

BEING FORGIVEN

by

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DECLARATION

I hereby declare that this thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis.

This thesis has also not been submitted for any degree in any university previously.



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14th October 2013

ABSTRACT

There has been an increasing interest in the topic of forgiveness in the recent years. However, till now, the bulk of research has looked at forgiveness from the victims' perspective. Hence, in my dissertation, I seek to contribute to the literature by looking at forgiveness from the perspective of the offenders – that is, the notion of *Being-Forgiven* or *Forgiven-ness*.

As we know, forgiveness is relevant against a backdrop of transgressions and errors (transgressions and errors will be referred to as 'mistakes' for the sake of brevity). In general, when people commit mistakes, negative outcomes usually follow. In my dissertation, I examine if the offenders' experience of *being-forgiven* for their mistakes may lead to a reduction in their negative emotions; furthermore, I examine if offenders' experience of being-forgiven may also lead them to experience positive outcomes – outcomes with a human flourishing flavor. Specifically, I examine three types of human flourishing outcomes – the emotional aspects of gratitude and happiness, the behavioral/social aspect of prosocial behavior, and the cognitive aspect of creativity. Furthermore, I examine if offenders' emotion states may be a mediating mechanism that underlies the relationship between their experience of forgiveness and their prosocial behavior and creativity. My proposed framework is tested on two types of mistakes – work errors and interpersonal transgressions. An experiment and a survey are conducted to test my hypotheses and proposed framework.

Results of my empirical studies converge to show that perceived mistake severity and the extent to which offenders have been forgiven for their mistakes have no effect on their creativity. That is, my experiment and survey show that offenders' experience of being-forgiven does not lead them toward cognitive-based human flourishing outcomes.

Within the context of work errors, my experiment shows that offenders' experience of being-forgiven removes the effect of perceived mistake severity on fear; however, it does not lead to any social- and emotion-based human flourishing outcomes.

Within the context of interpersonal transgressions, my survey shows that the extent to which offenders have been forgiven for their transgressions is positively related to their feelings of gratitude and happiness; furthermore, when offenders have been forgiven for severe transgressions (as compared to that of slight transgressions), they feel even more gratitude and happiness. This pattern of findings resonates with an emotion-based human flourishing story. In addition, my survey shows that offenders' experience of being-forgiven for their transgression leads them to feel guilt and shame at levels that are commensurate with the amount of harm that they had inflicted on their victims, thus yielding within them a sensitive emotional moral barometer – which may be a form of optimal human functioning. Through its effect on offenders emotions (gratitude, happiness, shame, and guilt), the joint effects of offenders' perception of transgression severity and of the extent to which they have been forgiven indirectly influence their prosocial behavior – a behavioral or social form of human flourishing.

In sum, my dissertation shows that offenders' experience of being-forgiven for work errors does not lead them to experience any human flourishing outcomes; by contrast, offenders' experience of being-forgiven for interpersonal transgressions leads them to experience emotion-based and social-based human flourishing/optimal human functioning outcomes.

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BEING FORGIVEN

'Blessed is he whose transgression is forgiven, whose sin is covered' (Psalm 32:1, New King James Version Bible)

In 1943 at a concentration camp, a Nazi soldier summoned a Jew to his bedside. On his deathbed, the Nazi soldier asked the Jew for forgiveness; he asked the Jew to forgive him for the transgressions that he had committed against other Jews during the World War II. This Jew – Wiesenthal – later wrote a book, entitled *'The sunflower: On the possibilities and limits of forgiveness'*. Using this scenario – this personal encounter – as a prelude to a symposium, Wiesenthal poses the question 'what would you have done if you were in my shoes; would you, as a victim, have offered forgiveness to the Nazi soldier'? And yet, this scenario, which served as a provocative prelude to the discourse on forgiveness among numerous eminent people, illustrates the importance of forgiveness not only from the victim's perspective, but also from the offender's perspective. Indeed, what else can be as important as a person's dying request?

Although originating from the fields of theology and philosophy (Murphy, 2003; North, 1987; Rye et al., 2000), forgiveness research has gained increasing popularity in the fields of psychology and organizational behavior (e.g., Aquino, Tripp, & Bies, 2006; Bradfield & Aquino, 1999; Crossley, 2009; Enright, 2001; Fehr, Gelfand, & Nag, 2010; McCullough, Worthington, & Rachal, 1997). However, till now, the bulk of forgiveness research examines forgiveness from the victims' (i.e., the forgivers') perspective; precious little research has examined forgiveness from the perspective of the offenders. Yet, as highlighted in the preceding story, the offenders' experience of being forgiven for their mistakes, errors, and transgressions is also important. Moreover, if we are to truly understand the whole phenomenon of forgiveness, we need to examine forgiveness not only from the victims' perspective, but also from the offenders'

perspective. Indeed, the whole meaning and experience of forgiveness cannot be studied apart from the offenders' input about being forgiven as this will have implications on the dyadic interpersonal interactions between the offenders and victims (Kelley, 1998; Strelan & Covic, 2006). Thus, a holistic view of forgiveness necessitates more forgiveness studies to be conducted from the perspective of the offenders.

Hence, my dissertation seeks to fill this crucial gap and contributes to the literature by examining *forgiveness from the offenders' perspective* – that is, the notion of ***Being-Forgiven*** or ***Forgiven-ness***. Stated precisely, ***Forgiven-ness*** refers to '*offenders' perception of the extent to which they have been forgiven by their victims for their mistakes, errors, or transgressions*'.

To elaborate, forgiveness is relevant against a backdrop of mistakes, errors or transgressions. Examples of transgressions include trust violation, unfairness, abuse, incivility, mistreatment, counter-productive work behaviors (Chan, 2009; Chan & Arvey, 2011; Chan & McAllister, 2014; Greenberg, 2006; Hall & Fincham, 2008; Hershcovis & Barling, 2010; Klass, 1978; Lewicki, 1983; Lewicki & Bunker, 1996; Lim & Cortina, 2005; Robinson & Bennett, 1995; Tepper, 2007). Examples of errors include work errors, improper implementation of protocols, among others (Berlinger, 2005; van Dyck et al. 2005; Zhao & Olivera, 2006). In general, mistakes, errors and transgressions occur when individuals have 'fallen short' of a standard or obligation (Berlinger, 2005). In my dissertation, the generic term '*mistake*' is employed to refer to error and transgression for the sake of brevity.

Within the context of mistakes – whether they are transgressions or errors – individuals who have committed mistakes will typically experience bad outcomes – for example, these offenders may experience guilt and fear; they may ruminate about their mistakes, which may in turn lead to lowered work performance and detrimental psychological well-being. In my

dissertation, I investigate if offenders’ experience of being forgiven for their mistakes may lead to a reduction in some of these negative outcomes. Of greater importance, I further explore the question of whether offenders’ experience of being forgiven for mistakes may also lead them to experience positive outcomes – in particular, human flourishing or optimal human functioning outcomes. If the answer to this question is ‘yes’, then it shows that mistakes can paradoxically lead to human flourishing – if offenders have been forgiven for the mistakes. Indeed, this reflects the transformative power of forgiveness for the offenders. Furthermore, I examine if an emotion-based mechanism underlies the relationship between offenders’ experience of forgiveness and some of their human flourishing/optimal human functioning outcomes. Figures 1 and 2 depict the frameworks for my dissertation.

Insert Figures 1 and 2 about here

Following, I provide an overview of my dissertation: first, I explicate the definition and nature of the Forgiven-ness construct. Second, I review the existing literature on the consequences of offenders’ experience of being-forgiven – the focus of my dissertation. Third, I elaborate on the theoretical underpinnings for my hypotheses and frameworks. Fourth, I give an account of my empirical studies before ending with a general discussion of my dissertation.

LITERATURE REVIEW: DEFINITION AND NATURE OF FORGIVENESS

Prelude: Forgiveness from the Victims’ Perspective

Various definitions of forgiveness have been proposed by prominent scholars – McCullough, North, Enright, Finkel – to name a few. Since most of the research on forgiveness within the organizational behavior and psychology fields have been conducted from the victims’

perspective, existing definitions of forgiveness have mostly adopted the victims' standpoint. Hence, as a prelude, I provide a brief overview of the forgiveness construct from the victims' standpoint, before elaborating on the forgiveness construct from the offenders' standpoint – that is, the *Being-Forgiven* or *Forgiven-ness* notion, which is the focus of my dissertation.

At a specific level, McCullough et al. (1997) refers to forgiveness as a transformation in a victims' motivation, such that there is a reduction in revenge motivation, reduction in avoidance motivation, and an increase in the motivation to have benevolence or goodwill toward their offenders. At a broader level, Enright and the Human Development Study Group (1996) define forgiving as “a willingness to abandon one's right to resentment, condemnation, and subtle revenge toward an offender who acts unjustly, while fostering the undeserved qualities of compassion, generosity, and even love toward him or her” (pp. 108). In this definition, forgiveness involves a *transformation* of the victims' feelings, thoughts, and behavior toward their offenders *from being negatively-* to *being positively-valenced* – that is, a transformation from having a negative attitude to having a positive attitude toward their offenders. Also at a broad level, researchers define forgiveness as the cancellation of interpersonal debt that has arisen from transgressions (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Stanley, 1991; Wallace, Exline, & Baumeister, 2008).

Researchers have also demarcated the scope of the forgiveness construct by noting what forgiveness is not. First, forgiveness is not condoning (Enright, 2001; Exline, Worthington, Hill, & McCullough, 2003; Worthington, 2009) since the notion of forgiveness is relevant only when people recognize that a wrong has been committed. Second, forgiveness is not forgetting (Enright, 2001; Exline et al., 2003). That is, forgiveness does not require the victims to forget about the mistakes; rather, it merely requires that the victims do not continue to regard their

offenders only in light of the mistakes (Enright and the Human Development Group, 1996) – for example, the victims see more human value and worth in their offenders than the mistakes that they had committed (Murphy & Hampton, 1988; Smedes, 1996). Third, forgiveness does not imply reconciliation, although it can facilitate reconciliation (Enright, 2001; Exline et al., 2003; Worthington, 2009). Fourth, forgiveness does not preclude punishment; the only caveat is that the punishment must not be motivated by a vengeance goal as this implies that the victims have not forgiven their offenders yet (Murphy, 2003). That is, the offenders may be forgiven by the victims and yet still receive punishment – this punishment may be in line with the goal of legal justice, goal of rehabilitation, or any goal other than to quench the victims’ thirst for vengeance (Murphy, 2003).

Forgiveness from the Offenders’ Perspective: Being-Forgiven or Forgiven-ness

Forgiveness, as defined in the preceding section, pertains to the victims’ standpoint. What about forgiveness from the standpoint of the offenders – the focus of my dissertation? From the offenders’ perspective, forgiveness is relevant when they have committed a mistake (i.e., which includes error and transgression in my dissertation), whether the mistake was intended or not (Enright, 2001; Smedes, 1996). According to Enright and the Human Development Group (1996), offenders experience and perceive forgiveness when they deem that their victims have ceased negative feelings, thoughts and behaviors toward them, and have replaced these with positive feelings, thoughts and behaviors toward the offenders. However, Enright and the Human Development Group clarify that not all six aspects need to be met in order for offenders to be considered forgiven; the offenders may receive varying degrees of forgiveness. Offenders also perceive that they have been forgiven by their victims when they deem that their victims have

cancelled the interpersonal debt (arising from the mistakes) against them or has ‘let go of the mistake’ – this is in line with other researchers’ broader definition of victim forgiveness-giving (e.g., Finkel et al., 2002; Stanley, 1991).

In my dissertation, the definition of Being-Forgiven or Forgiven-ness incorporates Enright and colleagues’ (1996) definition as well as the notion of ‘interpersonal debt cancellation’ (e.g., Finkel et al., 2002). To reiterate, **Forgiven-ness** refers to ‘*offenders’ perception of the extent to which they have been forgiven by their victims for their mistakes, errors, or transgressions*’ in my dissertation.

Next, I would like to highlight four characteristics of the Forgiven-ness construct. First, as noted in the preceding paragraph, offenders’ perception of being forgiven for their mistakes exist on a continuum (Enright and the Human Development Group, 1996) – that is, Forgiveness can be conceived of as a continuous variable, rather than as a binary forgiven-versus-unforgiven variable. Second, as a perceptual construct, Forgiven-ness is a unitary, global construct that taps offenders’ perception of their victims’ forgiveness (or the lack of it). Third, the Forgiven-ness construct pertains only to the offenders perceiving and receiving forgiveness from their victims – the scope of my Forgiven-ness construct does not extend to the offenders seeking forgiveness from their victims. Indeed, Ashby (2003) noted that “Those who are “seeking forgiveness” do not yet have a sense that they have been forgiven. They are seeking forgiveness that has not yet been offered” (pp. 144).

Lastly, the offenders’ Forgiven-ness experience is studied as a state construct in my dissertation. The reason for this pertains to the malleability of the victims’ forgiveness. Specifically, researchers have noted that victims’ forgiveness may be malleable – for example, victims may sometimes have transient experiences of forgiveness (temporary forgiveness;

McCullough, Fincham, & Tsang, 2003); victims may sometimes decide to forgive their offenders and yet experience recurring negative emotions (e.g., anger) (Karremans & van Lange, 2010; Merolla, 2008; Smedes, 1996; Zechmeister & Romero, 2002). This has led some researchers to describe forgiveness as not being under the victims' complete control (Karremans & van Lange, 2010). The malleability of victims' forgiveness will have corresponding implications on the offenders' Forgiveness experience and perception, as the victims' forgiveness (or the lack of it) will be implicitly or explicitly communicated to their offenders through their social interactions. Therefore, the offenders' Forgiveness experience and perception may change – corresponding to the changes in the victims' expressions of forgiveness. In other words, the offenders' Forgiveness experience may not necessarily be permanent – it may change as the offenders interact with their victims. Thus, the malleability of victims' forgiveness suggests that it will be expedient to regard offenders' Forgiveness perception as a *state* construct. The Forgiveness construct is therefore studied as a state construct in my dissertation.

Consequences of Being-Forgiven

In general, existing research has investigated the emotional and behavioral consequences of offenders' being-forgiven experience. First, research shows that offenders' experience of being forgiven for their mistakes may give rise to emotional consequences. For example, research shows that the experience of being forgiven for their mistakes may lead offenders to feel happiness and relief (Gassin, 1998). Using an imagery methodology, Witvliet and colleagues (Witvliet, Ludwig, & Bauer, 2002) asked their subjects to imagine seeking forgiveness from someone that they had actually hurt previously, and then imagine their victims' responses to them. This study shows that subjects who imagined that their victims forgave them experienced

less shame, less guilt, less fear, and more gratitude (as compared to those who imagined that their victims did not forgive them).

Second, research shows that offenders' experience of being forgiven for their mistakes may also give rise to behavioral outcomes. One of the most important behavioral outcomes that forgiveness researchers are concerned with is offender repentance versus reoffending/recidivism. The empirical evidence shows the following: first, research shows that when subjects have been forgiven for their mistakes, they are less likely to offend again, they have greater repentance, and they desire not to hurt their victims again (Gassin, 1998; Struthers, Eaton, Shirvani, Georghiou, & Edell, 2008; Wallace et al., 2008). However, McNulty's (2010) study shows contradictory findings. Specifically, McNulty's study shows that as compared to times when individuals are not forgiven for negative behaviors, the times when they are forgiven for negative behaviors led to more negative behaviors subsequently. These inconsistent findings caution us against making strong conclusions about the effect of forgiveness on offenders' subsequent behaviors.

In addition, research shows that when offenders perceive that their victims have forgiven them, the offenders' self-forgiveness increases (Hall & Fincham, 2008). Research also suggests that after receiving forgiveness for their mistakes, offenders may feel free to offer forgiveness to others who have transgressed against them (Gassin, 1998; Smedes, 1996; Worthington, 2009).

Will being forgiven for mistakes lead to human flourishing?

In my dissertation, I seek to extend the research on the consequences of offenders' experience of being forgiven for their mistakes. Specifically, I pose the question: when offenders have been forgiven for their mistakes, more than a reduction in negative outcomes (e.g., reduction in negative affect and psychopathology), is it also possible that this being-forgiven experience will lead to positive outcomes for the offenders? In my dissertation, I examine if and

how offenders' experience of being forgiven for their mistakes may also lead them toward human flourishing/optimal human functioning outcomes. Specifically, I examine prosocial behavior, creativity, gratitude and happiness as (respectively) behavioral/social, cognitive, and emotional aspects of human flourishing in my dissertation. To elaborate, prosocial behavior refers to actions which are performed to benefit another person (Eisenberg, 1991), and is a social approach behavior (von Dawans, Fischbacher, Kirschbaum, Fehr, & Heinrichs, 2012).

Creativity involves the generation of novel ideas/products that are valuable and useful (Hennessey & Amabile, 2010; Mumford & Gustafson, 1988; Sternberg & Lubart, 1999). Creativity is needed for problem-solving and is an aspect of optimal human functioning (Simonton, 2000). In general, some cognitive processes that are involved in creativity are divergent thinking process, associative process (e.g., forming connections among various ideas), and transformative process (e.g., processes of restructuring information, redefining categories) (Baas, De Dreu, & Nijstad, 2008; Guilford, 1962).

A popular measure of creativity is the divergent thinking test (Plucker & Renzulli, 1999). In general, the divergent thinking test requires subjects to generate multiple ideas within a set duration of time (Hennessey & Amabile, 2010; Mumford & Gustafson, 1988). An example of a widely used divergent thinking test is the Alternate Uses Test (Simonton, 2005; Sternberg & Lubart, 1999), which requires subjects to think of as many uses for an object (e.g., a brick, paper clip) as possible. Divergent thinking tests are then scored for fluency, flexibility, and originality (Sternberg & Lubart, 1999). Specifically, fluency refers to the number of non-redundant ideas that subjects generate; flexibility indicates the number of different response categories that subjects' ideas span (which reflects the diversity of ideas); and originality pertains to the unusualness of ideas that are generated (Baas et al., 2008; Runco, 2004).

The emotional aspects of human flourishing are addressed in the next section. Furthermore, I examine if offenders' state emotions may be a mediating mechanism that underlies the relationship between their experience of forgiveness and their human flourishing outcomes of creativity and prosocial behavior. Before doing so, I will provide an overview of the emotions literature.

Emotions

Emotions are triggered by events (Frijda, 1986; Weiss & Cropanzano, 1996). However, not all events can elicit emotions; only events that are personally significant and meaningful can trigger people's emotions (Frijda, 1986; Lazarus, 1991). To elaborate, events that have personal significance for people are first appraised in terms of their positivity versus negativity for them – specifically, emotions are appraised according to benefit versus harm, good versus bad, favorable versus unfavorable to the attainment of people's goals, pleasant versus unpleasant (Frijda, Kuipers, & ter Schure, 1989; Lazarus, 1991; Shaver, Schwartz, Kirson, & O'Connor, 1987). In general, events that are appraised positively (e.g., beneficial events, favorable/pleasurable events) will activate positive emotions, while events that are appraised negatively will activate negative emotions.

At a more subordinate/elaborate level in the emotion hierarchy (Shaver et al., 1987), different appraisal patterns lead to different discrete emotions (Lazarus, 1991). For example, people's appraisal of threat leads to the emotion of fear (Frijda, 1986; Shaver et al., 1987), people's appraisal that they have failed to meet their standards and obligations leads to the self-evaluative emotions of guilt and shame (Tangney & Dearing, 2002; Tangney, Stuewig, & Mashek, 2007; Baumeister, Stillwell, & Heatherton, 1994); people's appraisal that they have

received a benefit from others may activate the gratitude emotion (McCullough, Kilpatrick, Emmons, & Larson, 2001).

Researchers further posit that emotions can be distinguished from one another not only according to their appraisal patterns, but also according to their action tendencies/readiness (Frijda, 1986; Frijda et al., 1989, Lazarus, 1991; Shaver et al., 1987). For example, the action tendency of fear is flight/avoidance and self-protection; fear is also associated with freezing/immobilization and behavioral inhibition (Frijda, 1986; Gray, 1990; Izard & Ackerman, 2000; Kish-Gephart, Detert, Trevino, & Edmonson, 2009; Lazarus, 1991). In shame, people feel like hiding, “disappearing from view”; shame may thus be associated with an avoidance/withdrawal tendency (Frijda et al., 1989; Kim, Thibodeau, & Jorgensen, 2011; Sheikh & Janoff-Bulman, 2010; Roseman, Wiest, & Swartz, 1994; Tangney et al., 2007). In guilt, people are motivated to make reparations for their bad action or inaction – as such, guilt may be construed to have an approach tendency (Baumeister et al., 1994; Kim et al., 2011; Sheikh & Janoff-Bulman, 2010; Tangney, 1991; Tangney et al., 2007). When people experience gratitude, they are more likely to behave prosocially toward their benefactor and other third parties (McCullough et al., 2001). The experience of joy is associated with an approach tendency, as well as cognitive and social expansiveness (Fredrickson, 2001; Frijda et al., 1989; Lazarus, 1991; Shaver et al., 1987). As can be seen, emotions, in general, activate either the *approach* or *avoidance* tendencies. Indeed, researchers observe that positive emotions are generally associated with the approach tendency, while negative emotions are generally associated with the avoidance tendency (Carver & White, 1994). Of course, there are exceptions to this – for example, the negative emotion of guilt is associated with an approach tendency. In my

dissertation, the experience of committing mistakes and the experience of being forgiven for their mistakes are events that will trigger offenders' emotions.

The Mistake- and Being-Forgiven-Events and the Emotion-based Mechanism

Effect of Mistake- and Being-Forgiven-events on negative emotions

Committing mistakes is an event that will trigger offenders' negative emotions (Zhao, 2011). In general, research shows that committing mistakes – be it work errors or transgressions – may lead offenders to experience fear, shame, and guilt (Berlinger, 2005; Delbanco & Bell, 2007; Hall & Fincham, 2005; Zhao & Olivera, 2006). Specifically, having committed a mistake (e.g., interpersonal transgression), offenders may anticipate that their victims will try to get even with them or anticipate some form of punishment – this threat appraisal will activate their fear emotion (Frijda, 1986). Also, committing mistakes, whether through action or inaction, essentially implies that the offenders and their behaviors have 'fallen short' of their standard or obligations (Berlinger, 2005), which will in turn elicit their self-conscious moral emotions of shame and guilt (Berlinger, 2005; Hall & Fincham, 2005; McGraw, 1987; Tangney et al., 2007).

To clarify, although shame and guilt may be triggered by the same event, they are distinct emotions (Lewis, 1971). Essentially, while shame involves a negative evaluation of the self (i.e., that the self is unworthy), guilt involves a negative evaluation of the behavior (Tangney & Dearing, 2002). That is, the object of evaluation is *the self* when shame is experienced; the object of evaluation is *the behavior* when guilt is experienced (Lewis, 1971; Tangney, 1991). In general, *the greater the offenders' perception of mistake severity, the greater will be their feelings of fear, shame, and guilt.* I elaborate on each emotion in turn.

Fear

Having committed mistakes, offenders may anticipate that retaliation or punishment may befall them (e.g., their victims may get even with them) – this threat appraisal will then elicit the emotion of fear within the offenders (Frijda, 1986). Furthermore, the greater the offenders' mistakes (e.g., the more severely that the offenders have transgressed against or hurt their victims), the more retaliation/punishment the offenders would anticipate, and thus the greater the offenders' fear will be. Therefore, offenders' perception of mistake severity (i.e., perceived mistake severity) is positively related to offenders' fear.

When individuals experience fear, they will experience a high level of arousal and feel their hearts pound very quickly (Frijda, 1986; Roseman, 2008). The action tendency of fear is primarily avoidance – associated with the action readiness of flight or freezing (Frijda, 1986; Izard & Ackerman, 2000; Kish-Gephart et al., 2009). Indeed, Gray (1990, 1994) proposed that signals of punishment will activate the behavioral inhibition system (BIS) or the fight/flight system (FFS) – both of which are linked to fear (Carver & White, 1994). The operation of the BIS will in turn lead to behavior inhibition (e.g., individuals may be inhibited from moving toward their goals; Carver & White, 1994; Gray, 1990, 1994) – this observation is in line with the proposition that fear is associated with an avoidance tendency.

In addition, the operation of the BIS may lead to increased arousal and increased attention (Gray, 1990, 1994) – however, these responses are mainly directed towards the source of threat or threat-related information. Similarly, Izard and Ackerman (2000) note that fear leads to a narrowing of individuals' attentional focus only toward the source of threat.

The behavioral inhibition or the avoidance tendency that is associated with fear may then lead to a reduction in prosocial behavior (a behavior which calls for a social approach

orientation; von Dawans et al., 2012). Another plausible reason that fear may lead to reduced prosocial behavior is: when individuals experience fear, their attention may be so focused on the threatening source that they have little available attentional resources for other tasks (e.g., prosocial behavior) (Öhman, 2000).

The experience of fear may also lead to less creativity. A reason for this is: when individuals are fearful, their attention is oriented toward the threat-related source and information – the dedication of attention towards threat-related information leaves them with less available resources for creativity task, thus leading to reduced creative performance (e.g., Öhman, 2000). Indeed, Izard and Ackerman (2000) have even described fear as leading to “tunnel vision”, since fearful people’s attentional focus is narrowed toward the source of threat only. This narrowing of cognitive attention will in turn lead to less cognitive flexibility, and thus less creativity (Baas et al., 2008). Moreover, that fear is associated with the avoidance tendency may be another plausible reason that fear leads to less creativity. Indeed, Baas et al.’s meta-analysis shows that fear, an emotion with an avoidance tendency and high activation level, tends to be associated with less creativity. In sum, committing mistakes may lead offenders to experience fear, which will in turn lead to low prosocial behavior and creativity.

Attenuation of fear

However, offenders’ experience of forgiveness from their victims implies that their victims have let go of the offenders’ mistakes and have cancelled the interpersonal debt against them – that is, their victims will not get even with them or no retaliation will be forthcoming from their victims (Gassin, 1998; Gray, 1990). This appraisal that the threat of retaliation has been removed will lead to a reduction in offenders’ fear emotion. Indeed, research shows that

offenders' experience of being forgiven for their mistakes leads them to feel relief (Frijda et al., 1989; Gassin, 1998; Gray, 1990; Shaver et al., 1987).

Of greater interest in my dissertation, since the notion of being-forgiven for mistakes implies that the victims have cancelled the interpersonal debt and will not get even with the offenders, in this case, no matter how big or small the offenders' mistakes is, this will have little effect on their feeling of fear (since their fear will be removed as no retaliation is forthcoming from the victims anyway). That is, the offenders' experience of being forgiven for their mistakes may attenuate the positive relationship between their perception of mistake severity and fear.

When fear is reduced, the avoidance action tendency will correspondingly be reduced, which will in turn counter the decrement in the offenders' prosocial behavior and creativity – in other words, the offenders' prosocial behavior and creativity will be higher when there is a reduction in their feeling of fear. Furthermore, because the victims are no longer a source of threat to the offenders as they have forgiven the offenders, the offenders' attention no longer need to be consumed by the threat, thus leaving the offenders with more cognitive attentional resources for other concerns, which may lead to an increase in their prosocial behavior and creativity. In sum, offenders' experience of being forgiven for their mistakes may attenuate the positive relationship between perceived mistake severity and fear, which will in turn have implications on their prosocial behavior and creativity (please refer to Figure 1).

Hypothesis 1a: Forgiven-ness (i.e., the extent to which offenders have been forgiven by their victims for their mistakes) attenuates the positive relationship between offenders' perceived mistake severity and fear.

Hypothesis 1b: Forgiveness attenuates the positive relationship between offenders' perceived mistake severity and fear, and fear is in turn negatively related to offenders' (i) prosocial behavior, and (ii) creativity.

Shame

The experience of committing mistakes may lead offenders to evaluate themselves negatively as they have failed to live up to their standards or obligations – which may elicit the shame emotion. In addition, the more severe the mistake, it implies that the more that the offenders have fallen short of the standard, and thus the more shame they will experience. Therefore, perceived mistake severity is positively related to shame.

When individuals experience shame, they feel small and unworthy, and feel like shrinking or hiding (Frijda et al., 1989; Roseman et al., 1994; Tangney, 1991). The feeling of shame is thus associated with an avoidance tendency (Frijda et al., 1989; Sheikh & Janoff-Bulman, 2010; Roseman et al., 1994; Tangney et al., 2007). Since the sense of self is evaluated negatively when individuals feel shame, this will have implications on their self-esteem (Izard & Ackerman, 2000) – for example, research shows that shame is associated with low self-esteem (Tangney & Dearing, 2002).

The avoidance or withdrawal action tendency that is associated with shame may lead individuals to engage in less prosocial behavior. Furthermore, because individuals experiencing shame tend to focus on themselves and may be preoccupied with (trying to defend/protect) their damaged ego, they will have less attentional cognitive resources to fully engage with the external environment, which may in turn lead to a reduction in prosocial behavior (Thompson, Cowan, & Rosenhan, 1980).

In addition, shame may lead to a reduction in creativity because of its avoidance action tendency (Baas et al., 2008). Another reason that shame leads to lower creativity is: individuals experiencing shame may focus much attention on themselves, and thus will have less cognitive resources available for other non-self-related tasks (e.g., creativity tasks). In sum, the experience of committing mistakes may lead offenders to experience the shame emotion, which will in turn lead to low prosocial behavior and creativity.

Attenuation of shame

However, the experience of being forgiven for their mistakes may attenuate offenders' feeling of shame. The reason is that the self is implicated in shame – specifically, offenders feel a reduced sense of self-worth when they experience shame; however, when offenders are forgiven by their victims, this may convey the message to the offenders that they have intrinsic value/worth as a human being. For example, the offenders may reason that “if the victim can see enough good or decency in me to forgive me, then I may not be such a bad person after all” (Murphy & Hampton, 1988). This appraisal may then counter the decrement in the offenders' self-esteem and thus reduce their feeling of shame. Furthermore, the offenders may deem that that their victims forgive them implies that their victims value the relationship with them and accept them (Gassin, 1998; Smedes, 1996). Such acceptance in the relationship may lead the offenders to have a more positive self-evaluation, and in turn reduce their feeling of shame.

Of greater interest here, if the receipt of forgiveness leads to a restoration in the offenders' sense of self-worth or self-esteem, then the magnitude of the mistakes will have little implication on their feeling of shame when they have been forgiven. That is, it would not matter whether the offenders had previously committed slight or severe mistakes since their sense of self-worth would be restored and shame removed when they have been forgiven – hence, the

severity of the mistake would have little effect on their feeling of shame when they have been forgiven. Thus, I hypothesize that the positive relationship between perceived mistake severity and shame may be attenuated when offenders have been forgiven by their victims. In other words, the Forgiven-ness may moderate the relationship between perceived mistake severity and shame.

With a reduction in shame, the avoidance action tendency will be reduced and the offenders' attention can be shifted from a focus on themselves to a focus on other matters. Thus, the reduction in shame may be associated with an increase in offenders' prosocial behavior and creativity. In sum, Forgiven-ness may attenuate the positive relationship between perceived mistake severity and shame, which will in turn have implications on the offenders' prosocial behavior and creativity (please refer to Figure 1).

Hypothesis 2a: Forgiven-ness attenuates the positive relationship between offenders' perceived mistake severity and shame.

Hypothesis 2b: Forgiven-ness attenuates the positive relationship between offenders' perceived mistake severity and shame, and shame is in turn negatively related to offenders' (i) prosocial behavior, and (ii) creativity.

Guilt

The experience of committing mistakes may also lead offenders to appraise their behavior negatively and thus trigger their guilt emotion (Baumeister, Reis, & Delespaul, 1995; Berlinger, 2005; Delbanco & Bell, 2007; McGraw, 1987). Furthermore, the greater the mistake, it implies that the further the offenders' behaviors have fallen short of a standard, and thus the more guilt they will feel. In other words, perceived mistake severity is positively related to guilt.

When experiencing guilt, individuals are motivated to make reparations for their bad actions or inactions; for example, research shows that individuals experiencing guilt may engage in various reparative and conciliatory behaviors, including making apologies and restitution, seeking forgiveness, and trying to repent of their ways (Baumeister et al., 1994; Hall & Fincham, 2005; Roseman et al., 1994; Tangney, 1991). Thus, in contrast to other negative emotions, the experience of guilt generally gives rise to an approach tendency (rather than an avoidance tendency).

The approach action tendency that is associated with guilt may lead to an increase in prosocial behavior; indeed, research shows that when individuals experience guilt, they are also likely to engage in prosocial behavior toward generalized others (Baumeister et al., 1994; Regan, 1971). Another plausible reason why individuals experiencing guilt engage in more prosocial behavior is that such prosocial acts may help them to reduce their feelings of guilt – this is referred to as the guilt-reduction hypothesis in the literature (Regan 1971; Regan, Williams, & Sparling, 1972). Thus, committing mistakes may lead offenders to experience the guilt emotion, which will in turn lead to more prosocial behavior.

Attenuation of guilt

Research suggests that offenders may experience a reduction in guilt when they receive forgiveness (Gassin, 1998; Krause & Ellison, 2003; Witvliet et al., 2002; Zechmeister & Romero, 2002). One possible reason for this is that the offenders' experience of being forgiven by their victims may facilitate the offenders' self-forgiveness (Hall & Fincham, 2008), which may be associated with a reduction in their level of guilt. That is, as their victims let go of the mistakes (i.e., the victims cancel the interpersonal debt that has arisen because of the mistake;

Finkel et al., 2002), this helps the offenders to also let go of the mistakes that they had committed, which may in turn lead to a reduction/removal in the offenders' feeling of guilt.

As mentioned, perceived mistake severity is positively related to offenders' feeling of guilt. Of interest here, it may also be possible that when offenders have been forgiven for their mistakes, if forgiveness removes/reduces the feeling of guilt, then it would not matter whether the offenders had committed slight or severe mistakes – the severity of the mistake will have little effect on their feeling of guilt since their guilt feeling will be removed anyway when they have been forgiven. Hence, offenders' experience of forgiveness may attenuate the positive relationship between their perception of mistake severity and guilt:

Hypothesis 3a: Forgiven-ness attenuates the positive relationship between offenders' perceived mistake severity and guilt.

Hypothesis 3b: Forgiven-ness attenuates the positive relationship between offenders' perceived mistake severity and guilt, and guilt is in turn positively related to offenders' prosocial behavior.

Effect of Mistake- and Being-Forgiven-events on positive emotions

In addition to reducing the effect of mistake severity on offenders' negative emotions, the experience of being forgiven for mistakes is also an event that can lead offenders to experience positive emotions. Indeed, researchers have noted that forgiveness is a gift that victims offer to their offenders (Enright, 2001; Stanley, 1991). Thus, the event of receiving forgiveness from their victims may be appraised positively – favorable and beneficial for the offenders' well-being – which will in turn lead the offenders to experience positive emotions (Shaver et al., 1987). Specifically, as gift recipients are happy and grateful for gifts, the offenders may also experience

happiness and gratitude in response to receiving the gift of forgiveness from their victims. I elaborate on each of these two positive emotions in turn.

Happiness

Offenders' appraisal that they have received the benefit of being forgiven for their mistakes may lead them to experience happiness (Gassin, 1998). In addition, the more the offenders have been forgiven, the greater the benefit they have received, and thus the more happiness they feel. Therefore, the extent to which offenders have been forgiven for their mistakes is positively related to their feeling of happiness.

When feeling happy, individuals "feel a sense of lightness in movements, feel like jumping up and down" (Roseman, 2008). The action readiness of happiness/joy is an approach tendency and expansiveness (in terms of both cognitive and social expansiveness – e.g., broader thought-action repertoire, wanting to share the joy with others) (Baas et al., 2008; Fredrickson, 2001; Lyubomirsky, King, & Diener, 2005; Shaver et al., 1987). The approach and expansive action tendency of happiness may lead offenders to engage in more prosocial behavior – this proposition is in line with Fredrickson's broaden-and-build theory of positive emotions (Fredrickson, 2001). Indeed, social psychology research shows a consistent relationship between people's positive mood state and prosocial/helping behavior (Carlson, Charlin, & Miller, 1988; Eisenberg, 1991).

In addition, the approach action tendency of happiness/joy may lead to increased creativity. Indeed, a meta-analysis of mood-creativity research documents that in general, positive mood leads to more creativity (as compared to mood-neutral states); however, these authors noted that the bulk of research on positive mood states pertain to joy (an emotion with an

approach tendency and high activation level; Baas et al., 2008). Indeed, Baas et al.'s later fine-tuned their meta-analysis and showed that joy is positively correlated with creativity.

Moreover, research suggests that individuals experiencing happiness have expansive thought patterns (Fredrickson, 2001). This cognitive expansiveness is associated with greater cognitive flexibility (e.g., happy individuals may come up with more inclusive categorization of items as they can envision how typical and non-typical items can belong to the same category), and thus enhanced creativity (Isen, 2000). This is another plausible explanation for the happiness—creativity relationship. In sum, the experience of being forgiven for their mistakes may lead offenders to experience happiness, which will in turn lead to more prosocial behavior and creativity.

Accentuation of happiness

Moreover, the effect of offenders' Forgiven-ness perception on happiness will be stronger in the case of greater perceived mistake severity. The reason for this is that the more severe the mistake, the greater will be the benefit at each level of Forgiven-ness, and thus the more happiness the offenders will feel. In other words, perceived mistake severity will accentuate the positive relationship between Forgiven-ness and offenders' feeling of happiness, which will in turn have implications on their prosocial behavior and creativity (please refer to Figure 2).

Hypothesis 4a: Offender's perception of mistake severity accentuates the positive relationship between Forgiven-ness and happiness.

Hypothesis 4b: Perceived mistake severity accentuates the positive relationship between offenders' Forgiven-ness and happiness, and happiness is in turn positively related to offenders' (i) prosocial behavior, and (ii) creativity.

Gratitude

Offenders' appraisal of receiving the gift of forgiveness from their victims may also lead them to experience gratitude. Research shows that, in general, individuals experience more gratitude when they value the gift, perceive that the gift is costly to their benefactors, perceive that their benefactors have offered the gift intentionally and voluntarily, and perceive that their benefactors have offered the gift out of goodwill (McCullough et al., 2001). Applied to the topic of receiving forgiveness, offenders are likely to experience more gratitude when they value the forgiveness, and perceive that their victims have offered the gift of forgiveness intentionally, voluntarily, and out of goodwill. Indeed, the more that offenders have been forgiven (i.e., the bigger the forgiveness gift), the more gratitude they experience. Therefore, the extent to which offenders have been forgiven for their mistakes (i.e., Forgiven-ness) is positively related to their gratitude feeling.

In general, research shows that the gratitude emotion motivates individuals to engage in prosocial behavior toward their benefactors; this motivation to behave prosocially extends also to third parties (i.e., non-benefactors) (Bartlett & DeSteno, 2006; McCullough et al., 2001; McCullough, Kimeldorf, & Cohen, 2008). This suggests that gratitude may be associated with an approach tendency. Thus, the approach tendency may be one of the mechanisms that motivate grateful people to engage in prosocial behavior. Another plausible explanation of the gratitude—prosocial behavior relationship pertains to the norm of reciprocity – that is, after receiving benefits, people's feeling of gratitude may lead them to desire to benefit others as well. Applied to the topic of forgiveness, offenders' experience of being forgiven for their mistakes may lead them to experience gratitude, which will in turn lead to more prosocial behavior.

Accentuation of gratitude

As mentioned, Forgiven-ness is positively related to gratitude. Furthermore, each Forgiven-ness level constitutes an even bigger gift within the context of severe mistakes (as compared to that of slight mistakes). Hence, offenders will feel even more gratitude at each level of Forgiven-ness for severe mistakes, as compared to that of slight mistakes. In other words, offenders' perception of mistake severity will accentuate the positive relationship between Forgiven-ness and gratitude, which will in turn have implications on their prosocial behavior (please refer to Figure 2).

Hypothesis 5a: Offenders' perception of mistake severity accentuates the positive relationship between Forgiven-ness and gratitude.

Hypothesis 5b: Offenders' perceived mistake severity accentuates the positive relationship between Forgiven-ness and gratitude, and gratitude is in turn positively related to their prosocial behavior.

In sum, Figures 1 and 2 depict my proposed frameworks on how offenders' perception of mistake severity and Forgiven-ness may jointly lead to human flourishing outcomes for them. An emotion-based mediating mechanism underlies the relationship between the Forgiven-ness-by-MistakeSeverity interaction effect and offenders' prosocial behavior and creativity. Stated clearly, while Figure 1 depicts negative emotion states as mediating mechanisms, Figure 2 depicts positive emotion states as mediating mechanisms and as human flourishing outcomes in their own right. My proposed framework is tested on two types of mistakes – unintentional work errors and interpersonal transgressions. Specifically, in my first study, I conducted an experiment to examine the consequences of offenders' Forgiven-ness experience within the context of work

errors. In my second study, I conducted a survey to examine the consequences of offenders' Forgiven-ness experience within the context of interpersonal transgressions.

STUDY 1: DATA ENTRY ERROR EXPERIMENT (DEE) EXPERIMENT

Method

Sample

A total of 176 undergraduates from a local university participated in this study. However, only 88 research participants believed the experiment (please refer to the Footnote and Supplementary Tables for a description of the research participants who believed versus those who suspected the experimental manipulation). This study thus contains only 88 cases of usable data – therefore, analyses are conducted on only these 88 research participants who believed (i.e., did not suspect) the experiment. The mean age of the 88 research participants is 20.91 ($SD = 1.59$); 53.4% of the participants are females. Research participants either earned course credits or received 10 Singapore dollars for taking part in this study.

Procedure

The title of the survey that was reflected to the participants when they signed up for the study is ‘*Survey Questions and Task Performance*’. There was only one research participant in each session.

When the research participants first arrived for the session, the experimenter asked them to do a task for his/her colleague (who – unknown to the participants – was actually a research confederate) as the colleague needed to rush for an important presentation with a committee of professors. Participants were told that the task with the experimenter’s colleague will take only a short duration as the colleague would be rushing off soon. Furthermore, participants were instructed to go back to the experimenter’s room to do the formal research study after doing the

task for the experimenter's colleague. After instructing the participants, the experimenter directed them to his/her colleague's room (i.e., the research confederate room).

Procedurally, at the research confederate's room: when the research participants turned up at the confederate's room, the confederate told them "Please enter the data from this stack of surveys into the statistical spreadsheet accurately. Accuracy is extremely important when you enter the data as the results need to be accurate for me to make proper projections about the viability of my research study as I'm applying for a ~~\$500~~/~~\$2000~~ grant money funding for my project. Please also hurry with this because I need the data urgently as I'm rushing off for a presentation."

The research participants then entered the data from the stack of surveys on a computer; meanwhile, the confederate pretended to type on his/her laptop to lead the participants to believe that he/she was really rushing out for a presentation. After the research participants finished the data entry, the confederate then saved the data, but – unknown to the participants – opened another fake dataset (which is my pre-created dataset that contains faked errors). With the fake dataset, the confederate then performed the data analysis. The statistical program then revealed that there were errors in the data.

After "realizing the errors", the confederate enacted one of the following three Forgiveness treatment conditions (note that the sections in square brackets are the same across the three Forgiven-ness treatment conditions) (the Forgiven-ness experimental manipulations were adapted from Kelln and Ellard's (1999), as well as Struthers et al.'s (2008) forgiveness experimental manipulations):

Forgiven condition: In this condition, the confederate said to the research participants “[*oh no... there are many mistakes... now I can’t use this data... Shucks – now I will not be able to make it for my presentation... there goes my \$500/\$2000 grant money...*]”. Then the confederate took a deep breath and told the participants “Don’t worry about it.” Then the confederate packed his/her belongings and walked towards the door. Just before reaching the door, the confederate sincerely told the research participants “hey, all the best for your work. See you around.” The confederate then exited the room.

Control condition: In this condition, the confederate said to the research participants “[*oh no... there are many mistakes... now I can’t use this data... Shucks – now I will not be able to make it for my presentation... there goes my \$500/\$2000 grant money...*]..... sigh...”. The confederate then packed his/her belongings and exited the room.

Unforgiven condition: In this condition, the confederate said to the research participants “[*oh no... there are many mistakes... now I can’t use this data... Shucks – now I will not be able to make it for my presentation... there goes my \$500/\$2000 grant money...*]..... wow... how can you make up for this problem? I hope you will make many mistakes in your own work too.” Then the confederate packed his/her belongings and exited the room.

After the research participants completed the scenario with the confederate, they went back to the experimenter room – where the experimenter then administered some survey questions and tasks. Specifically, the experimenter administered personality surveys, state emotions survey, paper-clip creativity task, task to measure prosocial behavior (i.e., ask participants how much time they would like to volunteer for future research projects), surveys that pertained to the data entry error event (e.g., perception of the severity of the event,

perception of the extent to which they had been forgiven for the error), and demographic information.

For the paper-clip creativity task, the research participants were instructed “For this task, you will be given the name of an object, and your task is to come up with as many uses as possible for the object as you can. Don’t be concerned about the quality of the uses you come up with. The uses can be ordinary or unusual. It is, however, important that you write down as many uses as you can within 10 minutes. We are interested in the number of uses that can be generated for this object.” The instructions were adopted from Williams and Karau (1991).

After the research participants completed all the surveys and tasks, they were debriefed about the experiment.

Measures

Forgiven-ness treatment variable (manipulation check). There are three levels of the Forgiven-ness treatment variable – Unforgiven, Control, and Forgiven conditions (please refer to the Procedures section for information about the respective conditions). As a manipulation check, I used the *Being Forgiven Scale (BFS)* measure to assess if the Forgiven-ness treatment variable was effective. Specifically, the BFS measure consists of 17-items that assess offenders’ perception of the extent to which they have been forgiven by their victims for their mistakes, errors, or transgressions. Some example items in the BFS measure are “This person (i.e., the experimenter’s victim-colleague) lets go of the hurt that I’ve caused him/her”, “this person is hostile toward me” (reverse-coded), and “this person has goodwill toward me”. These BFS items are measured on a 7-point Likert-scale (1 = *strongly disagree*, 7 = *strongly agree*). The reliability Cronbach alpha for the *Being Forgiven Scale* is .91.

As a manipulation check, the BFS measure shows that the respective Forgiveness treatment conditions are effective. Specifically, ANOVA shows that the three treatment conditions are significantly different from one another, $F(2, 85) = 15.07, p < .001$, partial $\eta^2 = .26$. Bonferroni and Tukey HSD post hoc tests further show that the means of each Forgiveness treatment condition are statistically significantly different from one another. To elaborate, the BFS score of the Forgiven condition ($M = 3.86, SD = .92, n = 35$) is statistically significantly greater than that of the Control condition ($M = 3.22, SD = .70, n = 30$) ($p < .01$ for Bonferroni and Tukey HSD tests); the BFS score of the Control condition is statistically significantly greater than that of the Unforgiven condition ($M = 2.66, SD = .82, n = 23$) ($p = .05$ for Bonferroni test; $p < .05$ for Tukey HSD test); and the BFS score of the Forgiven condition is statistically significantly greater than that of the Unforgiven condition ($p < .001$ for Bonferroni and Tukey HSD tests).

Grant money. Initially, a 3 (Forgiveness treatment: Forgiven vs Control vs Unforgiven) X 2 (Grant money: \$500 vs \$2000) between-subject research design was used. The grant money variable was designed to manipulate the Severity of the mistake event. However, independent samples t-test shows that there is non-significant difference between the two levels of the grant money treatment variable. Specifically, t-test shows that the severity score of the \$500 grant money condition ($M = 4.10, SD = .76$) is non-significantly different from that of the \$2000 grant money condition ($M = 4.10, SD = .86$), [$t(82) = .01, p > .05$] – therefore, I collapsed the two levels of this variable. A plausible reason that the difference between these two conditions of grant money is statistically non-significant is due to a ceiling effect – in the sense that research participants are led to believe that they had caused a stranger (i.e., the research confederate) to lose \$500 or \$2000 – both of which could be considered a substantial amount of

money to undergraduates (especially when they have led a stranger to lose that amount of money). Thus, I collapsed the two levels of this factor, and examined the research participants' *perception* of error severity instead – since there will be variance on this variable as individuals usually perceive objective events differently; moreover, as this variable is a continuous variable, it offers my analysis more statistical power, and thereby allows for a more rigorous test of my hypotheses.

Perceived error severity. Participants were instructed to recall the data entry event, and to think about their experience with the confederate in this event, and then rate their perceived severity of the error event. Perceived error severity was measured by 3 items. The 3 items in my experiment are “how serious was the hurtful event for this person?”, “how deeply did you hurt this person or his/her goals?”, and “how painful would the event be for this person?”. These items were measured on a 5-point Likert-scale (1 = *not at all*, 3 = *somewhat*, 5 = *very much*). The reliability Cronbach alpha for this perceived severity scale is .79.

Fear. Participants were asked to indicate how they were feeling at the moment. Fear was measured with 3 items – fearful, scared, and afraid. These items were adopted from Izard and colleagues' (Izard, Libero, Putnam, & Haynes, 1993) Differential Emotions Scale (DES-IV); however, I modified the instructions and the rating scale so that I can tap the state emotion. The 3 items in my experiment were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this fear scale is .87.

Shame. Participants were asked to indicate how they were feeling at the moment. Shame was measured with 3 items – ashamed, small, and worthless. These items were adopted from Marschall and colleagues' (Marschall, Sanftner, & Tangney, 1994) State Shame and Guilt Scale, and Orth and colleagues' (Orth, Berking, & Burkhardt, 2006) Event-related Shame and Guilt

scale. The 3 items in my experiment were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this shame scale is .77.

Guilt. Participants indicated how they were feeling at the moment. Guilt was measured with 3 items – guilty, bad, and regretful. These items were adopted from Marschall et al.'s (1994) State Shame and Guilt Scale, and Orth et al.'s (2006) Event-related Shame and Guilt scale. The 3 items in my experiment were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this guilt scale is .80.

Gratitude. Participants indicated how they were feeling at the moment. Gratitude was measured with 3 items – appreciative, grateful, and thankful. These items were adopted from the Gratitude adjective checklist (GAC) (Froh, Fan, Emmons, Bono, Huebner, & Watkins, 2011; Tsang, 2006; McCullough et al., 2001). The 3 items in my experiment were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this gratitude scale is .92.

Happiness. Participants indicated how they were feeling at the moment. Happiness was measured with 3 items – happy, glad, and joyful. These items are adopted from Izard et al.'s (1993) Differential Emotions Scale (DES-IV); however, I modified the instructions and the rating scale so that I can tap the state emotion. The 3 items in my experiment were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this joy scale is .88.

Prosocial behavior (volunteering for research project). Prosocial behavior was measured by asking research participants to indicate how much time they were willing to volunteer to participate in other research studies. The range of options provided was from 0 minute to 120 minutes (where each option was set at 15 minutes apart). My measure of prosocial

behavior is modified from Donnerstein and colleagues' (Donnerstein, Donnerstein, & Munger, 1975).

Creativity - fluency. Fluency for the paper clip creativity task was assessed by counting the number of non-redundant ideas that each participant came up with (Baas et al., 2008; Runco, 2004). Three independent coders assessed this fluency measure, and the inter-rater reliability for this measure is .99.

Creativity - flexibility. Flexibility for the paper clip task was assessed by counting the number of response categories that each participant's ideas spanned (Baas et al., 2008). Three independent coders assessed this flexibility measure, and the inter-rater reliability for this measure is .83.

Creativity - originality. Originality for the paper clip task was assessed by counting the number of unusual/uncommon ideas that each participant came up with (Baas et al., 2008; Mumford & Gustafson, 1988; Runco, 2004) (where the unusualness of an idea is defined in this study as an idea that occurs in 5% or less of the sample (Plucker & Renzulli, 1999) – however, since 5% of my sample of 88 is 4.4, I rounded the number up to 5). That is, an idea was considered unusual if it occurred 5 times or less in this study. Thus, for each participant, the originality score was computed as the total number of original ideas that he/she came up with. Only one coder assessed this originality measure.

Results and Discussion

Analyses are conducted on only the 88 research participants who believed the experiment. Means, standard deviations, correlations, and internal consistency reliabilities are presented in Table 1.

Insert Table 1 about here

I conducted hierarchical regression analyses to test my hypotheses. Because the Forgiven-ness treatment variable is a categorical variable, I used two dummy codes to represent the three levels of the Forgiven-ness treatment variable in my regression analysis. Specifically, ‘Dummy1(ctrl)’ represents the Control group, ‘Dummy2(uf)’ represents the Unforgiven group; the Forgiven group serves as the reference group in the analyses. That is, on (Dummy1, Dummy2) respectively, the Forgiven treatment group is represented by (0, 0); the Control treatment group is represented by (1, 0); and the Unforgiven treatment group is represented by (0, 1). For the primary regression model analyses, the main effect predictors (i.e., Forgiven-ness treatment variable as represented by two dummy codes, and Perceived Severity centered variable) are entered in the first step, and the Forgiven-ness-by-Severity (centered) interaction effects are entered in the second step. Regression results are shown in Tables 2 to 7.

According to Table 2, the Forgiven-ness-by-Severity interaction effect on fear is statistically significant ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .65, p = .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = 1.10, p < .05$). In light of this statistically significant interaction effect on fear, I re-analyzed the data to produce the simple slopes for each Forgiven-ness treatment group (see Table 5) to further examine the interaction effect. Table 5 shows that in the Unforgiven condition, perceived severity of the error event is statistically significantly positively related with fear (simple slope $B = 1.35, p < .01$); in the Control condition, perceived severity is significantly positively related with fear (simple slope $B = .90, p < .001$); however, in the Forgiven condition, the relationship between perceived severity and fear is statistically non-significant (simple slope $B = .25, ns$). Overall, this pattern of results provides support for Hypothesis 1a that the Forgiven-ness attenuates the positive

relationship between perceived severity of the error event and their feeling of fear. Figure 3 depicts this pattern of results.

Insert Table 2 about here

Insert Table 5 about here

Insert Figure 3 about here

By contrast, Table 2 shows that the Forgiveness-by-Severity interaction effect on shame is statistically non-significant ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .46, p > .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = .81, p > .05$) – which implies that the perceived severity slope (on shame) in the Forgiven treatment group does not differ significantly from those in the Control or Unforgiven treatment groups. Since the interaction effect is non-significant, I then examine if the lower-order main effect predictors have any influence on the experience of shame. Regression analysis (see the results in Step 1) shows that for the Forgiven treatment group (i.e., the reference group in our analysis), perceived severity of the error event is positively related to shame ($B = .55, p < .01$). However, because Forgiveness does not attenuate this perceived severity-shame relationship, hypotheses 2a, 2bi and 2bii are not supported.

In addition, Table 2 shows that the Forgiveness-by-Severity interaction effect on guilt is statistically non-significant ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .32, p > .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = .60, p > .05$) –

which implies that the perceived severity slope (on guilt) in the Forgiven treatment group does not differ significantly from those in the Control or Unforgiven treatment groups. Since the interaction effect is non-significant, I then examine if the lower-order main effect predictors have any influence on the experience of guilt. Regression analysis (see the results in Step 1) shows that for the Forgiven treatment group (i.e., the reference group), perceived severity of the error event is positively related to guilt ($B = .93, p < .001$). However, because Forgiven-ness does not attenuate this perceived severity—guilt relationship, hypotheses 3a and 3b are not supported.

In general, the pattern of interaction effect with regard to the negative emotion states involves Perceived Error Severity as the main effect predictor and Forgiven-ness treatment variable as the moderator predictor. By contrast, the pattern of interaction effect with regard to the positive emotion states involves Forgiven-ness treatment variable as the main effect predictor, and Perceived Error Severity as the moderator of the Forgiven-ness—positive emotion state relationship. For example, in the case of gratitude, I hypothesized that the Forgiven-ness variable will have a main effect on gratitude, and that the perceived mistake severity (i.e., perceived error severity in Study 1) will moderate the Forgiven-ness—gratitude relationship.

However, Table 3 shows that the Forgiveness-by-Severity interaction effect on gratitude is statistically non-significant ($B_{\text{Severity}*\text{Dummy1(ctl)}} = .33, p > .05$; $B_{\text{Severity}*\text{Dummy2(uf)}} = .89, p > .05$) – which implies that the difference in gratitude scores among the various Forgiven-ness treatment conditions do not depend on the level of perceived error severity. Therefore, hypotheses 5a and 5b are not supported. Since the Forgiveness-by-Severity interaction effect is non-significant, I then examine if the lower-order predictors have any influence on the experience of gratitude (please refer to Step 1 results). The results show that the overall regression model containing the Forgiven-ness main effect on gratitude is statistically non-

significant – $F(3, 79) = 1.91, ns$. In sum, regression analyses show that neither the interaction effect nor the Forgiven-ness main effect predictors account for a significant proportion of variance in gratitude.

Insert Table 3 about here

For happiness, I hypothesized that the Forgiven-ness treatment variable will have a main effect on happiness, and that the perceived error severity will moderate the Forgiven-ness—happiness relationship. However, Table 3 shows that the Forgiveness-by-Severity interaction effect on happiness is statistically non-significant ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .05, p > .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = 1.17, p < .06$, but overall $F(5, 77) = 2.08, ns$) – which implies that the difference in happiness scores among the various Forgiven-ness treatment conditions do not depend on the level of perceived error severity. Therefore, hypotheses 4a, 4bi, and 4bii are not supported. Since Forgiveness-by-Severity interaction effect is non-significant, I then examine if the lower-order predictors have any influence on the experience of happiness (please refer to Step 1 results). The results show that the overall regression model containing the Forgiven-ness main effect on happiness is statistically non-significant – $F(3, 79) = 2.09, ns$. In sum, regression analyses show that neither the interaction effect nor the Forgiven-ness main effect predictors account for the variance in happiness.

For creativity, Table 4 shows that the Forgiveness-by-Severity interaction effects are statistically non-significantly associated with (i) fluency ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .96, p > .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = -2.22, p > .05$), (ii) flexibility ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .59, p > .05$; $B_{\text{Severity}*\text{Dummy2}(\text{uf})} = -.16, p > .05$), and (iii) originality ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = .12, p > .05$;

$B_{\text{Severity}*\text{Dummy2}(\text{uf})} = -1.02, p > .05$). Furthermore, that all three dimensions of creativity are non-significantly correlated with the various emotions states (e.g., fear) shows that all the mediated moderation hypotheses for creativity – hypotheses 1bii, 2bii, 4bii – are not supported. Since the Forgiveness-by-Severity interaction effects are non-significant, I then examine if the lower-order predictors have any influence on the various aspects of creativity (please refer to the respective Step 1 results in Table 4). Table 4 shows that the overall regression models containing the main effects are statistically non-significant for all creativity aspects. Specifically, (a) for fluency – $F(3, 79) = .17, ns$; (b) for flexibility – $F(3, 76) = .55, ns$; (c) for originality – $F(3, 76) = 1.98, ns$. In sum, regression analyses show that neither the interaction effect nor main effect predictors account for a significant proportion of variance in the three creativity dimensions.

 Insert Table 4 about here

Prosocial behavior

According to Table 4, the Forgiveness-by-Severity interaction effect on prosocial behavior is marginally statistically significant. Specifically, Table 4 shows that the difference in the *regression coefficient* (or *the slope of perceived error severity on prosocial behavior*) between the Forgiven treatment group and the Unforgiven treatment group is statistically non-significant ($B_{\text{Severity}*\text{Dummy2}(\text{uf})} = 2.44, p > .05$); however, the difference in the *regression coefficient* between the Forgiven treatment group and the Control treatment group is statistically significant ($B_{\text{Severity}*\text{Dummy1}(\text{ctrl})} = 17.00, p < .05$).

Furthermore, using an alternative dummy coding scheme with the control group as reference group, Table 6 shows that the difference in the *regression coefficient* (or *the slope of*

perceived severity on prosocial behavior) between the Control treatment group and the Unforgiven treatment group is statistically non-significant ($B_{\text{Severity*AltDummy(uf)}} = -14.55, p > .05$). In this case, since the perceived severity—prosocial behavior slope in the Unforgiven condition is non-significantly different from their counterpart slopes in the Forgiven or Control conditions, I focus my discussion on the source of “statistically significantly interesting” findings – that is, how the perceived error severity—prosocial behavior slopes are different in the Forgiven condition versus the Control condition, and what may explain for the perceived severity—prosocial behavior slopes in the Forgiven and Control conditions.

Insert Table 6 about here

To elaborate, I re-analyzed the data to produce the simple slopes for the respective Forgiven-ness treatment groups (see Table 5). Table 5 shows that in the Forgiven condition, the relationship between perceived severity of the error and prosocial behavior is statistically non-significant (simple slope $B = -2.44, ns$); however, in the Control condition, perceived severity is statistically significantly positively related with prosocial behavior (simple slope $B = 14.55, p < .01$). This pattern of results is also depicted in Figure 4. The pattern of perceived severity—prosocial behavior slopes in the Forgiven versus Control conditions suggests an *psychological closure* or *equilibrium* story, which I will elaborate on in the discussion section.

Insert Figure 4 about here

Mediation test

I conducted mediation analysis to further investigate the effect of Forgiveness-by-Severity interaction on prosocial behavior. According to Baron and Kenny (1986), for mediation to occur, the predictors should be significantly related to the mediator and the outcome variable. In light of this, the aforementioned findings suggest that only one variable qualifies for a mediator test for the relationship between Forgiveness-by-Severity interaction and prosocial behavior – that is, fear. (Specifically, the aforementioned findings reveal that the Forgiveness-by-Severity interaction effect is statistically significantly related with fear and prosocial behavior).

Table 7 sheds light on the mediation analyses. According to Table 7, because the relationship between fear and prosocial behavior is statistically non-significant ($B = .77, ns$), fear does not mediate the relationship between Forgiveness-by-Severity interaction and prosocial behavior. In general, all mediated moderation hypotheses for prosocial behavior (i.e., hypotheses 1bi, 2bi, 3b, 4bi, and 5b) are not supported.

Insert Table 7 about here

Discussion for DEE Experiment

Overall, the data entry error (DEE) experiment shows that offenders' experience of being forgiven for unintentional work errors does not tell a human flourishing story. Specifically, the DEE experiment shows that the perceived error severity and Forgiveness main effects and interaction effects on positive emotions (i.e., gratitude and happiness) and creativity are statistically non-significant. Therefore, neither error severity perception nor offenders'

experience of being forgiven/unforgiven for their errors has implications on these emotion- and cognitive-based human flourishing outcomes.

Moreover, the pattern of statistically significant Forgiveness-by-Severity interaction effect does not provide support for the human flourishing story with regard to prosocial behavior. Rather, further examination of this statistically significant Forgiveness-by-Severity interaction effect shows that the pattern of perceived severity—prosocial behavior slopes in the Forgiven versus Control conditions suggests a *psychological closure* or *equilibrium* story: first, when offenders have been forgiven for their errors, the debt that arises from the errors is cancelled (for example, the research confederate tells the subjects ‘don’t worry about it’ in the Forgiven condition), and subjects may experience a sense of psychological closure to the event (Skitka, Bauman, & Mullen, 2004; Zechmeister & Romero, 2002). Since there is psychological closure, no matter whether they had committed slight or serious errors (stated more precisely – errors with slight or serious effects), subjects do not have to compensate in order to restore a sense of equilibrium and attain closure, thus error severity is non-significantly associated with prosocial behavior.

By contrast, in the Control condition, the research confederate just sighs after “realizing” the errors and leaves the room. This plausibly creates an uncomfortable situation for the subjects as they have no sense of closure. That is, left with a mess that they have “created”, and not having something being done to them (by the confederate) that will allow them to restore a sense of equilibrium and attain closure, subjects may instead seize the opportunity to volunteer for future research projects as a means to compensate in order to restore a sense of equilibrium and attain psychological closure. Furthermore, the more severe subjects perceive their errors to be, the more they feel compelled to compensate, and thus the more they volunteer to participate in

research projects (which is an indicator of prosocial behavior in my experiment) in order to restore a sense of equilibrium. In other words, it is plausible that whether and the extent to which subjects volunteer to participate in research projects are motivated by their desire to have a sense of equilibrium and attain psychological closure.

Indeed, the equilibrium or psychological closure story that is proposed to underlie the pattern of prosocial behavior results in the Forgiven versus the Control conditions may be particularly relevant in my experiment because of the nature of the prosocial behavior indicator (i.e., ‘volunteering for research studies’) in my experiment. Specifically, where subjects have incurred a social debt by committing errors, a way to attain psychological closure is to repay the debt by engaging in prosocial behavior, particularly if the form of pro-socialness is in the area where they incurred the debt (in this case, the subjects incurred a debt by committing work errors within a research study, and volunteering to participate in other research studies is a close form of compensation). Future research should put this post-hoc psychological closure explanation to further empirical testing. In addition, a more rigorous test of my original hypothesis pertaining to whether and how the Forgiveness-by-Severity interaction effect will have implications on prosocial behavior may be accomplished by using other relatively unrelated forms of prosocial behavior – e.g., charitable donations to non-profit organizations – as the criterion variable. However, for this current experiment, the form of the Forgiveness-by-Severity interaction effect does not support the human flourishing story with regard to prosocial behavior.

In addition, this experiment shows that whether offenders have been forgiven for their errors or not does not affect the relationship between their perception of error severity and their feelings of guilt and shame. Indeed, the beneficial effect of experiencing forgiveness for unintended work errors pertains primarily to offenders’ fear emotion – specifically, the result

shows that the offenders' experience of being-forgiven for errors attenuates the relationship between perceived severity of the error event and their feeling of fear. Alternatively stated, the severity of the errors that offenders had committed is positively related to their feeling of fear only when they have not been forgiven for their errors (i.e., in the Unforgiven and Control conditions in this case); when offenders have been forgiven, it does not matter how big or small their error is since the interpersonal debt that has arisen from the errors is cancelled and no retaliation is forthcoming – thus, the magnitude of error severity has no (statistically) significant implication on offenders' experience of fear when they have been forgiven. In other words, experiencing forgiveness from their victims removes the effect that error severity has on offenders' feeling of fear.

STUDY 2: INTERPERSONAL TRANSGRESSION SURVEY (ITS)

In this study, I examined offenders' Being-Forgiven experience within the context of interpersonal transgressions. This is an important line of investigation as interpersonal transgressions occur at work (e.g., injustice, abuse, incivility, interpersonal counter-productive work behaviors – Chan & McAllister, 2014; Greenberg, 2006; Hershcovis, & Barling, 2010; Lim & Cortina, 2005; Robinson & Bennett, 1995). With interpersonal transgressions, the issue of forgiveness becomes relevant as it is important that the offenders not be handicapped by their transgressions (Arendt, 1958) and are able to move on as they still need to work and work together with their victim-employees. This underscores the importance of offenders' experience of forgiveness in the workplace. Hence, in this study, I conducted a survey to examine the consequences of offenders' Forgiven-ness experience within the context of interpersonal transgressions – specifically, the implication of forgiveness for offenders' emotions, prosocial behavior/organizational citizenship behavior, and creativity.

Method

Sample

187 undergraduates from a local university participated in this survey study. The mean age of the research participants is 20.26 ($SD = 1.64$); 68.4% of the participants are females. Research participants were recruited from the subject pool of an introductory business course, and they earned course credits for taking part in this study.

Procedure

In this survey, research participants were first instructed “Please recall the most serious event where you have hurt or harmed someone in the past six months. The hurt or harm may be of any type – for example, physical hurt, psychological or emotional hurt, hurting someone’s

goals or interests. However, for the purpose of this survey, the person whom you've hurt must not be a stranger. Try to visualize in your mind what happened during the event – the interactions you had with the person whom you've hurt, and describe the event in two paragraphs.” These instructions were modified from McCullough and colleagues (McCullough, Rachal, Sandage, Worthington, Jr., Brown, & Hight, 1998: 1589), and adapted from other sources (e.g., Kelley, 1998; McCullough et al., 1997; Wallace et al., 2008). After describing this event, participants rated the extent to which their victims forgave them, and indicated the emotions and responses that they had after realizing the extent to which they had been forgiven for their focal interpersonal transgression. Lastly, participants filled in personality and demographic information.

Measures

Perceived transgression/hurt severity. Research participants were instructed to recall what their thoughts about the interpersonal transgression/hurt-related event were at the time that it happened, and then provide ratings on the perceived severity of the transgression/hurt-related event. Specifically, perceived transgression/hurt severity was measured by the following 3 items: “how serious was the hurtful event for Person A (i.e., the victim)?”, “how deeply did you hurt Person A or his/her interests?”, and “how painful would the event be for Person A?”. I created these items from various sources (e.g., Exline et al., 2008; McCullough et al., 1998). These three items were measured on a 5-point Likert-scale (1 = *not at all*, 3 = *somewhat*, 5 = *very much*). The reliability Cronbach alpha for this perceived transgression severity scale is .85.

Forgiven-ness. The *Being Forgiven Scale (BFS)* was used to assess Forgiven-ness. Specifically, the BFS consists of 17-items that assess offenders' perception of the extent to which they have been forgiven by their victims for their mistakes, errors, or transgressions. Some

example items in the BFS measure are “Person A has let go of the hurt that I’ve caused him/her”, “Person A holds a grudge against me” (reverse-coded), and “Person A has goodwill toward me”. These BFS items were measured on a 7-point Likert-scale (1 = *strongly disagree*, 7 = *strongly agree*). The reliability Cronbach alpha for the *Being Forgiven Scale* is .95.

Fear. Participants were asked to indicate how they felt when they first realized the extent to which their victims had forgiven them for the interpersonal transgression event. Fear was measured with 3 items – fearful, scared, and afraid. These items were adopted from Izard and colleagues’ (1993) Differential Emotions Scale (DES-IV); however, I modified the instructions and the rating scale so that I can tap the state emotion. These three items in my survey were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this fear scale in my survey is .89.

Shame. Participants were asked to indicate how they felt when they first realized the extent to which their victims had forgiven them for the interpersonal transgression event. Shame was measured with 3 items – ashamed, small, and worthless. These items were adopted from Marschall et al.’s (1994) State Shame and Guilt Scale, and Orth et al.’s (2006) Event-related Shame and Guilt scale. These three items in my survey were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this shame scale is .70.

Guilt. Participants indicated how they felt when they first realized the extent to which their victims had forgiven them for the transgression event. Guilt was measured with 3 items – guilty, bad, and regretful. These items were adopted from Marschall et al.’s (1994) State Shame and Guilt Scale, and Orth et al.’s (2006) Event-related Shame and Guilt scale. These three items

were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this guilt scale in my survey is .82.

Gratitude. Participants indicated how they felt when they first realized the extent to which their victims had forgiven them for the transgression event. Gratitude was measured with 3 items – appreciative, grateful, and thankful. These items were adopted from the Gratitude adjective checklist (GAC) (Froh et al., 2011; Tsang, 2006; McCullough et al., 2001). These three items in my survey were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this gratitude scale is .94.

Happiness. Participants indicated how they felt when they first realized the extent to which their victims had forgiven them for the transgression event. Happiness was measured with 3 items – happy, glad, and joyful. These items are adopted from Izard et al.'s (1993) Differential Emotions Scale (DES-IV); however, I modified the instructions and the rating scale so that I can tap the state emotion. These items in my survey were measured on a 7-point Likert-scale (1 = *not at all*, 4 = *somewhat*, 7 = *extremely*). The reliability Cronbach alpha for this happiness scale in my survey is .91.

Prosocial behavior. Participants indicated what their responses were 24 hours after they first realized the extent to which their victims had forgiven them. Specifically, with the sentence stem “Within 24 hours after I first realized the extent to which Person A has forgiven (or not forgiven) me....”, prosocial behavior was measured with the following 4 items: “I helped someone”, “I shared personal resources with someone”, “I made adjustments to accommodate someone”, and “I did something good for someone”. Except for the last item, the former three items are largely adapted and modified from Lee and Allen's (2002) Organizational Citizenship Behavior – Interpersonal scale. The four prosocial behavior items in this survey were measured

on a 7-point Likert-scale (1 = *not at all*, 7 = *very much*). The reliability Cronbach alpha for this prosocial behavior scale is .83.

Creativity. I created a creativity scale for this survey. Participants were asked to indicate what their responses were 24 hours after they first realized the extent to which their victims had forgiven them. Specifically, with the sentence stem “Within 24 hours after I first realized the extent to which Person A has forgiven (or not forgiven) me....”, creativity was measured with the following 3 items: “I was creative”, “I came up with many ideas”, and “I was innovative”. These creativity items were measured on a 7-point Likert-scale (1 = *not at all*, 7 = *very much*); also, the ‘*not applicable*’ option was available for this creativity scale so that participants could select this option if creativity was not applicable to them at that time (e.g., if they were not engaged in any tasks). The reliability Cronbach alpha for this creativity scale is .96.

Control variable. Positive affectivity (PA) and negative affectivity (NA) (Watson, Clark, & Tellegen, 1988) were used as control variables in all the regression analyses. The reliability for the PA scale in this study is .83; the reliability for the NA scale in this study is .86.

Results

Means, standard deviations, correlations, and internal consistency reliabilities are presented in Table 8.

Insert Table 8 about here

I conducted hierarchical regression analyses to test my hypotheses. For each regression analysis, the control variables of positive affectivity and negative affectivity are entered in the

first step, the main effect predictors (Forgiveness and Perceived Transgression/Hurt Severity) are entered in the second step, and the Forgiveness-by-Severity interaction effect is entered in the last step. Since all the analyses involve tests of interaction effect, I centered the Perceived Transgression Severity and Forgiveness main effect predictors and their corresponding interaction effect in all the regression analyses – this is done to reduce multicollinearity and facilitate the interpretation of the data. The results are shown in Tables 9 to 11.

According to Table 9, the Forgiveness-by-Severity interaction effect on happiness is statistically significant ($\beta = .16, p < .05$). In light of this statistically significant interaction effect, I conducted a simple slope analysis to further probe the interaction effect. Simple slope analyses reveal that at low levels of perceived transgression severity, Forgiveness is statistically significantly positively related to happiness (simple slope $B = .45, Z = 2.80, p < .01$); at high levels of perceived severity, Forgiveness is also significantly positively related to happiness (simple slope $B = .99, Z = 7.26, p < .01$). On closer examination, the results indicate that the relationship between Forgiveness and happiness is stronger at high levels (as compared to at low levels) of perceived transgression severity (i.e., at high levels of perceived severity, $B = .99$; by contrast, at low levels of perceived severity, $B = .45$). Overall, this pattern of results provides support for Hypothesis 4a that perceived mistake/transgression severity accentuates the relationship between Forgiveness and happiness. This pattern of results is depicted in Figure 5.

Insert Table 9 about here

Insert Figure 5 about here

According to Table 9, the Forgiveness-by-Severity interaction effect on gratitude is marginally statistically significant ($\beta = .12, p = .06$). In light of this marginally significant interaction effect, I conducted a simple slope analysis to further probe the interaction effect. Simple slope analyses show that at low levels of perceived transgression severity, Forgiveness is significantly positively related to gratitude (simple slope $B = .58, Z = 3.57, p < .01$); at high levels of transgression severity, Forgiveness is also significantly positively related to gratitude (simple slope $B = .99, Z = 7.11, p < .01$). On closer examination, the results indicate that the relationship between Forgiveness and gratitude is stronger at high levels (as compared to at low levels) of perceived transgression severity (i.e., at high levels of perceived severity, $B = .99$; by contrast, at low levels of perceived severity, $B = .58$). Overall, this pattern of results provides support for Hypothesis 5a that perceived mistake severity accentuates the relationship between Forgiveness and gratitude. This pattern of results is depicted in Figure 6.

Insert Figure 6 about here

According to Table 10, the Forgiveness-by-Severity interaction effect on guilt is statistically significant ($\beta = .14, p < .05$). In light of this statistically significant interaction effect, I conducted a simple slope analysis to further probe the interaction effect. Simple slope analyses show that at low levels of Forgiveness, the relationship between perceived transgression severity and guilt is statistically non-significant (simple slope $B = .22, Z = 1.07, ns$); at high levels of Forgiveness, perceived severity is significantly positively related to guilt (simple

slope $B = .79$, $Z = 4.29$, $p < .01$). This pattern of results shows that Hypothesis 3a is not supported. Figure 7 depicts this pattern of results.

Insert Table 10 about here

Insert Figure 7 about here

According to Table 10, the Forgiveness-by-Severity interaction effect on shame is statistically significant ($\beta = .17$, $p < .05$). In light of this statistically significant interaction effect, I conducted a simple slope analysis to further probe the interaction effect. Simple slope analyses show that at low levels of Forgiveness, the relationship between perceived transgression severity and shame is statistically non-significant (simple slope $B = .00$, $Z = .01$, *ns*); at high levels of Forgiveness, perceived severity is significantly positively related to shame (simple slope $B = .50$, $Z = 3.53$, $p < .01$). This pattern of results shows that Hypothesis 2a is not supported. This pattern of results is depicted in Figure 8.

Insert Figure 8 about here

By contrast, Table 11 shows that the Forgiveness-by-Severity interaction effect on fear is statistically non-significant ($\beta = .09$, *ns*). Since this interaction effect is non-significant, I then examine if the lower-order main effect predictors have any influence on offenders' experience of fear. Regression analysis (see the results in Step 2) shows that perceived transgression severity is

positively related to fear ($\beta = .16, p < .05$), and that Forgiveness is negatively related to fear ($\beta = -.14, p < .05$). Of interest to my dissertation, perceived severity is positively related with fear, but Forgiveness does not attenuate the relationship between perceived severity and fear. Therefore, hypothesis 1a is not supported; by implication, the mediated moderation hypotheses involving fear (i.e., hypotheses 1bi and 1bii) are not supported.

Insert Table 11 about here

According to Table 11, the Forgiveness-by-Severity interaction effect is statistically non-significantly associated with creativity ($\beta = .03, ns$). This finding, coupled with the finding that the various emotion states (i.e., gratitude, happiness, guilt, shame) are non-significantly associated with creativity (please refer to the correlation table), show that all the mediated moderation hypotheses – that is, hypotheses 1bii, 2bii, and 4bii – involving the effects of perceived transgression severity and Forgiveness on creativity are not supported. Since the Forgiveness-by-Severity interaction effect on creativity is statistically non-significant, I then examine if the corresponding main effect predictors have any influence on creativity. As shown in step 2 of the regression analysis, the relationship between perceived transgression severity and creativity is statistically non-significant ($\beta = .05, ns$), and the relationship between the offenders' Forgiveness and their creativity is statistically non-significant ($\beta = -.05, ns$). Hence, neither the interaction effect nor main effect predictors account for a significant proportion of variance in creativity.

Lastly, Table 11 shows that the Forgiveness-by-Severity interaction effect is statistically non-significantly associated with prosocial behavior ($\beta = .01, ns$). However, correlation analyses

show that the various emotion states (i.e., shame, guilt, happiness, gratitude) are statistically significantly correlated with prosocial behavior (please refer to Table 8). In light of this, and since mediation can still occur even if the independent variables are non-significantly associated with the dependent variables, I proceeded to conduct mediation analysis (Hayes, 2013) for prosocial behavior.

With regard to happiness, mediation analysis (Hayes, 2013) shows the following: First, happiness is positively related with prosocial behavior (coefficient = .15, $p < .05$). Second, at high perceived transgression severity level (i.e., +1SD from mean of perceived severity), the conditional indirect effect of Forgiven-ness on prosocial behavior through happiness is statistically significant (i.e., the confidence interval does not include 0) (conditional indirect effect = .15); at low perceived transgression severity level (i.e., -1SD from mean of perceived severity), the conditional indirect effect of Forgiven-ness on prosocial behavior through happiness is also statistically significant (conditional indirect effect = .07). Hence, mediation analysis shows that Forgiven-ness is positively related to offenders' happiness, which is in turn positively related to their prosocial behavior – and this indirect effect is stronger at high levels, as compared to at low levels, of perceived transgression severity. Therefore, the pattern of results supports Hypothesis 4bi.

With regard to gratitude, mediation analysis shows the following: First, gratitude is positively related with prosocial behavior (coefficient = .15, $p < .05$). Second, at high perceived transgression severity level, the conditional indirect effect of Forgiven-ness on prosocial behavior through gratitude is statistically significant (conditional indirect effect = .15); at low perceived severity level, this conditional indirect effect is also statistically significant (conditional indirect effect = .09). Hence, mediation analysis shows that Forgiven-ness is

positively related to offenders' gratitude, which is in turn positively related to their prosocial behavior – and this indirect effect is stronger at high levels, as compared to at low levels, of perceived transgression severity. Therefore, the overall pattern of results provides support for Hypothesis 5b.

With regard to guilt, although the pattern of results do not support Hypothesis 3a (and by implication, Hypothesis 3b is not supported), in light of the statistically significant Forgiveness-by-Severity interaction effect on guilt, I conducted mediation analysis (Hayes, 2013) to examine if guilt mediates the relationship between this Forgiveness-by-Severity interaction effect and offenders' prosocial behavior. The mediation analysis shows the following: First, guilt is positively related with prosocial behavior (coefficient = .12, $p < .05$). Second, at high Forgiveness level (i.e., +1SD from the mean of Forgiveness), the conditional indirect effect of perceived transgression severity on prosocial behavior through guilt is statistically significant (conditional indirect effect = .09); by contrast, at low Forgiveness level (i.e., -1SD from the mean of Forgiveness), this conditional indirect effect is statistically non-significant (i.e., confidence interval includes 0) (conditional indirect effect = .03). Hence, mediation analysis shows that only when Forgiveness is high, perceived transgression severity is positively related to offenders' guilt, which is in turn positively related to their prosocial behavior.

With regard to shame, although the pattern of results do not support Hypothesis 2a (and by implication, Hypothesis 2bi is not supported), in light of the statistically significant Forgiveness-by-Severity interaction effect on shame, I conducted mediation analysis (Hayes, 2013) to examine if shame mediates the relationship between this Forgiveness-by-Severity interaction effect and offenders' prosocial behavior. The mediation analysis shows the following: First, shame is positively related with prosocial behavior (coefficient = .16, $p < .05$). Second, at

high Forgiven-ness level, the conditional indirect effect of perceived transgression severity on prosocial behavior through shame is statistically significant (conditional indirect effect = .08); by contrast, at low Forgiven-ness level, this conditional indirect effect is statistically non-significant (conditional indirect effect = .00). Hence, mediation analysis shows that only at high Forgiven-ness level, perceived transgression severity is positively related to offenders' shame, which is in turn positively related to their prosocial behavior.

Harman one-factor model

Finally, in order to investigate the extent to which common source bias may account for all my survey findings, I conducted structural equation modelling (SEM) analysis on all the items used in this study to examine if a single factor fitted the data. SEM analysis shows that the one-factor model has poor overall model fit ($\chi^2 = 3192.26$, $df = 882$, $CFI = .65$, $TLI = .59$, $IFI = .66$, $NFI = .58$, $RMSEA = .12$). This result shows that the findings of my study are not solely due to common source bias.

ITS Discussion

The pattern of results in my interpersonal transgression survey (ITS) provides support for the hypotheses with regard to the human flourishing emotions of happiness and gratitude. In essence, the results show that perceived transgression/hurt severity accentuates the positive relationships between the extent to which offenders have been forgiven (i.e., Forgiven-ness) and their feelings of happiness and gratitude, such that when offenders are forgiven for severe transgressions (as compared to that of slight transgressions), they feel even more gratitude and happiness. Furthermore, this study shows that through its influence on offenders' gratitude and happiness, the joint effects of perceived transgression severity and Forgiven-ness indirectly

increases offenders' prosocial behavior. In sum, offenders' experience of forgiveness for their interpersonal transgressions is associated with behavioral/social- and emotion-based human flourishing outcomes.

However, the ITS survey data does not support the hypotheses with regard to the guilt and shame emotions. Although the Forgiveness-by-Severity interaction effect is statistically significantly related to guilt and shame, the pattern of relationships is somewhat unexpected. Specifically, analyses show that for offenders who experience high levels of Forgiveness for their transgressions, perceived transgression severity is significantly positively related to their feelings of guilt and shame; by contrast, for offenders who experience low levels of Forgiveness for their transgressions, perceived transgression severity is non-significantly associated with offenders' feelings of guilt and shame.

Hence, the patterns of results for the guilt and shame emotions do not support my hypotheses and story; rather they suggest an *emotional moral barometer* (Tangney et al., 2007) *sensitivity* story. First, at high Forgiveness level (for example, when offenders have been forgiven for their interpersonal transgressions), a '*reflected conscience*' or '*reflected virtuousness*' phenomenon may be operating – in the sense that when offenders see and experience their victims' virtuousness (as their victims have forgiven them even though they had transgressed against their victims), the offenders may more clearly perceive the extent of their guilt and unworthiness – that is, they can with greater sensitivity experience guilt and shame at levels that are commensurate with the extent of hurt that they had inflicted on their victims. Moreover, when offenders are forgiven, it may free them to get in touch with their hearts and conscience – so that they experience the self-conscious moral emotions of guilt and shame at levels that are commensurate with the severity of hurt that they had inflicted on their victims.

However, at low Forgiveness level (for example, when offenders have not been forgiven for their transgressions), the ‘reflected conscience’ or ‘reflected virtuousness’ phenomenon may not be operating; moreover, when offenders are unforgiven, their defense mechanism may be activated so that they do not get in touch with their hearts and conscience, and numb themselves from being sensitive to the moral emotions of guilt and shame – thus the extent to which they experience the moral emotions of guilt and shame is not commensurate with the severity of hurt that they had inflicted on their victims.

In sum, this emotional moral barometer sensitivity explanation may account for why at high Forgiveness level, there is a positive relationship between offenders’ perception of transgression severity and their feelings of guilt and shame, whereas at low Forgiveness level, offenders’ perceived transgression severity is non-significantly associated with their feelings of guilt and shame. Indeed, the results from my survey suggest that while not being forgiven for transgressions is associated with a sense of emotional moral numbing within offenders, experiencing forgiveness for transgressions is associated with emotional moral barometer sensitivity (Tangney et al., 2007) within offenders in the sense that the offenders feel shame and guilt at levels that are commensurate with the amount of hurt that they had inflicted on their victims – this emotional moral barometer sensitivity may indeed be a form of optimal human functioning. A more direct empirical test should be conducted to further examine the validity of this post-hoc explanation.

Hence, this study underscores the importance of forgiveness for offenders as it has implications for the sensitivity of their emotional moral barometer. Further to that, as (moral) emotions may precede (moral) cognition, the experience of moral emotions (e.g., guilt, shame, gratitude) – and the sensitivity to which offenders feel these moral emotions (McCullough et al.,

2001; Tangney et al., 2007) – may influence the offenders’ moral sensitivity (which refers to “one’s awareness of how one’s actions affect others” (You, Maeda, & Bebeau, 2011, p. 265) (Rest, 1984; Zajonc, 1980). In the long run, these may in turn have implications for the moral development of the offenders (Gassin, 1998; Murphy & Hampton, 1988). This line of reasoning is pertinent to extant discussion of how the experience of forgiveness has implications for the moral development of offenders (Gassin, 1998; Murphy & Hampton, 1988).

Furthermore, this study shows that through its influence on offenders’ guilt and shame, the joint effects of perceived transgression severity and Forgiveness indirectly increases offenders’ prosocial behavior. Indeed, that shame is positively related to the offenders’ prosocial behavior contradicts Hypothesis 2bi (which posited that shame will be negatively related to offenders’ prosocial behavior). A plausible explanation for the surprising finding that shame is positively related to the offender’s prosocial behavior is: when offenders experience shame, they feel a low sense of self-worth, hence they may engage in prosocial behavior in order to increase their sense of self-worth or salvage their damaged ego (Sachdeva, Iliev, & Medin, 2009) – that is, by doing something good (e.g., helping someone), offenders may counter the decrement in their sense of self-worth/self-esteem and thereby reduce their feeling of shame. Indeed, this shame-reduction explanation resonates with the guilt-reduction hypothesis as an account for prosocial/helping behavior in the social psychology literature – which posited that individuals who are feeling guilty may help others in order to reduce their feelings of guilt (Regan 1971; Regan et al., 1972). In other words, it is plausible that offenders who experience shame after committing a transgression (a negative moral action) may engage in prosocial behavior (a positive moral action) in order to alleviate their feeling of shame. This post-hoc explanation may thus account for why shame, similar to guilt, is positively related to offenders’ prosocial

behavior. Future research is needed to more rigorously examine the validity of this post-hoc explanation.

The analysis also shows that the Forgiveness-by-Severity interaction effect is non-significantly associated with the fear emotion; however, the perceived transgression severity main effect is significantly positively related to fear. This pattern of results implies that whether offenders have been forgiven for their transgressions or not, perceived transgression severity is still positively related to fear. Thus, the hypothesis that Forgiveness attenuates the positive relationship between offenders' perceived mistake severity and fear is not supported in my ITS study.

In addition, regression analysis shows that the perceived transgression severity and Forgiveness main effects, as well as their interaction effect are non-significantly related to offenders' creativity. Hence, neither the severity of offenders' transgressions nor the extent to which offenders have been forgiven for their transgression has any implication on their creativity.

Lastly, the effect of offenders' forgiveness experience does not merely stop at the activation of their emotions – these emotion states in turn influence their prosocial behavior. Indeed, the analyses show that offenders' happiness, gratitude, guilt, and shame are all positively related to their prosocial behavior. In other words, through the effects on offenders' emotions (i.e., shame, guilt, gratitude, and happiness), the experience of forgiveness (or more specifically, the joint influence of offenders' perception of transgression severity and of the extent to which their victims have forgiven them) indirectly increase their prosocial behavior.

Overall, this study shows that offenders' experience of being-forgiven for their interpersonal transgressions is associated with emotion-based and behavioral/social-based human

flourishing or optimal human functioning outcomes (i.e., gratitude, happiness, sensitive emotional moral barometer, and prosocial behavior).

One of the limitations of this study is that it is based on the retrospective survey methodology. Yet, this method has been used in existing Being-Forgiven research (e.g., Exline et al., 2008; Gassin, 1998; Wallace et al., 2008); moreover, at a broader level, this retrospective methodology is a widely used methodology in forgiveness research – whether the study pertains to the victims’ or the offenders’ perspective of forgiveness (Fehr et al., 2010; Finkel et al., 2002). Indeed, some researchers have even noted that using the retrospective survey methodology may be expedient for forgiveness research (as compared to the other methodologies in our field – for example, the experimental methodology) since forgiveness research generally involves asking research participants about hurt- or harm-related events that they had committed (e.g., transgressions, mistakes), and such events will be difficult to simulate in the experimental laboratory without compromising on the realism while at the same time abiding by the ethical research principles. For example, Wallace et al. (2008) comments, “taking an experimental approach to systematically study how transgressors behave toward forgiving and unforgiving individuals is difficult because the requisite transgression cannot be ethically induced or simulated without sacrificing some ecological validity” (p. 455). Hence, when the advantages and disadvantages of the retrospective survey methodology have been weighed (as well as how this methodology compares with other methodologies in our field), this methodology may be the most suitable methodology for the topic of forgiveness within the context of transgressions – due to this topic’s sensitive nature.

Another limitation of this study is that the responses to the survey are all self-reported (i.e., common source bias). Yet, the Harman one-factor SEM analysis on all the items used in the

survey shows that the one-factor model had poor overall model fit. This shows that the findings of my survey are not solely due to common source bias. Moreover, the statistically significant interaction effects in my survey buttress my argument that the findings in this survey study are not all due to common source/method bias.

GENERAL DISCUSSION

My dissertation focuses on the experience of forgiveness from the perspective of the people who commit mistakes, errors, or transgressions. As with the few research pioneers who have investigated forgiveness from the offenders' perspective, I investigated how offenders' experience of being forgiven for their mistakes (i.e., errors and transgressions) may lead to a reduction in their negative emotions. Of greater importance, in my dissertation, I further examined the question of whether offenders' experience of being forgiven for their mistakes may also lead them to experience human flourishing outcomes; in addition, I examined if the offenders' state emotions may be a mediating mechanism that underlies the relationship between their experience of forgiveness and some of these human flourishing outcomes.

To recapitulate, I examined three aspects of human flourishing as possible outcomes for offenders' being-forgiven experience – happiness and gratitude as emotional aspects of human flourishing, creativity as a cognitive aspect of human flourishing, and prosocial behavior as a behavioral/social aspect of human flourishing. In general, for the human flourishing emotions of happiness and gratitude, the basic rationale is that offenders' perception of the extent to which they have been forgiven for their mistakes is positively related to their feelings of happiness and gratitude; and the perceived severity of the mistake will accentuate the positive relationship between Forgiven-ness and these human flourishing emotions. On the other hand, for the negative emotions, the basic rationale is that offenders' perception of mistake severity is positively related to their feelings of fear, shame, and guilt; and offenders' perception of the extent to which they have been forgiven will attenuate the positive relationship between perceived mistake severity and these negative emotions. I further hypothesized that through these positive and negative emotion states, perceived mistake severity and the extent to which

offenders have been forgiven will jointly influence (i.e., interaction effect in this case) their creativity and prosocial behavior.

A survey and an experiment were conducted to test my hypotheses. A distinction between the survey and experiment is highlighted here. Specifically, while the theme of the survey was on interpersonal transgressions, the theme of the experiment was on work errors. This distinction further informs my inferences as I examine the findings across the interpersonal transgression survey (ITS) and data entry error (DEE) experiment.

Lessons from the two empirical studies in my dissertation

Fear

In my data entry error (DEE) experiment, analysis shows that the Forgiveness-by-Severity interaction effect is statistically significantly related with the offenders' feeling of fear, such that while the relationship between perceived error severity and fear is statistically non-significant in the Forgiven treatment condition, this relationship is statistically significant in the Unforgiven and Control treatment conditions. Therefore, my experiment results provide support for the hypothesis that Being-Forgiven attenuates the positive relationship between offenders' perceived mistake severity and fear. Specifically, the results show that when offenders have been forgiven for their errors, it does not matter how big or small their error is on their feeling of fear since the debt that has arisen from the errors has been cancelled and no retaliation is forthcoming from their victims.

By contrast, the Forgiveness-by-Severity interaction effect is statistically non-significantly related to offenders' feeling of fear in my interpersonal transgression survey (ITS). So a pertinent question is: why did this result, which is contrary to my hypothesis, occur? Yet, in

comparing between the findings in my survey and experiment, given that the perceived transgression severity main effect is significantly positively related with fear in the survey, the more precise question is: why is the perceived severity—fear relationship *not* attenuated when there is a high level of Forgiven-ness in my survey? One plausible explanation for this unexpected finding is that for offenders who have committed interpersonal transgressions, even if they have been forgiven by their victims, they may fear retribution or punishment from higher sources (Krause & Ellison, 2003) – this may be a reason that the relationship between perceived transgression severity and offenders’ feeling of fear is not attenuated when there is a high level of Forgiven-ness experience from their victims. Indeed, this explanation is especially likely within the context of my survey since interpersonal transgressions typically involve the issue of ethics, and subjects may also have a just-world belief (Lerner, 1978). This explanation may account for the difference in findings in my experiment and survey; yet, future empirical studies are needed to provide a rigorous test of this post-hoc explanation.

Guilt and shame

My ITS study reveals that the Forgiveness-by-Severity interaction effect is statistically significantly related with offenders’ feelings of guilt and shame – however, the patterns of interaction effect run contrary to what I had hypothesized. On the other hand, my DEE experiment study shows that the Forgiveness-by-Severity interaction effect is non-significantly related with offenders’ feelings of guilt and shame. Yet, the results of both my survey and experiment studies converge to show that offenders’ experience of being forgiven for their mistakes *does not attenuate* the relationship between perceived mistake severity and their feelings of guilt and shame.

Indeed, contrary to my hypotheses, my ITS study shows that at high level of Forgiveness, the positive relationships between perceived transgression severity and offenders' feelings of guilt and shame are statistically significant; however, at low level of Forgiveness, the relationships between perceived transgression severity and offenders' feelings of guilt and shame are statistically non-significant. Respectively, this suggests that at high level of Forgiveness (e.g., when offenders have been forgiven for the transgression), offenders seem to be freed to be more sensitive or to be in tune with their conscience, and thus experience guilt and shame at levels that are commensurate with the amount of hurt/harm that they had inflicted on their victims. By contrast, at low level of Forgiveness (e.g., when offenders are not forgiven), offenders may not experience this freedom – indeed, the offenders' defense mechanism may be triggered such that they experience numbness with regard to these moral emotions, and thus the amount of guilt and shame that they feel are not commensurate with their perception of transgression severity. (For example, offenders' defense mechanism may be activated in order to protect their sense of self-worth when they are not forgiven, thus producing a numbing effect such that the relationship between their perception of transgression severity and feeling of shame is statistically non-significant at low level of Forgiveness).

For my DEE experiment, the main effects of perceived error severity on offenders' guilt and shame are statistically significant in the Forgiven treatment group. This resonates with the results in my ITS study, which demonstrate a positive relationship between perceived transgression severity with offenders' guilt and shame at high level of Forgiveness. However, the statistically non-significant Forgiveness-by-Severity interaction effect on guilt in my DEE experiment implies that the perceived error severity—guilt slopes in the Unforgiven and Control treatment conditions do not differ significantly from that of the Forgiven treatment condition;

likewise, the statistically non-significant Forgiveness-by-Severity interaction effect on shame in my experiment implies that the difference in the perceived error severity—shame slopes between the Forgiven treatment condition and the Unforgiven or Control treatment conditions are statistically non-significant. Hence, the pertinent question is: why, unlike the results that are obtained in the interpersonal transgression survey, is the effect of perceived error severity on guilt and shame not attenuated in the not-forgiven conditions (i.e., the control and unforgiven conditions) in my experiment? One plausible reason for this is that the defense mechanism that produces the numbing effect is not operating in the not-forgiven conditions in my experiment. This reason is especially plausible since my experiment involves subjects being led to believe that they had committed accidental typo errors – and because of their accidental or non-intentional nature, such work errors typically do not involve the issue of ethics. In other words, I posit that the offenders’ defense mechanisms operate to numb them from being *sensitive* to the moral emotions of shame and guilt only when the issue of ethics is involved – for example, within the context of my survey which pertains to interpersonal transgressions. By contrast, offenders’ defense mechanisms may not have been activated when the notion of ethics is not involved – for example, within the context of my DEE experiment where subjects were led to believe that they had committed *accidental* work errors. Indeed, supplementary analysis, which are conducted only for suggestive purpose, shows that the subjects perceived a greater level of responsibility for their mistakes in the survey involving interpersonal transgressions ($M = 3.69$, $SD = .85$, $n = 187$) than in the experiment involving accidental work errors ($M = 3.48$, $SD = 1.02$, $n = 84$), $t(269) = -1.81$, $p = .07$ (marginally significant). Rigorous tests on this post-hoc explanation needs to be conducted to examine its validity – a fruitful avenue for future research.

Happiness and gratitude

My ITS survey results show that the interaction effect between offenders' perception of transgression severity and of the extent to which they have been forgiven (i.e., Forgiveness-by-Severity interaction effect) is statistically significantly related to their feelings of happiness and gratitude, such that perceived transgression severity accentuates the positive relationship between offenders' Forgiven-ness and their feelings of happiness and gratitude. Therefore, the results of my interpersonal transgression survey provide support for the human flourishing story with regard to the happiness and gratitude emotions.

By contrast, my data entry error experiment shows that the Forgiveness-by-Severity interaction effect is non-significantly related to offenders' feelings of happiness and gratitude; furthermore, contrary to my argument, the Forgiven-ness main effect on happiness and gratitude are statistically non-significant. That even the Forgiven-ness main effect is non-significantly associated with happiness and gratitude suggests that a plausible explanation for this unexpected finding is that the offender-subjects may not value the forgiveness in the experiment. For example, it is plausible that subjects do not value the forgiveness because they may rationalize that they had "committed" only accidental typo mistakes and everyone commits typo mistakes sometimes, thus they and their actions are not particularly bad in this experiment – therefore, the experience of being forgiven for their work errors is not such big a deal that pushes offender-subjects to a higher emotional platform to experience happiness. It is also plausible that the subjects, being strangers with the confederate, do not particularly value the forgiveness from the "victim-confederate" and thus do not regard it as such a positive benefit to them that they experience happiness. Thus, whether subjects are forgiven or unforgiven for their errors is not

related with their feeling of happiness (i.e., Forgiven-ness main effect is non-significantly associated with happiness).

The same line of reasoning applies to the gratitude emotion – that is, because forgiveness is not a gift that they value, whether they are forgiven or not forgiven for their work errors is not associated with their feeling of gratitude (i.e., Forgiven-ness main effect is non-significantly associated with gratitude). Furthermore and of greater interest here, if the subjects do not value the forgiveness, it is a moot point as to whether perceived error severity accentuates the relationships between offenders' Forgiven-ness and their feelings of happiness and gratitude – this explanation resonates with my experiment findings that the Forgiveness-by-Severity interaction effect on offenders' happiness and gratitude are statistically non-significant. Future research may assess the validity of this post-hoc explanation by assessing 'the extent to which offenders value the experience of being forgiven', and examine this variable as a potential moderator of the relationship between the extent to which offenders have been forgiven for their mistakes and their feelings of happiness and gratitude.

Another plausible explanation for the unexpected findings with regard to happiness and gratitude in my DEE experiment is: because forgiveness takes place immediately after a serious negative event (where subjects were led to believe that they caused a stranger to lose \$500 or \$2000), the subjects' emotions could not change gears fast enough – so while subjects may experience a reduction in negative emotion states, they could not "attain the higher platform" of experiencing the positive emotions states of happiness and gratitude. Future research is needed to provide insight on the validity of this post-hoc explanation.

Creativity

In the survey and experiment, analyses show that both the main effects of perceived mistake severity and the extent to which offenders have been forgiven for their mistakes, as well as the Forgiveness-by-Severity interaction effect do not account for any variance in the offenders' creativity scores. Thus, the two studies in my dissertation converge to show that neither the perceived severity of mistake nor the offenders' experience of being forgiven for their mistakes has any implication on their creativity.

Prosocial behavior

Although the regression of prosocial behavior on Forgiveness-by-Severity interaction effect is statistically significant in my data entry error experiment, the pattern of results is not consistent with a human flourishing story (rather, the pattern of results suggests a *psychological closure* or *equilibrium* story). That is, my experiment shows that offenders' experience of forgiveness does not lead them to have enhanced prosocial behavior. By contrast, my interpersonal transgression survey shows that through the effects on offenders' emotions (i.e., gratitude, happiness, shame, and guilt), the experience of forgiveness (or more specifically, the joint influence of offenders' perception of transgression severity and of the extent to which their victims have forgiven them) indirectly increases their prosocial behavior. The difference in findings on prosocial behavior between my DEE experiment and ITS survey may be due to the differential activation of the offenders' emotion states – that is, while the Forgiveness-by-Severity interaction effect influences the offenders' guilt, shame, gratitude, and happiness within the context of interpersonal transgressions, this interaction effect does not influence these

offender emotion states within the context of work errors. Future research is needed to more rigorously examine this post-hoc explanation.

Overall

Overall, there are both similarities and differences in the findings across my ITS survey and DEE experiment. In terms of similarity, the two studies converge to show that offenders' experience of being forgiven for their work errors and interpersonal transgressions are not associated with enhanced creativity (cognitive aspect of human flourishing). In terms of differences, at a general level, while offenders' experience of being forgiven for unintentional work errors does not tell a human flourishing story at all, their experience of being forgiven for interpersonal transgressions tells a human flourishing story – albeit limited only to the emotional and behavioral/social aspects of human flourishing or optimal human functioning.

At this juncture, I would like to note a caveat – my two studies differ not only in terms of the types of mistakes (i.e., unintentional work errors versus interpersonal transgressions), but also in terms of the research methodologies (i.e., an experiment and a survey). While it is more plausible that the type of mistakes, rather than the type of research methodology, has yielded the differential results – that is, it is more plausible and intuitively appealing to infer that *'being forgiven for interpersonal transgressions is associated with social- and emotion-based human flourishing, but being forgiven for work errors is not associated with social- and emotion-based human flourishing'*, rather than *'being forgiven as assessed by a survey methodology is associated with social- and emotion-based human flourishing, but being forgiven as assessed by an experiment methodology is not associated with social- and emotion-based human flourishing'* – further research is needed to validate this plausible suggestion. Indeed, it may be particularly

informative if future research investigate the effect of being forgiven for interpersonal transgressions using an experiment methodology, and the effect of being forgiven for work errors using a survey methodology – if these lines of investigation triangulate on the conclusions, then our confidence in the conclusions will be strengthened.

Contributions

To truly understand the experience of forgiveness, we need research from the perspectives of both the victims and the offenders. However, much of existing research has examined the topic of forgiveness from the perspective of the victims only; there's a scarcity of research that examines forgiveness from the perspective of the offenders. Hence, my dissertation seeks to fill this important gap and contributes to the corpus of forgiveness literature by examining the experience and consequences of forgiveness from the offenders' perspective.

Forgiveness is relevant against a backdrop of mistakes. Within the context of mistakes, offenders typically experience negative outcomes when they commit mistakes – for example, they may experience guilt and fear. Hence, in my dissertation, I investigated whether and how offenders' experience of being forgiven for their mistakes may lead to a reduction in some of their negative outcomes; furthermore, I examined if offenders' experience of forgiveness may also lead them to experience positive outcomes (e.g., human flourishing/optimal human functioning outcomes). Since there is a dearth of research especially on the issue of whether offenders' experience of forgiveness for mistakes is associated with positive outcomes, this is another contribution of my dissertation.

My proposed framework was tested on two types of mistakes – interpersonal transgressions and unintentional work errors. Results of my empirical studies suggest that offenders' experiences of forgiveness for these two types of mistakes do not tell the same story.

Specifically, while the experience of being forgiven for interpersonal transgressions tells an emotion-based and behavioral/social-based human flourishing story, the experience of being forgiven for unintentional work errors does not tell a human flourishing story at all. Hence, my dissertation reveals some differences between offenders' experience of forgiveness for interpersonal transgressions versus their experience of forgiveness for unintentional work errors – another contribution to the literature.

Boundary Condition and Future Research

While examining the experience of forgiveness from the offenders' perspective is my major contribution to the literature, it is simultaneously a boundary condition in my dissertation. Indeed, my paper, like the bulk of extant forgiveness research, examines forgiveness from the perspective of only one party – the offenders' or the victims'.

Future research may thus push the frontiers of forgiveness research by examining forgiveness experiences within the offender-victim dyad – for example, by examining the dynamic forgiveness-related interactions between the offenders and victims. This will enrich our understanding of the forgiveness phenomenon. Furthermore, more empirical research may be conducted on the forgiveness phenomenon at higher levels-of-analysis – while some conceptual work has been done in this aspect (Fehr & Gelfand, 2012; Palanski, 2012), empirical work has yet to catch up.

The results of my two studies suggest that the type of mistakes (i.e., unintentional errors versus interpersonal transgressions) may affect the pattern of emotional and behavioral outcomes when offenders experience forgiveness from their victims. This would indeed be a fruitful avenue for future research. Specifically, future research may more rigorously examine if the type of mistakes (and the notion of ethicality) may be a third-order moderator of the 2-way

Forgiveness-by-Severity interaction effect on the offenders' emotion states and behavioral outcomes. In addition, as noted earlier, future research may examine if the 'extent to which offenders value the forgiveness from their victims' may affect their emotional and behavioral consequences of experiencing forgiveness for their mistakes. Other suggestions for future research have been noted elsewhere in my Discussion section.

Workplace Implications

The topic of forgiveness is important in the workplace as mistakes, errors, and transgressions occur (e.g., unfairness, trust violation, errors – Berlinger, 2005; Greenberg, 2006; Hershcovis, & Barling, 2010; Lewicki, 1983; Robinson & Bennett, 1995; Tepper, 2007; van Dyck, Frese, Baer, & Sonnentag, 2005; Zhao & Olivera, 2006). Indeed, at some point in their jobs, all employees will commit mistakes. Yet, after committing the mistakes, it is important that the focal employees not be handicapped by their mistakes (Arendt, 1958) and are able to move on as they still need to work, and work together with other employees. This underscores the importance of forgiveness at the workplace as it has important implications for the offender-employees, their victims, as well as their interpersonal relationships with their victims.

Applied to the workplace, the results of my ITS study recommend that managers forgive their subordinates for interpersonal transgressions, as doing so may allow their subordinates to experience the human flourishing emotions of happiness and gratitude. Moreover, forgiving subordinates for interpersonal transgressions may free them to get in touch with their moral self-conscious emotions (e.g., guilt, shame), and enhance the sensitivity of their emotional moral barometer – which may plausibly have implications for their moral development, and thus prevent them from committing interpersonal transgressions or workplace deviant behaviors in the future. Furthermore, in practical terms, this study shows that, through its effects on

subordinates' emotions (gratitude, happiness, shame, and guilt), the experience of forgiveness for their interpersonal transgressions may be associated with subordinates performing more organizational citizenship behavior. These employee behavioral responses will in turn have beneficial implications for the organization's productivity.

By contrast, the results of my experiment suggest that when managers forgive their subordinates for unintended work errors, they may become less prosocial and engage in less organizational citizenship behavior (OCB). Thus, from the manager's standpoint, it may not be particularly productive to convey the message of forgiveness to subordinates when they commit work errors as doing so may lead to a reduction in subordinates' OCB.

And yet, OCB is not the only work-related criterion that managers care about (e.g., other work-related criteria that are of interest to managers include subordinates' task performance, learning). Thus, more research should be conducted to investigate if subordinates' experience of forgiveness for their work errors and transgressions could influence other workplace outcomes (for example, subordinates' task performance, learning; Carmeli & Gittell, 2009) before we can make good recommendations to managers on the course of action to take when subordinates commit mistakes (i.e., transgressions, errors) in the workplace.

Conclusion

Within the context of interpersonal transgressions, the results of my survey reveal that offenders' perception of forgiveness for their interpersonal transgressions is associated with their feelings of happiness and gratitude; furthermore, when offenders have been forgiven for severe transgressions (as compared to that of slight transgressions), they feel even more happiness and gratitude. This pattern of findings resonates with an emotion-based human flourishing story.

In addition, my survey shows that when offenders perceive a low level of forgiveness for their interpersonal transgressions, the severity of their transgressions is non-significantly related to their feelings of guilt and shame; however, when offenders perceive a high level of forgiveness for their interpersonal transgressions, they have an increased sensitivity to the moral emotions of guilt and shame, such that they feel guilt and shame at levels that are commensurate with their perception of transgression severity. The former result suggests that when offenders do not receive forgiveness from their victims, they may experience a sense of emotional moral numbing; the latter result suggests that when offenders are forgiven for their interpersonal transgressions, they will have a more sensitive emotional moral barometer – which may be a form of optimal human functioning. Hence, my study underscores the importance of forgiveness as it yields within offenders a sensitive emotional moral barometer – with plausible implications for their moral sensitivity and moral development.

Furthermore, through the effects on their emotions (i.e., gratitude, happiness, shame, and guilt), offenders' experience of forgiveness for interpersonal transgressions (or more precisely stated, the joint influence of offenders' perception of transgression severity and of the extent to which they have been forgiven by their victims) indirectly increase their prosocial behavior. Hence, my survey shows that offenders' experience of being-forgiven for their interpersonal transgressions is associated with emotion-based and behavioral/social-based human flourishing or optimal human functioning outcomes.

Within the context of unintended work errors, the pattern of findings in my Data Entry Error experiment shows that even though offenders' experience of being forgiven for their errors removes the effect of perceived error severity on fear, it does not lead to any human flourishing

outcomes. Hence, offenders' experience of being forgiven for unintended work errors does not tell a human flourishing story.

In conclusion, my dissertation shows that offenders' experience of being forgiven for their work errors is not associated with any human flourishing outcomes; by contrast, offenders' experience of being forgiven for interpersonal transgressions is associated with emotion-based and behavioral/social-based human flourishing or optimal human functioning outcomes.

FOOTNOTE

In order to examine whether the DEE experiment data will be different for believed vs. suspected subjects, I conducted a 3rd-order interaction effect regression analysis (i.e., with the believed-vs-suspected variable as a third independent variable in the regression analysis). And the regression analysis shows that this Forgiveness-by-Severity-by-Suspect 3rd-order interaction effect is statistically significant for the happiness and gratitude emotion states – this shows that the subjects who suspected the experimental manipulation has different gratitude and happiness data patterns from the subjects who believed the experimental manipulation.

Also, although the Forgiveness-by-Severity-by-Suspect 3rd-order interaction effect is statistically non-significant for fear and prosocial behavior, the originally statistically significant 2nd-order Forgiveness-by-Severity interaction effects on fear and prosocial behavior (which had been obtained for the purely-believed subjects) are now statistically non-significant when the suspected subjects are included in the analysis.

Overall, the analyses (on the believed-vs-suspected subjects) show that the data pattern and psychological mechanism are different for the subjects who believed the experimental manipulation versus those who suspected the experimental manipulation. Hence, I conducted statistical analyses only on subjects who believed the experimental manipulation (i.e., $n = 88$).

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Table 1 (DEE Experiment). Means, standard deviations, correlations, and internal consistency reliability.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Dummy1 (control)	.34	.48	NA											
2. Dummy2 (unforgiven)	.26	.44	-.43**	NA										
3. Perceived Severity	4.10	.81	-.16	.17	(.79)									
4. Fear	2.43	1.25	.01	-.04	.39**	(.87)								
5. Shame	2.58	1.22	-.03	.06	.36**	.81**	(.77)							
6. Guilt	3.49	1.57	.02	.03	.46**	.66**	.71**	(.80)						
7. Gratitude	3.25	1.44	-.21	-.02	-.06	.21	.10	-.07	(.92)					
8. Happiness	3.23	1.34	-.14	-.06	-.19	-.01	-.10	-.30**	.77**	(.88)				
9. Fluency	12.77	5.79	.01	-.11	-.03	.05	-.03	-.03	.04	-.02	(.99)			
10. Flexibility	6.21	1.60	.05	-.12	-.12	.09	.01	-.04	.10	.05	.83**	(.83)		
11. Originality	.82	1.24	.16	-.02	-.18	-.09	-.10	-.10	.06	-.03	.64**	.48**	NA	
12. Volunteer project	25.41	26.19	.06	-.18	.13	.15	.23*	.16	.04	-.02	-.18	-.07	-.21	NA

Note: N = 88. Correlations are based on two-tailed tests. Internal consistency reliabilities are indicated in parentheses (along the diagonal in the correlation section).

* $p < .05$. ** $p < .01$.

Table 2 (DEE Experiment). Regression of negative emotion states on Forgiveness Treatment Variable and Perceived Severity (centered).

Predictors	Fear		Shame		Guilt	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Constant	2.41***	2.41***	2.50***	2.50***	3.45***	3.45***
Perceived Severity	.64***	.25	.55**	.26	.93***	.73*
Dummy1 (control group)	.16	.20	.13	.16	.26	.28
Dummy2 (unforgiven group)	-.28	-.45	.05	-.07	-.08	-.18
Severity*Dummy1 (ctrl) interaction		.65 [#]		.46		.32
Severity*Dummy2 (uf) interaction		1.10*		.81		.60
Adjusted R ²	.14	.18	.10	.11	.19	.18
ΔR ²	.17**	.06*	.13*	.04	.22***	.01
F	5.40**	4.69**	3.93*	3.04*	7.25***	4.51**

Note: Table shows unstandardized regression coefficients. N = 83.

* $p < .05$. ** $p < .01$. *** $p < .001$. [#] $p < .06$.

Table 3 (DEE Experiment). Regression of positive emotion states on Forgiveness Treatment Variable and Perceived Severity (centered).

Predictors	Gratitude		Happiness	
	Step 1	Step 2	Step 1	Step 2
Constant	3.65***	3.65***	3.50***	3.50***
Perceived Severity	-.13	-.37	-.33	-.47
Dummy1 (control group)	-.84*	-.82*	-.58	-.60
Dummy2 (unforgiven group)	-.53	-.69	-.44	-.68
Severity*Dummy1 (ctrl) interaction		.33		.05
Severity*Dummy2 (uf) interaction		.89		1.17 [#]
Adjusted R ²	.03	.03	.04	.06
ΔR ²	.07	.02	.07	.05
F	1.91	1.54	2.09	2.08

Note: Table shows unstandardized regression coefficients. N = 83.

* $p < .05$. ** $p < .01$. *** $p < .001$. [#] $p < .06$.

Table 4 (DEE Experiment). Regression of creativity dimensions and prosocial behavior (time offered to volunteer for research project) on Forgiven-ness Treatment Variable and Perceived Severity (centered).

Predictors	Fluency (n = 83)		Flexibility (n = 80)		Originality (n = 80)		Prosocial Behav. (n = 82)	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Constant	13.21***	13.22***	6.30***	6.29***	.53*	.53*	26.32***	26.04***
Perceived Severity	-.19	-.34	-.22	-.44	-.26	-.19	5.08	-2.44
Dummy1 (control group)	-.43	-.29	.01	.06	.55	.57	2.07	4.01
Dummy2 (unforgiven group)	-1.07	-.51	-.30	-.20	.39	.61	-10.38	-8.89
Severity*Dummy1 (ctrl) interactn		.96		.59		.12		17.00*
Severity*Dummy2 (uf) interactn		-2.22		-.16		-1.02		2.44
Adjusted R ²	-.03	-.04	-.02	-.02	.04	.07	.02	.07
ΔR ²	.01	.02	.02	.02	.07	.05	.06	.07 [#]
F	.17	.37	.55	.69	1.98	2.11	1.60	2.26 [#]

Note: Table shows unstandardized regression coefficients.

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p < .06$.

Table 5 (DEE Experiment). Regression of Fear and Prosocial Behavior on Forgiveness Treatment Variable and Perceived Severity (centered).

Predictors	Fear (n = 83)	Prosocial Behav. (n = 82)
Constant	2.41***	26.04***
Dummy1 (control group)	.20	4.01
Dummy2 (unforgiven group)	-.45	-8.89
Severity (forgiven group)	.25	-2.44
Severity (control group)	.90***	14.55**
Severity (unforgiven group)	1.35**	-.00
Adjusted R ²	.18	.07
ΔR ²	.23**	.13 [#]
F	4.69**	2.26 [#]

Note: Table shows unstandardized regression coefficients.

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p < .06$.

Table 6 (DEE Experiment). Regression of prosocial behavior (time offered to volunteer for research project) on Forgiveness Treatment Variable and Perceived Severity (centered) – using an alternative dummy coding scheme with Control group as reference group.

Predictors	Prosocial Behavior	
	Step 1	Step 2
Constant	28.39***	30.04***
Perceived Severity	5.08	14.55**
Alternative dummy (forgiven group)	-2.07	-4.01
Alternative dummy (unforgiven group)	-12.45	-12.90
Severity*AltDummy (forgiv) interaction		-17.00*
Severity*AltDummy (uf) interaction		-14.55
Adjusted R ²	.02	.07
ΔR ²	.06	.07 [#]
F	1.60	2.26 [#]

Note: Table shows unstandardized regression coefficients. N = 82.

* $p < .05$. ** $p < .01$. *** $p < .001$. [#] $p < .06$.

Table 7 (DEE Experiment). Test of mediation for the Forgiveness-by-Severity interaction effect on Prosocial Behavior.

Predictors	Prosocial Behavior
Constant	24.18**
Perceived Severity	-2.64
Dummy1 (control group)	3.87
Dummy2 (unforgiven group)	-8.43
Severity*Dummy1 (ctrl) interaction	16.50*
Severity*Dummy2 (uf) interaction	1.61
Fear	.77
Adjusted R ²	.06
ΔR ²	.13
F	1.83

Note: Table shows unstandardized regression coefficients. N = 81.

* $p < .05$. ** $p < .01$.

Table 8 (Interpersonal Transgression Survey – ITS). Means, standard deviations, correlations, and internal consistency reliability.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Perceived Severity	3.56	.89	(.85)										
2. Forgiven-ness	5.68	1.07	.03	(.95)									
3. Fear	2.03	1.34	.15*	-.16*	(.89)								
4. Shame	2.43	1.28	.19*	-.02	.46**	(.70)							
5. Guilt	3.97	1.71	.28**	.13	.36**	.70**	(.82)						
6. Happiness	4.62	1.72	.14	.48**	-.20**	.00	.08	(.91)					
7. Gratitude	4.72	1.81	.21**	.48**	-.13	.16*	.24**	.82**	(.94)				
8. Prosocial Behavior	4.44	1.37	.15*	.10	.12	.17*	.17*	.21**	.22**	(.83)			
9. Creativity (n=99)	3.43	1.52	.14	-.03	.04	-.06	-.01	.13	.06	.48**	(.96)		
10. Positive Affectivity	3.17	.60	.19**	.03	-.01	.06	.07	.10	.14	.22**	.43**	(.83)	
11. Negative Affectivity	2.13	.65	-.04	-.11	.15*	.15*	.11	-.10	-.03	-.05	-.09	.01	(.86)

Note: N = 187. Correlations are based on two-tailed tests. Internal consistency reliabilities are indicated in parentheses (along the diagonal in the correlation section).

* $p < .05$. ** $p < .01$.

Table 9 (ITS). Regression of gratitude and happiness on perceived transgression/hurt severity and Forgiven-ness centered independent variables.

Predictors	Gratitude			Happiness		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Positive Affectivity	.14 [#]	.09	.10	.10	.07	.07
Negative Affectivity	-.03	.03	.03	-.10	-.05	-.05
Perceived Severity_c		.18**	.17*		.11	.10
Forgiven-ness_c		.48***	.47***		.47***	.45***
Forgiveness*Severity interaction_c			.12 [#]			.16*
Adjusted R ²	.01	.27	.28	.01	.24	.26
ΔR ²	.02	.26***	.01 [#]	.02	.23***	.03*
F	1.89	17.82***	15.15***	1.97	15.36***	13.98***

Note: Table shows standardized regression coefficients. N = 187.

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p \leq .06$.

Table 10 (ITS). Regression of guilt and shame on perceived transgression severity and Forgiveness centered independent variables.

Predictors	Guilt			Shame		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Positive Affectivity	.06	.01	.01	.05	.02	.03
Negative Affectivity	.11	.13 [#]	.13 [#]	.15*	.16*	.16*
Perceived Severity_c		.27***	.26***		.19*	.17*
Forgiven-ness_c		.14 [#]	.12		-.01	-.03
Forgiveness*Severity interaction_c			.14*			.17*
Adjusted R ²	.01	.09	.11	.02	.04	.06
ΔR ²	.02	.09***	.02*	.03	.03*	.03*
F	1.49	5.55***	5.35***	2.51	2.93*	3.50**

Note: Table shows standardized regression coefficients. N = 187.

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p \leq .06$.

Table 11 (ITS). Regression of fear, prosocial behavior, and creativity on perceived transgression severity and Forgiven-ness centered independent variables.

Predictors	Fear			Prosocial Behavior			Creativity (N = 99)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Positive Affectivity	-.01	-.03	-.03	.22**	.20**	.20**	.43***	.43***	.42***
Negative Affectivity	.15*	.14 [#]	.14*	-.05	-.03	-.03	-.10	-.10	-.10
Perceived Severity_c		.16*	.15*		.11	.11		.05	.05
Forgiven-ness_c		-.14*	-.15*		.09	.08		-.05	-.05
Forgiveness*Severity interaction_c			.09			.01			.03
Adjusted R ²	.01	.05	.05	.04	.05	.04	.18	.17	.16
ΔR ²	.02	.04*	.01	.05**	.02	.00	.20***	.01	.00
F	2.18	3.29*	2.94*	4.97**	3.42*	2.72*	11.78***	5.96***	4.74**

Note: Table shows standardized regression coefficients. N = 187 (except creativity where N = 99).

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p \leq .06$.

Supplementary Table 1 (DEE Experiment): Comparison between subjects who believed vs. subjects who suspected the experimental manipulations.

Variable	Subject Type	Mean	SD	<i>t</i>	<i>p</i>
Forgiven-ness (manip. check)	Believed [#]	3.33	.95	<i>t</i> (169) = -2.14	.03*
	Suspected [^]	3.64	.94		
Error Severity (manip. check)	Believed	4.10	.81	<i>t</i> (162) = 3.80	.00***
	Suspected	3.58	.92		
Guilt	Believed	3.49	1.57	<i>t</i> (171) = 3.63	.00***
	Suspected	2.71	1.25		
Shame	Believed	2.58	1.22	<i>t</i> (171) = 4.48	.00***
	Suspected	1.85	.93		
Fear	Believed	2.43	1.25	<i>t</i> (171) = 2.47	.02*
	Suspected	2.00	1.08		
Gratitude	Believed	3.25	1.44	<i>t</i> (171) = 3.11	.00**
	Suspected	2.60	1.31		
Happiness	Believed	3.23	1.34	<i>t</i> (171) = -.01	.99
	Suspected	3.24	1.24		
Volunteer research project	Believed	25.41	26.19	<i>t</i> (170) = .35	.72
	Suspected	23.97	27.49		
Creativity – flexibility	Believed	6.18	1.59	<i>t</i> (171) = -.12	.91
	Suspected	6.21	1.67		
Creativity – fluency	Believed	12.77	5.79	<i>t</i> (171) = -.62	.54
	Suspected	13.37	6.90		

[#]*N* = 88 [^]*N* = 88 * *p* < .05. ** *p* < .01. *** *p* < .001.

Supplementary Table 2 (DEE Experiment). Regression of gratitude and happiness on Forgiveness treatment variable, perceived severity (centered), and subject type (believed vs. suspected manipulation).

Predictors	Gratitude			Happiness		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	4.29***	4.35***	4.41***	3.58***	3.51***	3.56***
Dummy1 (control group)	-.83**	-.72	-.80	-.60*	-.36	-.42
Dummy2 (unforgiven group)	-.39	-.90	-1.45	-.43	-.57	-1.41
Perceived Severity	-.08	-.15	-1.29*	-.20	-.42	-1.40*
Suspect (2 = suspected; 1 = believed)	-.66**	-.69 [#]	-.67 [#]	-.03	.04	.06
Severity*Dummy1(ctrl) interaction		-.22	1.62		-.31	.92
Severity*Dummy2(uf) interaction		-.01	2.39		-.03	2.97*
Suspect*Dummy1(ctrl) interaction		-.08	-.11		-.17	-.19
Suspect*Dummy2(uf) interaction		.35	.54		.11	.44
Suspect*Severity interaction		.11	.92*		.23	.93*
Suspect*Dummy1(ctrl)*Severity interaction			-1.30*			-.87
Suspect*Dummy2(uf)*Severity interaction			-1.50*			-1.81*
Adjusted R ²	.09	.06	.09	.04	.02	.05
ΔR ²	.11**	.01	.04*	.06*	.02	.04*
F	4.71**	2.19*	2.40**	2.45*	1.37	1.79 [#]

Note: Table shows unstandardized regression coefficients. N = 160.

* $p < .05$. ** $p < .01$. *** $p < .001$. # $p \leq .06$.

Supplementary Table 3 (DEE Experiment). Regression of guilt and shame on Forgiveness treatment variable, perceived severity (centered), and subject type (believed vs. suspected manipulation).

Predictors	Guilt			Shame		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	3.73***	3.76***	3.77***	3.00***	2.80***	2.83***
Dummy1 (control group)	.14	.30	.29	-.02	.25	.21
Dummy2 (unforgiven group)	.14	-.53	-.85	-.04	.02	-.31
Perceived Severity	.61***	1.38**	1.13	.31**	.94**	.35
Suspect (2 = suspected; 1 = believed)	-.45*	-.51	-.51	-.50**	-.41	-.40
Severity*Dummy1(ctrl) interaction		.26	.46		.19	1.11
Severity*Dummy2(uf) interaction		.17	1.20		.30	1.65
Suspect*Dummy1(ctrl) interaction		-.08	-.09		-.16	-.17
Suspect*Dummy2(uf) interaction		.39	.52		-.08	.04
Suspect*Severity interaction		-.58*	-.40		-.51*	-.08
Suspect*Dummy1(ctrl)*Severity interaction			-.14			-.65
Suspect*Dummy2(uf)*Severity interaction			-.60			-.84
Adjusted R ²	.17	.18	.17	.12	.13	.13
ΔR ²	.19***	.03	.00	.14***	.04	.02
F	9.20***	4.80***	3.95***	6.36***	3.60***	3.21**

Note: Table shows unstandardized regression coefficients. N = 160.

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

Supplementary Table 4 (DEE Experiment). Regression of fear and prosocial behavior on Forgiven-ness treatment variable, perceived severity (centered), and subject type (believed vs. suspected manipulation).

Predictors	Fear			Prosocial Behavior		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	2.42***	2.61***	2.64***	28.38***	24.46*	24.98*
Dummy1 (control group)	.16	-.15	-.18	-5.78	15.48	14.60
Dummy2 (unforgiven group)	-.17	-.77	-1.27	-5.34	-17.52	-16.28
Perceived Severity	.39***	.95**	.36	2.05	4.29	-9.51
Suspect (2 = suspected; 1 = believed)	-.14	-.30	-.29	-1.05	1.33	1.67
Severity*Dummy1(ctrl) interaction		.43	1.18		8.06	37.30*
Severity*Dummy2(uf) interaction		.39	2.16*		.44	9.74
Suspect*Dummy1(ctrl) interaction		.23	.22		-14.50	-14.85
Suspect*Dummy2(uf) interaction		.35	.54		7.89	6.78
Suspect*Severity interaction		-.53*	-.11		-2.69	7.06
Suspect*Dummy1(ctrl)*Severity interaction			-.53			-20.30
Suspect*Dummy2(uf)*Severity interaction			-1.06			-7.29
Adjusted R ²	.09	.11	.12	-.01	.02	.03
ΔR ²	.12**	.05	.02	.02	.06	.02
F	5.08**	3.23**	2.95**	.74	1.42	1.49

Note: Table shows unstandardized regression coefficients. N = 160 (but N = 161 for prosocial behavior).

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

Supplementary Table 5 (DEE Experiment). Regression of fluency and flexibility on Forgiveness treatment variable, perceived severity (centered), and subject type (believed vs. suspected manipulation).

Predictors	Fluency			Flexibility		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	11.98***	13.48***	13.50***	6.13***	7.02***	7.03***
Dummy1 (control group)	-.24	-.54	-.61	.17	-.77	-.78
Dummy2 (unforgiven group)	.59	-4.45	-2.67	.29	-1.57	-1.30
Perceived Severity	.34	-1.60	-2.00	-.02	-.79	-.93
Suspect (2 = suspected; 1 = believed)	.68	-.21	-.20	-.06	-.63	-.63
Severity*Dummy1(ctrl) interaction		.16	2.72		.49	1.03
Severity*Dummy2(uf) interaction		-.21	-4.51		.11	-.43
Suspect*Dummy1(ctrl) interaction		.09	.08		.60	.60
Suspect*Dummy2(uf) interaction		3.49	2.71		1.26	1.14
Suspect*Severity interaction		1.37	1.66		.39	.49
Suspect*Dummy1(ctrl)*Severity interaction			-1.77			-.38
Suspect*Dummy2(uf)*Severity interaction			2.29			.27
Adjusted R ²	-.02	-.03	-.04	-.02	-.01	-.02
ΔR ²	.01	.02	.01	.01	.05	.01
F	.24	.49	.51	.22	.89	.77

Note: Table shows unstandardized regression coefficients. N = 160.

*** $p < .001$.

Figure 1: Framework with negative emotion states as mediators of the relationship between Forgivenness-by-Severity interaction effect and offender’s creativity and prosocial behavior

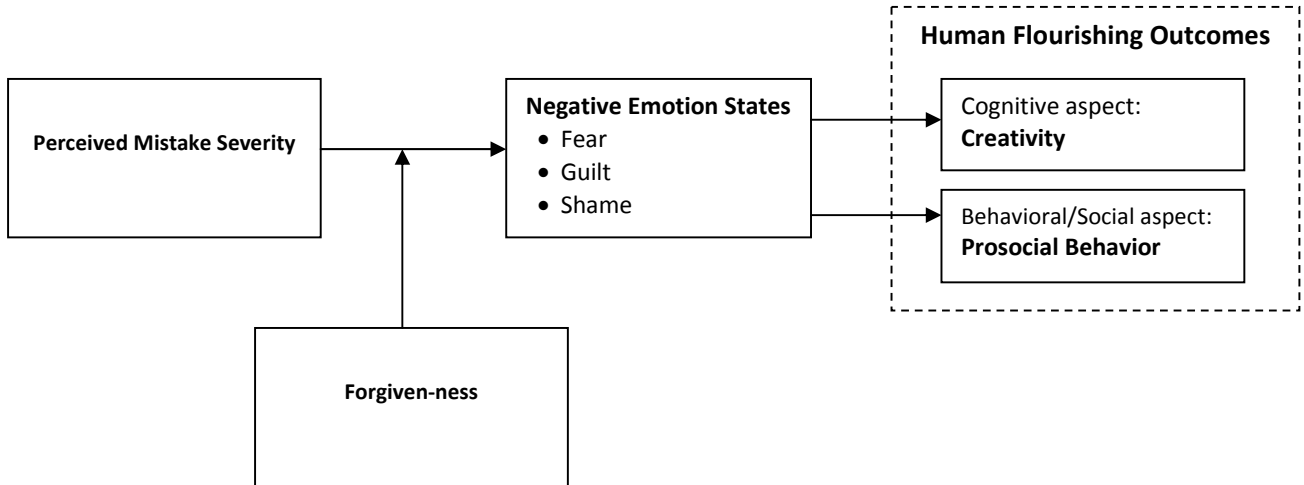


Figure 2: Framework with positive emotion states as mediators of the relationship between Forgivenness-by-Severity interaction effect and offender's creativity and prosocial behavior

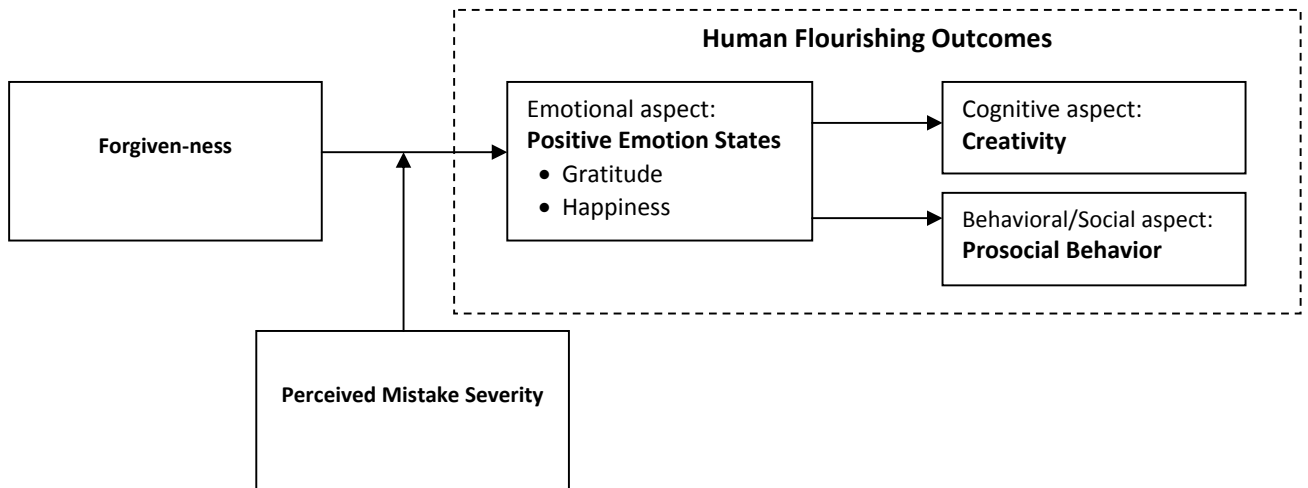


Figure 3 (DEE): Graph of Forgiveness-by-Severity interaction effect on offender's fear

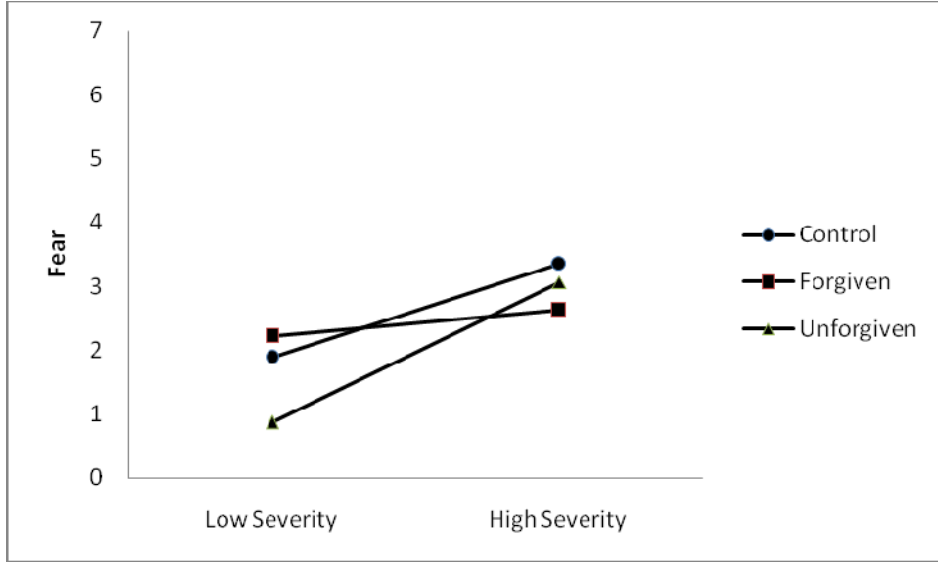


Figure 4 (DEE): Graph of Forgiveness-by-Severity interaction effect on offender's prosocial behavior

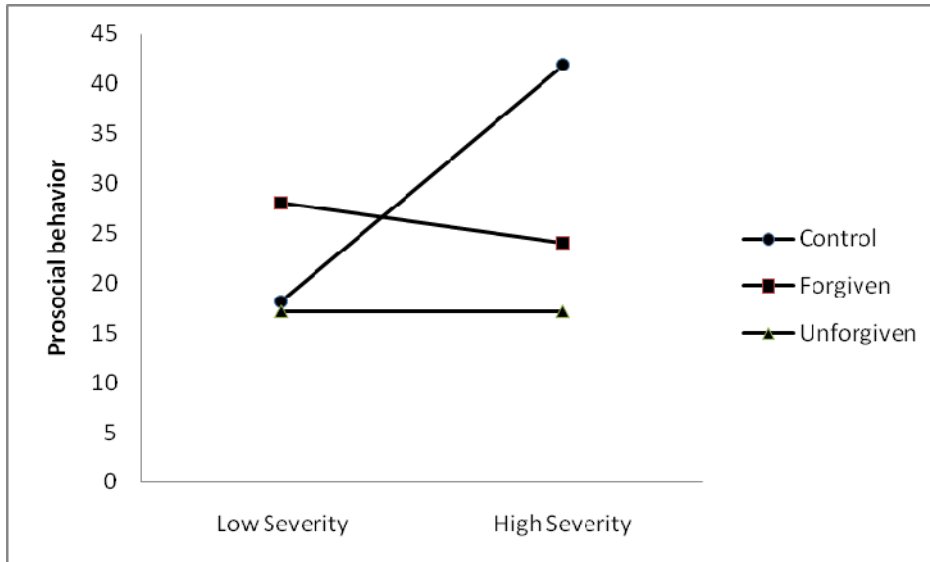


Figure 5 (ITS): Graph of Forgiveness-by-Severity interaction effect on offender's happiness

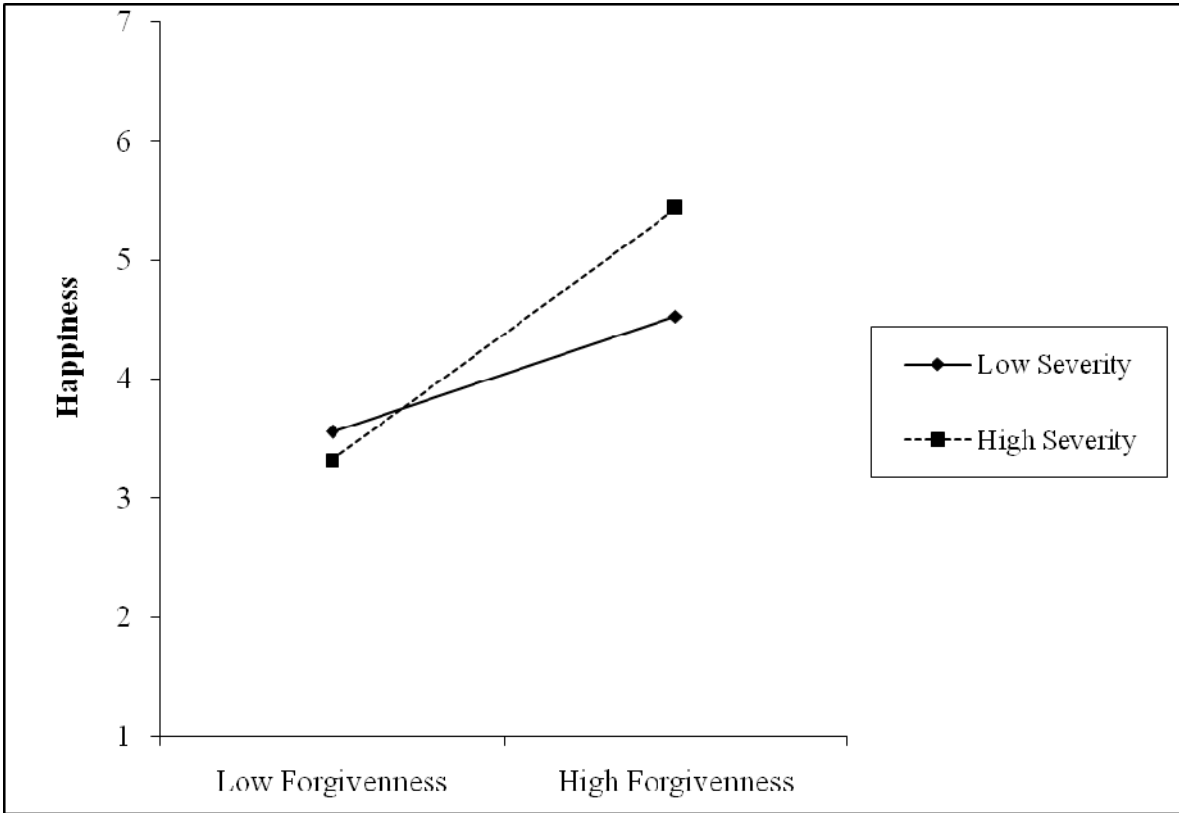


Figure 6 (ITS): Graph of Forgiveness-by-Severity interaction effect on offender's gratitude

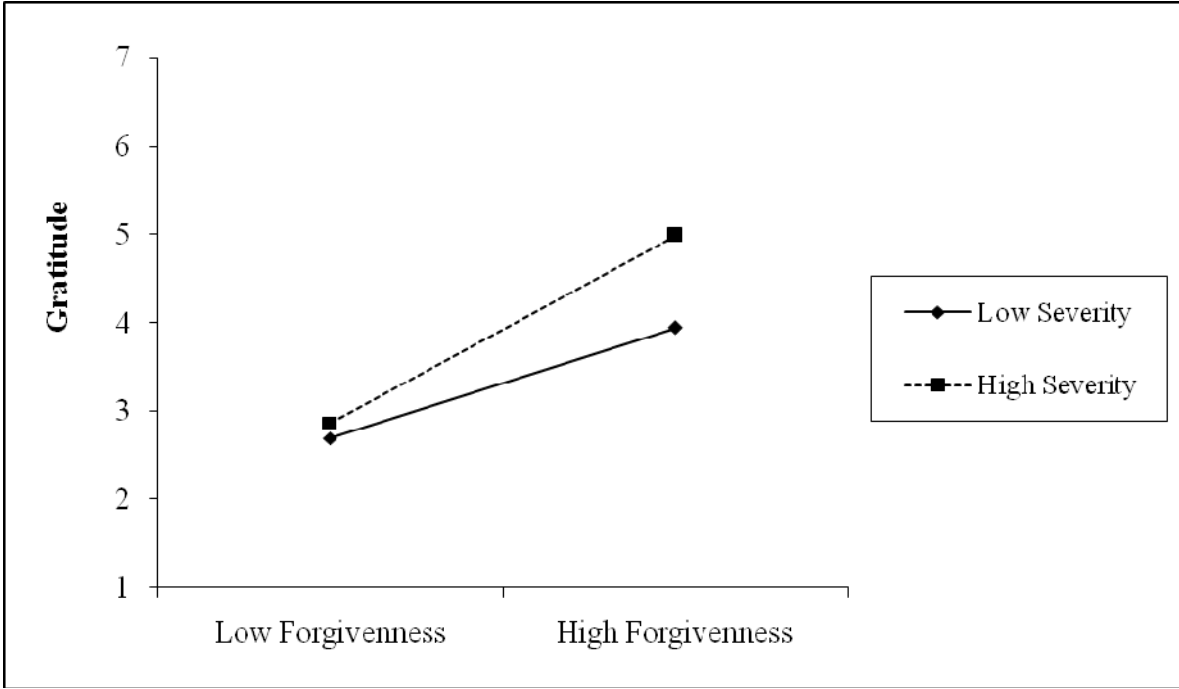


Figure 7 (ITS): Graph of Forgiveness-by-Severity interaction effect on offender's guilt

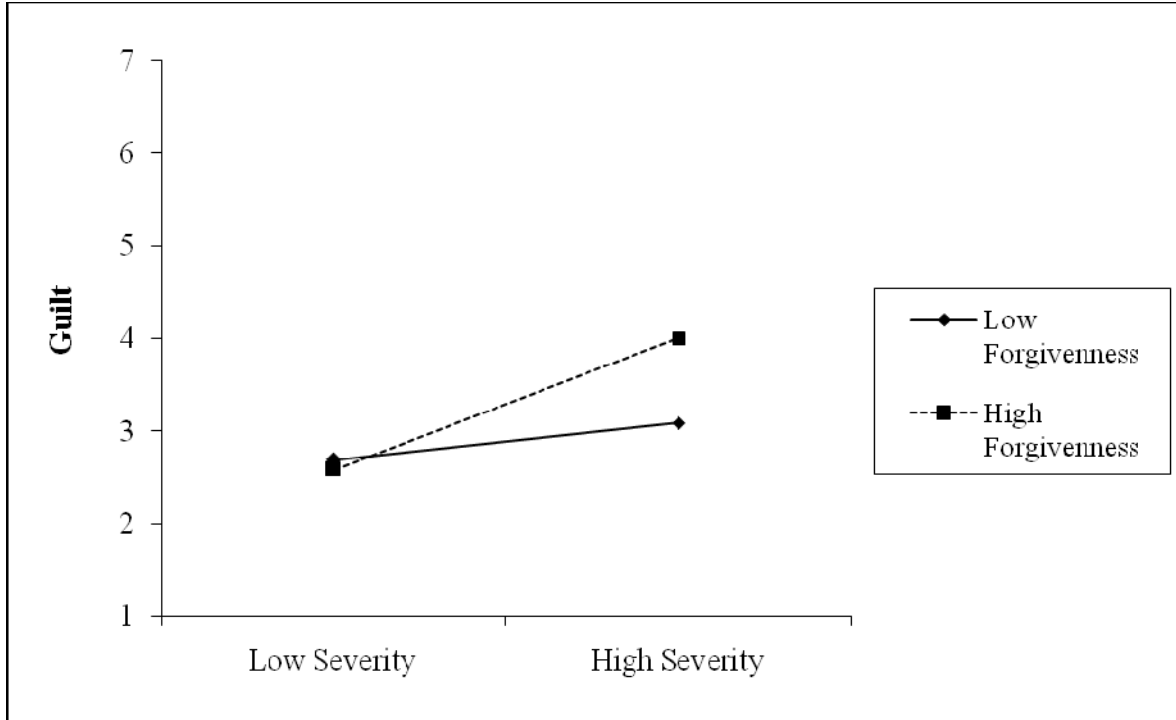


Figure 8 (ITS): Graph of Forgiveness-by-Severity interaction effect on offender's shame

