on the dependent variables, I used bivariate correlations to examine the relationships between anger/interpersonal justice perceptions and CWBs at Time 2 and Time 3. The correlation tables (see Table 6 & Table 7) for Time 2 and Time 3 do show that, for Time 2 there were significant relationships between experienced anger at Time 2 and Instrumental ($r = .23$, $p < .05$) and Expressive ($r = .30$, $p < .01$) CWBs. At Time 3, the relationships between experienced anger and Instrumental ($r = -.16$) and Expressive ($r = .41$, $p < .01$) CWBs were only significant for Expressive CWBs. The relationships between supervisor-directed interpersonal justice and Instrumental/Expressive CWBs were not significant for Time 2 (*Instrumental*, $r = .03$; *Expressive*, $r = -.20$) or Time 3 (*Instrumental*, $r = -.05$; *Expressive*, $r = -.10$). The relationships between peer-directed interpersonal justice perceptions were significant for Expressive CWBs, but not for Instrumental CWBs, at Time 2 (*Instrumental*, $r = -.07$; *Expressive*, $r = -.26$, $p < .05$) and Time 3 (*Instrumental*, $r = -.00$, *Expressive*, $r = -.25$, $p < .05$). Therefore, just as in study one, while there were significant effects for the mediators on some of the dependent variables, the lack of main effects of the independent variable on either the mediators or the dependent variables does not support a test of mediation (Baron & Kenny, 1986). Thus, for study two, hypothesis three and hypothesis four were not supported by the data.

In testing the moderating hypotheses five through eight, I conducted multiple linear regression analyses to determine whether I would find the predicted moderating effects for the individual difference and situational moderators on both anger and interpersonal justice perceptions. In the first step of my analysis, I entered the training condition and chronic

reappraisal (H5)/perspective taking (H6)/anger expression norms (H7)/interpersonal justice norms (H8). In the second step of the analysis, I added the interactive terms. Just as in study one, the moderator variables were centered to help with interpretability before creating the interaction terms (Aiken & West, 1991).

Regarding hypothesis five, I tested the moderating effect of chronic reappraisal at Time 2 and Time 3 for both anger and supervisor/peer-directed interpersonal justice perceptions (see Table 13). At Time 2, chronic reappraisal was not a significant moderator for anger (F = 1.40, ΔR^2 = .00, β = .00) (*two-tailed*), nor was it at Time 3 (F = 1.95, ΔR^2 = .00, β = -.00) (*two-tailed*). For supervisor-directed interpersonal justice perceptions, the F-test was significant at Time 2(F = 2.26†, $p < .10$) and at Time 3(F = 4.39**, $p < .01$), but the change in R^2 and the interaction terms were not significant at Time 2 (β = .07, ΔR^2 = .00) or at Time 3 (β = .15, ΔR^2 = .01) (*two-tailed*). In contrast, peer directed interpersonal justice perceptions(see Figure 4 & Figure 5) were moderated by chronic reappraisal at Time 2 (F = 5.69**, ΔR^2 = .05†, β = .31†), as well as at Time 3 (F = 6.32**, ΔR^2 = .08*, β = .39*) (*two-tailed*). Follow-up analyses revealed that, at Time 2, the training influenced peer directed interpersonal justice perceptions more so when chronic reappraisal was high (high chronic reappraisal: F = 4.38.50, p = .06 † (*two-tailed*); low chronic reappraisal: F = 1.26, p = .26 (*two-tailed*). At Time 3, follow-up analyses again showed that the training positively influenced peer directed interpersonal justice perceptions when chronic reappraisal was high (high chronic reappraisal: F = 4.25, p = .06† (*two-tailed)*; low chronic reappraisal: F = .55, p = .56 (*two-tailed*). Hypothesis five suggested that chronic reappraisal would moderate the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high chronic reappraisers would have lower anger and higher justice perceptions in both training conditions. Specifically, hypothesis five

argued that those high in chronic reappraisal would have lower anger and higher justice perceptions in the control group. As you can see, the peer-directed interpersonal justice perceptions were higher for the reappraisal group at Time 2 and Time 3. However, with the moderating effect of chronic reappraisal, justice perceptions only remained high for those high in chronic reappraisal, as those with low chronic reappraisal dropped over time (see Figure 4 and 5). Accordingly, hypothesis five was only partially supported.

Table 13. Study Two: Testing of Chronic Reappraisal as Moderator

Time 2	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	.01	.01	-.06	-.07	.04	.04
Chronic Reappraisal	-.27*	-.28	.44**	.24	.33*	.28
Chronic Reappraisal x Training		.00		.31†		.07
F	2.14	1.40	6.49**	5.69**	3.36*	2.26†
R	.27	.27	.44	.50†	.34*	.34
ΔR^2	.08	.00	.20*	.05†	.11*	.00
Time 3	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	-.06	-.062	-.02	-.03	.06	.06
Chronic Reappraisal	-.27*	-.27†	.40**	.14	.38**	.28†
Chronic Reappraisal x Training		-.00		.39*		.15
F	2.97†	1.95	5.73**	6.32**	6.06**	4.39**
R	.28†	.28	.40**	.49*	.39**	.41
ΔR^2	.08†	.00	.16**	.08*	.15**	.01

N = 71
Chronic Reappraisal was centered before being entered into regression
For Training (Reappraisal First= 0, Personality First= 1)
† $p < .10$, *$p < .05$, **$p < .01$ (two-tailed)

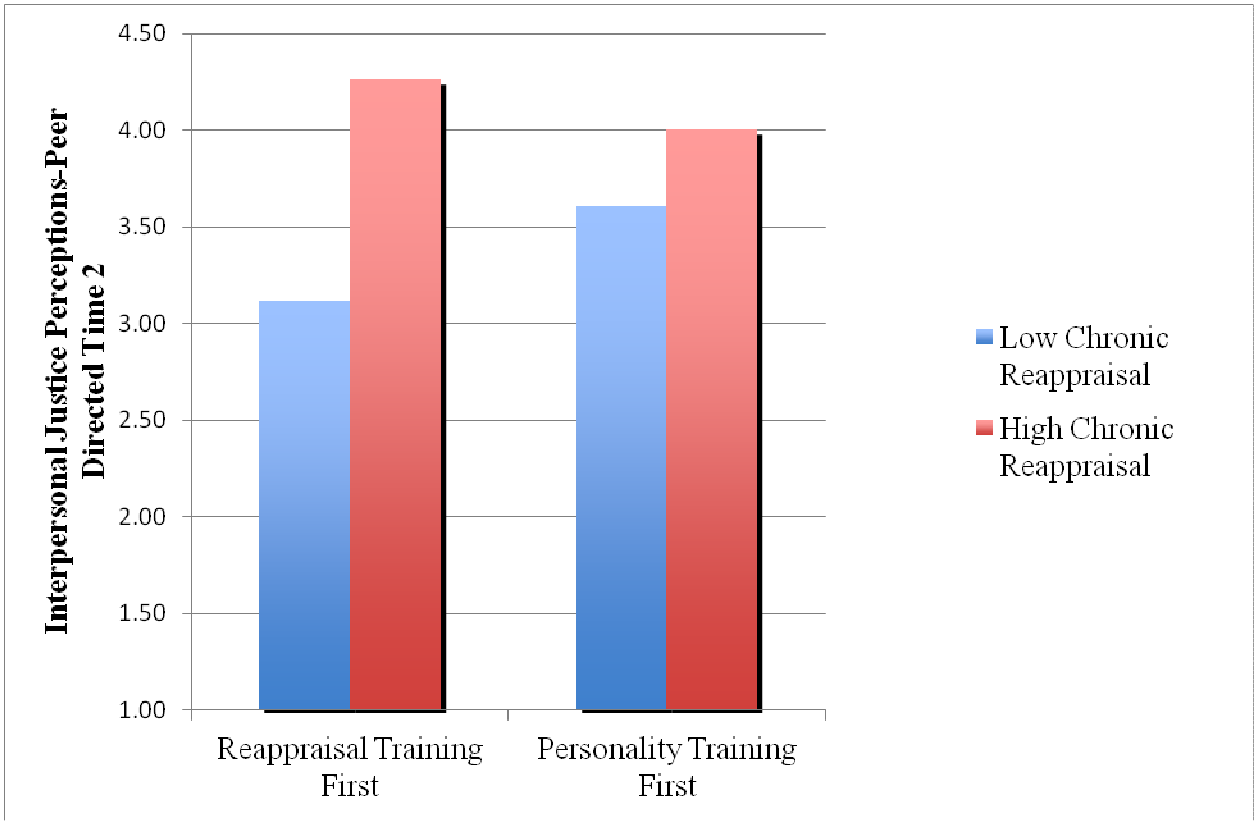

Figure 4. Study Two: Testing of Chronic Reappraisal as a Moderator of Peer-Directed Interpersonal Justice Perceptions at Time 2

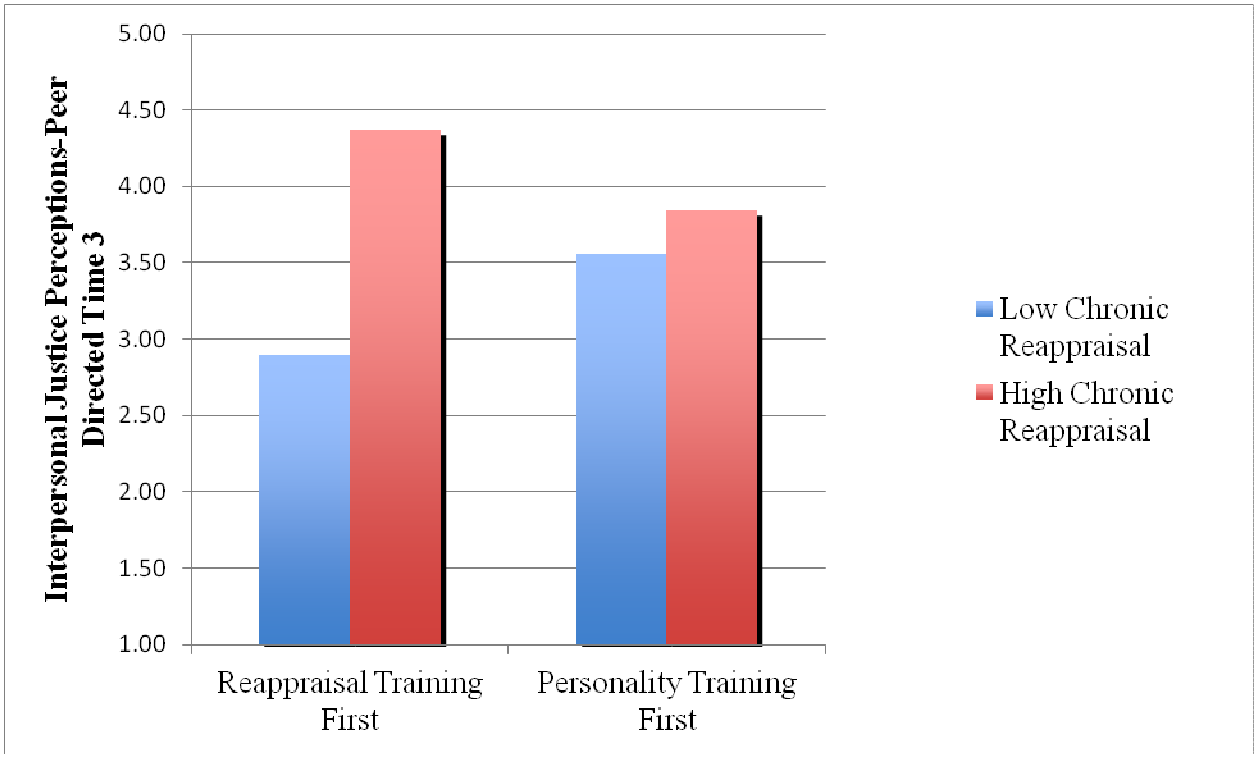

Figure 5. Study Two: Testing of Chronic Reappraisal as a Moderator of Peer-Directed Interpersonal Justice Perceptions at Time 3

In testing hypothesis six, I examined the moderating effect of perspective taking, at Time 2 and Time 3, for both anger and supervisor/peer-directed interpersonal justice perceptions (see Table 14). At Time 2, perspective taking was not a significant moderator for experienced anger (F = .89, ΔR^2 = .01, β = -.11) (*two-tailed*). However, at Time 3, (see Figure 7) perspective taking was significant moderator for experienced anger (F = 3.83*, ΔR^2 = .05†, β = -.29†) (*two-tailed*). Follow-up analyses revealed that, at Time 3, the training moderately influenced anger when perspective taking was high (high perspective taking: F = 1.50, p =.20 (*two-tailed*); low perspective taking: F = .50, p =.48 (*two-tailed*). For supervisor-directed interpersonal justice perceptions at Time 2, the F-test was significant (F = 2.26*, p < .05), but the interaction term and change in R^2 were not significant (β = -.43, ΔR^2 = .19). At Time 3, however, there was a moderating effect of perspective taking (F = 8.30**, ΔR^2 =.04†, β = -.26 †) (*two-tailed*) (see Figure 6). Follow-up analyses revealed that the training only moderately influenced supervisor-directed interpersonal justice perceptions at Time 3 when perspective taking was low (high perspective taking: F = .65, p =.42 (*two-tailed*); low perspective taking: F = 1.08, p =.30 (*two-tailed*). And finally, regarding whether perspective taking had a moderating effect on peer-directed interpersonal justice perceptions, there was no moderating effect (F = 1.33, ΔR^2 = .00, β = .03) found at Time 2. And while, at Time 3, the F-test was significant (F = 2.62†, p < .10), the interaction term and change in R^2 were not (β = -.00, ΔR^2 = .00). As you can see, anger was much lower for the reappraisal group at Time 3. However, with the moderating effect of perspective taking, anger was only kept low for those high in perspective taking (see Figure 7). Interestingly, supervisor-directed interpersonal justice perceptions were much higher at Time 3

for the personality first group, and yet, with the moderating effect of perspective taking, this was not the case for those that had low levels of perspective taking.

Table 14. Study Two: Testing of Perspective Taking as Moderator

Time 2	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	.02	.02	-.13	-.13	-.04	-.04
Perspective Taking	-.17	-.09	.18	.17	.36**	.40**
Perspective Taking x Training		-.11		.03		-.43
F	1.12	.89	2.00	1.33	5.72**	3.84*
R	.17	.18	.22	.22	.36**	.36
ΔR^2	.03	.01	.05	.00	.13**	.19
Time 3	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	-.05	-.03	-.01	-.01	.00	.02
Perspective Taking	-.32**	-.12	.33**	.34*	.50**	.67**
Perspective Taking x Training		-.29†		-.00		-.26†
F	3.83*	3.82*	3.99*	2.62†	10.49**	8.30**
R	.33*	.39†	.33*	.33	.50**	.54†
ΔR^2	.11*	.05†	.11*	.00	.25**	.04†

N = 80
Perspective Taking was centered before being entered into regression
For Training (Reappraisal First= 0, Personality First= 1)
† $p < .10$, *$p < .05$, ** $p < .01$ (two-tailed)

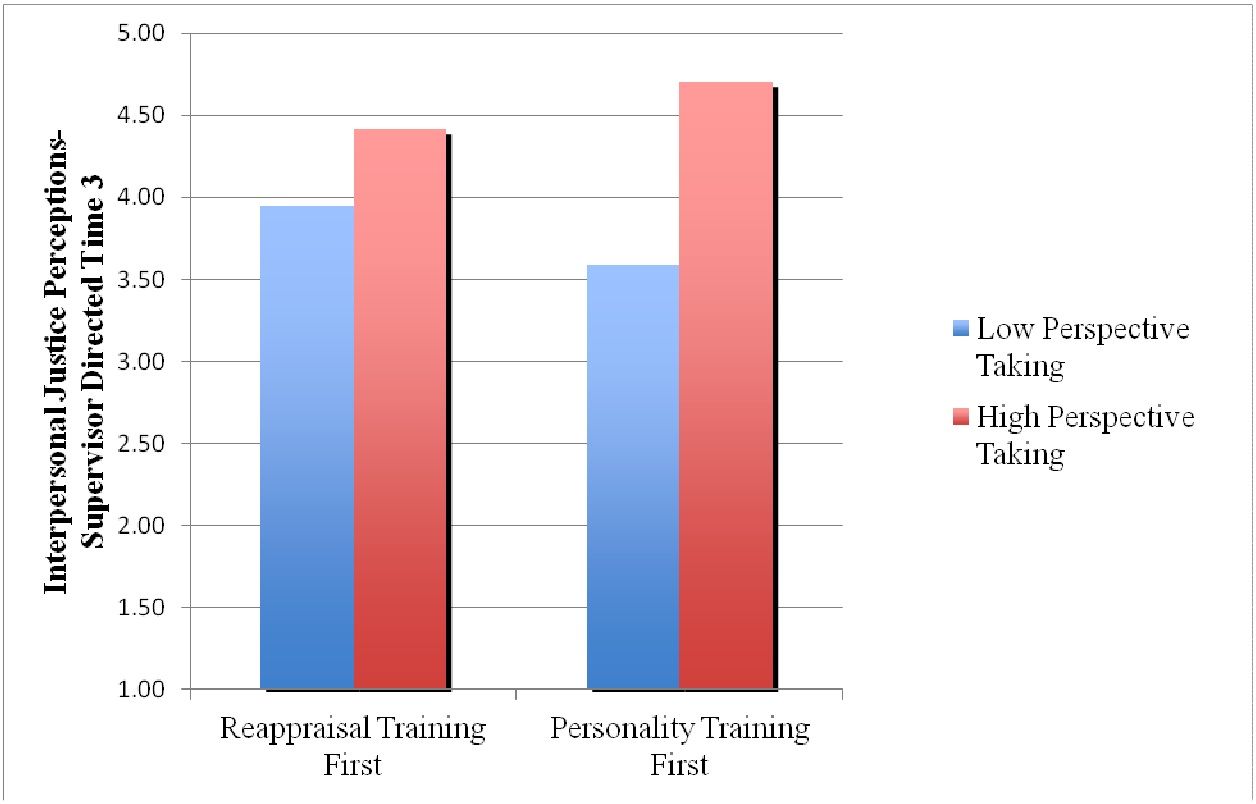

Figure 6. Study Two: Testing of Perspective Taking as a Moderator of Supervisor-Directed Interpersonal Justice Perceptions at Time 3

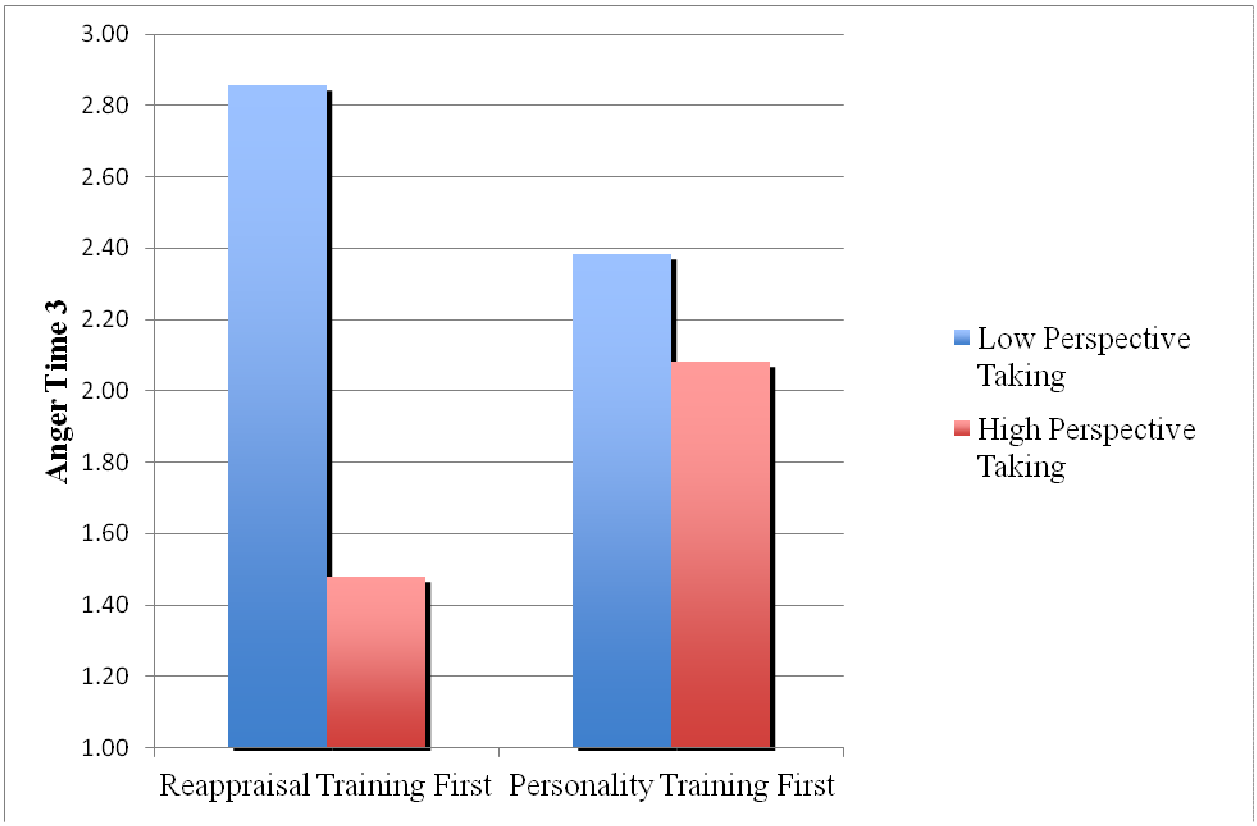

Figure 7. Study Two: Testing of Perspective Taking as a Moderator of Anger at Time 3

In testing hypothesis seven, I examined the moderating effect of anger expression norms at Time 2 and Time 3 for both anger and supervisor/peer-directed interpersonal justice perceptions (see Table 15). As a reminder, high/strong anger expression norms indicate that it is acceptable and desirable to express anger in the organization. Hypothesis seven suggested that strength of anger expression norms would moderate the relationship between reappraisal training on the one hand and anger and justice perceptions on the other, such that high strength of anger expression norms would have higher anger and lower justice perceptions in both training conditions. At Time 2, anger expression norms was a marginally significant moderator for experienced anger (β = -.30†, *F-change* = 3.88†, ΔR^2 = .05†) (*two-tailed*)). However, follow-up analyses revealed that, at Time 2, the training did not significantly influence experienced anger regardless of whether anger expression norms were high or low (high/strong anger expression norms: F = .18 p =.68 (*two-tailed*); low/weak anger norms: F = .62, p = .44 (*two-tailed*) (see Figure 8). Nor was support found at Time 3 for experienced anger (F = 1.14, ΔR^2 = .00, β = -.10). Moreover, regarding peer-directed interpersonal justice perceptions, anger expression norms were not found to be a moderator at Time 2 (F = .88, ΔR^2 = .03, β = .08) or at Time 3 (F = .64, ΔR^2 = .01, β = .14). Similarly, anger expression norms were not found to be a moderator for supervisor-directed interpersonal justice perceptions at Time 2 (F = 1.87, ΔR^2 = .00, β = .01) or at Time 3 (F = 1.91, ΔR^2 = .01, β = .11). Thus, hypothesis seven was not supported.

Table 15. Study Two: Testing of Anger Expression Norms as Moderator

Time 2	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	.04	.03	-.17	-.17	-.00	-.00
Anger Norms	.03	.23	.03	-.03	.27*	.26†
Norms x Training		-.30†		.08		.01
F	.08	1.35	1.19	.88	2.83†	1.87
R	.05	.23†	.18	.19	.27†	.27
ΔR^2	.00	.05†	.03	.00	.07†	.00
Time 3	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	-.06	-.07	.09	.11	.13	.14
Anger Norms	.20	.26	.10	.00	.25*	.17
Norms x Training		-.10		.14		.11
F	1.54	1.14	.57	.64	2.64†	1.91
R	.21	.22	.13	.17	.27†	.29
ΔR^2	.04	.00	.02	.01	.07†	.01

N = 77

Anger Norms was centered before being entered into regression

For Training (Reappraisal First= 0, Personality First= 1)

† $p < .10$, *$p < .05$, **$p < .01$ (two-tailed)

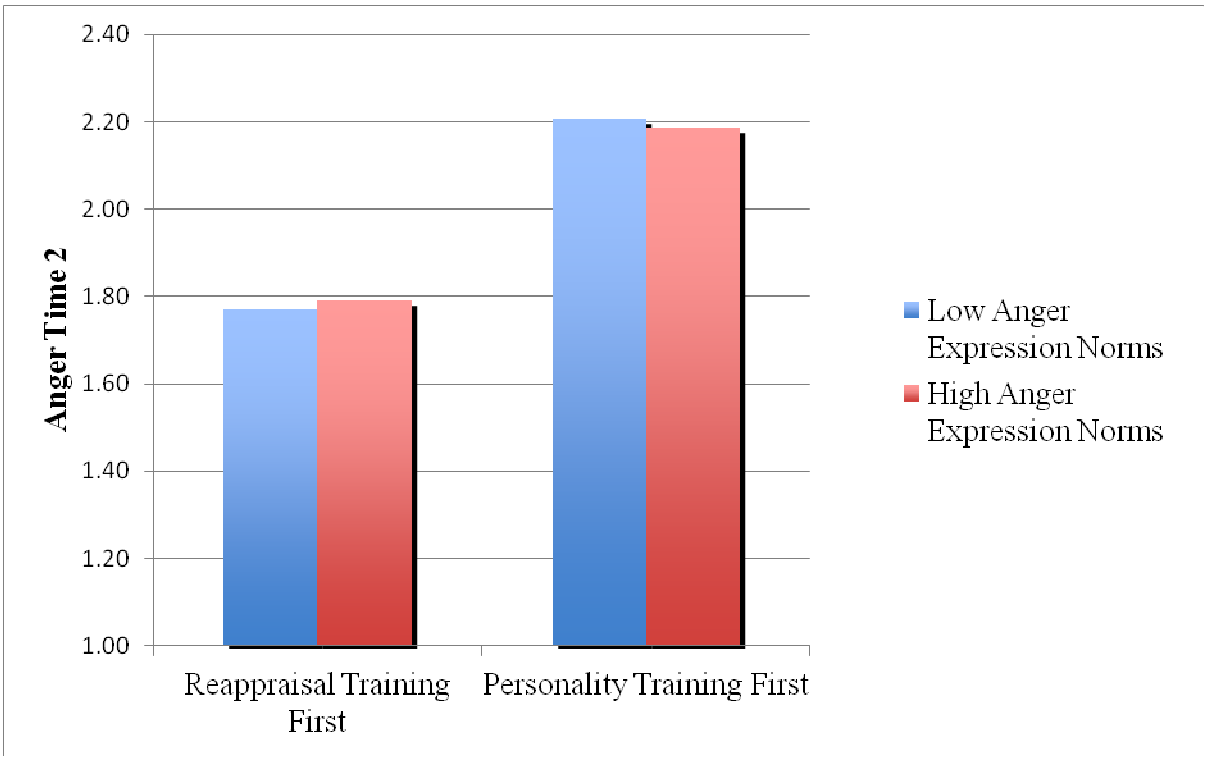

Figure 8. Study Two: Testing of Anger Norms as a Moderator of Anger at Time 2

Regarding hypothesis eight, I tested the moderating effect of interpersonal justice norms at Time 2 and Time 3 for both anger and supervisor/peer-directed interpersonal justice perceptions (see Table 16). For anger, interpersonal justice norms were not found to be a significant moderator at Time 2 or Time 3. At Time 2, the F-test was significant ($F = 3.45$, $p < .05$), but the interaction term and change in R^2 were not ($\beta = -.13$, $\Delta R^2 = .01$). The same was found at Time 3 ($F = 5.87$, $p < .01$), ($\beta = -.07$, $\Delta R^2 = .00$). Interpersonal justice norms did not have a significant moderating effect on peer-directed interpersonal justice perceptions for Time 2 ($F = 6.82^{**}$, $\Delta R^2 = .00$, $\beta = .00$) or for Time 3 ($F = 8.49^{**}$, $\Delta R^2 = .01$, $\beta = -.12$). Similarly, interpersonal justice norms did not have a significant moderating effect on supervisor-directed interpersonal justice perceptions Time 2 ($F = 4.26^{**}$, $\Delta R^2 = .00$, $\beta = -.09$) or for Time 3 ($F = 3.23^{*}$, $\Delta R^2 = .00$, $\beta = .02$). Thus, hypothesis eight was not supported by the data.

Table 16. Study Two: Testing of Interpersonal Justice Norms as Moderator

Time 2	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	.06	.05	-.20†	-.20†	-.06	-.07
Interpersonal Justice Norms	-.34**	-.25	.44**	.44**	.38**	.45**
Norms x Training		-.13		.00		-.09
F	4.89**	3.45*	10.38**	6.82**	6.28**	4.26**
R	.34**	.35	.47**	.47	.38**	.39
ΔR^2	.12**	.01	.22**	.00	.15**	.00
Time 3	**Anger**		**Interpersonal Justice Peers**		**Interpersonal Justice Supervisors**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Training	-.02	-.02	.01	.01	.06	.06
Interpersonal Justice Norms	-.46**	-.44**	.52**	.61**	.35**	.33†
Norms x Training		-.03		-.12		.02
F	8.92**	5.87**	12.50**	8.49**	4.91**	3.23*
R	.46**	.46	.52**	.53	.36**	. 36
ΔR^2	.21**	.00	.28**	.01	.13**	.00

N = 76

Interpersonal Justice Norms was centered before being entered into regression

For Training (Reappraisal First= 0, Personality First= 1)

† $p < .10$, *$p < .05$, ** $p < .01$ (two-tailed)

POST-HOC ANALYSES

Because many of my hypotheses were not supported, I conducted additional post-hoc analyses to 1) explore a different measure of anger, 2) examine additional moderators, and 3) determine whether an individual difference measure of reappraisal, *chronic reappraisal*, would influence negative emotions, interpersonal justice perceptions, and a wider range of dependent variables. In the following sections, I will describe these analyses.

A New Perspective on Anger

While this dissertation was focused on the discrete emotion of anger, I also measured other negative emotions using the PANAS-X (Watson & Clark, 1994). For many of the post-hoc analyses, I created multi-item scale for hostility (i.e. angry, frustrated, and irritable combined) in order to offer higher reliability and provide a different perspective with which to examine participant anger. Importantly, Diefendorff, et al (2008) found that reappraisal was most often linked to these three discrete emotions. This is a shortened version of the six-item PANAS-X (Watson & Clark, 1994) scale for hostility. Cronbach's alpha was calculated to be .87 for the three-item measures of hostility in both study one and study two.

In this post-hoc analysis, I re-examined this dissertation's hypotheses by using the measure of hostility. In doing so, four particularly interesting findings emerged. The first interesting finding had to do with hypothesis one in study one which was not supported. In this specific post-hoc analysis, I chose to compare only the reappraisal condition with the suppression condition specifically because they are two theoretically distinct emotional regulation training conditions. Moreover, the communication training involved taking the

perspective of an interaction partner, and in retrospect, this may be conceptually too similar to the "broader perspective" strategy of reappraisal. The one-way ANOVA testing for post-confederate hostility revealed marginally significant (*two-tailed*) between-group differences (F = 1.76, p = .18; η^2= .03) ($M_{reappraisal}$ = 1.59, *SD* = .84; $M_{suppression}$= 1.89, *SD* = 1.01). Specifically, hostility was found to be significantly higher for those in the suppression training condition. As mentioned in the pilot study, Cohen (1988) suggested that for η^2; "0.01" can be considered a small effect, "0.06" a medium effect, and "0.14" a large effect. This marginally significant result, combined with the small to medium effect size, would suggest support for the potential of reappraisal training to reduce experienced hostility in the face of interpersonal justice violations.

A second interesting finding in my examination of hostility had to do with hypothesis six in study two, which was only partially supported. In study two, perspective taking moderated anger and interpersonal justice perceptions at Time 3. Interestingly, in the post-hoc analyses, linear regression also revealed that perspective taking significantly moderated hostility at Time 3 (F = 5.05*, ΔR^2 = .05†, β = -.30†) (*two-tailed*). Follow-up analyses revealed that, at Time 3, the training moderately influenced experienced hostility when perspective taking was high (high perspective taking: F = 1.82 p =.18 (*two-tailed*); low perspective taking: F = .20, p = .66 (*two-tailed*) such that hostility at Time 3 was significantly lower in the reappraisal condition, but only for those high in perspective taking. Thus, this finding adds additional support for the proposed moderating role of perspective taking in study two (see Figure 9).

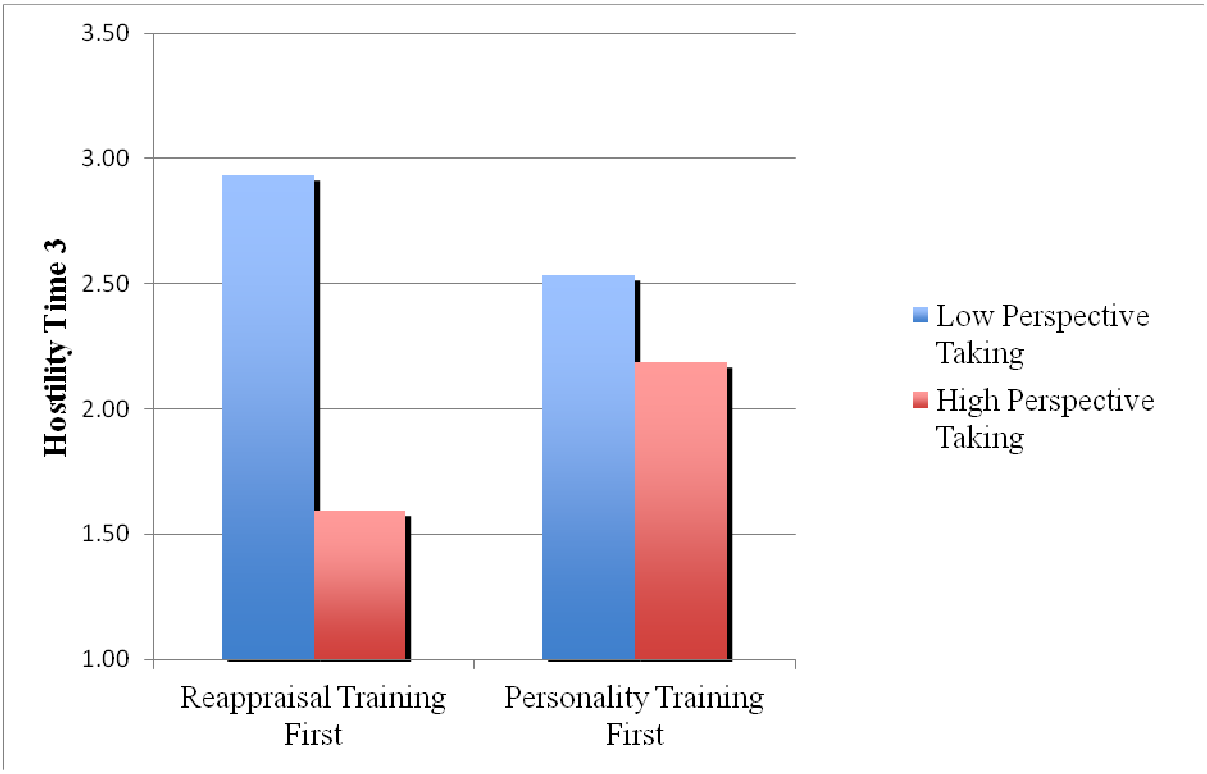

Figure 9. Post-Hoc: Testing of Perspective Taking as a Moderator of Hostility at Time 3

A third interesting finding came from examining possible ways to split the sample in study one and study two while examining hostility. Specifically, splitting the sample in study one into high and low levels of perspective taking revealed that those high in perspective taking had significantly different levels of hostility between training groups (F = 3.84, p = .06 (*two-tailed*); $M_{reappraisal}$ = 1.43, SD = .84; $M_{suppression}$= 2.06, SD = 1.01). In other words, when the sample was split in this way, the reappraisal group had significantly lower levels of hostility than the suppression group. And while those low in perspective taking did not have significant between group differences regarding hostility, post-hoc analyses did reveal marginally significant between group differences in interpersonal justice perceptions (F = 1.83, p = .18 (*two-tailed*); $M_{reappraisal}$ = 3.03, SD = .93; $M_{suppression}$= 3.50, SD = 1.08). This finding that those low in perspective taking actually had significantly lower perceptions of interpersonal justice would suggest that the ability to shift perspective is a key part of successful reappraisal training.

And finally, another interesting result from study one came after splitting the sample into high and low levels of perceived training effectiveness to examine hostility. Interestingly, there were significant between group differences in experienced hostility depending on whether or not the participant thought the training was effective. Specifically, for the group that perceived the training to have a high level of effectiveness, there were marginally significant differences between hostility for each condition (F = 2.26, p = .14 (*two-tailed*)) such that participants in the reappraisal condition had lower levels of hostility when they perceived the training to have been highly effective ($M_{reappraisal}$ = 1.56, SD = .84; $M_{suppression}$= 2.14, SD = .86).

Additional Moderators

In addition to the moderators tested in this dissertation, I decided to examine other possible moderators that may have been influencing the training results. While I examined the role of ethnicity, gender, diary entries completed, perceptions of training effectiveness and satisfaction, as well as trait anger on both study one and study two, only ethnicity was found to be a significant moderator for anger and interpersonal justice in study one. Trait anger was found to be a significant moderator of hostility at Time 2 and Time 3 in study two. Additionally, gender was found to be a significant moderator of peer-directed and customer-directed interpersonal justice perceptions at Time 2 in study two.

Study One. Specifically, in study one, the sample was approximately 43% White/Caucasian and 42% Asian and spread relatively equally across conditions (see section on Participants in Study One). Research from the personality and social psychology literature suggests that there are cultural level differences in the use of reappraisal versus suppression with strong support for cultures with high power distance, embeddedness, hierarchy, and long-term orientation being positively correlated with suppression. Moreover, suppression has been shown to be negatively correlated with individualism, affective autonomy, and egalitarianism (Matsumoto, Yoo, & Nakagawa, 2008). Thus, in the post-hoc analysis, it seemed reasonable to expect that ethnicity, looking specifically between Whites and Asians, may have a moderating effect.

The ANOVAs for examining ethnicity (White; Asian) as a moderator in study one showed that ethnicity moderated the relationship between training condition and anger

(F=1.91, p = .14) (*two-tailed*) and training condition and interpersonal justice perceptions (F=3.39*, p=.02) (*two-tailed*). For Asian participants, interpersonal justice perceptions were marginally significantly higher in the suppression condition (F= 1.83, p=.18; η^2= .09), but there were no significant differences between conditions for anger (F=.84, p = .44; η^2= .04). For the white participants, anger was marginally significantly lower in the communication condition (F = 2.03, p = .14; η^2= .10) and interpersonal justice was marginally significantly higher in the communication condition (F= 1.58, p = .22, η^2= .08) (*two-tailed*). These marginally significant moderating effects, and more importantly, the medium to large effect sizes, suggest the possibility of cultural differences in the effectiveness of training different regulation styles on anger and interpersonal justice (see Figure 10 and 11).

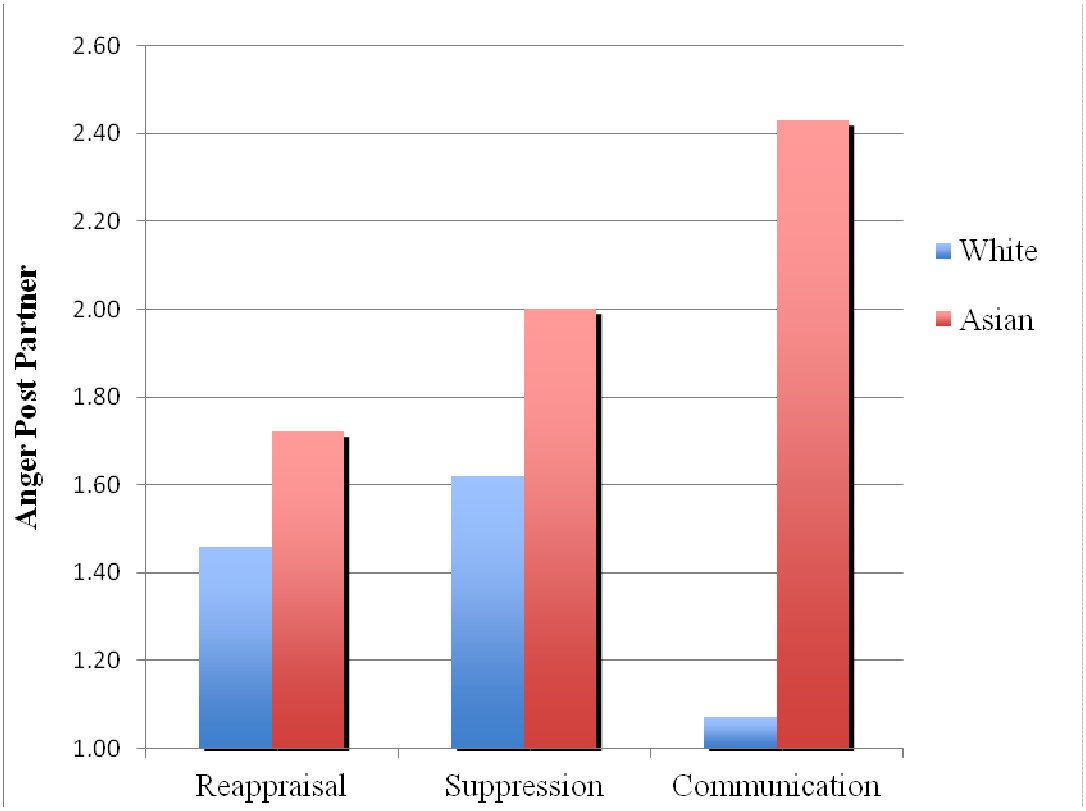

Figure 10. Post-Hoc: Testing of Ethnicity as a Moderator of Anger

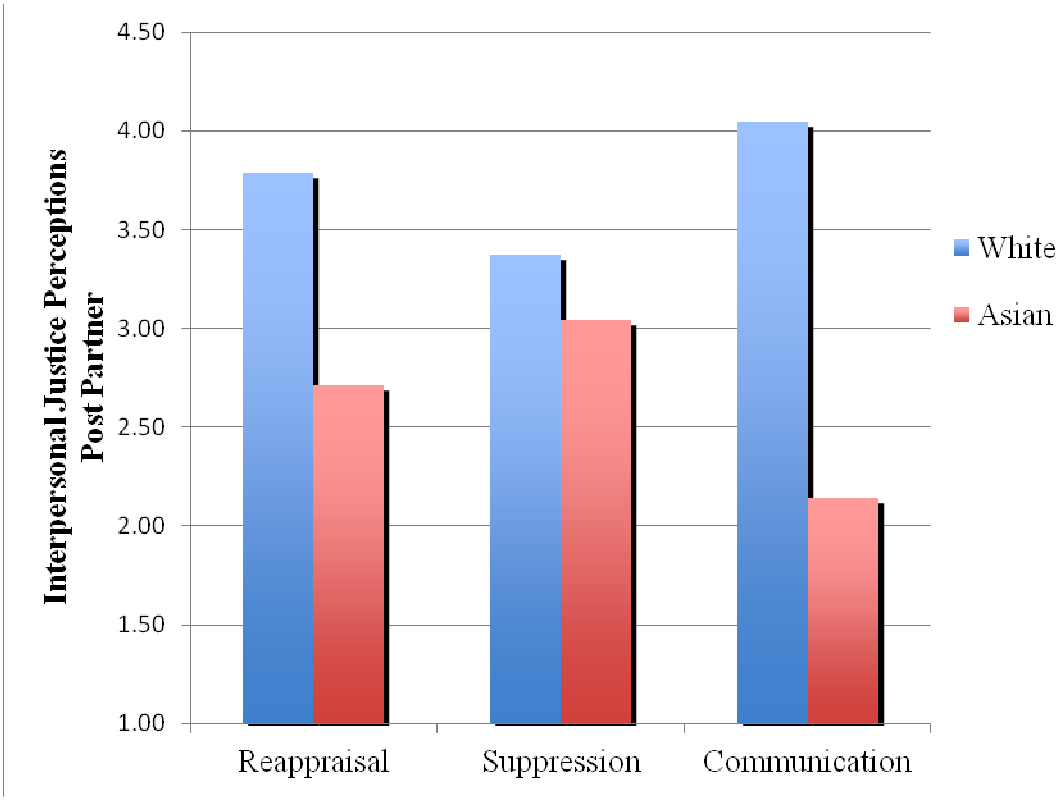

Figure 11. Post-Hoc: Testing of Ethnicity as a Moderator of Interpersonal Justice

Study Two.

In the post-hoc analyses, I introduced the measure of hostility (Watson & Clark, 1994), and I found interesting results regarding how moderators influenced hostility at Time 2 and Time 3 in study two. While trait anger was not found to moderate anger or interpersonal justice perceptions at Time 2 or Time 3, trait anger was found to moderate *hostility* at Time 2 and at Time 3. Trait anger is understood as the general level and frequency with which individuals experience anger (Spielberger, 1999), and it has been found to influence state levels of anger. Thus, in these post-hoc analyses, it seemed reasonable to expect that trait anger may have a played moderating role in the effectiveness of the reappraisal training.

Specifically, at Time 2, trait anger was found to be a marginally significant moderator for hostility ($F = 6.74$*, $\Delta R^2 = .02$, $\beta = .20$) (*two-tailed*). Moreover, at Time 3, trait anger was found to be a significant moderator for hostility ($F = 6.05$*, $\Delta R^2 = .03$†, $\beta = .25$†) (*two-tailed*). Follow-up analyses revealed that, at Time 2, the training significantly influenced hostility when trait anger was high (low trait anger: $F = .42$, $p = .52$ (*two-tailed*); high trait anger: $F = 6.29$, $p = .00$ (*two-tailed*), and again at Time 3, when trait anger was high (low trait anger: $F = .98$, $p = .32$ (*two-tailed*); high trait anger: $F = 5.75$, $p = .00$ (*two-tailed*) (see Figure 12 and 13). As demonstrated in Figure 12 and Figure 13, those higher in trait anger experienced higher levels of hostility, particularly so in the reappraisal first training condition.

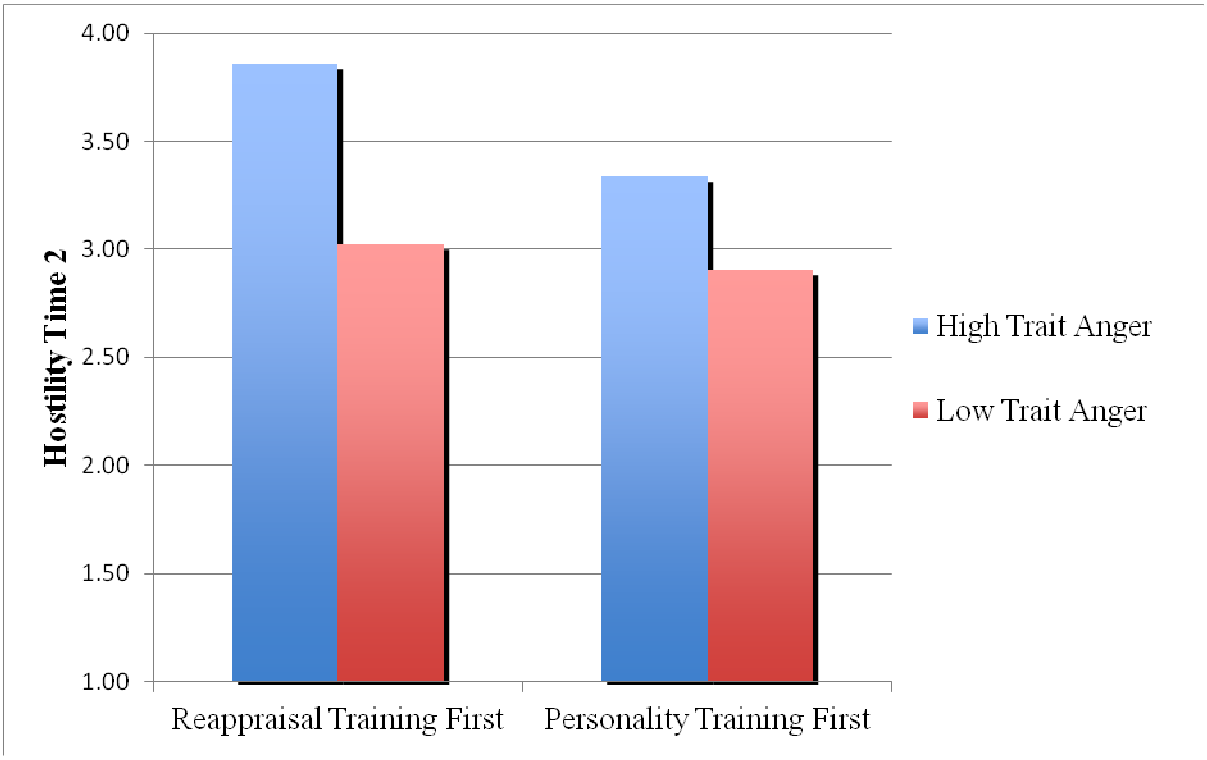

Figure 12. Post-Hoc: Testing of Trait Anger as a Moderator of Hostility at Time 2

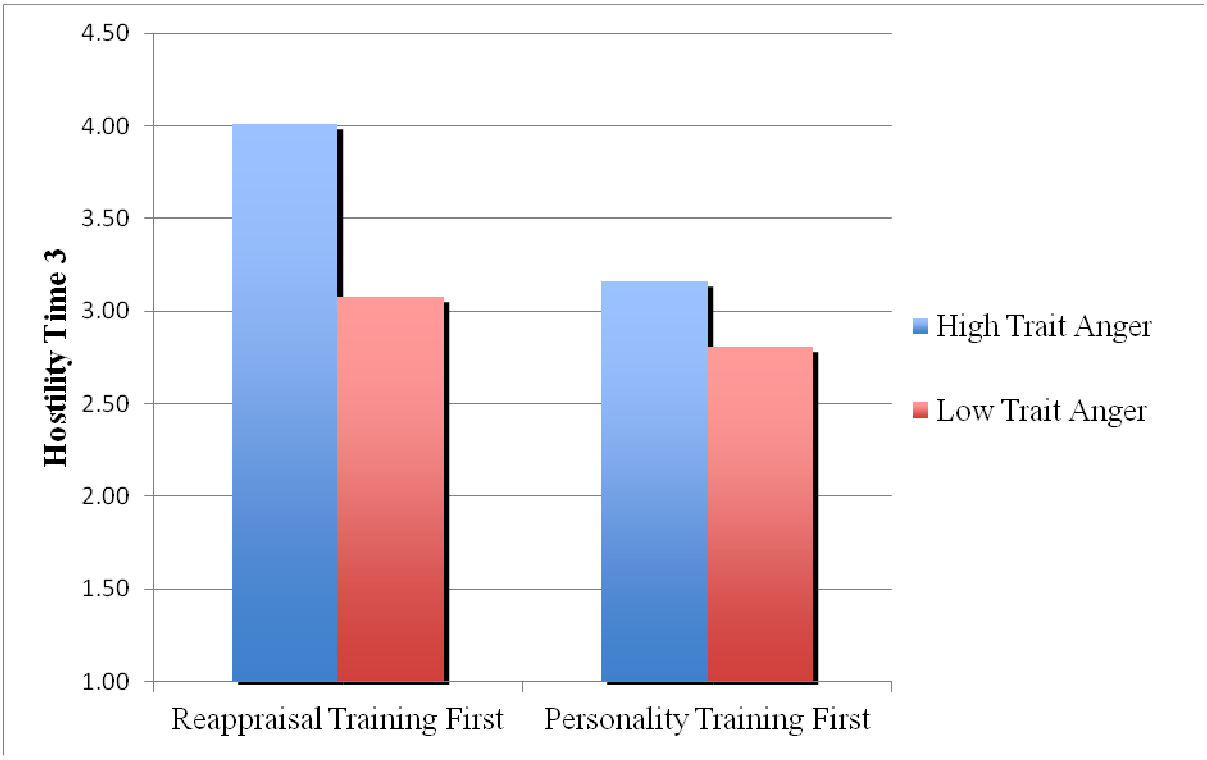

Figure 13. Post-Hoc: Testing of Trait Anger as a Moderator of Hostility at Time 3

Interestingly, in the animal rescue sample of study two, men seemed to experience the expected between group differences regarding their perceptions of peer-directed and customer-directed interpersonal justice. As expected, at Time 1, for male employees, there were no significant differences between training conditions for peer-directed (F = 1.20, p = .30 (*two-tailed*)) or customer-directed (F = .86, p = .36 (*two-tailed*)) interpersonal justice perceptions. However, at Time 2, there were significant differences for male employees between conditions regarding their peer-directed (F = 4.07, p = .04 (*two-tailed*); $M_{reappraisal}$ = 4.23, SD = .75; $M_{personality}$= 3.50, SD = .95) and their customer-directed (F = 1.90, p = .18 (*two-tailed*); $M_{reappraisal}$ = 4.41, SD = .84; $M_{personality}$= 3.55, SD = 1.15) perceptions of interpersonal justice. These findings would suggest that the reappraisal training seemed to have the hypothesized positive effect on interpersonal justice perceptions for male employees but not for the female employees (see Figure 14 and 15).

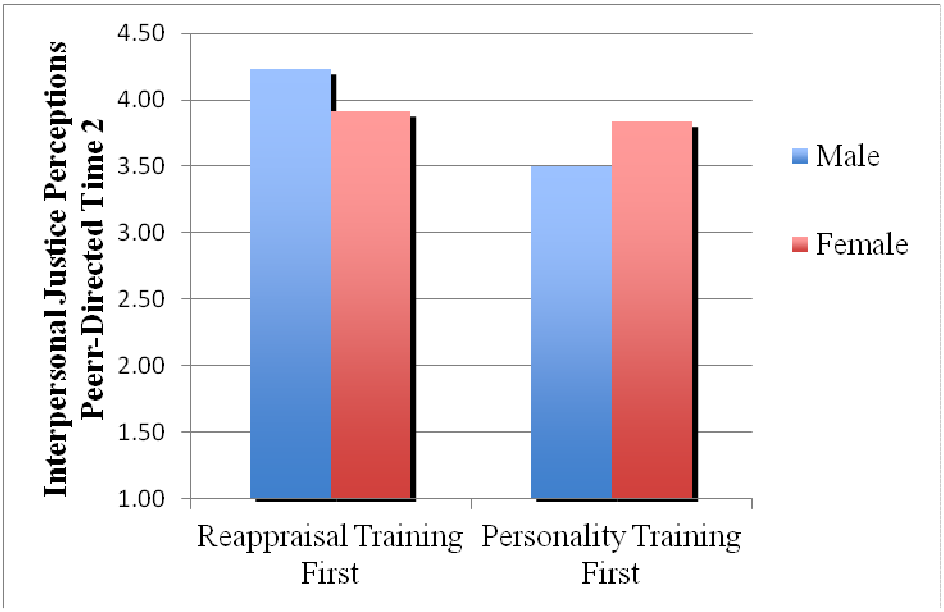

Figure 14. Post-Hoc: Testing of Gender as a Moderator of Peer-Directed Justice Perceptions at Time 2

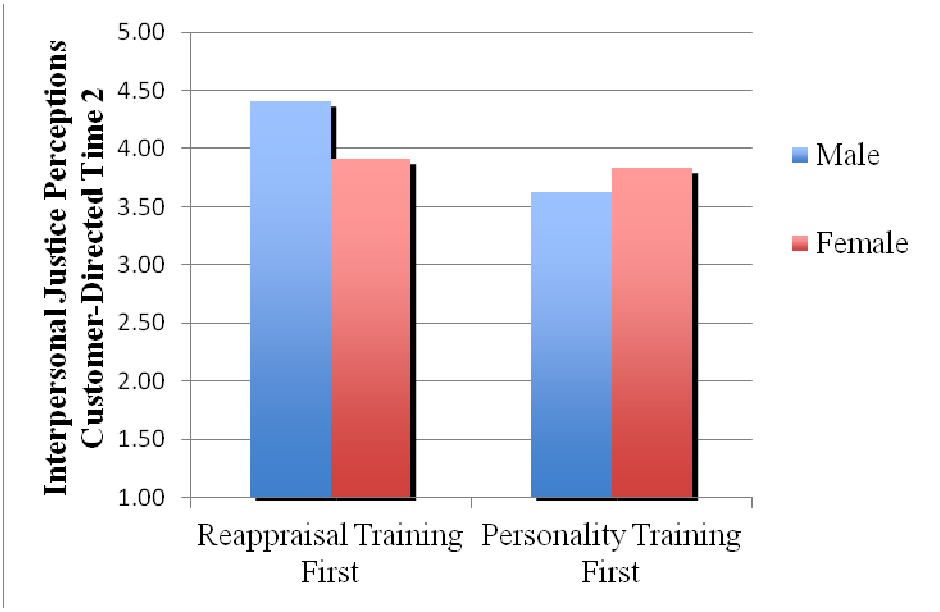

Figure 15. Post-Hoc: Testing of Gender as a Moderator of Customer-Directed Justice Perceptions at Time 2

Chronic Reappraisal & Mediation

As discussed in the above methods sections, chronic reappraisal was measured using the Emotional Regulation Questionnaire, or ERQ, by Gross and John (2003). In addition, I also measured additional dependent variables such as employee burnout (Maslach & Jackson, 1981) and job satisfaction (Cook, Hepworth, Wall, & Warr, 1981) (see Figure 3 to see when these variables were collected). As illustrated in Table 17, I examined the correlations at Time 3 in study two and found significant relationships between chronic reappraisal and how angry, frustrated, and irritable (i.e. hostility) participants were. Additionally, I found significant relationships between chronic reappraisal and supervisor-directed interpersonal justice perceptions, burnout, and job satisfaction.

While I had not predicted either burnout or job satisfaction as dependent variables in this dissertation, there is theoretical support for the relationship between negative emotions and perceptions of injustice with both burnout and job satisfaction. Specifically, there is existing research linking negative emotions and high levels of perceived injustice to low levels of job satisfaction as well to high levels of burnout (Glomb, 2002; Colquitt, et al, 2001; Weiss & Cropanzano, 1996).

Table 17. Post Hoc: Means, Standard Deviations, and Intercorrelations

Study Two-Time 3	**Mean**	**SD**	1	2	3	4	5	6	7
1. Chronic Reappraisal	**2.69**	**.78**							
2. Angry	**2.10**	**1.18**	-.27*						
3. Frustrated	**2.82**	**1.14**	-.41**	.71**					
4. Irritable	**2.56**	**1.12**	-.33**	.75**	.71**				
5. Hostility	**2.50**	**1.04**	-.38**	.91**	.89**	.91**			
6. Interpersonal Justice Supervisor	**4.14**	**.89**	.38**	-.19	-.43**	-.32**	-.34**		
7. Burnout	**3.02**	**1.10**	-.38**	.68**	.61**	.58**	.69**	-.36**	
8. Job Satisfaction	**3.58**	**.79**	.42**	-.58*	-.64**	-.56**	-.66**	.56**	-.68**

*$p < .05$, ** $p < .01$ (two-tailed)
Negative Affect consists of Angry, Frustrated, & Irritable experienced emotions

Thus, in this post-hoc section, I sought to examine the relationships between negative affect, interpersonal justice perceptions, burnout, and job satisfaction, using chronic reappraisal as the independent variable. As illustrated in Table 11, chronic reappraisal was found to be negatively related to the construct of hostility (r = -.38, p < .01), and positively related to supervisor directed interpersonal justice perceptions (r = .38, p < .01). Moreover, chronic reappraisal was negatively related to burnout (r = -.38, p < .01) and positively related to job satisfaction (r = .42, p < .01). Before testing for the mediating effect of hostility and interpersonal justice, I followed the recommendation of Baron and Kenny (1986) to verify that there were main effects of chronic reappraisal on the mediators and the dependent variables and of the mediators on the dependent variables. Because these relationships were found to be significant (see Table 11), I was able to proceed with my test of mediation.

Specifically, I used structural equation modeling (SEM) to test for the mediating impact of both hostility and interpersonal justice perceptions. I chose SEM for this analysis because it is particularly suited to testing for mediation when there are multiple mediators (Bollen, 1989; Preacher & Hayes, 2004). Moreover, SEM has been found to be preferable to traditional regression techniques in testing for mediation because it controls for measurement error and allow for a simultaneous test of multiple mediators (Preacher & Hayes, 2004).

I tested the structural model to estimate the relationships between the constructs using EQS 6.1 software for Windows. As suggested by Williams, Vandenberg, and Edwards (2009), I chose to report the comparative fit index (CFI) and root mean square error of approximation (RMSEA) to evaluate model fit. I tested a five-factor model to examine whether hostility and interpersonal justice perceptions mediated the relationship between chronic reappraisal to job satisfaction and burnout. In testing this model, I found a

reasonably good fit; $\chi 2$ (129) = 245.75, $p < .01$, RMSEA = .11, CFI = .9. The ratio of chi-square to degrees of freedom was 1.91, and a value less than 3 for this ratio suggests a good fit (Carmines & McIver, 1981). The CFI value was .9, and a value over .9 is indicative of a good fit (Bentler & Bonett, 1980). However, the corresponding root mean square error of approximation (RMSEA) was .11, and this is higher than the recommended value of .05 or less. I also tested a competing model to examine whether having chronic reappraisal directly influence the two dependent variables would improve fit. However, in this second model, fit was not particularly improved; $\chi 2$ (127) = 245.13, $p < .01$, RMSEA = .11, CFI = .9, and it was less parsimonious. As is illustrated in figure 16, parameter estimates were significant for the initial, more parsimonious, model. As predicted, chronic reappraisal significantly influenced hostility ($\gamma = -.46$, $p < .05$) and interpersonal justice perceptions ($\gamma = .40$, $p < .05$). Hostility significantly influenced both burnout ($\gamma = .82$, $p < .05$) and job satisfaction ($\gamma = -.75$, $p < .05$). And finally, interpersonal justice perceptions also significantly influenced burnout ($\gamma = -.18$, $p < .05$) and job satisfaction ($\gamma = .33$, $p < .05$). Changes in parameter estimates in the second model are shown in parentheses in red. Examining the initial model, the parameter estimates would suggest that negative affect and interpersonal justice perceptions do act as mediators in this post-hoc model.

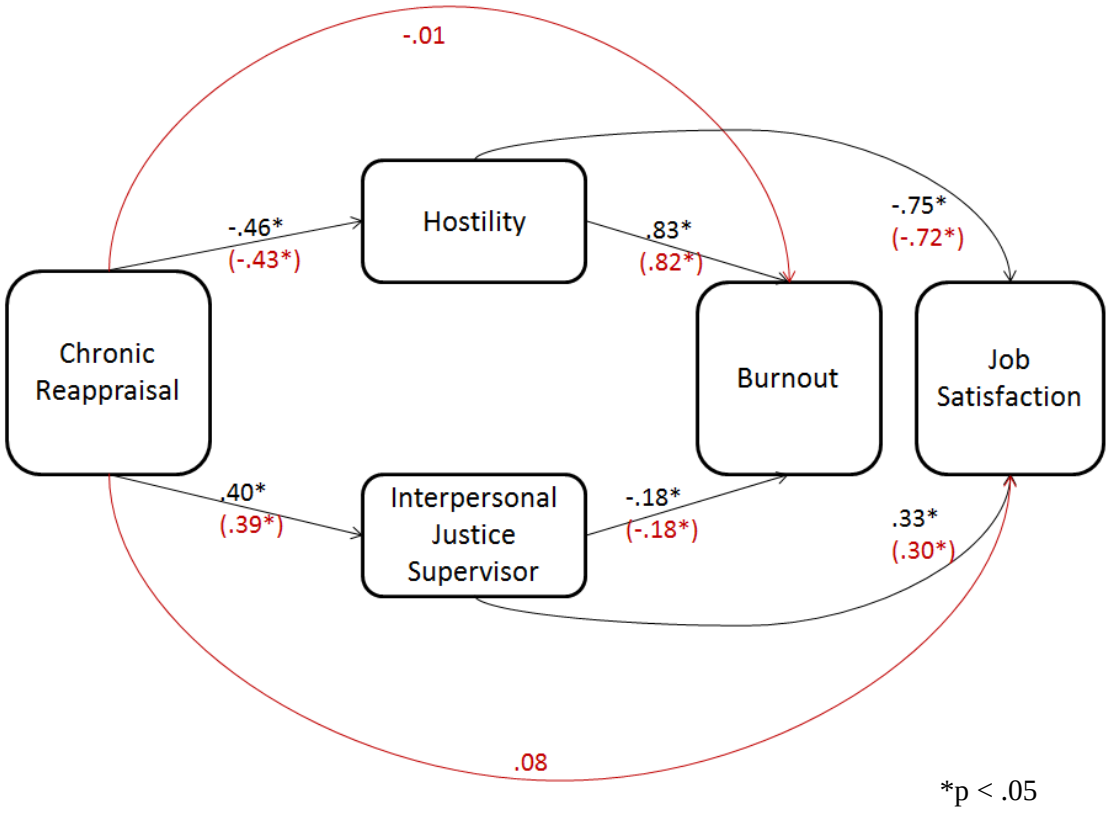

Figure 16. Post-Hoc: Testing Structural Equation Mediation Model

DISCUSSION

In this discussion, I will first summarize the findings and limitations of the two studies, and I will then follow with theoretical implications and practical applications of the dissertation findings. Taken together, the two studies provide little direct support for the hypothesized training model (see Figure 2). However, the significant moderating effects found in both study two and the post-hoc analyses would suggest that this dissertation is much more a story of how reappraisal training may influence different groups of people very differently. Hypothesis one, which argued that reappraisal training would lead to lower levels of anger, was not supported in either study one or study two. However, in the post-hoc analyses, I compared the influence of the reappraisal and suppression training conditions on experienced hostility and found that, as expected, hostility was significantly higher for those in the suppression training condition and lower for those in the reappraisal condition.

Similarly, hypothesis two, which argued that reappraisal training would lead to increased justice perceptions, was not supported by either study. However, in the post-hoc analyses, there was, in fact, support for the positive impact of the individual difference measure of reappraisal, *chronic reappraisal*, on interpersonal justice perceptions. This was the case such that, in the post-hoc analyses, chronic reappraisal resulted in increased justice perceptions. And while there was no support in study one or two for testing hypotheses three and four, which argued for the mediating effect of anger and justice perceptions, the post-hoc analyses did support the mediating effect of both negative emotions and interpersonal justice perceptions. Specifically, hostility and interpersonal justice perceptions were found to mediate the relationship between chronic reappraisal and burnout/ job satisfaction. Interestingly, I did find some support in study two for the moderating effects of chronic

reappraisal and perspective taking, hypotheses five and six, but I did not find support for the moderating effect of anger expression norms or interpersonal justice norms, hypotheses seven and eight.

Hypothesis five suggested that those high in chronic reappraisal would have lower anger and higher justice perceptions in the control group. As argued in the first part of this dissertation, in situations where reappraisal is not trained, or a subject is not instructed to use a particular emotional regulation strategy, chronic reappraisers should theoretically be more likely to engage in reappraisal in response to anger-inducing events. As can be seen in Figure 4 and 5, the peer-directed interpersonal justice perceptions were higher for the reappraisal group at Time 2 and Time 3. And yet, because of the moderating effect of chronic reappraisal, this was only the case for those high in chronic reappraisal. Those with low chronic reappraisal dropped in their justice perceptions over time for the reappraisal first training group. These results suggest a waning effect only for those who are low in chronic reappraisal. For those high in chronic reappraisal, the training effects appeared to become stronger over time.

Hypothesis six suggested that those high in perspective taking will have low anger and high justice perceptions in both training conditions, and specifically, that those high in perspective taking should be better able to apply the reappraisal training to reduce both their anger and perceptions of interpersonal injustice. As you can see in Figure 7, participant anger was much lower for the reappraisal group at Time 3. As a result of the moderating effect of perspective taking, this was only the case for those high in perspective taking. Interestingly, supervisor-directed interpersonal justice perceptions were much higher at Time 3 for the personality first group, and yet, with the moderating effect of perspective taking,

this was not the case for those that had low levels of perspective taking. Moreover, in the post-hoc analyses, perspective taking significantly moderated hostility such that hostility at Time 3 was significantly lower in the reappraisal condition, but only for those high in perspective taking. Additionally, the post-hoc analyses revealed that when the sample was split into high and low perspective taking, the group high in perspective taking had significant between group differences such that the reappraisal group had significantly lower levels of hostility than the suppression group. In contrast, those low in perspective taking had significant between group differences in interpersonal justice perceptions such that those in the reappraisal condition actually had significantly lower perceptions of interpersonal justice than those in the suppression condition. These findings on perspective taking highlight the importance of the role of perspective taking on the effectiveness of reappraisal training. Moreover, these results suggest a waning effect only for those who are low in perspective taking. Just as was the case with chronic reappraisal, for those high in perspective taking, the training effects appeared to become stronger over time.

Reflecting on the results of study one, study two, and the post-hoc analyses, it is important to discuss why certain hypotheses were supported and others were not. Looking at hypothesis one and two (i.e. that reappraisal training would reduce anger and increase justice perceptions); there are several possibilities as to why these two hypotheses were not supported. One explanation is that the proposed theory was flawed. However, the results from the post-hoc study relating chronic reappraisal to reduced hostility and increased justice perceptions would support the theoretical relationships proposed in this dissertation. Thus, I would argue that theory was not to blame for the lack of support for hypotheses one and two. Another possible explanation could be that the training was flawed. However, multiple

choice tests done in the pilot study, study one, and study two suggest that participants were able to identify and distinguish between the four reappraisal strategies. While the satisfaction and effectiveness ratings of the training were above average in both studies, in the post-hoc analyses using data from study one, splitting the sample into high and low levels of perceived training effectiveness revealed that there were significant between group differences in hostility depending on whether or not the participant thought the training was effective. Specifically, participants in the reappraisal condition had lower levels of hostility when they perceived the training to have been highly effective.

In addition to these possibilities, the training methods were adapted from existing research methods that had been used successfully to train reappraisal (Schartau, et al., 2009; Nelis et al, 2009). And yet, these types of training methods had not been applied to justice scenarios, but instead, had been tested immediately in response to less complex anger inducing scenarios. Therefore, I would argue that it may be that the reappraisal training strategies were taught effectively, but they were not necessarily taught well enough to be applied to complex justice scenarios. Moreover, it may also have been that the sample in study one and study two were not motivated to apply the reappraisal strategies in their experienced injustice interactions. If participants did not feel a need to apply the reappraisal strategies, they may have chosen not to use them in their injustice interactions. Work by Gross (2001) often instructed subjects to think about their video scenarios using reappraisal to immediately regulate their negative emotions. In this dissertation, subjects were able to choose what strategies they used and there was a period of time separating the training and the justice interactions.

It is also important to reflect on the positive results of the post-hoc analyses. A particularly interesting result from study one revealed that ethnicity moderated the relationship between training condition and anger and training condition and interpersonal justice perceptions. This was the case such that for Asian participants, interpersonal justice perceptions were significantly higher in the suppression condition. Conversely, for the white participants, anger was significantly lower and interpersonal justice was significantly higher in the communication condition. These post-hoc analyses open up the possibility for future research on the impact of culture on the use and effectiveness of different forms of emotional regulation and justice regulation.

In study two, post-hoc analyses, trait anger was found to be a significant moderator for hostility at Time 2 and Time 3. Specifically, the training significantly influenced hostility when trait anger was high such that those higher in trait anger experienced higher levels of hostility, particularly so in the reappraisal first training condition. In addition to the moderating effects of trait anger in study two, gender also significantly moderated employee perceptions of interpersonal justice. Specifically, men at Time 2 and Time 3, had significantly higher perceptions of customer and peer-directed interpersonal justice in the reappraisal condition. Thus, from the post-hoc analyses, there is support for the possible moderating role of ethnicity, gender, trait anger, and perceptions of training effectiveness, all of which have the potential to influence the impact of reappraisal training.

As previously mentioned, if there was a lack of motivation on the part of the subjects, or if the training was not learned well enough to be applied to complex justice situations, it is reasonable to expect that chronic reappraisal (rather than the training) would be predictive of negative emotions, interpersonal justice perceptions, and related workplace outcomes.

Specifically, the post-hoc analyses provided support for the established negative relationship between chronic reappraisal and "other-directed" negative emotions (i.e. frustration, anger, and irritability), and it also provided support for the hypothesized positive relationship between chronic reappraisal and interpersonal justice perceptions. While these negative emotions and justice perceptions did mediate the relationship between chronic reappraisal and related workplace outcomes (i.e. job satisfaction and burnout), it did not mediate the relationship between chronic reappraisal and CWBs as predicted. Because CWBs often involve sensitive material (Robinson & Bennett, 1995; 1997), it would seem logical that other related workplace constructs that are less threatening, specifically job satisfaction and burnout, would be more accurately reported by employees.

Limitations

There are at least eight limitations to the studies in this dissertation. First, there is the obvious limitation of same source bias that is commonly associated with having self-reported data. However, this type of self-report data is commonly used in both emotions and justice research (Gross, 2002; Colquitt, 2001). Additionally, I tried to overcome this problem by obtaining behavioral measures for retaliation in study one. Second, another concern could be that participants in the reappraisal training who did experience decreased anger and interpersonal justice perceptions only did so because of demand characteristics. However, the finding that reappraisal decreases emotional responding has also been found using a behavioral measure (e.g. the magnitude of a startle response to a loud noise burst) as an indicator of emotional state (Jackson, Malmstadt, Larson, & Davidson, 2000). Third, this dissertation uses a one-item measure for the discrete emotion of anger as well as for anger norms. While one-item measures are common in emotions research (Grandey, 2008), I did

decide to use a three-item measure of hostility in the post-hoc analyses to offer higher reliability. Fourth, this dissertation relies a great deal on scenarios in training. However, this type of training has been shown to be effective in teaching reappraisal strategies (Schartau, et al, 2009; Nelis, et al, 2009). Nevertheless, scenarios do tend to remove a great deal of the complexity experienced in interpersonal interaction (e.g. relationship history) (Dasborough & Ashkanasy, 2002). In response to this concern, in study two, I used challenging interpersonal events that are commonly experienced in animal rescue for the reappraisal training. I also collected measures of learning (i.e. multiple choice tests) as well as perceptions of training satisfaction and effectiveness. Fifth, because this dissertation's focus is on employee justice perceptions, anger, and CWBs, this dissertation does not look to examine the influence of reappraisal training on other types of workplace events. However, future research that seeks to examine the effects of reappraisal training on other, non-justice related events, would do well to explore the influence of reappraisal training on a spectrum of emotion-inducing events, including positive events. Sixth, this dissertation only tested a very specific kind of reappraisal training using two relatively small samples, thus, it is difficult to know whether the form of training is the cause of the disappointing results in study one and study two, or whether it is the fact that training emotional regulation strategies, using any type of training, would be extremely difficult. Thus, testing different types of reappraisal training may lead to very different results that what has been reported here. Seventh, this dissertation uses a behavioral test of the reappraisal training in study one that may not be representative of all interpersonal justice scenarios. However, the task has both "mundane realism" and "psychological realism" (Berkowitz & Donnerstein, 1982) such that the partner task in the laboratory setting was similar to something the participant might have experienced in a real-

world partner task and induced similar psychological states to real-world partner tasks. Additionally, study two was done using a field sample to help account for threats to external validity. Nevertheless, this was a specific type of field sample that may not generalize to other workplace samples. However, I would argue that the challenges faced in animal rescue regarding interdepartmental tensions, dealing with emotionally distraught members of the public, and challenging budgets and workloads would generalize across settings. And finally, this dissertation only tested a small number of potential moderators in the hypothesized model. As evidenced by the findings in the post-hoc analyses, another limitation of this dissertation is that it may not have accounted for all important individual differences and situational moderators that may have influenced the effectiveness of the training.

Implications

Practical Implications. The regulation of interpersonal injustice perceptions should be of great practical interest to managers and organizations. As such, there are important practical implications that can be made from these findings. First, the significant moderating effects found in study two and the post-hoc analyses would suggest that both individual difference and situational moderators may play a part in the effectiveness of emotional regulation training. Chronic use of specific emotional regulation strategies may influence the choices that employees make regarding whether they reappraise, suppress, or express negative emotions in the workplace. It is important for managers to take into account these individual differences when implementing training programs designed to change the emotional regulation strategies being used by employees. Moreover, it is also important for managers to pay attention to the context in which the training is taking place. Specifically, cultural variables and emotional expression and regulation norms may influence whether or

not employees feel that they should be regulating their negative emotions in the workplace. If employees feel as if the expression of negative emotions is desirable or accepted, their motivation to use or change regulation strategies will be weakened. A second key practical implication can be found in the post-hoc analyses. Specifically, these additional analyses revealed that chronic reappraisal (i.e. the chronic or frequent use of reappraisal strategies) was found to be negatively related to negative emotions and positively related to justice perceptions, and consequently, positively related to job satisfaction and negatively related to employee burnout. As such, another practical implication from these findings might be that chronic reappraisal may be able to function as an effective selection tool for hiring employees in emotionally demanding careers. It may also be that managers and organizations would do well to examine this individual difference when deciding placement of employees. In other words, employees high in chronic reappraisal may be better suited for the positions that demand the highest load of emotional work (e.g. front line employees, leadership positions, etc.). And finally, it may be important for managers and organizations to carefully consider training in emotional regulation strategies, as it may be costly and time consuming. Moreover, as the findings in study one and study two suggest, it may be difficult to achieve successful training results. Instead, managers and organizations may find it more fruitful to focus on understanding existing individual differences in the chronic use of certain emotional regulation strategies.

Theoretical Implications. In addition to the practical implications mentioned above, there are also at least five important theoretical contributions made by this dissertation. First, by extending work by Gross (2001) on reappraisal to the context of interpersonal justice, this dissertation contributes to organizational justice literature by adding to the justice literature's

identification of adaptive justice regulation strategies. Specifically, in the post-hoc analyses, chronic reappraisal was found to be positively related to interpersonal justice perceptions. Moreover, chronic reappraisal was found to be a significant moderator in predicting the influence of the training on peer-directed interpersonal justice perceptions. Accordingly, this dissertation is among the first to propose and find partial support for the theoretical connection between the cognitive reappraisal and the formation of employee justice perceptions.

Second, by focusing on the regulation of anger, this dissertation answers the call for continued research on discrete emotions (Grandey, 2008). Moreover, it explores how specific emotions and emotional regulation strategies influence the formation of justice perceptions. Thus, this dissertation contributes to the emotions literature by focusing on the impact of discrete emotions on justice perceptions, and it also extends work in the emotional regulation literature by exploring the impact of reappraisal on organizational outcomes. This dissertation is one of the first to explore the impact of cognitive reappraisal in a workplace setting, beyond its impact on employee emotions. Specifically, this dissertation provides evidence for a link between chronic reappraisal and interpersonal justice perceptions as well as to job satisfaction and employee burnout.

Third, this dissertation also contributes to the management literature by being one of the first to train reappraisal strategies within a workplace environment. While some emotional intelligence research has focused on training emotional regulation strategies in the workplace, there is very little research directly applying work by Gross (2001) to the management literature, specifically in the context of organizational justice. Moreover, this dissertation is among the first to explore the impact of individual difference variables and

situational variables on the effectiveness of cognitive reappraisal training. Thus, this dissertation adds to the management literature by exploring, not only the training of cognitive reappraisal, but also the influence of individual difference and situational moderators that may influence the effectiveness of this type of emotional regulation training.

Fourth, this dissertation adds to work in the emotional intelligence and leadership literatures by providing support for the importance of using adaptive emotional regulation strategies in response to stressful events. While there is evidence for the importance of having a leader that is able to effectively regulate their negative emotions, there is relatively less research in the leadership and emotional intelligence fields on how the chronic use of cognitive reappraisal may be able to influence how leaders can cognitively reframe negative events in such a way that they reduce their injustice perceptions as well as their burnout. As such, this dissertation is one of the first to explore the potential for emotional intelligence and leadership research focusing on the positive impact of chronic reappraisal, beyond leader and follower emotions.

And finally, this dissertation adds to the employee burnout and job satisfaction literatures by exploring the impact of employee chronic reappraisal on both workplace outcomes. As there is relatively little research on cognitive reappraisal in the workplace, this dissertation begins to identify the potential for chronic reappraisal to be predictive, not only of emotions and justice perceptions, but also of important workplace variables, such as employee burnout and satisfaction. Specifically, this dissertation informs both the burnout and job satisfaction literatures by exploring the mediating role that negative emotions and justice perceptions play in the relationship between the chronic use of cognitive reappraisal

and burnout and job satisfaction. In sum, this dissertation explores the mechanisms through which employee burnout and job satisfaction may be impacted by chronic reappraisal.

Future Research

Future research on reappraisal in a justice context would do well to pursue any of the following six avenues of research. First, future research could extend the work in this dissertation by examining the influence of different forms of reappraisal training on the other three dimensions of organizational justice. Theoretically, the relationship between reappraisal and justice perceptions should hold for all four dimensions, but because of the interpersonal focus of this dissertation, the other three dimensions were excluded from this stage of research on reappraisal training. Moreover, while this type of training was not particularly effective in this context, it may be that different forms of reappraisal training may be more effective for different justice dimensions.

Second, another fruitful avenue of research would be to explore the influence of reappraisal training in dyadic or group situations where the leader is trained in reappraisal in the face of justice events. This could have significant implications for leadership research by helping to provide skills to regulate group emotions. Leaders are often faced with numerous opportunities to influence the emotions or behaviors of their followers. Sy, Cote, and Saavedra (2005) argued that moods are most likely to be transmitted by leaders because group members attend to their leader's cues more often and because leaders have more opportunities to express and transmit moods. Specifically, in a recent study on charismatic leaders and mood, Bono and Ilies (2006) found that "mood contagion may be one of the psychological mechanisms by which charismatic leaders influence followers." Research on

both emotional contagion (Barsade, 2002) and justice contagion (Degoey, 2000) would suggest that it may be possible to transmit emotion regulation strategies as well.

Third, this research could be extended by examining other discrete emotions, such as guilt, which has been long associated with justice perceptions but is considered to be a more internally-focused emotion (as opposed to anger which is other-focused) (Homans, 1961). This dissertation focused on anger because of its established relationship with interpersonal justice perceptions, but recent emotions research has demonstrated the importance of studying many different discrete emotions due to their differential impact on employee behaviors. Interestingly, in the post-hoc study, anger, frustration, and irritability were all found to be related to chronic reappraisal, burnout, and job satisfaction.

Fourth, future research on reappraisal in a justice context could focus on different behaviors beyond CWBs. For example, through reducing anger and perceptions of injustice, reappraisal training may influence positive workplace behaviors such as organizational citizenship behaviors (i.e.OCBs), as well as reduce other forms of costly behavior such as turnover. While CWBs were not significantly impacted by chronic reappraisal or the reappraisal training in this study, job satisfaction and burnout were shown to have been impacted in the post-hoc analyses. Thus it is important for future research exploring emotional regulation strategies to measure a wide variety of workplace outcomes. Fifth, post-hoc analyses illustrated the potential for more research on the individual difference measure of chronic reappraisal and its impact across contexts and involving other organizational variables.

Sixth, this dissertation has begun to identify some of the important moderators that may come into play in determining the use and effectiveness of certain reappraisal strategies. Future research would do well to examine both individual difference, situational, and cultural moderators that may influence the reactions employees have to different forms of emotional regulation. It may be that cultures that rely heavily on suppression (Matsumoto, et al, 2008) have different ways of regulating emotions and justice perceptions, and consequently, experience different consequences as a result.

Conclusion

Gross (2002) argues that the use of emotion regulation is neither good nor bad. And yet, should employees who experience an unjust event just "regulate" their anger and perceptions of injustice away through the use of cognitive reframing? Are there some justice events that should not be reframed? I would argue that the answer to the above question is yes, almost certainly; however, the focus of this dissertation on understanding the potential for reappraisal to act as an adaptive regulation strategy in the workplace. Reappraisal, whether it is developed through training or is present as an individual difference variable, has the potential to positively impact much more than just emotions in the workplace. Moreover, while reappraisal is a widely accepted strategy for healthy regulation (Gross & John, 2003), there are many different potential individual difference, situational, and cultural moderators that may influence the success of reappraisal training. This dissertation is one of the first to begin to explore that potential.

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APPENDIX A: Study 1 Training Scenarios

Video Scenario One: You have come in for a meeting with your supervisor. You have concerns about new changes to the project you're working on together. She is abrupt in her response to you, and she sends you to another coworker to have your questions answered. She dismisses you almost immediately after the meeting starts.

Video Scenario Two: In this video, please visualize that you are the young blond woman in the above picture. You have come in at the end of your work day at the request of your supervisor. It's 7 pm, and your supervisor tells you she's very disappointed with your work, and that you need to redo this particular project for her by morning.

Video Scenario Three: In this video, please visualize that you are the mechanic with a ball cap in the picture above. You have just been approached by a frantic customer. The customer keeps interrupting you when you try to direct him to the front desk. He doesn't understand why you won't help him.

Video Scenario Four: In this video, please visualize that you are the middle-aged man in the above picture. You have just arrived for your presentation. Your partner is waiting for you. She seems to be less than pleased with your dress for the presentation, so she makes fun of your tie.

Video Scenario Five: In this video, please visualize that you are the young woman with the short hair and glasses in the above picture. You are excited and looking for feedback from your coworker, and she is sarcastic and dismissive of your idea.

Video Scenario Six: In this video, please visualize that you are the male waiter serving in the above picture. You are waiting on this female customer. She is frustrated with you that you brought her what she considers to be the wrong dish. You know that she asked for the "special of the day", and that was what you brought her. She blames you for the mistake.

Video Scenario Seven: In this video, please visualize that you are the male employee in the above picture. You work at a large chain phone store, and you are trying to help a customer with a broken phone. Your customer has been on the phone with customer service without success and has now come in for your help.

Video Scenario Eight: In this video, please visualize that you are the male employee in the above picture. You have come in to talk with your supervisor, and you have an important question to ask her. Your supervisor takes a personal call during your meeting while you wait.

APPENDIX B: Study 1 Measures

- **Organizational justice perceptions** were measured using Colquitt's (2001) four dimensions of justice; distributive, procedural, interpersonal, informational. All items use a five point scale ranging from (1=to a small extent, to 5=to a large extent). Items were selected and adapted to fit the partner situation.

Procedural Justice

1. Were you able to express your views to your partner during the scenario creation?
2. Could you influence the decisions you and your partner arrived at in the scenario creation?
3. Did your partner apply his/her decision making strategies consistently during the scenario creation?
4. Was your partner free of bias in his/her decision making strategies during the scenario creation?
5. Were your partner's decision-making strategies based on accurate information?
6. Were you able to disagree with the decision making strategies used by your partner?
7. Did your partner use ethical and moral decision making standards during your scenario creation?

Interpersonal Justice

1. Has he/she treated you in a polite manner?
2. Has he/she treated you with dignity?
3. Has he/she treated you with respect?
4. Has he/she refrained from improper remarks or comments?

Informational Justice

1. Has he/she been candid when communicating with you about the scenario creation?
2. Has he/she explained his/her decision-making process for the scenario creation thoroughly?
3. Were his/her explanations regarding his/her decision making processes reasonable?
4. Did he/she communicate his or her thoughts about the scenario creation in a timely manner?
5. Did he/she tailor his/her communications to meet your needs during the scenario creation?

Distributive Justice

1. Would the monetary award distribution (as reported by your partner) reflect the effort you have put into the scenario?
2. Would the monetary award distribution (as reported by your partner) be appropriate for the work you have completed?
3. Would the monetary distribution (as reported by your partner) reflect what you have contributed to your work?
4. Would the monetary award distribution (as reported by your partner) be justified, given your performance on the scenario creation?

- **Anger, and other discrete emotions** were measured using discrete emotions items from the PANAS-X (Watson & Clark, 1994). These emotions will be rated on a five-point scale that ranges from (1=very slight/not at all to 5=extremely). Participants will be asked to respond "to what extent do you feel this emotion at this moment."

Responses are obtained using a 5-point Likert-type scale where 1 = *very slight or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, and 5 = *extremely*

1. scared
2. nervous
3. irritable
4. hostile
5. guilty
6. ashamed
7. upset
8. attentive
9. determined
10. enthusiastic
11. excited
12. inspired
13. angry

- **Counterproductive Work Behaviors** Counterproductive Work Behavior Checklist survey (Spector, et al, 2006). In this dissertation items were selected for their applicability to the partner situation.

1. Purposely did tasks during the scenario creation incorrectly
2. Purposely worked slowly on the scenario creation
3. Purposely failed to follow instructions
4. Took something belonging to your partner
5. Daydreamed rather than worked on the scenario with your partner
6. Refused to take on a task when asked by your partner
7. Tried to look busy while doing nothing
8. Insulted your partner about their work on the scenario
9. Made fun of your partner
10. Ignored your partner
11. Blamed your partner for an error you made
12. Started an argument with your partner
13. Verbally abused your partner
14. Made an obscene gesture (e.g.the finger) to your partner
15. Threatened your partner, but not physically
16. Said something to your partner to make them feel bad
17. Did something to make your partner look bad
18. Refused to help your partner
19. Withheld information from your partner
20. Purposely interfered with your partner during the scenario creation

CWBs were also measured by having participants 1) rate the performance of their partner on a scale from 1 to 5 (5 being extremely well), 2) rate how much credit they would give their partner on a scale from 1 to 5 (5 being Full Credit), 3) report how they would split a $100 reward between themselves and their partner, if they were in the top ten performing pairs.

- **Demographic Variables.**

Gender: ____ male_____ female
Age: ____
Education: What is the highest level of education you have completed?
High School
Associates
Bachelors
Masters
Doctoral
Ethnicity (please check the one group you identify most closely with):

____ Euro-American/Anglo
____ Asian-American
____ Hispanic
____ Native American
____ African-American
____ Other (Please list):

- **Chronic Emotional Regulation Style** was measured using the ten-item Emotional Regulation Questionnaire, or ERQ, by Gross and John (2003). All items use a seven point scale ranging from (1=strongly disagree, to 7=strongly agree). The dissertation focused on the Chronic Reappraisal subscale.

  Instructions and Items
  We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

  1. When I want to feel more *positive* emotion (such as joy or amusement), I *change what I'm thinking about*.
  2. I keep my emotions to myself.
  3. When I want to feel less *negative* emotion (such as sadness or anger), I *change what I'm thinking about*.
  4. When I am feeling *positive* emotions, I am careful not to express them.
  5. When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.
  6. I control my emotions by *not expressing them*.
  7. When I want to feel more *positive* emotion, I *change the way I'm thinking* about the situation.
  8. I control my emotions by *changing the way I think* about the situation I'm in.
  9. When I am feeling *negative* emotions, I make sure not to express them.
  10. When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.

  Scoring (no reversals)
  Reappraisal Items: 1, 3, 5, 7, 8, 10; Suppression Items: 2, 4, 6, 9.

- **Perspective Taking.** The Interpersonal Reactivity Index (Davis, 1980) is a 28-item self-report scale that measures four different components of dispositional empathy. This dissertation focused on the perspective taking subscale, which measures an individual's tendency to adopt the perspective of other people and to see things from their point of view. All items employed 5-point Likert-type scale that ranges from "describes me very well" to "does not describe me well."

  The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

  1. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)
  2. I try to look at everybody's side of a disagreement before I make a decision. (PT)
  3. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
  4. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)
  5. I believe that there are two sides to every question and try to look at them both. (PT)

6. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
7. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE: (-) denotes item to be scored in reverse fashion
PT = perspective-taking scale

- **The the State-Trait Anger Expression Inventory-2.** The State-Trait Anger Expression Inventory-2 is a 57-item self-report measure designed by Spielberger (1999) to assess state anger, trait anger, and styles of anger expression and control. This dissertation focuses on the Trait Anger subscale. All items use a 4-point Likert-type rating scale from almost never to always.

1. I am quick tempered
2. I have a fiery temper
3. I am a hotheaded person
4. I get angry when I'm slowed down by others' mistakes
5. I feel annoyed when I am not given recognition for doing good work
6. I fly off the handle
7. When I get mad, I say nasty things
8. It makes me furious when I am criticized in front of others
9. When I get frustrated, I feel like hitting someone
10. I feel infuriated when I do a good job and get a poor evaluation

APPENDIX C: Study 1 Actor's Flexible Script

Verbal Responses to be tailored to interaction with subject:

1. "Here, you do the writing."
2. "Do you really think that's a good setting?"
3. "I think we should do something less boring/weird."
4. "I guess that could work"
5. "Really?"
6. "I mean, we want to win, right? Do you think we'll win with this?"
7. "Do you think people really experience this...like, in the real world?"
8. "We need to go faster than this"
9. *Interrupting partner with own idea (tailor to situation)
10. *Ignoring partner's idea (tailor to situation)

Nonverbal Responses

1. Skeptical raised eyebrow
2. Shrugging
3. Eye rolling
4. Dissatisfied sighing

APPENDIX D: Study 2 Training Scenarios

1. **Customer who wants to adopt an animal that isn't a good fit and gets frustrated with you.**
2. **You have to say no to a coworker in another department, and they don't understand why, and they get frustrated.**
3. **You're talking with a coworker or customer that you feel isn't listening to you.**
4. **You get interrupted in the middle of something important by a coworker asking you to do something else.**
5. **You're having a conversation with another coworker, and you feel like they aren't treating you fairly.**
6. **You're getting chewed out for something that isn't directly your fault.**

APPENDIX E: Study 2 Measures

- **Organizational justice perceptions** were measured using Colquitt's (2001) four dimensions of justice; distributive, procedural, interpersonal, informational. All items use a five point scale ranging from (1=to a small extent, to 5=to a large extent). Items were selected and adapted to fit the workplace environment. **Over the last two weeks, to what extent:**

  Interpersonal Justice (asked three times for supervisor/peers/coworkers)

  The questions below refer to the way your supervisor/peers/customers treated you during your interactions.

  1. Treat you with dignity and respect?
  2. Refrain from improper remarks or comments?

  Procedural Justice

  The questions below refer to the procedures (i.e. decision making processes) your supervisor used to make decisions about the outcomes you received (e.g. rewards, feedback, assignments).

  1. Were you able to express your views during those procedures (decision making processes)?
  2. Could you influence the decisions arrived at by those procedures (decision making processes)?
  3. Were those procedures (decision making processes) applied consistently and without bias?
  4. Were those procedures (decision making processes) based on accurate information?

  Informational Justice

  The questions below refer to the explanations and communications your supervisor gave you about decision-making procedures used to determine your outcomes.

  1. Has he/she explained decision-making procedures thoroughly?
  2. Were his/her explanations regarding procedures reasonable?
  3. Has he/she communicated details in a timely manner?

  Distributive Justice

  The questions below refer to the outcomes you receive from your supervisor on your job, such as rewards (formal (e.g. pay) or informal (e.g. praise), feedback, assignments, etc.)

  1. Did those allocated outcomes (e.g. rewards, feedback, assignments) reflect the effort you have put into your work?
  2. Were those allocated outcomes (e.g. rewards, feedback, assignments) appropriate for the quality/performance level of the work you have completed?

- **Anger, and other discrete emotions** were measured using discrete emotions items from the PANAS-X (Watson & Clark, 1994). These emotions will be rated on a five-point scale that ranges from (1=very slight/not at all to 5=extremely). Participants will be asked to respond "to what extent do you feel this emotion at this moment."

Responses are obtained using a 5-point Likert-type scale where 1 = *very slight or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, and 5 = *extremely*

1. scared
2. nervous/anxious
3. irritable
4. frustrated
5. guilty
6. upset/sad
7. enthusiastic
8. inspired
9. angry
10. proud
11. disgusted

- **Counterproductive Work Behaviors** Counterproductive Work Behavior Checklist survey (Spector et al, 2006). In this dissertation items were selected for their applicability to the workplace situation.

1. Purposely waste your employer's materials/supplies
2. Purposely dirty your place of work
3. Come to work late without permission
4. Stay home from work and say you are sick when you aren't
5. Take longer breaks or leave work earlier than you are allowed to
6. Purposely do your work incorrectly
7. Purposely work slowly when things need to get done
8. Take supplies or tools home without permission
9. Refuse to take on a task when asked
10. Try to look busy while doing nothing
11. Tell people outside the job what a lousy place you work for
12. Be rude to someone at work
13. Ignore someone at work
14. Start an argument with someone at work
15. Purposely interfere with someone at work doing his/her job

- **Demographic Variables.**

Gender: ____ male_____ female
Age: ____
Tenure:
Department:
Education: What is the highest level of education you have completed?
High School
Associates
Bachelors
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Ethnicity (please check the one group you identify most closely with):
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  6. I control my emotions by *not expressing them*.
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  Scoring (no reversals)
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  8. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)
  1. I try to look at everybody's side of a disagreement before I make a decision. (PT)
  2. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
  3. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)
  4. I believe that there are two sides to every question and try to look at them both. (PT)
  5. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
  6. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

  NOTE: (-) denotes item to be scored in reverse fashion
  PT = perspective-taking scale

- **Strength of Interpersonal Justice Norms** Adapted from Colquitt's (2001) measure of interpersonal justice, but participants will be asked to respond generally about treatment in their organization. All items use a five point scale ranging from (1=to a small extent, to 5=to a large extent).

  The questions below refer to the way *supervisors* in your organization treat employees during their interactions. To what extent to *supervisors* generally:

  1. Treat employees in a polite manner?
  2. Treat employees with dignity?
  3. Treat employees with respect?
  4. Refrain from improper remarks or comments?

- **Strength of Anger Expression Norms** Adapted from Eid and Diener's (2001) measurement of norms for emotions in different cultures. The instructions read, "In the following question we would like you to indicate how appropriate or desirable it is to experience certain emotions in your workplace. Please use the following scale to give your answer to each emotion (Eid & Diener, 2001; 873)."

  (1=extremely desirable and appropriate, desirable and appropriate, slightly desirable and appropriate, neutral, slightly undesirable and inappropriate, undesirable and inappropriate, and 7=extremely undesirable and inappropriate).

  1. angry

- **The State-Trait Anger Expression Inventory-2.** The State-Trait Anger Expression Inventory-2 is a 57-item self-report measure designed by Spielberger (1999) to assess state anger, trait anger, and styles of anger expression and control. All items use a 4-point Likert-type rating scale from almost never to always. This dissertation focused on the Trait Anger subscale.

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  5. I feel annoyed when I am not given recognition for doing good work
  6. I fly off the handle
  7. When I get mad, I say nasty things
  8. It makes me furious when I am criticized in front of others
  9. When I get frustrated, I feel like hitting someone
  10. I feel infuriated when I do a good job and get a poor evaluation

- **NEO Personality Survey; Study Two Control Condition** (Costa Jr. & McCrae, 1992)

1. I am not a worrier.
2. I like to have a lot of people around me.
3. I don't like to waste my time daydreaming.
4. I try to be courteous to everyone I meet.
5. I keep my belongings clean and neat.
6. I often feel inferior to others.
7. I laugh easily.
8. Once I find the right way to do something, I stick to it.
9. I often get into arguments with my family and co-workers.

10. I'm pretty good about pacing myself so as to get things done on time.
11. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
12. I don't consider myself especially "light-hearted."
13. I am intrigued by the patterns I find in art and nature.
14. Some people think I'm selfish and egotistical.
15. I am not a very methodical person.
16. I rarely feel lonely and blue.
17. I really enjoy talking to people.
18. I believe letting students hear controversial speakers can only confuse and mislead them.
19. I would rather cooperate with others than compete with them.
20. I try to perform all the tasks assigned to me conscientiously.
21. I often feel tense and jittery.
22. I like to be where the action is.
23. Poetry has little or no effect on me.
24. I tend to be cynical and skeptical of others' intentions.
25. I have a clear set of goals and work toward them in an orderly fashion.
26. Sometimes I feel completely worthless.
27. I usually prefer to do things alone.
28. I often try new and foreign foods.
29. I believe that most people will take advantage of you if you let them.
30. I waste a lot of time before settling down to work.
31. I rarely feel fearful or anxious.
32. I often feel as if I'm bursting with energy.
33. I seldom notice the moods or feelings that different environments produce.
34. Most people I know like me.
35. I work hard to accomplish my goals.
36. I often get angry at the way people treat me.
37. I am a cheerful, high-spirited person.
38. I believe we should look to our religious authorities for decisions on moral issues.
39. Some people think of me as cold and calculating.
40. When I make a commitment, I can always be counted on to follow through.
41. Too often, when things to wrong, I get discouraged and feel like giving up.
42. I am not a cheerful optimist.
43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
44. I'm hard-headed and tough-minded in my attitudes.
45. Sometimes I'm not as dependable or reliable as I should be.
46. I am seldom sad or depressed.
47. My life is fast-paced.
48. I have little interest in speculating on the nature of the universe or the human condition.
49. I generally try to be thoughtful and considerate.
50. I am a productive person who always gets the job done.
51. I often feel helpless and want someone else to solve my problems.
52. I am a very active person.
53. I have a lot of intellectual curiosity.
54. If I don't like people, I let them know it.
55. I never seem to be able to get organized.
56. At times I have been so ashamed I just wanted to hide.
57. I would rather go my own way than be a leader of others.
58. I often enjoy playing with theories or abstract ideas.
59. If necessary, I am willing to manipulate people to get what I want.
60. I strive for excellence in everything I do.

Post-Hoc Measures

- **Burnout** Adapted from Maslach and Jackson, 1981. Items were rated on a 5-point scale from strongly disagree to agree.

    1. I feel emotionally drained from my work.
    2. I feel fatigued when I get up in the morning and have to face another day on the job.
    3. I feel frustrated by my job.
    4. I feel I'm working too hard on my job.

- **Job Satisfaction** Adapted from Cook, Hepworth, Wall, and Warr (1981) Items were rated on a 5-point scale from completely satisfied to completely unsatisfied

    1. All in all, how satisfied are you with the persons in your work group?
    2. All in all, how satisfied are you with your supervisor?
    3. All in all, how satisfied are you with your job?
    4. All in all, how satisfied are you with this organization, compared to most?
    5. Considering your skills and the effort you put into your work, how satisfied are you with your pay?
    6. How satisfied do you feel with the progress you have made in this organization up to now?
    7. How satisfied do you feel with your chance for getting ahead in this organization in the future

APPENDIX F: Study 2 Diary Instructions

Please enter your password here:

1. The first two letters of your first pet's name
2. The day of your birthday
3. The last two letters of the city where you were born

Recap of the 4 Reappraisal Strategies:

1. Broader perspective:

Take a step back from what's going on in front of you. Shift your perspective

2. Every cloud has a silver lining:

There are usually some good aspects to every situation, and it is important to focus on these.

3. Time heals:

In the (near) future, this will not seem anywhere near as bad as it does now.

4. Bad things happen:

Bad things happen in the world, and I need to put them behind me and move on in a positive direction

Tell me about a challenging interaction you had with another person today?

How did you use the reappraisal strategies you learned in your training session to help you neutralize your negative thoughts and emotions?

If you didn't use one of the strategies (don't despair!) :), but how might you have been able to use them in this situation?

VITA

Erica Christine Holley was born in Austin, Texas and currently resides in Kirkland, Washington with her husband. In 2006, she earned her Bachelor of Science in Business Administration at the University of Nebraska-Lincoln. After many long years, Erica received her Doctor of Philosophy in Management at the University of Washington in 2012.