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Evening the Score: Factors Affecting Criminal Responses to Injustice

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A dissertation submitted to the Faculty of the
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Abstract

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Research in criminology suggests that some, but not all stressors or strains increase criminal or deviant behavior. The literature indicates that criminal or deviant acts are more likely in response to strains that are perceived to be unjust. It is not clear, however, how different types of injustice combine to affect these behaviors. To address this limitation, I examine how certain types and combinations of major forms of injustice (distributive, procedural, and interactional) may increase the likelihood that individuals respond to strain with crime. In addition, this project examines how factors such as gender, personality traits, and peers' endorsement of criminal or deviant behavior condition whether individuals respond to injustice with crime or deviance. I argue that injustice will most likely promote crime when multiple forms of injustice coincide and when unjust events entail the experience of disrespect and improper treatment (i.e., interactional injustice). This form of injustice may be perceived as more severe relative to distributive and procedural injustice because of the intense emotional and behavioral responses it produces. To test these arguments, undergraduate study participants responded to three vignettes by indicating how likely they would be to engage in criminal or deviant behavior in response to the strain represented in each vignette. Results reveal that multiple forms of injustice are not necessary to produce criminal or deviant responses to a distributive injustice, one type is sufficient. Also, males are more likely than females to engage in crime or deviance in response to this form of injustice.

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I. INTRODUCTION

The association between injustice and criminal or deviant behaviors is not a novel one. Research suggests that the experience of major forms of injustice, i.e., distributive, procedural, and interactional, affects the behavioral responses of individuals, including their likelihood of engaging in criminal or deviant behavior (e.g., Agnew 2006; Aquino, Lewis, and Bradfield 1999; Skarlicki and Folger 1997; Tyler 2003, 2006; Tyler and Huo 2002). Crime may serve as a means to either restore justice (e.g., Agnew 2006) or to retaliate against the source of the perceived injustice (Ambrose, Seabright, and Schminke 2002). Within the criminological literature, the arguments inherent in General Strain Theory (GST) (e.g., Agnew 2006) and Tyler's work on procedural justice (e.g., Tyler and Lind 1992), suggest that the experience of injustice damages bonds to conventional others and stimulates negative emotions, thereby providing a foundation for criminal responses. GST, moreover, considers how the different types of justice influence the likelihood of criminal coping. The relative impact and combined effects of distributive, procedural, and interactional injustice on crime, however, have not yet been examined. Why these types of injustice produce particular effects, and the variables that condition whether a person engages in crime in response to injustice, is the subject of this investigation.

The organizational justice literature provides some guidance on when people are likely to respond in deviant or criminal ways to combinations of injustice (Aquino et al. 1999b; Skarlicki and Folger 1997). Like GST, the justice literature argues that injustice produces emotional distress that individuals relieve by either altering their perceptions of the situation or their actions (Adams 1965). Although the social psychological literature

on injustice has examined the impact of combinations of types of injustice, rarely do studies focus on criminal or deviant responses. Most justice studies relevant to the combined impact of types of injustice concentrate on the formal context of the workplace. As a consequence, little research investigates the responses to combined types of injustice in informal networks like adolescent peer groups that are examined in criminology.[1] And, while the link between justice and legitimacy is gaining attention (e.g., Hegtvedt and Johnson 2000; Jost and Major 2001), few scholars have addressed the role peers may play in legitimating deviant or criminal responses to injustice. Furthermore, the justice literature fails to highlight adequately why the distress produced from injustice increases the likelihood that individuals respond to injustice with criminal or deviant behavior.

This project draws from research in both criminology and social psychology to address these gaps in the literature. GST argues that those strains that are seen as unjust and that are high in magnitude will most likely produce criminal or deviant coping (Agnew 2001). Perceived injustice is an aspect of all strains, or unpleasant events that produce negative emotions that may lead individuals to engage in crime or deviance to cope with their associated distress (Agnew 2006; Froggio and Agnew 2007). Individuals are more likely to perceive that a strain is unjust when it violates a particular justice norm or rule pertaining to a reward (distributive justice), procedure (procedural justice), or interpersonal treatment enacted in a situation (interactional justice) (Agnew 2006). Specifically, distributive justice entails the fairness of the allocation of resources in a group or an exchange (Adams 1965; Homans 1961), while procedural justice refers to the fairness of the decision-making processes used to establish a distribution (Lind and Tyler

[1] The justice literature on close relationships focuses mainly on distributive injustice (Cohen 1982; Lerner and Mikula 1994).

1988). Interactional justice deals with the fairness of interpersonal treatment (Bies and Moag 1986; Barclay, Skarlicki, and Pugh 2005). Moreover, experiences of injustice that are central to individuals or that violate their core goals, needs, values, activities, and/or identities (centrality) should most likely produce crime or deviance (Agnew 2001).

Other research in criminology that includes a justice element largely pertains to how offenders' experiences of procedural injustice foster recidivism (e.g., Tyler et al. 2007). Procedures used by legal authorities that are viewed as unfair or harsh reduce the perceived legitimacy of and compliance with the law (Fagan and Tyler 2005), which damages ties to conventional others and fosters criminal or deviant behavior (Braithwaite 1989; Brownfield 2006; Hay 2001).

The justice literature also suggests that violations of justice may produce criminal or deviant behaviors. Organizational justice represents the application of the social psychological concepts of distributive, procedural, and interactional justice to the workplace (Colquitt, Greenberg, and Zapata-Phelan 2005). A violation of any of these types of justice results in emotional distress that individuals seek to alleviate psychologically or behaviorally (Adams 1965; Walster, Walster, and Berscheid 1978), which they may do so through deviance (Aquino et al. 1999b; Skarlicki and Folger 1997). Recent justice research (Skarlicki and Folger 1997; Van Yperen et al. 2000) finds that interactional injustice is a more important predictor of deviant behavior than procedural or distributive injustice because the associated intense emotional and behavioral responses it produces (Aquino et al. 1999b). Deviant responses to injustice entail acts that are directed toward the perceived source of injustice, which may be an individual (interpersonal deviance) or an organization (organizational deviance) (Ambrose et al.

2002). These acts include violent, destructive, or unethical behaviors that violate societal or workplace norms (Aquino et al. 1999b). Although described as deviant, these counterproductive (Conlon, Meyer, and Nowakowski 2005) or retaliatory work behaviors (Skarlicki and Folger 1997) may also involve crimes of theft, drug use, and physical abuse (Conlon et al. 2005).

An important commonality of the criminology and organizational justice literatures is the specification of conditioning factors that increase the likelihood that individuals will respond to injustice with crime or deviance. Both the criminology and justice literatures argue that individuals must first perceive a particular act as unjust in order to respond with criminal behavior. Criminal responses to injustice, however, are more likely to occur when the material and social costs of crime are low (Agnew 2006; Hegtvedt 2006). In addition, GST suggests that individuals will be more prone to crime upon experiencing injustice when they possess beliefs conducive to crime, have relationships with delinquent others who model criminal behavior (Agnew 2002), and are high in negative emotionality. Therefore, individuals who associate with delinquent peers, or who have friends grant legitimacy to criminal or deviant behavior, should be more likely to respond to injustice with crime or deviance. Negative emotionality is a personality trait that is also recognized by the justice literature to increase the likelihood of criminal or deviant behavior (e.g., Skarlicki, Folger, and Tesluk 1999; Tripp, Bies, and Aquino 2007). Individuals high in negative emotionality are more likely to perceive situations as stressors, experience anger in response to events, and respond aggressively (Agnew et al. 2002).

Together, these literatures, then, evoke the questions: 1) How do different types of

injustice combine to affect criminal or deviant responses?; and 2) What factors may condition criminal or deviant responses to injustice? The type of injustice experienced and how these types of injustice combine with each other will influence whether individuals respond with criminal or deviant acts (Skarlicki and Folger 1997).

Given the stressful nature of injustice and the negative emotions that it evokes, I predict that various forms of injustice and certain combinations will promote criminal or deviant coping. The central hypotheses of this study are as follows: 1) as the experience of injustice is stressful for individuals, the experience of multiple forms of injustice should increase the likelihood of crime or deviance (Agnew 1992, 2006); and 2) interactional injustice should emerge as a stronger predictor of criminal or deviant behavior than procedural injustice because it deals with the respect an individual experiences (Anderson 1999; Bies and Moag 1986; Brezina et al. 2004) and should thus be associated with strains that are central or highly salient for the individual (refer to Agnew 2001).

Moreover, the criminology literature and social psychological research on legitimacy address the important role peers play in influencing criminal behavior. The endorsement of criminal or deviant actions in response to injustice on the part of a peer should facilitate these types of behaviors (Anderson 1999; Baron, Kennedy, and Forde 2001; Heimer and De Coster 1999; Younts 2008). Therefore, I also hypothesize that peers who support a criminal or deviant response to injustice should increase the likelihood that this type of behavior will occur.

Last, various individual-level factors will condition the relationship between injustice and crime. Together the social psychological and criminological literatures

suggest that gender and certain personality traits (negative emotionality, constraint, and locus of control) either facilitate or hinder criminality in response to injustice. Based on findings in these literatures I expect that males and individuals who are high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to cope with injustice by choosing to engage in criminal or deviant acts.

As the criminological and social psychological literatures are complementary, incorporating research from these areas serves to enhance the understanding of the relationship that exists between injustice and crime by making important theoretical and real-world contributions. In regard to the development of theory, the theoretical underpinnings of GST can augment the social psychological literature in explaining why injustice leads to crime or deviance in different contexts. GST identifies how certain characteristics of strains, i.e., their frequency, duration, and centrality, may serve to promote criminal or deviant behavior (Agnew 2001) and generally examines the injustice-crime relationship in a broader array of situations outside of the workplace (e.g., within the school, family, or prison) (refer to Agnew and Scheuerman 2011). The characteristics of strains, moreover, may be more applicable to certain forms of injustice than others, as may be the case regarding the association between interactional injustice and centrality.

Furthermore, findings from the justice literature can limit the broadness of GST by stipulating how the types of injustice work together to increase the likelihood of crime (Agnew 2001). By investigating how the three major types of injustice influence criminal coping, this project helps to specify an aspect of strains that lead to crime. Moreover, by highlighting certain situational and individual-level factors that condition the injustice-

crime relationship, criminal or deviant behaviors may be reduced by ensuring that justice is upheld in all situational contexts and that individuals associate with conventional instead of deviant others. These conditions should also be relevant for reducing recidivism when processing and rehabilitating offenders (e.g., Tyler et al. 2007).

I present the first theoretical foundation for this study in the next chapter, which outlines the basic underpinnings of GST and criminological work that examines procedural justice and crime. The third chapter focuses on the second theoretical foundation, highlighting justice studies pertaining to the emotional, behavioral, and cognitive responses to distributive, procedural, and interactional injustice. There I also review the specific literature on organizational deviance and how others may legitimate criminal responses to injustice. In Chapter 4, I develop my theoretical predictions by integrating these theoretical traditions. Chapter 5 presents how I test my theoretical predictions and chapter 6 details my results. Last, in Chapter 7, I discuss the implications these results may have for the criminological and social psychological literatures.

II. CRIME AND JUSTICE

A. General Strain Theory

1. Basic Tenets

Agnew's (1992) general strain theory (GST) argues that criminal or deviant behavior results from the experience of strains. Strains are aversive events or conditions that produce negative emotions that then prompt individuals to engage in actions to reduce their distress and to correct for these strains (Froggio and Agnew 2007; Brezina 1996). For instance, individuals may engage in theft, burglary, or robbery in order to alleviate feelings of frustration, fear, and depression caused by their unemployment. Crime may allow individuals to seek retribution for the strains they experience or to reduce or escape from these unpleasant conditions (Agnew 1992; Froggio and Agnew 2007). For example, individuals may steal the money they desire (Agnew 2001) or reduce the negative emotions strains produce by engaging in illicit drug use (Agnew 1992; Froggio and Agnew 2007).

Strains that are most likely to lead to crime involve the inability of individuals to achieve their goals, the actual or anticipated loss of positively valued stimuli (e.g., the ending of a romantic relationship), or the presentation of noxious stimuli (e.g., negative relations with parents or peers) (Agnew 1992). Yet, whether a type of strain stimulates such responses may depend on whether it is objectively or subjectively experienced (Agnew 2001). Objective strains entail events or conditions that are generally disliked by individuals in a particular group (Agnew 2001; Froggio and Agnew 2007). In contrast, subjective strains are those events or conditions that are disliked by individuals who directly experience them (Agnew 2001; Froggio and Agnew 2007). Such strains are more

strongly associated with crime (Froggio and Agnew 2007).[2] For example, although losing one's job would be an objectively aversive experience, some individuals may not experience intense negative emotions when experiencing this strain (Froggio and Agnew 2007).

Not all strains, however, are created equal. Objective and subjective strains will most often facilitate criminal responses when they are perceived to be high in magnitude and unjust (Agnew 2001). Strains are seen as high in magnitude if they are long in duration and occur frequently (duration and frequency), if they have occurred recently (recency), and if they threaten the core goals, needs, values, activities, and/or identities of the victim (centrality) (Agnew 2001). Moreover, a criminal or deviant response to unjust and intense strains is predicated on whether these aversive events are coupled with low social control, facilitate the social learning of crime (Agnew 2001; Froggio and Agnew 2007), and are easily resolved through crime (e.g., the desire for money is more easy to satisfy through crime than educational success) (Agnew 2006).[3]

a. Relationship between Injustice, Strain, and Crime

Despite the many conditioning factors that influence the likelihood of criminal behavior in response to strain, injustice is an omnipresent aspect of strain that motivates criminal coping. Perceived injustice is a characteristic of all strains and increases the likelihood of a criminal or deviant response. For instance, the failure to achieve a goal can include not being treated according to a distributive, procedural, or interactional justice norm. A person may have less money (distributive injustice), autonomy

[2] Strains can also be anticipated or vicarious (refer to Agnew 2002 for a more detailed discussion).
[3] The social learning of crime entails individuals having associations with others who reinforce crime, model crime, or teach beliefs that are favorable to crime (Akers 1985; Sutherland and Cressey [1960] 2006). For example, individuals who are unable to earn money through legal means may join gangs in order to earn money in illegal ways (Agnew 2006).

(procedural injustice), and status (interactional injustice) than is expected or desired. The removal of these valued rewards and treatment can also represent the loss of positively valued stimuli. Also, the presentation of noxious stimuli may include negative relationships with parents, teachers, friends, and victimization (Agnew and White 1992; Agnew 2006). These adverse relations can include disrespectful treatment (interactional injustice), inequitable outcomes (distributive injustice) (e.g., undeserved punishment or not receiving a particular valued resource) and unfair procedures used to allocate certain outcomes (procedural injustice) (Agnew 2001).

1. Sources of Injustice

Agnew (2001) argues that strains are most likely to be seen as unjust when individuals perceive that a particular justice norm has been intentionally and voluntarily violated. This condition exists when the perpetrator is perceived to be responsible for the strain, has a history of inflicting strain, and does not express remorse for his or her actions. Yet, the perception that "strainful" events are unjust not only depends on the relationship between and the characteristics of the perpetrator and victim, but also on whether others (i.e., close or trusted others) interpret a particular aversive condition as unjust (Agnew 2001).

The voluntary and intentional infliction of strain is more likely to be considered unjust when it violates a distributive, procedural, or interactional justice norm or rule. Agnew (2001) argues that perceptions of distributive injustice occur when strains are perceived to be undeserved, not in the service of a higher authority, and result in a lot of net harm to the individual. Assessments of procedural injustice are made when individuals: 1) are denied voice in the decision-making process used to inflict their strain;

2) perceive the perpetrators of strain as illegitimate; 3) distrust those who inflict their strain because they are biased or dishonest; 4) believe that the decision used to inflict strain was not based on accurate or complete information; 5) believe that the procedures used were not consistent for similar others; 6) experienced disrespectful or impolite treatment; 7) experience a decision-making process that conflicts with fundamental moral and ethical values; 8) are not provided a rationale for the decision by the perpetrator; and/or 9) are unable to correct for bad decisions (Agnew 2001:331).[4] In regard to interactional injustice, disrespectful treatment is perceived to be unjust when the treatment differs from that of similar others or past treatment of the individual in similar circumstances (Agnew 2001; see Tyler et al. 1997).

2. Expanding GST

Although GST highlights that the injustice that characterizes all strains may encompass the three major types of injustice, it fails to indicate how these forms of unfairness may combine to affect the likelihood of criminal coping in response to strain. Agnew (1992) notes that it is not the effect of one strain on an individual but the cumulative effect of all strains that are important for determining whether one engages in crime. The experience of all three types of injustice instead of one should thus produce the greatest likelihood of criminal or deviant behavior.

In addition, even though GST lays the foundation for suggesting that certain forms of injustice affect the likelihood of criminal or deviant behavior in response to strain, it does not specify whether certain types of injustice are more criminogenic than others. Specifically, the other general characteristics of strain (i.e., intensity, association

[4] Disrespectful or impolite treatment is argued by some researchers to encompass interactional injustice (Bies and Moag 1986; Cohen-Charash and Spector 2001; Colquitt et al. 2005). I distinguish between interactional justice and procedural justice in the next section.

with low social control, and create a pressure or incentive to engage in criminal behavior) that stipulate the effect of strain on criminal coping allude to which forms of injustice should play a greater role in producing criminal behavior. Strains marked with disrespectful treatment or interactional injustice, which negatively impact the identities of an individual, may have greater implications for criminal behavior than strains that are not central to the individual. These unjust strains may challenge a particular identity one holds so strongly that the perceived costs of engaging in crime or deviance are reduced in light of the damage that interactional injustice produces for how one views him or herself. Indeed, disrespect fosters the occurrence of criminal behavior (Anderson 1999; Brezina et al. 2004)

In addition, the groups to which individuals belong may enhance the subjective experience of strain by defining particular strains more negatively than others (Froggio and Agnew 2007). These groups may also provide criminal models for dealing with this strain (Akers 1985; Sutherland and Cressey [1960] 2006; Agnew 2006) and therefore reduce the perceived social costs, or sanctions, associated with criminal or deviant behavior. Consequently, strains that are characterized by treatment that threatens one's core self (centrality) and that are defined more severely by others may have greater implications for criminal behavior than those that are not. This suggests that the negative treatment associated with interactional injustice may be a stronger determinant of crime or deviance than distributive or procedural injustice.

b. Strain, Emotions, and Crime

Whether criminal behavior occurs in response to strain is predicated on the type and combination of emotions that occur when strain is experienced. The injustice

associated with strains produces emotions such as anger, frustration, fear, and depression. These emotions pressure individuals to engage in corrective action, reduce perceived costs associated with crime, foster a disposition for crime, and reduce the likelihood of legal forms of coping. Specifically, strains that produce the negative emotions of anger, frustration, depression, and fear will more likely produce criminal behavior (Agnew 2006) in order to restore justice or as a means to retaliate for the injustice experienced. For instance, individuals who wish to correct for a distributive injustice may attempt to re-establish equity by engaging in delinquency "in order to (1) increase their outcomes (e.g., by theft); (2) lower their inputs (e.g., truancy from school); (3) lower the outcomes of others (e.g., vandalism, theft, assault); and/or (4) increase the inputs of others (e.g., by being incorrigible or disorderly)" (Agnew 1992:54; see also Adams 1965).

In particular, unjust strains that produce anger are more likely to lead to criminal behavior (Agnew 2001; Brezina 1996, 1998; Broidy 2001; Hay 2003; Mazerolle and Piquero 1998). Anger allows individuals to ignore information that may aid in resolving a stressful situation and impedes one's ability to coherently express their unfair treatment. In addition, anger lessens the actual and perceived costs of crime because individuals are less likely to feel guilty for redressing an injustice they experience and more likely to justify the type of criminal behavior in which they engage (Agnew 2001). Last, anger "increases the individual's level of felt injury, creates a desire for retaliation/revenge, energizes the individual for action, and lowers inhibitions, in part because individuals believe that others will feel their aggression is justified" (Agnew 1992: 60).[5] It is no

[5] Anger is more likely to predict the occurrence of aggressive crimes than criminal acts such as shoplifting or driving while intoxicated (Capowich, Mazerolle, and Piquero 2001; Jang and Johnson 2003; Piquero and Sealock 2000). Moreover, frustration can lead to aggressive forms of delinquency, such as speeding, aggressive driving, and risk taking (Ellwanger 2007). Morgan (2006) finds that frustration is produced

surprise that studies show that anger also mediates the relationship between strain and crime (Aseltine, Gore, and Gordon 2000; Brezina 1998; Broidy 2001; Capowich et al. 2001; Hay 2003; Jang and Johnson 2003) (for exceptions see Mazerolle and Piquero 1998; Mazerolle et al. 2000; Piquero and Sealock 2000). This is particularly true when individuals blame their adversity on others (Agnew 1992; Mazerolle and Piquero 1998).[6]

In contrast, depression results from the experience of an irrevocable harm that individuals feel they have no control over (Smith and Lazarus 1993), or are responsible for (Thompson 1999), and thus fosters certain types of delinquency. Although the relationship between depression and crime is not as strong as that between anger and crime, this emotion may result in "passive" crimes such as illegal drug use (Agnew 2006; Jang and Johnson 2003; Piquero and Sealock 2000). Bao, Haas, and Pi (2004), and Jang and Johnson (2003) find that depression has a stronger effect on drug use than on fighting, which is associated more strongly with anger. Yet, depression may also lead to feelings of anger (Berkowitz 1989), which would lead to other forms of criminal activity.

Consequently, the different emotions produced by diverse types of strain facilitate the expression of various forms of criminal or deviant behavior. Due to the fact that GST predicts a contemporaneous effect of strain on the facilitation of crime or deviance, this theory focuses on the effect of state emotions on criminal coping. State emotions are produced in response to a particular environmental trigger. They differ from trait emotions, which reflect a dispositional tendency, or a stable dimension of one's personality that fosters the experience of certain emotions across situations (Deffenbacher et al. 1996). Research on trait anger suggests it is likely to produce state anger, and that

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when individuals cannot achieve important goals, while anger is more likely to result from behavior that is perceived to be intentional or personal.

[6] This finding is consistent with what the justice literature would argue (see Cohen 1982).

state anger mediates the impact of strain on criminal behavior rather than trait anger (Mazerolle, Piquero, and Capowich 2003). As such, an added strength of this study is its focus on situational emotions in response to strain. Although I do not focus explicitly on emotions in this paper, findings regarding emotions lead me to concentrate on unjust situations in which individuals experience a personal unjustified affront, a harm for which they are responsible (Thompson 1999), and a blocked goal to ensure the creation of strains that may lead to criminal or deviant behavior.

c. Factors Conditioning the Effects of Strain on Crime

The literature suggests that the type of emotions produced in response to stressful events or conditions is dependent upon gender and personality. Below I detail the importance of gender and personality in facilitating or inhibiting criminal responses to strain. Both of these factors influence the type of emotions that individuals experience as a result of strain and how people may behaviorally cope with the negative emotions they experience.

1. *Role of gender*

The literature on emotions and strain highlights that gender is an important factor in understanding criminal or deviant responses to injustice. Women are more likely than men to experience a range of emotions as a result of strain (Broidy and Agnew 1997; Morgan 2006), certain of which may hinder criminal or deviant behavior (Agnew 2006). A number of studies indicate that women tend to experience more depression (De Coster 2005; Van Gundy 2002), guilt, and anxiety in response to strains than do men, even when both also feel angry (Broidy and Agnew 1997; Morgan 2006). Depression causes people to feel powerless and to become inactive, and may lead to inner-directed crimes or

deviance (e.g., drug use) (Agnew 2006).

Gender, however, may be important not only because it affects the experience of emotions, but also emotional expression. In concordance with Broidy and Agnew (1997), De Coster and Zito (2010) find that females are more likely than males to experience, in addition to anger, higher levels of depression upon the experience of strain. Yet, they also find that upon the experience of strain, the combined presence of anger and depression facilitates delinquency among males and not females. Other studies have found a positive relationship between depression and delinquency (Jang 2007; Piquero and Sealock 2004). Therefore, differences in gendered expectations of emotional expression may also explain why males and females engage in differential levels of crime and delinquency. The cultural acceptance that exists for males, but not for females, to express behaviorally negative emotions, grants them greater freedom in choosing to cope with strain in a criminal or deviant manner (De Coster and Zito 2010; Brody 1997).

Also, the association that exists between masculinity and crime suggests that interactional injustice may impact males more so than females. Hegemonic masculinity is associated with authority, control, aggressiveness, competitive individualism, independence, and the capacity for violence (Messerschmidt 1993). Depending on the situational context, men "do masculinity" (West and Zimmerman 1987) in order to promote and maintain differences in social divisions of labor, power, and normative heterosexuality. For men, crime can serve as a way to separate themselves from that which is feminine and can occur when legitimate pathways to asserting masculinity are unavailable (Messerschmidt 1993). One need that is associated with masculinity and that men require is the need to be treated with and shown respect (Kupers 2005;

Messerschmidt 1993). When men cannot achieve respect, they are more likely to experience frustration, respond aggressively, and attempt to dominate others (Anderson 1999; Brezina et al. 2004; Kupers 2005). Therefore, males, in order to deal with intense negative emotions produced from disrespectful treatment, will be more likely than females to engage in criminal or deviant behavior. As such, interactional injustice should more heavily impact the criminal or deviant behavior of males rather than females.

Consequently, cultural and structural processes surrounding gender should impact the occurrence of crime in response to injustice (Heimer and De Coster 1999). Differences in socialization will influence the type of emotions that are experienced and expressed by men and women (Brody and Hall 1993; Fischer et al. 2004), with women tending to experience more passive emotions (sadness, fear, shame, and guilt) than men (Fischer et al. 2004). Males are more likely to respond to strain with anger because they lack coping resources in response to strain and are more strongly disposed to delinquency due to their association with delinquent peers than females (Broidy and Agnew 1997; Heimer and De Coster 1999). Therefore, the way that gender is constructed within a patriarchal society should affect the theoretical mechanisms of GST and explain gendered differences in criminal behavior.

2. Role of personality

Strain is also more likely to lead to crime when "individuals lack the skills and resources to cope with their strain in a legitimate manner" (Agnew 2001:323). For instance, people who lack emotional and spiritual coping skills are more likely to engage in crime (Piquero and Sealock 2000). Furthermore, those individuals who do not have the resources to properly deal with their strain tend to have poor problem solving and social

skills, are low in constraint and self-efficacy, and are high in negative emotionality (Agnew 2006). Negative emotionality encompasses the extent to which an individual is more likely to perceive situations as stressful, experience negative emotions, i.e., anger, in response to those situations, and respond in an aggressive way (Agnew et al. 2002). These individuals are more likely to perceive that others are treating them in a hostile manner and respond with criminal behavior in response to their strain (Agnew et al. 2002; Mazerolle and Maahs 2000).

Furthermore, Caspi et al. (1994) find that high negative emotionality in combination with low constraint increases the likelihood of deviant behavior across gender and race. Low constraint is associated with individuals having an increased likelihood of being impulsive, rejecting social norms, seeking thrills, and being unconcerned with others' feelings (Agnew et al. 2002). This trait fosters perceptions of unfairness and feelings of anger. In a vignette study using a nonrandom sample of college students, Piquero, Gomez-Smith, and Langton (2004) find that individuals with low self-control who receive sanctions for hypothetical scenarios depicting speeding and drinking in public are more likely to perceive these sanctions as unfair. Perceptions of unfairness then increase the likelihood of perceived state anger in response to this injustice (Piquero et al. 2004).[7]

GST also argues that criminal behavior is more likely to occur when individuals blame others or outside events for the strains they experience through the production of anger (Agnew 1992; refer to Barclay et al. 2005). Therefore, those with an external locus of control, or who have a tendency to blame outside forces, such as fate, chance or

[7] Nevertheless, perceived unfairness produces perceived feelings of anger regardless of the level of self-control (Piquero et al. 2004).

powerful others for events in their lives (Levenson 1973), should be more likely to engage in criminal coping upon the experience of strain.

d. Other (Non-Criminal) Responses to Strain

Yet, not all individuals may engage in criminal or deviant behavior in response to strain. In order to minimize strain, individuals may ignore or undermine a particular goal/value or identity. People may also attempt to redefine the situation by maximizing any positive outcomes and minimizing any negative outcomes by reducing the standards that are used to evaluate outcomes or distorting how one estimates current or expected outcomes (Agnew 1992). Making downward social comparisons and concentrating on a positive attribute of the negative situation are two ways in which an individual may cognitively distort his or her outcomes (Agnew 1992). Individuals may also think that they deserve the objective strain they experience. For instance, those who believe in a just world assume that if the world is fair, then people deserve the treatment or rewards they receive (Olson and Hafer 2001). Therefore, belief in a just world would reduce strain (Agnew 1992).

Behaviorally, one may cope with strain by minimizing or eliminating its source (Agnew 1992) or by attempting to terminate, reduce, or escape from a particular strain by engaging in conventional behaviors (e.g., talking to people who harass you) (Agnew 2001). Experiencing injustice associated with strains, therefore, may not result in crime or any reaction. In addition, emotional coping strategies may include listening to music instead of using illicit drugs (Agnew 2001), physical exercise, expression work, deep-breathing techniques, and progressive relaxation and meditation (Agnew 1992:70).

Strain, therefore, does not always lead to crime. Individuals may alter their

cognitions or behaviors in order to minimize strain or to seek conventional methods to cope with the strain they experience. Furthermore, individuals with conventional social support, high self-control, and access to legitimate coping strategies are less likely to engage in delinquency when under strain (Agnew 1992). In the next section, I detail how a type of strain, procedurally unjust treatment by conventional authorities, increases the likelihood that offenders will recidivate.

B. Procedural Justice and Crime

GST highlights how the quality of the relationship one has with conventional others can reduce or increase the likelihood of criminal coping (e.g., Agnew 1992). Literature on procedural justice and crime also focuses on how adverse or negative treatment from conventional others may facilitate criminal behavior. In particular, criminological research on the relationship between procedural justice and crime highlights how unjust treatment from conventional sanctioning agents, such as the police, fosters the occurrence of criminal behavior (Paternoster et al. 1997; Vermunt et al. 1996). Offenders who experience procedurally unjust treatment when they are processed by the criminal justice system have a greater likelihood of recidivating.

Tyler and Lind's (1992) relational model of procedural justice emphasizes three rules to ensure fair treatment by authorities: trust, standing, and neutrality.[8] Trust refers to the intentions of the decision maker to be fair and ethical. Standing requires the decision maker to treat group members with dignity and respect.[9] Last, to ensure neutrality,

[8] The rules outlined by this model differ from, but to some extent are encompassed by, broad procedural justice principles that Leventhal, Karuza, and Fry (1980) outline, and which are predominantly used in the social psychology literature and by GST. I will touch upon these principles in the justice and crime section.
[9] It is important to note that standing encompasses respect, which is an aspect of interactional justice. The criminological literature on procedural justice and crime, however, does not distinguish between procedural and interactional justice. This distinction is present in the justice literature.

decision-makers must be honest, use facts, and suppress biases. Individuals perceive that procedures are fair when they: 1) are able to participate in the decision-making process by explaining their views to authorities; 2) perceive decisions as unbiased and objective; 3) are treated with respect and have their rights acknowledged; and 4) trust that authorities care about them and have taken into account their needs and concerns (Tyler 2004).

When the law and legal authorities act in procedurally just ways, they are viewed as more legitimate (Tyler and Rasinski 1991), which in turn results in greater compliance, deference and internalization of the law (Tyler 2006). For instance, the use of fair procedures by police when they assert their authority enhances their legitimacy and fosters compliance with them and the law (Sunshine and Tyler 2003; Tyler 1990; Tyler 2004; Tyler and Huo 2002). Paternoster et al. (1997) find that spouse abusers are less likely to commit future offenses when they experience procedural justice when interacting with police officers. In contrast, procedural injustice reduces compliance with police orders and increases the likelihood of conflict (Matrofski, Snipes, and Supina 1996; McCluskey, Matrofski, and Parks 1999).

Not only does procedural justice foster compliance with the law and legal authorities through legitimacy (Tyler 2006), it also strengthens the ties individuals hold to the groups they belong to (Huo et al. 1996), which reduces recidivism through the experience of reintegrative shaming. Individuals who are bonded with the community are more likely to experience and respond favorably to reintegrative shaming, which consists of the reestablishment of ties with noncriminal others after condemnation of a criminal offense (Braithwaite 1989). Through reintegrative shaming individuals tend to feel

remorse for their misdeeds, are less likely to experience rage or defiance in response to punishment (Sherman 2009; Brownfield 2006), and come to see their behavior as condemned, and not their person (Tyler et al. 2007), which allows them to see positive aspects of themselves.[10] The links that offenders develop or strengthen with their significant others fosters the desire to maintain those relationships and a favorable sense of self, which reduces the likelihood that offenders will engage in future crime (Tyler et al. 2007).[11]

In contrast, procedural injustice produces negative consequences. Procedural injustice by authorities demonstrates to individuals that they are not valued by conventional others. In addition, unfair treatment may then foster disintegrative shaming, which precludes the affirmation of offenders' basic goodness of character and their membership in the community. As a result, individuals may experience a decrease in self-esteem and form a negative view of themselves (Smith and Tyler 1997; Tyler, Degoey, and Smith 1996). Disintegrative shaming allows criminal subcultures to be viewed as more attractive because the offender can find acceptance in these groups (Braithwaite 1989; Hay 2001). Therefore, the negative self-conception that procedural injustice fosters furthers the occurrence of crime by leading offenders to seek acceptance among deviant or criminal subcultures that possess favorable views toward crime and deviance. In summary, then, the experience of procedural justice perpetrated by conventional others should foster law-abiding behavior, while unjust procedures should promote crime.

[10] Refer to Sherman's (1993) defiance theory for a more extensive review.

[11] Possessing a favorable sense of self or having high self-esteem also reduces the probability of criminal behavior according to GST because those individuals are more resistant to stress (Agnew 1992).

1. Expanding the Literature on Procedural Justice and Crime

Insofar as Tyler's conceptualization of procedural justice in terms of standing, neutrality, and trust overlaps considerably with recent attempts to conceptualize interactional justice (Bies 2005), it is extremely difficult to disentangle the effects of procedural and interactional injustice on recidivism. This project, however, offers distinct conceptualizations of procedural and interactional justice, and can thus more readily address their separate and combined effects on criminal and deviant behaviors.

C. Summary

In sum, the criminological literature suggests that the experience of injustice increases the likelihood of criminal or deviant behavior when certain conditions are met. GST specifies that criminal coping is fostered in response to strains that are unjust, intense, coupled with low social control, and incentives for engaging in crime (Agnew 2006). Specifically, the experience of strain resulting from distributive, procedural, or interactional injustice produces emotions that increase the likelihood that individuals cope in a criminal or deviant way. Anger appears to be the most significant predictor of crime in response to strain, which as the next section will show is an emotion that is usually produced through the experience of injustice.

Importantly, GST also helps to identify interactional injustice as a factor that should increase the likelihood of criminal or deviant coping over and above the other forms of injustice. Strains marked by interactional injustice should be more central for individuals due to the disrespectful treatment they experience. The identity costs produced by this form of injustice should minimize or outweigh the perceived costs that exist for engaging in criminal or deviant behavior.

Moreover, GST and Tyler's research on procedural justice identifies the role that others play in facilitating or inhibiting criminal responses to injustice. According to GST, individuals may learn to engage in criminal or deviant behavior in response to the strain they experience from others, while support from conventional others may decrease deviant responses (see Akers 1985; Sutherland and Cressey [1960] 2006). As such, having peers or others condone criminal or deviant behavior should reduce the social costs associated with crime and promote criminal or deviant coping. In contrast, Tyler notes how injustice on the part of conventional authorities encourages deviant responses to strain.

Furthermore, gender and personality traits are also important in conditioning whether one responds to injustice with crime. Specifically, being: 1) male; 2) high in negative emotionality; 3) low in constraint; and 4) externally controlled are all factors that foster criminal or deviant coping when faced with injustice. Gender impacts the types of emotions that are experienced in response to strain (Broidy and Agnew 1997; De Coster and Zito 2010) and how they are expressed (Brody 1997; De Coster and Zito 2010). Moreover, gender affects how one deals with and views disrespectful treatment, in that disrespect should be more threatening or central to males due to the association between respect and masculinity (Anderson 1999; Brezina et al. 2004; Kupers 2005; Messerschmidt 1993). And, personality traits that promote the experience of anger (negative emotionality and external locus of control) and that reduce the perceived costs associated with crime by discouraging control (low constraint), will increase the likelihood that crime or deviant acts result from the experience of injustice.

Although the criminology literature helps to specify aspects of the injustice-crime

relationship, it does not examine how the different types of justice combine to influence the likelihood of criminal or deviant behavior in response to injustice. In the next section, I delve more deeply into the types of justice and their relationship to each other and deviance by examining the social psychological literature and research on organizational justice.

III. JUSTICE AND CRIME

Distributive, procedural, and interactional justice are related but distinct concepts (Cohen-Charash and Spector 2001). Akin to Agnew's (2006) GST, early justice theorists (Adams 1965; Walster et al. 1978) proposed that the experience of injustice produces feelings of distress that motivate individuals to eliminate this distress by restoring psychological or actual justice for themselves or others. I first briefly discuss a general justice model and note how the characteristics, beliefs, and motivations of individuals combine with situational factors to influence perceptions of (in)justice, which in turn stimulate emotional, behavioral, and cognitive reactions (Hegtvedt 2006). Next, I discuss the reactions individuals may have to each type of justice, noting how they may relate to deviance and crime.

A. General Justice Model

Like strain, the experience of justice or injustice can be objective or subjective. It is, however, how people subjectively *perceive* justice or injustice that determines their responses. Specifically, justice evaluations originate from a perceiver, or an individual who assesses a particular outcome, procedure, or type of interpersonal treatment. These assessments are based on whether or not a comparison between an actual outcome, procedure, or treatment coincides with what is expected based on the justice rule presumed relevant to situational goals (Hegtvedt 2006).

Given a particular rule, individual factors (i.e., one's characteristics, beliefs, and motivations) and situational factors (e.g., the presence of others, the relationship of these others to the individual, and the type of distribution or treatment these others receive) will shape the justice evaluations that are made (for a more detailed review refer to Hegtvedt

2006).[12] For instance, gender influences justice evaluations. Females tend to use an equality principle when distributing a reward, while males tend to follow a contributions or equity principle that dictates that rewards should be commensurate with inputs such as effort, experience, etc. (Leventhal and Lane 1970). Other research suggests that females and males use the equity rule when they work on tasks appropriate for their respective genders and an equality rule when allocations are public. The characteristics of the perceiver alone and in conjunction with situational factors influence the selection of a justice rule. Moreover, the situational context influences the salience of particular personal or group identities that can then influence how individuals perceive how authorities treat them (see Hegtvedt 2006).

People perceive whether their experiences are just by comparing their actual experiences to what would be expected based on justice rules relevant to the situation (Deutsch 1975; Leventhal 1976a, 1976b; Hegtvedt 2006; Tyler et al. 1997). In this process, individuals determine whether the outcomes they receive, the procedures used to allocate those outcomes, and their interpersonal treatment were fair. When perceptions of an outcome, procedure, or treatment do not match a particular justice rule, individuals experience emotional distress, which in turn influences their behavior. Namely, people will attempt to reduce the distress they experience by retaliating against the perpetrator of

[12] The equality rule requires that each individual receive an equal amount of a distributed resource, which achieves group solidarity or harmony. The contributions rule, in contrast, necessitates that the amount of a resource one receives is commensurate to his or her contributions, which fosters the achievement of individual productivity (Deutsch 1975; Leventhal 1976a, 1976b). Last, the needs rule dictates that resources be distributed according to the needs of individuals and furthers personal welfare (Deutsch 1975; Leventhal 1976a, 1976b). Individuals who desire distributions based on a particular justice rule will also favor procedures that attempt to ensure that type of distribution (Leventhal et al. 1980). Furthermore, regarding relationships with authority, individuals tend to prefer procedures that value their membership in the group by granting them voice, or input in the decision-making process (Lind and Tyler 1988) and that provide reasons for why a particular procedure is enacted (Bies 2001).

injustice or attempting to restore justice to the situation (Adams 1965; Walster et al. 1978). In the next section, I conceptualize distributive, procedural, and interactional justice processes, focusing on emotional, behavioral, and cognitive responses to injustice.

1. Types of Justice

a. Distributive Justice

Distributive justice refers to the fairness of the distribution of resources in a group or exchange (Colquitt et al. 2005; Hegtvedt 1994). Early research on distributive justice revealed that the actual level of resources distributed is less important in forming justice judgments than the amount of outcomes comparison others receive (Colquitt et al. 2005). For instance, distributive justice occurs when the rewards are proportional to one's investments in a social exchange (Homans 1961). This relationship is formally expressed by equity theory, which states that individuals evaluate fairness by calculating the ratio of their outcomes to their own contributions (inputs) and then comparing it to the ratio of a comparison other (Adams 1965; Colquitt et al. 2001). Outcomes are considered to be items received from an exchange or allocation, which may consist of pay or intrinsic satisfaction, while inputs include training, seniority, and effort (Cohen and Greenberg 1982).

Perceptions of equity result in feelings of contentment, satisfaction, and commitment, while perceptions of inequity lead individuals to experience distress and dissatisfaction (Adams 1965; Homans 1961; Sprecher 2001).[13] The greater the perceived inequity, the more distress individuals experience and the harder they will attempt to restore equity (Jasso 1980; Markovsky 1985; Traupmann et al. 1981). Individuals,

[13] These perceptions are produced by social comparisons which are important for distributive justice evaluations because they allow individuals to determine whether the rewards they receive are fair (for a more detailed discussion refer to Hegtvedt 2006).

moreover, are more resentful of an unjust situation when it is unexpected (Austin and Walster 1974b) and when they believe another has intentionally deprived them of a reward or resource than if they blame their deprivation on situational constraints (Cohen 1982). This distress takes the form of overrewarded individuals feeling guilty for receiving undeserved benefits at the expense of another and underrewarded individuals feeling angry for being exploited (Homans 1961; Traupmann et al. 1981).[14] Yet, these emotional responses are conditioned by the situational context. For instance, overrewarded individuals are happier, less guilty, and more comfortable with their inequitable treatment when they know that their benefactor was previously overrewarded. In contrast, underrewarded individuals are happier, less angry, and evaluate their unjust treatment as fairer when they discover that their exploiter was previously deprived (Austin and Walster 1974a).

The emotions that result from perceptions of inequity motivate individuals to attempt to restore equity either behaviorally or cognitively in order to alleviate the distress they feel (Adams 1965; Walster et al. 1978). Behaviorally, individuals may attempt to restore equity by changing their own inputs, outputs, or by leaving the relationship (Adams 1965; see also Cook and Hegtvedt 1983). In addition, behavioral responses to equity restoration may involve individuals attempting to change the system that produced this injustice. Individuals may engage in deviance either to restore equity or to retaliate against an actor who has caused harm to an individual (Ambrose et al. 2002). For instance, underrewarded individuals may demand restitution, retaliate against the harmdoer, (Berscheid, Boye, and Walster 1968; Ross, Thibaut, and Evenbeck 1971),

[14] Overrewarded individuals, however, may not feel guilty because they attempt to justify the rewards they receive (Hegtvedt 1990).

or restore equity by engaging in theft (Hollinger and Clark 1983; Greenberg 1990), vandalism (DeMore, Fisher, and Baron 1988), or by reducing their inputs. In contrast, overrewarded individuals may attempt to restore equity by compensating their partners (Berscheid and Walster 1967; Schmitt and Marwell 1972). If individuals perceive that they cannot alter the system that has led them to experience distributive injustice, then they may inflict punishment on the party they think is the most responsible for their plight (Aquino et al. 1999b).

Nevertheless, many responses to injustice may not be visible because individuals may only experience cognitive changes. Perceptual responses to injustice are unobservable and involve distorting elements of the distribution in order to eliminate the perceived violation of a justice principle (Hegtvedt 2006). For instance, people may psychologically justify or eliminate their perceived inequity (Austin and Walster 1974a, 1975) by cognitively distorting their perception of their own or another's outcomes and/or inputs, or by changing the comparison other (Adams 1965; see also Colquitt et al. 2005).

b. Procedural Justice

Principles of procedural justice encompass rules that, when followed, ensure that procedures used to allocate rewards or resources are just (Leventhal et al. 1980). The consistency rule guarantees that procedures are consistent across persons and time. The bias suppression rule necessitates that personal self-interest and narrow preconceptions are suppressed when an allocation is made. The accuracy rule states that allocations should be based on accurate information and informed opinions. The correctability rule dictates that methods should exist for reversing decisions that have been made throughout

the process of allocation. The representativeness rule requires that the viewpoints of the individuals affected by the allocative process be taken into account. Last, the ethicality rule specifies that the procedures enacted agree with the morals and values held by the individuals involved, so that procedures are free from deception, trickery, bribery, or invasion of privacy (Colquitt et al. 2005). Procedural justice, moreover, may entail the perceived fairness of how one is treated in the decision-making process (Murphy and Tyler 2008; Hegtvedt 2006). As discussed in the previous chapter, the relational aspects of procedural justice consist of standing, neutrality, and trust (Tyler and Lind 1992). Based on extensive empirical research (see Bies and Moag 1986; Cohen-Charash and Spector 2001; Colquitt et al. 2005), for the purposes of this project I consider the fairness of interpersonal treatment by authorities or peers in the decision-making process to constitute interactional justice.

Procedural justice is important because it ensures that individuals are likely to obtain fair material or social outcomes. On the one hand, individuals value procedural fairness because it allows them to have control over the decision-making process to ensure a fair outcome (Thibaut and Walker 1975). In contrast to this instrumental reason, the group-value model of procedural justice argues that individuals desire fair procedures because they want to receive beneficial social outcomes by being perceived as valued members of the group (Lind and Tyler 1988). Procedures that allow for voice or participation in the group affirm one's membership and enhance perceptions of fairness (Lind and Tyler 1988; Shapiro and Brett 2005). Having voice provides individuals with some control over the procedures that will affect their outcomes (Thibaut and Walker

1975; Shapiro and Brett 2005) and increases procedural justice regardless of the type of outcome that is received (Lind and Tyler 1988).

The experience of procedural justice promotes the establishment of relationships because it produces happiness (Murphy and Tyler 2008) and enhances self-esteem and pride in one's group, owing to feelings that one is a valued and respected group member (Tyler et al. 1996). Pride and respect in turn cultivate group-serving behavior (Tyler et al. 1996; Tyler and Blader 2000), a greater desire to help others (Tyler and Degoey 1995), and compliance to rules, authorities (Murphy and Tyler 2008), and the law (Wenzel 2002). Moreover, procedural justice, is one way to establish the perceived legitimacy of authorities, increasing the willingness of individuals to comply with their decisions and directives (Sunshine and Tyler 2003; Tyler 2004; Tyler 2006; Tyler and Huo 2002).

Procedural injustice, in contrast, produces negative emotions, which are thought to mediate the relationship between procedural justice and behavior (Murphy and Tyler 2008). Any procedure used to allocate rewards or resources that produces an undesirable distribution will be negatively evaluated and will prompt corrective action to modify that procedure (Leventhal et al. 1980). For instance, Gordijn et al. (2006) find that anger mediates the effect that an unfair procedure has on the likelihood that one will take action against an unfair legislative proposal. Inadequate justification for a change in procedures that results in reduced outcomes fosters feelings of resentment (Folger, Rosenfield, and Robinson 1983) and ill will (Cropanzano and Folger 1989). Krehbiel and Cropanzano (2000) find that anger and frustration are highest when an individual receives an unfavorable outcome as a result of an unfair process. In contrast, feelings of guilt and anxiety are highest when an individual receives a favorable outcome from an unfair

procedure. Weiss, Suckow, and Cropanzano (1999) report that unfair procedures resulting in a beneficial outcome promote guilt among individuals while procedures biased against individuals resulting in a negative outcome produce anger.

Behaviorally, individuals who experience procedural injustice are also less likely to comply with authorities and the law (Matrofski et al. 1996; McCluskey et al. 1999; Tyler 1990; Tyler 2006) and follow group rules (Tyler et al. 1996) than those who do not. Individuals, moreover, are more sensitive to procedural injustice the more they are concerned with their social standing (Nowakowski and Conlon 2005) and will have stronger reactions to injustice when they have a greater sense of being a victim of unjust outcomes (Schmitt 1996). For instance, persons who identify strongly with a group that is receiving unfair treatment are more likely to perceive the behavior of the perpetrator as unfair, experience more anger, and desire to retaliate against the perpetrator than those who do not strongly identify (Gordijn et al. 2006). In addition, individuals who are unjustly treated by members of a group to which they highly identify will experience a reduction in their self-worth (Smith and Tyler 1997; Tyler et al. 1996). Last, engaging in deviant or criminal behaviors in response to a distributive injustice is partly conditioned by the fairness of the procedures that are used to allocate rewards and resources. Under conditions of high procedural justice, distributive injustice is more likely to be tolerated (Brockner and Wiesenfeld 1996; Folger 1977; Greenberg 1990).

c. Interactional Justice

Like other forms of injustice, interactional injustice also produces negative emotions that may result in deviant or criminal behavior that either attempts to restore justice or lead to retaliation against the harmdoer. Empirical research suggests that

interactional justice is conceptually distinct from procedural justice (e.g., Aquino et al. 1999b; Cohen-Charash and Spector 2001; Colquitt et al. 2005) and focuses on the quality of interpersonal treatment that individuals experience when organizational procedures are enacted (Bies and Moag 1986) and resources are distributed (Colquitt et al. 2001). Specifically, some researchers argue that procedural justice encompasses the structural attributes of procedures while interactional justice centers on interpersonal elements of how individuals in positions of authority treat their subordinates (Aquino et al. 1999b) and how coworkers treat each other (Bies 2005).[15]

Rules that establish interactional justice include truthfulness, justification, respect, and propriety.[16] Although these rules are discussed in reference to the relationship between authorities and subordinates, the operation of these rules also pertains to the relationship between individuals (Cropanzano, Prehar, and Chen 2002). The truthfulness rule dictates that authorities should be honest and openly communicate with their subordinates when they implement decision-making procedures. Justification requires that authorities adequately explain outcomes of the decision-making process. Respect involves authorities treating subordinates with sincerity and dignity, while propriety necessitates that authorities should not ask any inappropriate questions or make prejudicial statements (Colquitt et al. 2005).

Treatment in accordance with principles of interactional justice is associated with positive emotions, such as joy and hope. Interactional injustice in contrast, predicts

[15] Moreover, a number of researchers suggest that interactional justice consists of interpersonal and informational justice, the latter sometimes being considered as a fourth type of organizational justice (Bies 2005). Interpersonal justice entails individuals being treated with politeness, dignity and respect. Informational justice, in contrast, is more relevant to organizational contexts and centers on the explanations used to convey why certain procedures were used or why outcomes were distributed in a particular manner (Colquitt et al. 2001).

[16] Note that interactional justice rules considerably overlap with the relational approach to the interpersonal dimension of procedural justice and its components of standing, neutrality, and trust (Tyler and Lind 1992).

anxiety and disgust (Chebat and Slusarczyk 2005). Moreover, Stecher and Rosse (2005) find that interactional injustice results in the expression of anger, resentment, and bitterness.

The positive and negative emotions that are associated with interactional justice and injustice are reflected in the ways in which individuals behaviorally respond to this form of fairness. Interactional justice predicts altruism, courtesy, sportsmanship, and conscientiousness (Moorman 1991). Moreover, adolescents who are treated with dignity and respect in a neutral and trustworthy manner are less likely to engage in deviant behavior because they are more likely to experience family cohesiveness and psychological well-being (Fondacaro, Dunkle, and Pathak 1998). Familial cohesion should enhance the bonds adolescents have with non-deviant others and reduce the likelihood of criminal behavior (Hirschi 1969). Jackson and Fondacaro (1999) find that adolescents who are trusted by their parents and are treated as valued members of the family report less delinquent and antisocial behavior.[17]

On the other hand, the negative emotions associated with interactional injustice are correlated with the restoration of justice and retaliation. Individuals who experience distributive injustice are more likely to steal an item only if it can restore equity, while interactional injustice leads individuals to steal an item regardless of its value (Ambrose et al. 2002; Greenberg 1996). Sabotage in response to interactional injustice is based on retaliation, while sabotage in response to procedural injustice is just as likely to be based on restoration and retaliation (Ambrose et al. 2002).

Interactional justice may be more important for predicting criminal and deviant

[17] Fondacaro et al. (1998) and Jackson and Fondacaro (1999) incorporate interactional justice in their conceptualization of procedural justice.

behavior because individuals are more troubled by being subjected to abusive behavior than with the receipt of unfair outcomes or the experience of unfair procedures (Aquino et al. 1999b; Poyner 1988). Interactional injustice enhances the experience of negative emotions regardless of whether fair procedures are used (Van Yperen et al. 2000) and facilitates the expression of deviant behavior when it occurs in conjunction with distributive and procedural injustice (Skarlicki and Folger 1997). Mikula, Petri, and Tanzer (1990) find that students are more likely to detail incidents of interactional injustice than procedural or distributive injustice when asked to report their experience of unjust events and when they became angered in response to an injustice. Interactional justice may thus be more consequential in influencing whether individuals engage in deviant or criminal behaviors in response to this form of injustice because of the implications that unfair treatment has for one's self-esteem and pride (Smith and Tyler 1997; Tyler et al. 1996).[18] The next section reviews the major role that interactional justice plays for increasing the likelihood of deviant responses to injustice in organizations.

B. Organizational Deviance

Organizational justice investigates how distributive, procedural, and interactional justice affect workplace behaviors. Specifically, organizational injustice produces negative emotions and fosters the occurrence of deviant acts. These behaviors have been conceptualized both as organizational retaliation behaviors (ORBs) (Skarlicki and Folger 1997; Cohen-Charash and Spector 2001), and as counterproductive work behaviors

[18] Smith and Tyler (1997) and Tyler et al. (1996) use the group-value model of procedural justice to conceptualize how individuals are treated by authorities instead of interactional justice.

(CWBs) (Fox, Spector, and Miles 2001).[19] These acts entail negative reactions toward an organization by employees, such as theft or sabotage, in response to a perceived unfairness (Fox et al. 2001; Skarlicki and Folger 1997). Individuals who perceive organizational outcomes and procedures to be unfair are more likely to perform worse, steal more, sue their employers, engage in protest behaviors, disobey the decisions of their authorities (Lind, Kray, and Thompson 1998), avoid work, and engage in defiance, aggression, revenge, and retaliation (Ball, Trevino, and Sims 1994; Gholipour, Saeidinejad, and Zehtabi 2009). Below I identify and detail the factors that influence whether injustice leads to the occurrence of workplace deviance.

1. Emotions and Organizational Deviance

In the organizational justice literature unjust decisions or actions performed by management can produce anger, outrage, and resentment among employees, which may lead to workplace deviance. Fox et al. (2001) find that negative emotions mediate the relationship between justice and workplace deviance. In addition, Van Yperen et al. (2000) report on the mediating role of negative affect (measured as distress, hostility, and irritability). Specifically, interactional injustice produces negative affect, which leads to aggressive voice, or being persistent or starting a fight with one's supervisor, independent of perceived distributive and procedural injustice. Also, distributive and procedural injustice result in greater negative affect than distributive and procedural justice and predict intentions to leave an organization. Therefore, injustice gives rise to destructive behaviors through an increase in negative affect (Van Yperen et al. 2000).

Moreover, the attributions that individuals make for the experience of a perceived

[19] Both ORB and CWB encompass similar behaviors and thus will be collapsed into the general category of workplace deviance.

injustice influence the type of felt emotions. Barclay et al. (2005) find that individuals are more likely to experience the inward-focused emotions of shame and guilt in response to unfavorable outcomes when they also perceive interactional and procedural justice because they are less likely to blame external sources for their outcomes. Regardless of outcome favorability, individuals are more likely to experience the outward-focused emotions of anger and hostility under conditions of procedural and interactional injustice. Instances of procedural and interactional injustice foster external attributions, and subsequent outward-focused negative emotions, because they permit people to blame others for their unfair treatment or to perceive that their unfavorable outcomes could have been avoided. Barclay et al. (2005) find that these negative emotions lead individuals to be more likely to right a wrong or engage in retaliation against the doer of injustice.

Consequently, anger plays a significant role in predicting whether one engages in organizational deviance. The experience of injustice produces anger by leading individuals to make external attributions for their unfair treatment in order to deny personal responsibility and blame others for their negative outcomes (Barclay et al. 2005). Anger then increases the likelihood of deviant or criminal behavior. Moreover, the literature on organizational deviance suggests that interactional injustice has a greater impact on negative affect and workplace deviance than distributive or procedural justice. The experience of interactional injustice produces greater levels of negative affect when procedural justice is high than when it is low (Van Yperen et al. 2000). Chebat and Slusarczyk (2005) find that interactional justice impacts both positive and negative emotions and plays a dominant role in predicting the loyalty of customers.

2. Factors that Condition the Expression of Workplace Deviance

Regardless of the source of injustice, workplace deviance may target the organization or other persons in the organization (Aquino et al. 1999b; Fox et al. 2001). Interpersonal deviance involves acts directed toward others such as verbal abuse or assault, while organizational deviance encompasses acts directed toward the organization such as theft or equipment sabotage. Whether individuals engage in either form of deviance as a result of distributive, procedural, or interactional injustice depends on a variety of conditioning factors.

a. Role of Gender

Gender may influence perceptions of and reactions to injustice (Major and Deaux 1982; Clayton 1992). Tata (2000) reports that women and men may use different frameworks for perceiving fairness in an organization. Men are more likely than women to use distributive justice principles rather than procedural justice principles when allocating and evaluating raises in pay (Tata 2000). For instance, Farh, Earley, and Lin (1997) find a stronger relationship between distributive justice and conscientiousness among men than women. The experience of distributive justice increases conscientiousness among men but is not related to conscientiousness among women. Therefore, different types of justice may produce stronger emotional and subsequent behavioral reactions for males and females. Men may experience more negative emotions and be more likely to engage in deviance in response to violations of distributive justice than women. Women, in contrast, may experience higher levels of distress in response to procedural injustice, which may or may not (due to the role of gender in mediating responses to strain) increase the possibility of their engagement in deviance (e.g., Agnew

2006). Importantly, Farh et al. (1997) find that gender moderates the relationship between organizational justice and citizenship behavior, with the strongest effect relating to interactional justice. The experience of organizational justice was more likely to produce citizenship behaviors among males than females. Again, this finding may relate to the association that respect has with masculinity (e.g., Kupers 2005; Messerschmidt 1993).

b. Role of Personality

Individuals with particular personality traits are also more likely to engage in workplace deviance in response to a perceived injustice. Negative emotionality, trait anger, attitude toward revenge, low self-control, attribution style, and previous exposure to aggressive cultures are personality traits that can explain workplace aggression (Tripp et al. 2007). Skarlicki et al. (1999) report that individuals are more likely to engage in workplace deviance in response to distributive and interactional injustice if they are high in negative emotionality and low in agreeableness. Moreover, individuals high in trait anger (tendency to perceive situations as anger-provoking) and trait anxiety (tendency to perceive stressful events as threatening) are more likely to engage in interpersonal workplace deviance when they experience multiple job stressors, such as interpersonal conflict and organizational constraints (e.g., interruptions at work) (Fox et al. 2001). Penney and Spector (2005) find that the relationship between job stressors (incivility, organizational constraints, and interpersonal conflict) and counterproductive work behaviors is stronger for individuals who are high in negative emotionality than for those who are low in this trait.

Highly impulsive employees are also more likely to engage in workplace deviance when interactional injustice exists (Henle 2001). This may be due to the fact

that people who seek immediate gratification are less likely to perceive that fair procedures will result in just outcomes (Joy and Witt 1992; see also Caspi et al. 1994). Therefore, individuals with a short delay of gratification may engage in deviance or crime in order to rectify their perceived experience of injustice.

Perceptions of control in a situation also influence whether one appraises an event or situation as stressful. Thus, it is not the objective stressors per se but an individual's subjective appraisal of not having the control to handle these stressful circumstances that have the possibility of producing workplace deviance (Fox et al. 2001). Storms and Spector (1987) report that individuals with an external locus of control are more likely to respond to frustrating events at work by engaging in workplace deviance. An external locus of control leads to the experience of anger because individuals tend to blame other forces for their misfortunes (Levenson 1973).

Ultimately, the individual level factors that enhance workplace deviance are similar to the ones found in the criminological literature. Negative emotionality, low constraint, and an external locus of control enhance the likelihood that individuals respond to injustice with crime. These traits either promote the experience of anger in response to injustice (negative emotionality and external locus of control) or increase the likelihood that individuals respond impulsively upon experiencing injustice (low constraint).

3. Combinations of Injustice Resulting in Workplace Deviance

Whether or not deviant behavior is expressed in response to a particular injustice also depends on whether the unjust act occurs in conjunction with other forms of injustice. Van Yperen et al. (2000) find that low levels of procedural and distributive

justice predict one's intention to quit. Moreover, distributive and procedural justice may interact. When procedural injustice is low, organizational commitment depends on the level of distributive justice, while this behavior does not vary considerably with distributive justice when procedural justice is high (McFarlin and Sweeney 1992). Skarlicki and Folger (1997) suggest that individuals are more likely to engage in deviance against an employer for an experienced distributive injustice when both procedural and interactional injustice are low. It appears that fair procedures limit the likelihood of deviant responses to a distributive injustice. In addition, at high levels of interactional injustice the interaction between distributive and procedural justice is not significant, which implies that interactional justice allows one to be more tolerant of both distributive and procedural injustice.

Furthermore, interactional justice is found to have the strongest effect on workplace deviance in comparison to distributive and procedural justice (Colquitt et al. 2001; Skarlicki and Folger 1997; Stecher and Rosse 2005). Since the most intense emotional and behavioral responses to a perceived injustice are associated with interactional injustice, violations of interactional justice should be associated with a range of organizational deviant behaviors (Aquino et al. 1999b). Interactional justice is argued to be linked with behavior directed toward authorities in general because this aspect of fairness deals with the fairness of supervision (Moorman 1991) and with the interpersonal behavior of these individuals with other employees (Cohen-Charash and Spector 2001). Yet, interactional injustice may also lead persons to engage in deviant behaviors directed toward the organization due to the cost associated with the consequences of perpetrating interpersonal deviance against one's superiors or coworkers (Aquino et al. 1999b). For

instance, Aquino et al. (1999b) find that interactional injustice on the part of an employer leads to indirect forms of organizational deviance, such as intentionally arriving late for work. Also, Van Yperen et al. (2000) find that interactional justice was the only significant type of justice to impact intentions of individuals to behave destructively upon the experience of a problematic event; thus, nurses who perceived that their supervisors unfairly treated them were more likely to exit, engage in neglect, or aggressive voice.

C. Bridging Organizational Justice and Crime Literatures

Basic research and studies pertaining to organizations highlight several important trends regarding the relationship between injustice and deviance. First, the literature suggests that emotions mediate the relationship between injustice and behavior. Fair treatment results in positive emotions, which may prompt prosocial behaviors; conversely, the experience of distributive, procedural, and interactional injustice produces negative emotions that may foster the occurrence of crime or deviance. Specifically, all types of injustice foster the experience of anger, an emotion that facilitates criminal behavior (Agnew 2006). Second, negative behaviors may be viewed as a means of restoring justice or retaliating against the perceived perpetrator of injustice or otherwise alleviating negative emotions (drug use).

The nature of the response, moreover, may depend on the combination of the types of injustice that a person experiences. Thus, the third trend takes into consideration combinations of injustice. The expression of deviant behavioral responses may not occur when the experience of one type of injustice is countered by the experience of another type of justice. For instance, individuals have a tendency to be more tolerant of a distributive injustice (a low pay raise) when fair procedures are used (McFarlin and

Sweeney 1992). Similarly, interactional justice leads individuals to be more tolerant of unfair outcomes and procedures (Skarlicki and Folger 1997). Yet, research indicates that procedural justice does not offset the negative affect that results from interactional injustice (Van Yperen et al. 2000). And, when all types of injustice co-occur, individuals are likely to experience the most negative affect (Van Yperen et al. 2000) and pursue deviant behaviors (Skarlicki and Folger 1997). Last, interactional injustice appears to be a more important predictor of deviance or criminal behavior than either of the other two types of justice (Colquitt et al. 2001; Skarlicki and Folger 1997; Stecher and Rosse 2005; Van Yperen et al. 2000).

These justice trends augment the criminological literature by specifying how the types of injustice combine to influence the expression of deviant or criminal behavior. Despite this contribution, the justice literature remains limited by its focus on the relationship between injustice and deviance only within the workplace. Moreover, the literature hardly addresses the role that others may play in influencing criminal or deviant acts. Incorporating research on GST and the procedural justice and crime literature, however, rectifies these oversights.

Like the justice literature, GST argues that the injustice associated with strains is correlated with criminal behavior because it may lead to the experience of a variety of negative emotions, which can be reduced through engaging in crime (Agnew 1992). Both GST and the organizational justice literature specify situational and individual level factors that increase the likelihood of criminal coping in response to perceived injustice (Agnew 2006; Aquino et al. 1999b; Skarlicki et al. 1999). Although both literatures argue that the least costly means will be used to redress injustice (Adams 1965), the

criminological literature highlights why these factors reduce the costs associated with crime and implicates how others may affect the expression of deviant or criminal behavior. GST highlights how central strains, or those most often associated with interactional injustice that can threaten one's identity and how criminal role models may reduce the perceived costs associated with engaging in criminal or deviant behavior.

Therefore, GST and the procedural justice and crime literature can be used to help explain why interactional injustice may be more important for crime. As previously mentioned, GST argues that strains that are high in magnitude, which threaten the core needs and/or identities of an individual are more likely to result in criminal coping behavior (Agnew 2006). Also, the way in which procedural justice is described in criminology subsumes interactional justice. Standing, or the respectful treatment an individual receives, is considered an element of procedural justice, which, when violated, promotes crime or deviance. Also, the association of self-esteem and pride with the dimensions of interactional justice may explain why this form of injustice is likely to stimulate deviant or criminal responses (Smith and Tyler 1997; Tyler et al. 1996). Individuals seek out groups that enhance or confirm their self-worth, which may include deviant others when they experience injustice. In the next section, I note how peers may help to facilitate or hinder criminal or deviant responses to injustice.

D. Legitimacy

GST and the social psychological approaches to legitimacy both argue that others, particularly close associates, influence how one perceives and reacts to injustice. Agnew (2002) notes that delinquent responses are more likely when individuals associate with delinquent peers who encourage criminal coping. Furthermore, individuals may

subjectively evaluate objective strains differently depending on their goals, values, identities, personality traits, and prior experiences (Froggio and Agnew 2007). Namely, the peer, community, or familial groups to which individuals belong may define certain objective strains more negatively than others. Subcultural theories of crime argue that individuals who engage in crime and delinquency do not possess conventional values and goals but adhere to the culturally deviant norms of the groups in which they are members (Anderson 1999; Wolfgang and Ferracuti 1982). The reactions of others in one's primary social groups may therefore legitimate or delegitimate certain criminal acts.

Legitimacy "means that something is natural, right, proper, in accord with the way things are or the way things ought to be" (Zelditch 2006: 324). Weber (1958) asserts that social orders become legitimate or valid when individuals follow norms or rules associated with that social order, regardless of whether they agree with them (Hegtvedt and Johnson 2000). Specifically, the individual belief that normative prescriptions of a social order are right and proper refers to the concept of propriety (Dornbusch and Scott 1975). Propriety is enhanced through authorization and endorsement, which are collective sources of legitimacy that further one's adherence to a particular order and grant it validity. Authorization refers to the support that comes from authorities or individuals with higher status and more power than the focal person, while endorsement entails the support of peers or those lower in status than the individual (Zelditch 2006). A valid social order therefore indicates that an individual should obey its norms despite not personally agreeing with them because it is perceived that these norms are supported by others (Dornbusch and Scott 1975).

Due to the fact that delinquent peers have a great impact on fostering criminality

(Agnew 2006; Baron et al. 2001; Heimer and De Coster 1999; Warr and Stafford 1991), I focus on how endorsement of the actions of the perpetrator of injustice and of a deviant response to that injustice affect the likelihood that an individual will engage in a criminal or deviant response. Younts (2008) finds that, independent of propriety, the endorsement of deviance by one's peers legitimates deviance within a situation. Welch et al. (2005) suggest that tax evasion is more likely to occur in the future when individuals perceive it is prevalent within their parish community, signifying that there exists some consensus in perpetrating it or that it is legitimated by similar others (Walker 2004). When a particular behavior is legitimated, individuals tend to do nothing that contradicts that act. They enact it in order to avoid negative sanctions from others for noncompliance (Zelditch 2006). Thus, peers who endorse unjust behavior may lead individuals to justify that behavior as legitimate and undeserving of a deviant or criminal response. Likewise, criminal behavior that is endorsed by a peer would facilitate criminal coping.

Agnew (2001) notes that peers may play a role in defining particular events or conditions as unjust or high in magnitude. Conventional peers who legitimize the unjust actions of the perpetrator may therefore minimize the perceived intensity of the injustice associated with that strain, its resultant negative emotions, and the likelihood of a criminal or deviant response. These conventional individuals do not hold beliefs conducive to the perpetration of crime (Sutherland and Cressey [1960] 2006) and therefore disapprove of defining the situation as unfair and rectifying it with the pursuit of a criminal response. Research indicates that individuals who can rely on non-delinquent others, such as family, friends, romantic partners, church members, or teachers to cope with strain, are less likely to engage in crime because the support that they

provide reduces negative emotions associated with strain. Jang and Lyons (2006) report that having close family and friends in whom confidences can be made reduces the negative emotions produced by strain. Indeed, studies suggest that individuals with strong attachments to conventional others have a reduced likelihood of committing crime in response to strain (Agnew et al. 2002; Mazerolle et al. 2000).

Unconventional peers who endorse criminal behavior, in contrast, increase the likelihood of that type of behavior. Individuals who form ties with delinquent others are low in conventional social support and are more likely to commit crime upon the experience of strain. These individuals are likely to be low in social control or less likely to believe that crime is wrong because of their lack of ties to conventional others (Agnew 2006). Social learning theories of crime suggest that individuals are more likely to engage in delinquency by interacting with others who hold favorable definitions of crime (Akers 1985; Sutherland and Cressey [1960] 2006). Some strains are associated with being exposed to others who engage in crime, reinforce crime, or have beliefs conducive to the perpetration of crime. For example, child abuse or being bullied by peers places the individual in a context in which favorable definitions to crime can be learned (Agnew 2001). Therefore, peers who hold favorable definitions of crime and legitimate a criminal response to an unjust strain should increase the likelihood that an individual engages in criminal or deviant behavior.

In sum, having peers who legitimate the behavior of a perpetrator of injustice should reduce the likelihood that individuals will respond to that injustice with crime or deviance; more conventional responses ensure the avoidance of social sanctions. Such peers may also provide those who experience injustice with the coping resources to

reduce the negative emotions produced by the injustice they experience and to justify the unjust treatment they receive. In contrast, having friends who are delinquent increases the likelihood of crime in response to strain. Delinquent others may grant legitimacy to deviant or criminal behavior, increase the costs of individuals not engaging in crime through informal sanctions, and provide individuals with favorable definitions of crime. Moreover, having delinquent peers reduces one's level of conventional social support and facilitates a favorable view of crime. Individuals are less likely to feel guilty when engaging in crime when they are not tied to conventional others or institutions (Agnew 2006). Individuals, then, may be more likely to respond to injustice in a criminal or deviant manner when their peers fail to endorse the perpetrator of injustice and, at the same time, grant legitimacy to criminal or deviant acts.

Consequently, the criminological and social psychological literatures suggest that having deviant peers is another conditioning factor that affects the likelihood that one engages in a criminal or deviant response to injustice. In the next chapter, I further detail how the criminological and social psychological literatures can jointly contribute to specifying the injustice-crime relationship. In doing so, I note the commonalities of these literatures and establish my theoretical predictions.

IV. THEORETICAL ARGUMENT AND HYPOTHESES

Research in criminology and social psychology specifies aspects of the injustice-crime relationship. Both the criminological and social psychological literatures suggest that the subjective evaluation of injustice may stimulate deviant or criminal behaviors. The two literatures agree that the experience of injustice may foster deviant or criminal acts in order to alleviate emotional distress and restore justice or retaliate against the harmdoer. These literatures also identify situational and individual level factors under which crime or deviance is most likely to occur in response to injustice.

There is an increased likelihood of crime or deviance when the costs of responding in a criminal or deviant manner are low. Peers who legitimate deviance or crime in response to injustice help to justify criminal coping to deal with that injustice and lower the potential social costs of engaging in crime. Moreover, characteristics that facilitate the experience and expression of anger, such as high negative emotionality, locus of control, low constraint, and being male, encourage criminal or deviant acts in response to strain. Males are more likely than females to experience anger, absent of other emotions, when strained and to engage in outward behaviors that express negative emotion (De Coster and Zito 2010).

Yet, despite the commonalities between the literatures, GST helps to identify the underlying theoretical mechanisms to explain when individuals will most likely engage in crime or deviance upon the experience of injustice. For instance, this theory notes the importance of anger in facilitating criminal or deviant responses to strain and qualifies how certain forms of strain (i.e., those that are high in magnitude and centrality) may differentially impact the likelihood of criminal coping when strain is experienced. Below

I draw upon these literatures, in particular GST, to identify and argue how situational and individual level factors may facilitate crime or deviance in response to injustice.

A. Situational Factors

1. Effects of Types of Justice

Classic (i.e., Merton [1938] 2006) and general strain theories recognize that inadequate material outcomes (distributive injustice) constitute a fundamental form of strain that can occur in combination with different levels of procedural and interactional injustice. Insofar as the experience of injustice is stressful or costly for individuals, experiencing multiple forms of injustice should enhance one's emotional distress, or feelings of anger (Van Yperen et al. 2000), which in turn may increase the likelihood that individuals redress the situation in any way possible, including engaging in crime or deviance. According to GST (Agnew 2006), anger lowers the perceived costs of crime, creates a desire for revenge, and motivates one for action, which increase the likelihood that people might pursue deviant or criminal responses to injustice.

Indeed, research suggests that the experience of all three forms of injustice enhance the likelihood of deviant or criminal behavior (Skarlicki and Folger 1997). Moreover, procedural or interactional injustice enacted by conventional others may lead people to seek out approval among deviant groups (Braithwaite 1989; Hay 2001), which may foster favorable definitions of crime (Akers 1985; Sutherland and Cressey [1960] 2006). Ultimately, multiple forms of injustice should have additive effects. Combinations of injustice should enhance the experience of negative emotions, thereby increasing emotional distress and reducing the perceived costs of criminal or deviant responses (i.e.,

receiving sanctions from others) to address their unfair treatment or of seeking out delinquent others who can serve as criminal or deviant models. Therefore, I hypothesize:

> H1: Under conditions of distributive injustice, the experience of procedural or interactional injustice will promote crime or deviance.

Yet, whether a type of injustice associated with a particular strain produces crime or deviance may depend on certain conditioning factors (Agnew 2001). The criminology and organizational justice literatures suggest that interactional justice, or the interpersonal element of procedural justice, is more important than distributive or procedural injustice in predicting criminal behavior.[20] Distinct from other forms of injustice, interactional injustice is immediate, usually performed by a well-known perpetrator, and threatens one's self-esteem, which may lead individuals to perceive their interpersonal treatment as extremely severe and unjust. This form of injustice is damaging to one's identity and psyche (Bies and Tripp 1996). Interactional injustice therefore represents characteristics of strains, such as recency and centrality to self, that are more likely to produce criminal coping (Agnew 2001). In regard to centrality, GST argues that strains that threaten the core needs, goals, activities, or identities of an individual, are more likely to produce crime. The receipt of interactional injustice may then be costly for one's identity and subsequently increase emotional distress in a way that is distinct from distributive and procedural injustice.[21] In turn, this increase in distress would reduce the costs associated with criminal or deviant coping. Moreover, when individuals are treated negatively or experience interactional injustice by conventional others, they are more likely to seek

[20] Although these arguments can apply to the way in which the criminological literature defines procedural justice, I argue that procedural and interactional injustice are distinct forms of justice that will produce different effects.

[21] For instance, the disconfirmation of an identity is expected to evoke emotional responses (Turner and Stets 2005) and produce distress (Burke 1991).

relationships with those who will validate their self-worth, which may include ties to delinquent others.

In contrast, the crime literature on procedural justice, which subsumes the social psychological concept of interactional justice, states that just treatment of offenders strengthens bonds among conventional others, which promotes self-esteem and facilitates reintegrative shaming (Braithwaite 1989; Tyler et al. 2007). Individuals who experience disintegrative shaming through the experience of procedural injustice, on the contrary, seek out nonconventional others in order to achieve the acceptance and self-esteem they have been denied. Thus, the experience of interactional injustice, as defined in this study, is likely to lead to deviant or criminal acts regardless of the presence of distributive or procedural justice. Indeed, studies substantiate the greater impact of interactional injustice (e.g., Skarlicki and Folger 1997; Van Yperen et al. 2000). The connection that interactional injustice has to one's self-worth may increase the perceived cost that this form of injustice has for the individual over the cost of procedural injustice. I expect interactional injustice to have a greater effect on deviant or criminal behaviors than procedural injustice.

> H2: The experience of interactional injustice is a stronger predictor of crime or deviance than the experience of procedural injustice.

The presence of interactional justice, moreover, enables one to be more tolerant of distributive and procedural injustice (Skarlicki and Folger 1997), which implies an increased likelihood of deviance or crime when both interactional and procedural injustice are present. The relative importance that interactional justice has for one's self-concept suggests that injustice that does not directly threaten the self may be more tolerable when individuals perceive they are being treated with dignity and respect. This

fair treatment may indicate the goodwill of the perpetrator of injustice and make individuals more tolerant of any distributive or procedural injustice they may also be subjected to by this person (Skarlicki and Folger 1997). The presence of interactional injustice in addition to procedural injustice should therefore produce the greatest likelihood of criminal or deviant behavior. I thus expect interactional injustice to interact with procedural injustice to predict the occurrence of crime and deviance.

> H2a: Procedural and interactional injustice will interact such that the effect of injustice on crime will be greatest when individuals experience both of these types of injustice.

2. Effects of Legitimacy

The costs of engaging in crime are also reduced when others endorse criminal or deviant behavior. The criminology literature highlights the importance that others may play in affecting the likelihood that one engages in crime. Individuals desire approval from their friends and want to avoid their sanctions. They are thus more likely to accept their peers' judgments of others or suggested behaviors in order to avoid social costs and to be considered part of their peer group (Warr 2002). Furthermore, the social psychological literature demonstrates how individuals are more likely to commit behaviors or accept the advice of others if these acts or recommendations are endorsed by their peers (Dornbusch and Scott 1975; Zelditch 2006). Endorsement of judgments or actions grants them legitimacy and creates social pressure for individuals to conform to whatever is endorsed in order to avoid sanctions from their peers (Zelditch 2006).

In effect, to the extent that peers support the actions of a perpetrator of injustice, they may decrease the likelihood of criminal responses to injustice. In contrast, peers who support criminal responses to injustice may increase the likelihood of such behavior occurring. The social costs of criminal responses to injustice are lowest when peers do

not endorse the behavior of the perpetrator of injustice but they do support criminal behavior. Social costs of criminal responses to injustice are highest when peers do endorse the perpetrator of injustice and do not support criminal behavior. Thus, peers' endorsement of the behavior of a perpetrator of injustice or of a criminal response to injustice influences whether one will engage in crime or deviance in response to a perceived injustice. Criminal responses are less costly when they are endorsed by others and more costly when the perpetrator of injustice is supported.

> H3: Having peers who fail to endorse the perpetrator of injustice and who support criminal or deviant behaviors in response to that injustice will increase the likelihood that individuals respond to the injustice with crime or deviance. Having peers who endorse a perpetrator of injustice and support conventional behaviors in response to that injustice will decrease the likelihood that individuals respond to the injustice with crime or deviance.

B. Individual Level Factors

GST and the justice literature on workplace deviance also highlight similar conditioning factors that enhance the likelihood of whether one will respond to injustice with crime or deviance. Again, there is an increased likelihood of criminal or deviant behavior when the costs of responding in a criminal or deviant manner are low. Being male and having the characteristics of high negative emotionality, low constraint, and an external locus of control allow individuals to minimize costs associated with crime or deviance and increase the disposition for crime. Specifically, males and individuals with these traits are more likely to experience anger, net of other emotions, and to express that anger upon the experience of strain.

1. Effects of Gender

Gender influences how one perceives, experiences, and responds to injustice. Although men and women are equally as likely to experience anger in response to strain,

women also experience the emotions of depression and anxiety that may inhibit a criminal response to unjust treatment (Broidy and Agnew 1997; Morgan 2006). Women may experience these types of emotions because they tend to internalize their stress (Hraba, Lorenz, and Lee 1996). Yet, gender may also impact the expression of criminal or deviant behavior upon the experience of injustice due to gendered expectations of behavior. It is socially more acceptable for men than for women to behaviorally cope with their negative emotions. For instance, Piquero and Sealock (2004) find that strain significantly predicts interpersonal aggression for males but not for females. Therefore, regardless of the combination of negative emotions experienced, men should still be more likely to react in criminal or deviant ways in response to injustice (De Coster and Zito 2010).

> H4: Women will be less likely than men to engage in criminal or deviant behaviors in response to injustice.

Although women should be less likely than men to respond to injustice with crime or deviance, the experience of injustice should still positively impact female deviance, but to a lesser extent than for males. Women pay attention to justice principles when allocating and evaluating outcomes (Tata 2000), which should then enhance distress and the likelihood of certain forms of deviance when injustice is experienced. For instance, females are less likely than males to have a sense of mastery and higher self-esteem. As such, they cannot effectively cope with strain and, consequently, may engage in self-directed forms of crime or deviance, such as alcohol and drug abuse or disordered eating, rather than other-directed crime (Broidy and Agnew 1997).

Yet, responses to certain types of injustice may be conditioned by gender and impact differentially criminal coping. For instance, interactional injustice may entail

disrespectful treatment, which may produce a gendered response to this form of injustice. The association between masculinity and respect should enhance the distress associated with interactional injustice and facilitate criminal or deviant behavior for males and not for females (refer to Kupers 2005; Messerschmidt 1993). I thus hypothesize:

> H4a: Interactional injustice will increase the likelihood of crime or deviance for men and not for women.

2. Effects of Individual Differences

Three individual level factors – locus of control, and level of negative emotionality and constraint – also may facilitate or hinder a criminal or deviant response to injustice. Having an external locus of control (making external attributions) and being high in negative emotionality increase the likelihood that individuals will experience anger in response to strain, which more often results in criminal or deviant behavior. Moreover, being low in constraint suggests that individuals will more often ignore the costs associated with engaging in criminal or deviant acts so as to experience immediate gratification. Therefore,

> H5: Individuals high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to engage in criminal or deviant behavior in response to injustice than those who do not possess these traits.

In brief, separately, the criminological and social psychological literatures neglect to explain fully the relationship between injustice and crime. GST and the work of Tyler do not examine how distributive, procedural, and interactional injustice combine to influence one's likelihood of engaging in crime or deviance upon the experience of injustice. In contrast, while the social psychological literature considers the interaction between these types of injustice on workplace deviance, it does not adequately provide theoretical justification for the importance interactional injustice has for predicting

criminal behavior and the role that others play in facilitating or hindering crime or deviance. By drawing from both the criminology and justice literatures, and research on legitimacy, I aim to clarify how the convergence between the types of injustice and how the support of either the perpetrator of injustice and of a deviant act influence the likelihood that one engages in crime or deviance. In doing so, I examine whether the likelihood that individuals react to injustice with crime or deviance will be affected by various situational and individual-level factors that either hinder or facilitate a criminal or deviant response to unfairness.

V. METHODS

A. Overview

I used responses to an electronic survey administered to undergraduates to test the hypotheses of this project. Specifically, the survey examines the influence of injustice on how one responds to three central forms of strain, each represented in a vignette: 1) Club; 2) Group Project; and 3) Studying. The Club scenario presents an unjustified affront, the Group Project scenario entails a harm for which an internal attribution is made, and the Studying scenario depicts a blocked goal. I chose these forms of strain because of the respective emotions each produces, which facilitates a certain criminal or deviant behavior. An unjustified affront produces feelings of anger and is associated with intentions to hit someone, while a blocked goal fosters frustration and is associated with deviance that allows individuals to achieve a blocked goal (Morgan 2005; Ganem 2010). Internal attributions for negative events are associated with depression, which is an emotion that encourages drug use in response to strain (Agnew 2006), and other violent behaviors among males (De Coster and Zito 2010).

Each scenario presents a distributive injustice and manipulates conditions of: procedural justice (high/low), interactional justice (high/low), and the combined legitimacy or endorsement of the acts of the perpetrator of injustice (high conventional legitimacy) and of the potential criminal or deviant response to injustice (low conventional legitimacy). To create high conventional legitimacy, or conditions that hinder criminal responses, peers legitimate the actions of the perpetrator of injustice and do not endorse a criminal or deviant response to the injustice experienced. In contrast, low conventional legitimacy involves peers not supporting the perpetrator's actions and

endorsing a criminal or deviant response to injustice in order to facilitate criminal or deviant acts. Therefore, I created eight versions of each scenario, based on a 2x2x2 factorial design.

Versions of the three scenarios were randomly ordered and randomly assigned to male and female subjects who answered questions that measure perceptions of justice, the felt emotions, and anticipated behavioral responses to the situations presented. The survey also included scales that assess the individual level factors of negative emotionality, low constraint, and locus of control that are predicted to be associated with criminal or deviant responses to injustice.

The use of vignettes is an appropriate methodology to assess the factors that increase the likelihood that individuals will respond to injustice in a criminal or deviant manner. Other studies have successfully used vignettes to predict offending (Capowich et al. 2001; Mazerolle and Piquero 1998; Mazerolle et al. 2003; Matthews 2009; Morgan 2006; Nagin and Paternoster 1993). These studies use scenarios that depict an individual perpetrating a deviant act (e.g., fighting, shoplifting, and drunk driving) in response to strain and ask subjects to estimate the likelihood that they would respond similarly. In contrast, this study allows respondents to take the role of the main actor in each vignette and assess the likelihood of various deviant/nondeviant behaviors in response to realistic depictions of just/unjust situations.[22] Moreover, I pretested these scenarios via focus groups; students recognized instances of injustice and judged the situations to be realistic. Although offender intentions are not equivalent to actual behaviors, intentions to offend closely reflect behavior (Green 1989). Kim and Hunter (1993) also find that attitudes,

[22] Findings that support the relationship between injustice and crime will thus strengthen this study because respondents had the ability to choose non-deviant or non-criminal behaviors in response to injustice.

intentions, and behavior are highly correlated (see also Ajzen and Fishbein 1977, 2005). Intentions to offend should also more closely match behavior when scenarios are presented that are relevant to the students in my sample (refer to Fishbein and Ajzen 1975).

Although not representative of the general population, college students are appropriate for this study because they engage in various forms of criminal and deviant activity (see Nagin and Paternoster 1993). Undergraduates are in a new and stressful environment that allows them to test the boundaries of their independence and to form new friendships and adult relationships (Capowich et al. 2001). During this stressful period, college students engage in partying and experiment with alcohol and drugs, which may increase the likelihood of the crimes of vandalism, sexual assault, and fighting (Morgan 2006). For instance, data from the Emory Police Department indicates that Emory undergraduates do indeed participate in offenses similar to those examined in this study (i.e., assault, drug and alcohol abuse, and stealing). Between 2006 and 2008, a total of 13 robberies, 3 aggravated assaults, 29 motor vehicle thefts, 121 burglaries, 5 liquor law arrests, 738 liquor law violations, 25 drug law arrests, and 79 drug law violations were reported. Although these figures include offenses that occurred on campus, at non-campus buildings and property, and on public property, they are most likely highly conservative estimates of the total amount of crime that occurs among the Emory student population. Most likely, the majority of offenses that occur off and on campus are not reported to the Emory Police. Moreover, these figures may reflect non-Emory students and thus overestimate the true extent of criminal and deviant behavior that occurs on campus.

Self-report data from my study also reveal that approximately 8% of Emory students have attacked someone with the idea of seriously hurting him/her, 25% say they have hit or threatened to hit someone, 58% admit to having drank more than four alcoholic beverages in less than two hours, 36% say they have used marijuana, 7% indicate they have used other illegal drugs (e.g., heroin, cocaine, or LSD), 30% state they have stolen or tried to steal things worth $50.00 or less, 8% have stolen or tried to steal things worth $50.00 or more, and 36% confess to cheating on school tests, while 17% mentioned that they plagiarized a paper or part of a paper. Consequently, college students should be an adequate sample to study because of the potential strain they experience (Capowich et al. 2001; Hamilton and Fagot 1988; Morgan 2006) and their potentiality of engaging in criminal or deviant behavior.

B. Subjects

1. Sample Overview

I used a sample of 320 (160 male; 160 female) undergraduate students from Emory University in this study. In the 2008-2009 academic year the Emory undergraduate student population was 45% male and 55% female. The sample ranges in age from 18 through 30 years with a mean of 19.53 (SD = 1.74).[23] Freshman compose the majority of the sample (47.5%; n = 152). The remaining sample contains 25.94% of students in their sophomore year, 15.31% in their junior year, and 9.38% in their senior year. Six individuals (1.88%) did not indicate their school rank and were coded as other. The sample includes representatives of 29 distinct majors. The majority of students who took the survey majored in biology (15.94%), business (13.13%), and economics

[23] One respondent was over 30 years old. This individual is counted as having 31 years of age.

(11.88%), while 10.94% of the sample did not indicate a major.[24]

Of the 160 females who took the survey, 11.25% are black (n = 18), 35.0% are Asian (n = 56), 43.75% are White (n = 70), and 10.01% are Hispanic, multiracial, or other (n = 16). Of the 160 males who took the survey, 9.38% are black (n = 15), 36.88% are Asian (n = 59), 41.88% are White (n = 67), and 11.88% are Hispanic, multiracial, or other (n = 19). Combined, this sample is 10.31% black (n = 33), 35.94% Asian (n = 115), 42.81% white (n = 137), and 10.94% Hispanic, multiracial, or other (n = 35). This sample adequately represents Emory's undergraduate student population, although it slightly oversamples Asians. In 2008-2009 the undergraduate student population was 10% Black, 26% Asian/Pacific Islander, 53% White, and 11% Hispanic/Other. I am thus confident that the racial breakdown of my sample is representative of Emory undergraduates.

2. Recruitment of the Sample

Upon approval from Emory's Institutional Review Board, I recruited respondents in 58 courses from March 18 – June 2, 2010 in both the natural and social sciences, including: Biology, Chemistry, Computer Science, Economics, History, Mathematics, Physics, Political Science, Psychology, Sociology, and Spanish. I contacted 126 professors and graduate students to request permission to recruit in 151 courses. Of the 126 professors and graduate students I contacted, 52 agreed to have me recruit in their courses.[25] During recruitment, I went to 46 classes in order to briefly introduce myself, the purpose of my visit, and to pass out recruitment forms. For the other 12 courses, the

[24] Students are grouped by their primary majors. In addition, I combined categories in regard to students who are enrolled in Emory University's business school. For instance, students majoring in accounting, management, or finance are categorized into the overarching major of "business." Sixteen students did not indicate their majors and one individual chose "n/a." These individuals are included in the undecided/undeclared major category.

[25] I sometimes recruited in multiple courses taught by the same professor or graduate student.

instructors preferred to post the recruitment form on their course website. This form and my announcement reiterated to students that participation in the study was completely voluntary and in no way would impact their performance in the course from which they were recruited. Participants were also offered a $10.00 incentive to participate in the survey in compensation for their time. From recruitment, I obtained a total of 525 forms (265 males; 260 females), of which six were emailed to me.

3. Distribution of the Survey to the Sample

Throughout recruitment, I emailed students thanking them for volunteering and informed them that they would receive a link to the actual survey in a subsequent email, which was generated by Qualtrics Survey Software. Each student received a unique link that expired within two weeks after opening.[26] In addition, I emailed students in order to thank those who took the survey and to remind them that those who complete the survey will have $10.00 credited to their Emory card accounts.

The first page of the survey included a statement of informed consent. Before students could access the rest of the survey they needed to indicate their acceptance of participating in the survey and their gender. Students were randomly assigned randomly ordered packages of vignettes. Each package contained different conditions across the vignettes, resulting in a total of three scenarios that varied by context and type. At the end of the survey, students received a link that routed them to another survey where they presented their 7-digit Emory student identification number and email address. This

[26] Because I emailed participants their own individual link to the survey, I ensured that they could only take the survey once. Although students could forward the email containing their survey link and access the survey through another email account, the link became deactivated after students completed the survey. In addition, students who began the survey and allowed it to expire needed to contact me in order to have the link emailed to them again. This happened only eight times. Upon completion of data collection, any identifying information associated with student responses was deleted. I thus have no way of linking the results of my surveys to particular individuals.

information was collected in order to compensate the respondents.

C. Manipulations: Independent Variables

1. Injustice

As I am interested in assessing the likelihood of criminal or deviant behaviors in response to injustice, in each scenario respondents took the role of a person who received a lesser amount of some promised or expected reward. Thus, in all conditions, respondents experienced a distributive injustice. Procedural justice, or high procedural justice, was operationalized as any procedures used by the perpetrator of injustice that adhere to the rules of bias suppression and consistency in allocating a "reward." Namely, high procedural justice occurred when the respondent failed to receive an outcome in spite of the fact that the perpetrator of injustice did not put his or her needs first (adhering to bias suppression) and gave a person similar to the respondent the same treatment (adhering to consistency). Procedural injustice, or low procedural justice, occurred when the respondent failed to receive an outcome because the perpetrator of injustice put his or her needs first (violating bias suppression) and gave a person similar to the respondent the expected outcome (violating consistency) (for questions that assess injustice see Appendix A).

I manipulated high interactional justice by having the perpetrator of injustice show concern for the actor and be polite in the described situation. By doing so, the perpetrator of injustice appeared to adhere to the rules of respect and propriety by being respectful and polite. Low interactional justice, in contrast, entailed the perpetrator of injustice violating the rules of respect and propriety by being disrespectful and impolite when they ignored their concerns and called the main actor in the scenario a name (refer

to Van Yperen et al. 2000).

In order to assess subjective perceptions of justice, following each scenario, respondents assessed the overall fairness of the situationally based strain. I used Likert scales to ask students to evaluate the degree of the distributive, procedural, and interactional injustice present (1 = very unfair; 7 = very fair). Distributive justice is assessed by the questions: how unfair or fair do you perceive to be the amount of "rewards" the perpetrator of injustice allots you?; and how unexpected or expected was the amount of "rewards" you received? The "rewards" were dependent on the scenario and represented: 1) number of drinks (Club); 2) amount of work (Group Project); and 3) amount of help the focal actor received (Studying). These measures were not summed to form a general measure of distributive justice because principal factor analysis with oblique rotation revealed that they assess different dimensions of distributive justice.

I measured procedural justice with three questions that assess, respectively, overall procedural justice (how unfair or fair do you perceive how the perpetrator of injustice decides your rewards?), bias suppression (how biased or unbiased is the way the perpetrator of injustice decides your rewards?), and consistency (how inconsistent or consistent is the way the perpetrator of injustice decides your rewards?). Principal factor analyses with oblique rotation show that these three measures loaded onto one factor. Therefore, for each scenario, I summed these items to form a scale of a general measure of procedural justice (Club: $\alpha = .639$; Group Project: $\alpha = .568$; Studying: $\alpha = .674$).

Three questions measure interactional injustice. These questions respectively assess overall interactional justice (how unfair or fair do you perceive how the perpetrator of injustice treats you?), respect (how disrespectful or respectful is the treatment of the

perpetrator of injustice?), and propriety (how inappropriate or appropriate is what the perpetrator of injustice says to you?). Principal factor analyses with oblique rotation show that these three measures loaded onto one factor. For each scenario, I summed these items to form a scale of a general measure of interactional justice (Club: $\alpha = .840$; Group Project: $\alpha = .819$; Studying: $\alpha = .825$)

2. Legitimacy

With a focus on whether peer approval of the perpetrator of injustice and of a criminal response affect the likelihood an individual will respond to injustice with crime, I operationalized legitimacy as endorsement. In each scenario a peer actor either endorses conventional behavior by supporting the actions of the perpetrator of injustice (high conventional legitimacy) or endorses deviant or criminal behavior by suggesting the respondent engage in crime or deviance in response to injustice (low conventional legitimacy). For the high conventional legitimacy condition, peers in each vignette scenario approved the behavior of the perpetrator of injustice and offered a neutral suggestion for how the actor should respond. In contrast, for the low conventional legitimacy condition, peers disagreed with the action of the perpetrator of injustice and suggested a deviant response. The type of scenario that students received assesses legitimacy.

D. Pre-testing

I conducted pre-tests with small groups of students in order to ensure the creation of strong operationalizations of injustice and legitimacy. I had two pretest sessions (one male, one female) with students who were recommended by sociology instructors. Interested students wrote their name, email address, age, and availability on a signup

sheet, allowing me to send an email informing them of the date and time for the pretest and to send them a reminder email of the date, time, and location of the pretest. I informed students that they must be 18 years of age or older to participate, participation is completely confidential and voluntary, has no bearing on their performance in the class from which they were recruited, and that the pretest session would take about an hour. I offered students pizza and soda in compensation for their time. Out of 16 females who signed up, based on availability, I contacted nine females. Of these nine, five female students participated in the pretest focus group. Out of the five males who signed up, based on availability, I contacted four males. Of these four, none participated in the focus group. I contacted two additional male students recommended by sociology professors. Of these two, only one male attended the session.

At the beginning of each pretest session students read an informed consent form. Upon agreeing to participate, each student received three scenarios and answered questions about them. Of the female students who agreed to participate, two received conditions with low procedural justice, low interactional justice, and low legitimacy of conventional behavior, another two received scenarios with low procedural justice, high interactional justice, and low legitimacy of conventional behavior, and one received vignettes with high procedural justice, low interactional justice, and high legitimacy of conventional behavior. The male respondent received scenarios with low procedural justice, low interactional justice, and low legitimacy of conventional behavior. After reading the vignettes and answering the questionnaire, I asked students: whether the scenarios they were presented with were realistic, whether or not anything could be improved in regard to the language used and behavioral choices presented, and which

actions of the perpetrator of injustice (i.e., which forms of injustice) affected them the most and why. From averaging the Likert scale responses, the justice manipulations appeared to be effective. Individuals were less likely to perceive situations as fair if they were presented with scenarios that had low procedural and interactional justice. Furthermore, although students reported that they would be less likely to hit or do drugs in response to the Club and Group Project scenarios, respondents reported that they would be likely to cheat in the studying scenario. Students also identified instances where the scenarios could be made clearer and more applicable to Emory undergraduates in general. Importantly, students revealed that they recognized the difference between manipulations of procedural and interactional injustice. The female focus group stated that being treated inconsistently bothered them more so than being ignored and called a name, but that being called a name made the situation more serious. The male student, however, thought that the feeling of being treated differently was more intense. In the following section I present the finalized version of my vignette scenarios.

E. Manipulations: The Vignettes

Students responded to one of the eight versions of each of the three vignette scenarios. Since males are more likely to interact with other males and females with other females, in order to keep gender constant, males received vignettes that have only male characters, while females received vignettes that only have female characters. In this way I control for sex composition of the actors with whom the respondent interacts. All vignettes entail same-sex peer relationships, thus controlling for power differences. I drew heavily from Morgan (2006) and Matthews (2009), whose vignettes were informed by Capowich et al. (2001), Mazerolle and Piquero (1998), and Mazerolle et al. (2003).

Ultimately, I chose these vignettes because of the specific deviant behavior each type of situationally based strain might be expected to produce (i.e., hitting, pushing, drinking, drug use, and cheating), as these behaviors and situational strains appeared to be most relevant to my sample. Below I detail my scenarios.

1. Club Scenario

This vignette details a scenario in which the participant is portrayed to experience a personal and unjustified affront from another person of similar power. The vignette presented below represents the male version of this scenario. In the female version, the pronouns are changed and Matt is portrayed as Michelle, James as Jessica, and Paul as Paula.

It's a typical Friday night and you and your friend Paul have just agreed to meet your friend Matt at the club, Opera, for a few drinks. Before you went out, Matt had told you that he would buy you three drinks tonight because you bought him three drinks last Friday.

Upon entering the club, you and Paul discover that Matt is with your mutual friend James and has spent most of his cash on drinks for himself and for James. When you ask if Matt could buy you a drink, Matt tells you ____PJ_____. When you insist that Matt owes you some drinks, Matt ____IJ_____. While this is happening, Paul says to you, _____L_____.

	Low	High
Distributive	Matt offered to buy you three drinks tonight because you bought him three drinks last Friday. Upon entering the club, you and Paul discover that Matt is with your mutual friend James and has spent most of his cash on drinks for himself and for James.	
Procedural (PJ)	Matt tells you that he can't because he wants to get James more drinks. And, he promised James that night that he would buy him more drinks, forgetting about you. Matt decided he needs to get those drinks for James tonight. (Violating bias suppression and consistency rules)	Matt tells you that he decided he'll buy both you and James one drink and will make it up to you another time.
Interactional (IJ)	When you insist that Matt owes you three drinks, Matt calls you a jerk and then blatantly ignores you. (Violating respect and propriety rules)	When you insist that Matt owes you some drinks, Matt politely agrees with you and thanks you for buying him the other drinks last week.
Conventional Legitimacy (L) (Endorsement)	While this is happening, Paul says to you, "I can't believe you're taking this crap from Matt, he owes you a lot of drinks. You should just hit him."	While this is happening, Paul says to you, "Don't worry about Matt, he's just drunk. Let it go. He can buy your other drinks another time."

2. Group Project Scenario

In this scenario the participant is portrayed to experience a negative event for which he or she internally attributes blame for the harm experienced. Internal attributions are associated with sadness and depression (Thompson 1999), which are feelings that are thought to foster drinking and illicit drug use (Agnew 2006). The vignette presented below represents the female version of this scenario. In the male version, Nancy is portrayed as Nick, Stacy as Stan, Linda as Larry, and Anne as Andrew.

It's Thursday afternoon and you're on the way to the library to meet your classmate, Stacy, in order to finish a group project that is due the next day. The professor made it clear that each group should check in with their partner. When you ask Stacy if she finished her part of the project she hands you a disorganized stack of papers. As you look through her work, you realize that Stacy did not do the amount of research she was required to do and did a very poor job on what she did finish. Even though you did not communicate with Stacy as your professor had requested, you know ___PJ____. When you confront Stacy about her work, Stacy _____IJ_____. Even though you tried your best to fix the project in the time you had left, it was of poor quality, and you had to hand it in to your professor.

Later that night, when you get together to go out with some other friends, you tell them what happened when they asked whether you finished your report. Your friend Anne says, _____L_____.

	Low	High
Distributive	When you ask Stacy if she finished her part of the project she hands you a disorganized stack of papers. As you look through her work, you realize that Stacy did not do the amount of research she was required to do and did a very poor job on what she did finish.	
Procedural (PJ)	Even though you did not communicate with Stacy as your professor had requested, you know that your professor recently complimented Stacy for an excellent job she did on her project with Linda, another classmate. Then, Stacy tells you that she worked hard on the other project because Linda is going to help her on the final. Stacy also admits that because she was busy, she decided to let the project with you slide. (Violating bias suppression and consistency rules)	Even though you did not communicate with Stacy as your professor had requested, you know for a fact that Stacy is considerate of others and has done the same type of job on other projects she has worked on, no matter who she works with.
Interactional (IJ)	When you confront Stacy about her work, Stacy accuses you of being lazy for not following up on her work and dismisses your concerns. (Violating respect and propriety rules)	When you confront Stacy about her work, Stacy politely apologizes to you for her poor performance.
Conventional Legitimacy (L) (Endorsement)	Your friend Anne says, "Wow, I can't believe Stacy did that! Let's get wasted."	Your friend Anne says, "Don't worry about Stacy. Let it go. You can tell the professor you don't want to work with her again."

3. Studying Scenario

This vignette details a scenario in which the participant is portrayed to experience a blocked goal. Blocked goals foster feelings of frustration, which are associated with theft when an individual has a pressing monetary desire (Agnew 2006). Below is the male version of this scenario. In the female version, the pronouns are changed and Mike is portrayed as Mary and Daniel as Danielle.

You and your friend Mike have been studying for hours in the library for a Calculus final you have in the afternoon. You are also awaiting the arrival of Daniel, a friend who said he would help you study for the exam. Daniel, who was in another section of Calculus, had just taken his final and is expecting an A in the course. Daniel has a graphing calculator that has all the equations needed for the final. Although Daniel had told you he could help you study for three hours, he arrives an hour before your calculus final. You know that without Daniel's extra help, you are sure to fail.

When you ask Daniel why he late he says, ___PJ_____. Even though you are short on time, Daniel also states that he is unwilling to lend you his calculator or share with you the equations he has. When you explain that you are most likely to fail the exam without the equations, Daniel _____IJ_____.

After Daniel leaves, you notice that his calculator has slipped out of his backpack onto the floor. You realize that you do not have the time to program your calculator. Your friend Mike says quietly to you, _____L_____.

	Low	High
Distributive	Although Daniel had told you he could help you study for three hours, he arrives an hour before your calculus final.	
Procedural (PJ)	When you ask why Daniel was late he says, "I decided I had some other things to do." You know for a fact, however, that Daniel had helped a friend of yours study for several hours that morning for the Calculus exam. (Violating bias suppression and consistency rules)	When you ask why Daniel was late he says, "I decided I can only stay for an hour because that is how long I was able to help another mutual friend who was in a different section of the course."
Interactional (IJ)	When you explain that you are most likely to fail the exam without the equations, Daniel disregards your concerns and calls you stupid for waiting till the last minute to study. (Violating respect and propriety rules)	When you explain that you are most likely to fail the exam without the equations, Daniel apologizes and states that while he sympathizes, he is uncomfortable with sharing all of his hard work.
Conventional Legitimacy (Endorsement)	Mike says quietly to you, "Hey, Daniel should have given you his calculator. No one will notice if you pick it up. Why don't you just take it?"	Mike says quietly to you, "Hey, Daniel was right not to share his work with you. Just try your best on the final."

F. Measures: Dependent Variables

1. Criminal or Deviant Behaviors

Students evaluated their likelihood of engaging in a range of behaviors in each of the scenarios according to a Likert scale (1= not at all likely; 7 = very likely). The behaviors presented encompassed ways in which individuals may behaviorally respond by engaging in criminal or deviant behavior to seek retribution or to restore justice. I presented students with a violent criminal option, non-violent criminal options, legal but assertive options, and passive options. For example, regarding criminal or deviant behavior, students assessed whether they would be likely to hit another, drink or do drugs, or steal a needed item, after they have experienced injustice (Table 1).

Table 1: Behavioral Measures by Scenario

Scenario	**Behavioral Measures**
Club	Hit, Push or shove, Take the perpetrator of injustice's drinks, Drink a lot of alcohol, Do drugs, Curse, Yell, Reason with the perpetrator of injustice, Leave the club, Justify the behavior of the perpetrator of injustice, Complain to friends about the behavior of the perpetrator of injustice to get their sympathy or advice
Group Project	Hit, Push or shove, Drink a lot of alcohol, Do drugs, Yell, Inform the professor of the behavior of the perpetrator of injustice, Reason with the perpetrator of injustice, Do nothing, Justify the behavior of the perpetrator of injustice, Complain to friends about the behavior of the perpetrator of injustice to get their sympathy or advice
Studying	Hit, Push or shove, Steal the calculator, Copy the formulas and leave the calculator, Use the calculator and give it back to the perpetrator of injustice after the exam, Drink a lot of alcohol, Do drugs, Yell, Reason with the perpetrator of injustice, Justify the behavior of the perpetrator of injustice, Complain to friends about the behavior of the perpetrator of injustice to get their sympathy or advice

I used factor analyses with oblique rotation to reveal that certain behaviors loaded together. Moreover, I combined behaviors that were predicted to be associated with the form of strain depicted in each of the scenarios. For all scenarios, I combined the behavior options of "hit" and "push" into a measure of violent behavior (Club: α =.896; Group Project: α = .885; Studying: α =.924). For all scenarios, I created a measure of drinking and drug use by combining the options of "drink" and "do drugs" (Club: α = .432; Group Project: α = .684; Studying: α = .646). In addition, a measure of cheating was created for the studying scenario by combining the variables "steal," "copy," and "use" (α = .763). Last, I created a measure of verbal behavior for all scenarios. For the club scenario, I combined the options of "curse," "yell," and "complain" (α = .751). In regard to the Group Project scenario, I combined the options of "inform," "yell," and "complain" (α = .451). For the Studying scenario, I combined the options of "yell," "reason," and "complain" (α = .607).

G. Measures: Conditioning Variables

1. Personality

In the survey I also included scales that assessed the perceiver factors of negative emotionality, low constraint, and locus of control. Negative emotionality and low constraint are major personality dimensions that are associated with criminal behavior (Caspi et al. 1994). These personality factors are similar to Gottfredson and Hirschi's (1990) concept of low self-control, which indicates that people are impulsive, insensitive to others, and shortsighted. Specifically, individuals who are high in negative emotionality are more likely to be easily upset and interact aggressively or antagonistically with others. Persons who are low in constraint are impulsive, take risks, and have the tendency to act without taking the feelings or rights of others into account (Agnew 2006).

I employed the Iowa Personality Questionnaire (IPQ) created by Donnellan, Conger, and Burzette (2005), to assess negative emotionality and low constraint. The IPQ is a shortened and validated version of the Multidimensional Personality Questionnaire (MPQ) that contains 42 items that assess negative emotionality, constraint, and positive emotionality (Tellegen 1982). Due to the fact that only negative emotionality and low constraint are associated with crime, I specifically focus on these dimensions. Fifteen items measured negative emotionality. These items assessed stress reaction, aggression, and alienation. The stress scale measured the extent to which individuals are tense, even-tempered (reverse coded), and sensitive. The aggression scale examined the extent to which individuals are tough, conciliatory (reverse coded), and aggressive. The alienation scale assessed the degree to which subjects feel they are treated poorly, exploited, and

unlucky (Patrick, Curtin, and Tellegen 2002). Participants ranked themselves in comparison to others of their age and sex on these traits by selecting numbers between 1 to 5, with 3 indicating about average. Individuals who score high on these traits have higher than average levels of negative emotionality. I summed these items to form a negative emotionality scale ($\alpha = .743$).

To measure constraint, I relied on twelve items. These items evaluated harm-avoidance, traditionalism, and control. Harm-avoidance assessed the extent to which respondents feel they are adventurous (reverse coded), safety-conscious, and thrill-seeking (reverse coded). The traditionalism scale measured the degree to which respondents value a good reputation, endorse strictness, and respect their parents. The control scale measured the extent to which respondents are deliberate, anticipating, and sensible (Patrick et al. 2002). Participants ranked themselves in comparison to others of their age and sex on these traits. The items were coded so that a higher score indicated higher than average levels of constraint. I summed these items to form a scale of constraint ($\alpha = .722$)

I measure locus of control using Rotter's (1966) Locus of Control Scale. Individuals who have an external locus of control are more likely to blame other people or things for life events, which is a trait that increases one's likelihood of engaging in crime (Storms and Spector 1987; Agnew 2006). This scale contains 29 forced-choice items, which include six filler items. Individuals receive one point for each item they select that indicates that powerful others, fate, or chance determine events (external locus of control). A high score of 11 or more indicates someone who is externally controlled, while a total score of 10 or less reveals someone who is internally controlled (see

Appendix A). I summed these items to form a general measure of locus of control (α = .732).

2. Control Variables

Participants responded to questions that assessed their engagement in prior criminal activity in the past year and the type of prior strain they experienced during that time. I also included control variables that have been theorized to affect the relationship between strain and crime, which include social control, social support, social learning, and demographic variables such as age, race, and year in school. Finally, I asked students questions about how they express anger and experience depression. Below I report only those control variables that are relevant for the analyses (see Appendix B for a detailed discussion of measures that assess prior criminal activity, prior strain, social control, social support, and social learning).

a. Demographic Variables

I asked respondents to indicate their age, gender, race, relationship status, class standing, major or intended major, parents' level of education, and parent's SES ($25,000 or below, $25,000-75,000, $75,000-125,000, $125,000-175,000, $175,000-225,000, $225,000 or above). For race, I created a dummy variable coded "0, 1" with Whites serving as the reference category. Gender was coded as "0, 1" with males serving as the reference category. In regard to age, individuals ranged from 18 to over thirty years of age. Those who were 22 years of age or older were combined into one category (Mean = 19.4). For relationship status, I created a dummy variable such that the reference category served as those who were not in a relationship; all others were either in a relationship with a boyfriend or girlfriend, engaged, or married. For class standing, freshman,

sophomores, juniors, and seniors were coded 0-3. Mother's and father's education was measured by creating dummy variables of high school or less, some college, bachelor degree, and graduate degree. Family income was coded by combining the average of the SES ranges (1 = $12,500; 2 = $37,500.50; 3 = $62,500.50; 4 = $87,500.50; 5 = $112,500.50; 6 = $137,500.50; 7 = $162,500.50; 8 = $187,500.50; 9 = $212,500.50).

b. State Emotions

Although not the focus of this study, I also assessed the state emotions these justice scenarios produce for participants because of the differential effects emotions may have on influencing the type of criminal behavior in which individuals engage. Students indicated how angry, frustrated, depressed, fearful, worried, or content these scenarios made them feel according to a Likert scale (1 = not at all; 7 = very). The effect of emotions on the injustice-crime relationship produced in response to the immediate situation can be compared to the trait emotions of anger and depression, which are presented in the following section.

c. Trait Emotions

In order to measure trait anger I use Speilberger's (1999) State Trait Anger Expression Inventory 2 (STAXI-2) to assess whether individuals express their anger outwardly (anger expression-out: AX/O) or inwardly (anger expression-in: AX/I).[27] This section of the scale contains 16 items that ask respondents to indicate the degree to which they would express their anger or keep things in (1 = almost never; 4 = almost always). Expressing anger outwardly is measured by summing the items: "I express my anger," "If

[27] Despite the fact that some empirical evidence suggests that state anger better predicts a deviant or criminal response to strain (Mazerolle et al. 2003), research indicates that trait anger is associated with deviant responses to injustice (Fox et al. 2001) and highly correlated with negative emotionality (Matthews 2009).

someone is annoying, I am apt to tell him or her," "I lose my temper," "I make sarcastic remarks to people," "I do things like slam doors," "I argue with others," "I strike out at whatever is infuriating me," and "I say nasty things" ($\alpha = .809$). In contrast, expressing anger inwardly is measured by adding the items: "I keep things in," "I pout or sulk," "I withdraw from people," "I boil inside, but don't show it," "I tend to harbor grudges that I don't tell anyone about," "I am secretly quite critical of others," "I am angrier than I am willing to admit," and "I am irritated a great deal more than people are aware of" ($\alpha = .797$).

Trait depression is measured by four items of the Center for Epidemiological Studies' Scale of Depression (CES-D) (see Morgan 2006). This scale has been validated in prior research (see Mirowsky and Ross 1995; Ross and Mirowsky 1984). Respondents answered: on how many days of the past week (0-7) have you: Felt you just couldn't get going? Felt that everything was an effort? Felt sad? Felt lonely? These items were summed to form a scale ($\alpha = .862$).

H. Analytical Strategy

I first present the descriptive statistics of my main dependent and independent variables. I then present descriptive statistics of manipulation checks in order to determine whether the scenarios produced the intended emotional response and were realistic. I also conduct ANOVAs to assess whether the justice manipulations were effective. ANOVAs are appropriate to use when the dependent variable is continuous and the independent variables are dichotomous or categorical (Gujarati 2003). Last, I test each of my hypotheses according to the three main scenarios of this study by focusing on the major expected forms of criminal or deviant behavior: violence, drinking and drug

use, and cheating/stealing. I combined criminal/deviant responses that were similar to create more general measures of crime/deviance. Doing so also has the advantage of increasing variation in the dependent variables of interest. These measures are constructed theoretically and by combining certain individual behaviors that loaded onto distinct factors. I measured violence by combining the behaviors of hitting and pushing. Drinking and drug use is a variable that reflects the combination of the behaviors of drinking and drug use. Cheating behavior is composed of the actions of copying from or stealing and using a calculator that had formulas required for a final exam.[28]

The highly skewed nature of the majority of the variables led to recoding them as "1" for anything above a "1" on a single-item scale that ranged from one through seven and "1" for anything above a "2" for a two-item additive scale that ranged from two through 14.[29] A "1" on a single-item scale and a "2" on a two-item additive scale indicate that respondents were not at all likely to engage the criminal/deviant behaviors of interest. The only exception to this rule was when evaluating cheating behavior in the studying scenario, as this variable was more normally distributed and was not dichotomized. Cheating behavior is a three-item additive scale that ranged from "3" to 21 with a "3" indicating that individuals were not at all likely to engage in cheating.

I conduct a series of logit regressions to test relationships between injustice and those behavioral variables that were dichotomized. [30] The variables that measure objective manipulations of injustice were dichotomous variables created by combining

[28] The Club scenario is the only other vignette that contained a measure of stealing.
[29] The scale that measured stealing in the Club scenario was a single-item scale that ranged from "1" to "7."
[30] Some researchers consider logistic regressions to be those that include continuous explanatory variables and logit regressions to include dichotomous explanatory variables (Liao 1994). I make no such distinction and use "logit regressions" to specify both types of models. Moreover, I could have used probit models for my analysis. Probit and logit models, however, typically produce similar substantive conclusions with the exception of when there is a large number of cases with a heavy concentration in the tails of the distribution. When this exception occurs, logit models are more appropriate (Liao 1994).

appropriate conditions across scenarios within vignette types. For example, low procedural justice was created by combining the scenarios that had low levels of procedural justice. Conditions marked by low procedural justice entailed procedures that are biased and inconsistent. In addition, low interactional justice encompassed being treated with disrespect and impropriety.

The positive skew of my behavioral measures precludes the use of ordinary least squares regression (OLS).[31] I therefore only employ OLS regression when examining cheating behavior in the studying scenario because of its more normal distribution. Binary regression models, or those models that examine dichotomous dependent variables like the logit regression models employed here, are nonlinear and explore how explanatory variables affect the probability of an event occurring. Moreover, the nonlinearity of the model allows the change in the magnitude of the outcome probability to be associated with a given change in one unit of the explanatory variable based on the levels of all of the other explanatory variables (Long and Freese 2006).[32]

As I employ an experimental research design, I do not control for all possible control variables such as prior criminal activity, prior strain, social control, social support, and social learning in my models. It is expected that any differences among respondents according to these variables should be averaged out and have little or no

[31] Skew tests and histograms confirmed the positive skew of my dependent variables. This skew held even when transforming the measures into z-scores or by taking the natural log. Variables that are not normally distributed violate the assumption of homoscedasticity of the error terms, which precludes the use of OLS regression in my analyses (Long 1997).

[32] I also use ANOVAs to supplement my analyses. When conducting ANOVAs I use the full scales of my measures of crime and deviance. Although my dependent variables are highly positively skewed (respondents were less likely to engage in criminal or deviant behaviors in response to the scenarios than in conventional behavior), the orthogonal nature of my data permit the use of ANOVAs. When there is an equal number of observations in each cell, one can violate the requirement of equal error variance without serious risk (Winkler and Hays 1975). The ANOVAs served as a type of sensitivity analysis so that I might identify initial relationships between my main variables of interest. In general, the results from the ANOVAs coincide with those of the logit regressions. I do, however, footnote those results that are different from the logit regressions.

effect on the likelihood of crime and deviance. As such, to keep my models robust and to prevent reduction in degrees of freedom, I only include those variables that are relevant to my predictions. Doing so ensures an adequate sample size in order to increase the ability of detecting significant interactions (McClelland and Judd 1993). When testing Hypotheses 1 through 3, I first present a basic model that tests for the relationship between the manipulations of justice and legitimacy on criminal or deviant behavior and include gender, race, negative emotionality, constraint, and locus of control.[33] In the second model, I control also for anger expression, since the ways in which individuals express anger can influence criminal or deviant coping behaviors. When assessing subsequent hypotheses (4 and 5) I include anger expression as a control variable. In addition, when examining a significant interaction between gender and interactional justice (Hypothesis 4a) I conduct regressions by gender. Even though not hypothesized, I also examine whether gender and procedural injustice interact to predict criminal or deviant behavior in response to injustice. Last, I evaluate Hypothesis 5, which specifies the relationship between personality traits and criminal or deviant responses to injustice, across models. Doing so highlights the relationship that negative emotionality, constraint, and locus of control has with crime and deviance when a distributive injustice occurs. Moreover, I test how these personality traits may interact with procedural and interactional injustice to predict the likelihood of criminal or deviant behavior in response to these forms of injustice.

It is important to test for multicollinearity prior to running regressions. I present the correlation matrices of the variables I use within the logit and OLS regressions I

[33] Race is present in the analytical models because it impacts the amount and type of strain individuals may experience (Piquero and Sealock 2010) and therefore how they might perceive and deal with injustice.

conduct. In addition, I examine the variance inflation factors (VIF). A VIF of 10, or as low as four, may indicate problems with collinearity (Gujarati 2003; O'Brien 2007). The regression models in the analyses were typically well below this number and multicollinearity did not appear to be an issue. The only instances when the VIF was potentially problematic emerged when testing for an interaction between procedural injustice, interactional injustice, and low legitimacy of conventional behavior. The VIF for this three-way interaction term was around seven. Multicollinearity, however, was a problem when testing whether negative emotionality, constraint, and locus of control interacted with procedural and interactional injustice to predict crime and deviance. In order to minimize multicollinearity, I created interaction terms with personality variables that had been mean centered.[34] I note the VIFs of variables that are above the threshold of four throughout the results section. Next, I present the results of these regression models.

[34] Although caution should be used when interpreting the results from models that are multicollinear, these results should not be disregarded. Confidence in the results should be based on the t-values and/or confidence intervals of the variables, which are produced by variation in the regression coefficients. Results that are significant should be interpreted as indicating a relationship even in the presence of variance inflation (O'Brien 2007).

VI. RESULTS

This study examines whether the major forms of injustice increase criminal and deviant responses, and how these types of injustice combine to affect such responses. I expect crime and deviance to have the highest likelihood of occurring when multiple forms of injustice are present. I also hypothesize that interactional injustice will play a greater role in predicting criminal or deviant behavior due to the centrality it may have for the individual. Moreover, certain factors are expected to condition the relationship between injustice and criminal or deviant behavior, such as the legitimacy of a criminal/deviant response, gender, and the personality traits of negative emotionality, constraint, and locus of control.

In order to test these expectations, respondents were presented with hypothetical scenarios that manipulated levels of injustice and the legitimacy of criminal or conventional behavior. The Club scenario presented an unjustified affront which was expected to foster feelings of anger that would then increase the probability of assault. The actor in this scenario was called a "jerk" by a friend who was supposed to buy the actor a certain amount of drinks. The Group Project scenario depicted a negative event for which an internal attribution was made in order to facilitate feelings of depression, which would then increase the likelihood of drinking and drug use. The actor in this scenario did not follow the advice of his/her professor to check on the work his/her partner was doing for their group project and was unable to correct for the lesser amount and quality of work that the partner accomplished. The Studying scenario portrayed a blocked goal that was intended to foster frustration and increase the probability that respondents would cheat. The actor in this scenario is going to fail a calculus final exam

and needed the equations his/her friend had programmed into his/her calculator in order to succeed, even though that friend was unwilling to share these equations. After reading each vignette, respondents were asked to indicate the emotions they would experience and behaviors they would engage in if they were the main actor in each scenario. The next section presents descriptive statistics for key variables associated with each scenario.

A. Descriptive Statistics

Table 2 presents the means, standard deviations, and ranges for relevant scenario variables. First, I present my behavioral measures. Respondents reported how likely they would be to engage in a variety of behaviors, including criminal or deviant actions, if they were the main actor in the scenario. Responses ranged from "1" to "7," with "7" indicating a greater likelihood of engaging in a specific type of crime or deviance. The means for the expected criminal and deviant behaviors are rather low in the Club (Mean of Hitting = 1.303; Mean of Pushing = 1.396) and Group Project scenarios (Mean of Drinking = 1.844; Mean of Drug Use = 1.309). In contrast, the means for cheating and stealing are rather high in the Studying scenario, indicating that cheating and stealing may be more acceptable responses to the type of situation that was presented to students (Mean of Copying = 4.038; Mean of Using = 4.006; Mean of Stealing = 3.813), or that the legitimacy manipulation was more effective than in the other scenarios. Also, students may have been driven to succeed in their classes and more likely to justify behavior (cheating) that would enable them to do so.[35]

[Table 2 about here]

[35] Ninety-one percent of my sample (n = 292) earned mostly A's (n = 93), mostly A's and B's (n = 155), or mostly B's (n = 44). The average GPA of Emory students has also been on the rise and was 3.38 in 2008. These numbers may reflect grade inflation, with private institutions leading the nation in this practice (Rojstaczer 2002), and which has been identified as a problem at Emory (Treadaway 1995).

Violence, or hitting and pushing the perpetrator of injustice, was the least likely form of criminal/or deviant behavior respondents would engage in across the scenarios. Individuals were more likely to indicate that they would engage in drinking and drug use, even though less than half of the respondents reported they would engage in these behaviors. The most common form of deviance was cheating, or copying or stealing the calculator in order to use desired formulas. More than half of the respondents indicated that they would cheat in response to the conditions of the studying scenario. Ultimately, the distributions of these variables suggest that drinking, drug use, and cheating are more normative forms of deviance in the study population than violence because individuals were more likely to engage in these acts. These forms of deviant behaviors have been documented on college campuses (Mustaine and Tewksbury 2005; O'Malley and Johnston 2002). I present the combined measures of criminal and deviant behavior in Table 3 and the frequency distributions for those variables that were dichotomized in order to account for their positively skewed distributions.

[Table 3 about here]

As expected, men were more likely than women to indicate that they would engage in violent behaviors in the three scenarios. The literature finds that males have a tendency to be more violent than females (Agnew 2009; Mazerolle 1998). No gender differences emerged for drinking and drug use across scenarios and in regard to cheating, which is supportive of the findings that males and females tend to engage in minor forms of crime and deviance at similar rates (Agnew 2009) (Table 2).

1. Manipulation Checks

a. Situational Emotions

I also present the descriptive statistics for measures of situational emotions in response to each scenario to serve as a manipulation check (Table 2). The type of emotions that garnered the most intense response will have implications for the form of criminal or deviant behavior in which individuals engage. Respondents were asked to report the kinds of emotions they experienced in response to the vignette conditions they received if they were the main actor in the situation. Responses ranged from "1" to "7," "7" indicating a stronger intensity of emotion. As expected, anger and frustration were the strongest emotions that occurred in response to the unjustified affront depicted by the Club scenario (Mean of Anger = 3.852; Mean of Frustration = 4.368). These emotions were also unexpectedly the strongest in the Group Project scenario, in addition to worry (Mean of Anger = 5.257; Mean of Frustration = 5.865; Mean of Worry = 4.817). I had expected that depression would be the strongest emotion in the Group Project scenario because respondents were presented with a harm for which an internal attribution was made. This suggests that this scenario may not have clearly presented the occurrence of an internal attribution. Students could have attributed greater blame to their group partners, rather than to themselves for failing to do a good job on their project, which would support the findings that anger and frustration were the strongest emotions produced. Last, as expected, frustration was the strongest emotion elicited by the studying scenario (Mean = 5.761), followed by anger, which was significantly different from frustration (Mean of Anger = 4.994; $t = 9.449$; $p = 0.000$).[36]

[36] The t-statistic was obtained by conducting a difference of means t-test.

In general, no significant gender differences emerged for the intensity of emotions experienced across the scenarios. When significant differences did occur, females were more likely to experience a greater intensity of emotions, which is a finding supported in the literature (Mirowsky and Ross 1995; Piquero and Sealock 2004). Females reported higher levels of frustration in response to the Club scenario and anger, frustration, depression, and worry in response to the Studying scenario. The only exception to this trend occurred with the emotion of fear. Males were significantly more likely to strongly experience this emotion in response to the Club scenario than females (Male Mean = 1.547; Female Mean = 1.325; $p \leq .05$). This may be due to the fact that males perceive other males as having a greater propensity for violence than when females evaluate other females (Table 2). Last, the gender differences that did emerge in regard to emotion may predict patterns in offending. Females may be less likely than males to indicate that they would respond to injustice with crime or deviance due to their greater tendency to experience passive emotions (i.e., depression and worry), in addition to anger and frustration.

b. Effectiveness of Scenarios

To ensure that the behavioral responses presented after each scenario represented what respondents would have actually done in response to these unjust situations, students were asked how believable the scenarios were, how easy it was for them to imagine being in the scenarios, and how confident they were that their answers would reflect what they would actually do in the situation. These variables ranged from "1" to "7," with higher scores indicating that the respondents found these scenarios more believable, easier to imagine being in, and more highly confident that their answers

would reflect what they would actually do in similar situations. The Group Project scenario was the most believable (Mean = 5.818) followed by the Club (Mean = 5.154) and Studying scenario (Mean = 4.764) (Table 2). It was the easiest for respondents to imagine being in the Group Project scenario (Mean = 5.806). There was no significant difference between the means for this variable in the Club (Mean = 4.616) and Studying scenarios (Mean = 4.761) ($t = -1.292$; $p = 0.197$). Respondents were the most confident that their responses indicated their actual behaviors in the Group Project scenario (Mean = 6.100), followed by the Club scenario (Mean = 5.947) and the Studying scenario (Mean = 5.733), which significantly differed from each other ($t = -3.57$; $p = 0.000$). The Group Project scenario presented situations which dealt with academic work and may have been most applicable to the students in my sample.

No gender differences emerged for the Club and Studying vignettes in regard to their believability, ease of imagining being in, and the confidence that respondents' actions would reflect their actual behaviors in these scenarios. Interestingly, females were more likely than males to find the Group Project scenario believable (Mean = 5.956; in comparison to Male Mean = 5.681; $p \leq .05$). Although females were also more likely than males to perceive that this situation was easy to imagine being in (Mean = 5.931; in comparison to Male Mean = 5.679), and they were more confident that their responses would reflect their actual behaviors (Mean = 6.201; in comparison to Male mean = 6.000), these results are only marginally significant ($p \leq .10$).

I am thus confident that my scenarios are applicable to the respondents in this study. Even though some conditions were more believable than others, respondents in general felt these scenarios were realistic and were able to imagine themselves in these

situations. Indeed, scenarios that took place in a college or educational setting, i.e., the Group Project and Studying scenarios, were the easiest for students to imagine being in. And, most importantly, students indicated that they were relatively confident that the behaviors they would have engaged in within these scenarios would reflect their actual intended behaviors.

Table 2: Descriptive Statistics for Scenarios and Difference of Means T-tests by Gender

	Total Sample					Males					Females					
	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	T-test
Intentions to Offend																
Club																
Hit	320	1.303	0.919	1	7	160	1.481	1.121	1	7	160	1.125	0.612	1	6	***
Push	318	1.396	1.033	1	7	160	1.638	1.266	1	7	158	1.152	0.640	1	5	***
Take	319	1.655	1.130	1	7	159	1.786	1.160	1	6	160	1.525	1.087	1	7	*
Drink	320	2.228	1.576	1	7	160	2.294	1.620	1	7	160	2.163	1.533	1	7	ns
Drugs	320	1.197	0.748	1	7	160	1.225	0.831	1	7	160	1.169	0.656	1	5	ns
Group Project																
Hit	320	1.381	1.047	1	7	160	1.594	1.194	1	7	160	1.169	0.826	1	7	***
Push	319	1.361	0.938	1	6	159	1.610	1.158	1	6	160	1.113	0.549	1	6	***
Drink	320	1.844	1.527	1	7	160	1.956	1.607	1	7	160	1.731	1.439	1	7	ns
Drugs	320	1.309	1.018	1	7	160	1.394	1.116	1	7	160	1.225	0.904	1	7	ns
Studying																
Scenario																
Hit	318	1.270	0.834	1	6	159	1.403	0.982	1	6	159	1.138	0.631	1	6	**
Push	316	1.332	0.940	1	7	157	1.465	1.029	1	6	159	1.201	0.825	1	7	**
Steal	317	3.183	2.161	1	7	159	3.333	2.166	1	7	158	3.032	2.152	1	7	ns
Copy	318	4.038	2.121	1	7	159	4.031	2.088	1	7	159	4.044	2.159	1	7	ns
Use	317	4.006	2.310	1	7	158	4.152	2.330	1	7	159	3.862	2.288	1	7	ns
Drink	317	1.909	1.563	1	7	159	1.862	1.495	1	7	158	1.956	1.633	1	7	ns
Drugs	317	1.303	0.992	1	7	159	1.302	0.966	1	7	158	1.304	1.020	1	7	ns

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 2: Descriptive Statistics for Scenarios and Difference of Means T-tests by Gender

	Total Sample					Males					Females					
	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	T-test
Situational Emotions																
Club																
Anger	318	3.852	1.792	1	7	159	3.698	1.813	1	7	159	4.006	1.763	1	7	ns
Frustration	318	4.368	1.827	1	7	159	4.145	1.845	1	7	159	4.591	1.787	1	7	*
Depression	319	1.762	1.259	1	7	159	1.755	1.241	1	7	160	1.769	1.280	1	7	ns
Fear	319	1.436	0.972	1	6	159	1.547	1.118	1	6	160	1.325	0.789	1	5	*
Worry	319	1.627	1.150	1	7	159	1.648	1.080	1	5	160	1.606	1.219	1	7	ns
Contentment	319	2.379	1.440	1	7	159	2.371	1.434	1	7	160	2.388	1.449	1	7	ns
Group Project																
Anger	319	5.257	1.601	1	7	159	5.119	1.666	1	7	160	5.394	1.526	1	7	ns
Frustration	319	5.865	1.328	1	7	159	5.755	1.344	1	7	160	5.975	1.308	1	7	ns
Depression	318	2.629	1.748	1	7	159	2.635	1.780	1	7	159	2.623	1.720	1	7	ns
Fear	319	3.013	1.947	1	7	159	3.144	1.945	1	7	160	2.881	1.947	1	7	ns
Worry	317	4.817	1.726	1	7	158	4.772	1.568	1	7	159	4.862	1.874	1	7	ns
Contentment	318	1.550	1.043	1	7	158	1.633	1.091	1	7	160	1.469	0.990	1	7	ns
Studying Scenario																
Anger	318	4.994	1.776	1	7	159	4.811	1.880	1	7	159	5.176	1.652	1	7	+
Frustration	318	5.761	1.456	1	7	159	5.591	1.604	1	7	159	5.931	1.273	1	7	*
Depression	317	3.211	1.978	1	7	159	2.899	1.877	1	7	158	3.525	2.034	1	7	**
Worry	318	5.327	1.737	1	7	159	5.138	1.689	1	7	159	5.516	1.768	1	7	*
Contentment	319	2.379	1.440	1	7	159	1.786	1.280	1	7	158	1.582	1.293	1	7	ns

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 2: Descriptive Statistics for Scenarios and Difference of Means T-tests by Gender

	Total Sample					Males					Females					
	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	T-test
Effectiveness of Scenarios																
Club																
Believable	319	5.154	1.539	1	7	159	5.151	1.527	1	7	160	5.156	1.556	1	7	ns
Easy to Imagine	320	4.616	1.867	1	7	160	4.519	1.815	1	7	160	4.713	1.918	1	7	ns
Confident	320	5.947	1.103	2	7	160	5.863	1.146	2	7	160	6.031	1.055	2	7	ns
Group Project																
Believable	318	5.818	1.185	2	7	160	5.681	1.200	2	7	158	5.956	1.158	2	7	*
Easy to Imagine	319	5.806	1.287	1	7	159	5.679	1.352	1	7	160	5.931	1.209	2	7	$^{+}$
Confident	319	6.100	0.976	2	7	160	6.000	1.046	2	7	159	6.201	0.891	3	7	$^{+}$
Studying Scenario																
Believable	318	4.764	1.554	1	7	159	4.717	1.604	1	7	159	4.811	1.506	1	7	ns
Easy to Imagine	318	4.761	1.709	1	7	159	4.711	1.737	1	7	159	4.811	1.685	1	7	ns
Confident	318	5.733	1.098	2	7	159	5.711	1.099	2	7	159	5.755	1.101	3	7	ns

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 3: Descriptive Statistics of Dependent Variables[37]

	Obs	Mean	SD	Min	Max	Frequency	Percent
Scenario: Behavior							
Club: Violence	318	2.686	1.843	2	14	60	18.870
Group Project: Violence	319	2.740	1.883	2	13	59	18.500
Studying: Violence	316	2.604	1.714	2	12	49	15.510
Club: Drinking and Drug Use	320	3.425	1.970	2	14	157	49.060
Group Project: Drinking and Drug Use	320	3.153	2.263	2	14	106	33.130
Studying: Drinking and Drug Use	316	3.215	2.252	2	14	110	34.810
Studying: Cheating	316	11.25	5.430	3	21	272	86.080

[37] The frequencies reflect the dichotomous versions of the variables presented. For the studying scenario, the measure of cheating is not dichotomous. This statistic is presented in order to show that the majority of students indicated that they would engage in cheating behavior in this scenario, thus reflecting that this variable was not as highly skewed as the other measures of crime and deviance.

Because I make predictions about certain individual level personality traits that might affect whether or not an individual responds to injustice with crime or deviance, I present the descriptive statistics for negative emotionality, constraint, and locus of control in Table 4. I also include the descriptive statistics for the variables that measure whether individuals express their anger outwardly or inwardly, which can impact whether they will respond to injustice with criminal or deviant behaviors.

[Table 4 about here]

I assess negative emotionality by a 15-item additive scale so that high scores indicate higher levels of negative emotionality. Constraint is a 12-item additive scale with high scores representative of higher levels of constraint. Locus of control is a 29-item additive scale and individuals with higher scores have an external locus of control. Those who score higher on the anger expression items indicate that they are either more likely to express their anger inwardly or outwardly.

Females are more likely than males to be high in negative emotionality (Mean = 41.138 in comparison to Male Mean = 38.767; $t = -2.798$; $p = 0.006$). Although both males and females appear to be externally controlled (Male Mean = 11.719; Female Mean = 12.651), females are more likely to have an external locus of control than males ($t = -1.957$; $p = 0.051$). Greater levels of negative emotionality, in regard to depressive symptoms, have been found among women and not men (Chaplin 2006). Moreover, for locus of control, men have been found to be more internal than women due to the fact that an internal locus of control suggests individuals are better able to control the outcome of events and thus behave in more agentic ways (Smith, Dugan, and Trompenaars 1997). Agency is associated with assertive or controlling behavior, which

should be more likely among males (Eagly 1987; Smith et al. 1997). Females and males do not differ on their levels of constraint ($t = -1.088$; $p = 0.277$), or on their tendency to express their anger outwardly or inwardly (Outwardly: $t = -0.148$; $p = 0.882$; Inwardly: $t = -1.469$; $p = 0.143$) (Table 4).

Table 4: Descriptive Statistics of Non-Scenario Variables and Difference of Means T-tests by Gender

	Total Sample					Males					Females					
	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max	T-test
Conditioning Factors																
Negative Emotionality	302	39.960	7.448	19	59	150	38.767	7.598	19	59	152	41.138	7.127	22	59	**
Constraint	299	44.749	5.036	29	56	150	44.433	4.811	29	56	149	45.067	5.251	29	56	ns
Locus of Control	305	12.184	4.180	3	23	153	11.719	4.296	3	23	152	12.651	4.020	4	23	*
Inward Anger	306	18.291	4.805	8	31	150	17.880	4.602	8	30	156	18.686	4.976	9	31	ns
Outward Anger	304	16.234	4.657	8	31	150	16.193	4.506	8	30	154	16.273	4.813	8	31	ns
Demographics																
Age	315	19.533	1.740	18	30	158	19.684	2.136	18	30	157	19.382	1.206	18	24	--
Males	160	--	--	--	--	160	--	--	--	--	160	--	--	--	--	--
Females	160	--	--	--	--	160	--	--	--	--	160	--	--	--	--	--
Whites	137	--	--	--	--	67	--	--	--	--	70	--	--	--	--	--
Non-Whites	183	--	--	--	--	93	--	--	--	--	90	--	--	--	--	--

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

B. Manipulation Checks

1. Justice Measures

In order to ensure that my manipulations of injustice actually promoted perceptions of injustice, I conduct ANOVAs to compare justice manipulations to subjective perceptions of justice.[38] Respondents assessed on a scale of "1" to "7" whether they perceived low justice (1) or high justice (7) within the vignettes. Table 5 presents the estimated marginal means for these models.

[Table 5 about here]

For the Club scenarios, the manipulation of procedural injustice is significantly related to perceptions of procedural justice, with those who received scenarios with low procedural justice perceiving less procedural justice (Mean = 9.091; $F(3,1) = 12.64$; $p = 0.000$; in comparison to Mean of High Procedural Justice= 10.435). Moreover, the interactional injustice manipulation is not associated with perceptions of procedural justice. Subjective perceptions of interactional justice, however, are significantly influenced by both types of justice manipulations. Those who received conditions marked by low interactional justice (Mean = 7.683; $F(3,1) = 35.46$; $p = 0.000$; in comparison to Mean of High Interactional Justice = 9.911) and low procedural justice (Mean = 7.852; $F(3,1) = 25.18$; $p = 0.000$; in comparison to Mean of High Procedural Justice = 9.729) are less likely to perceive interactional justice in the Club scenarios (Table 5).

For the Group Project scenarios, the manipulation of procedural justice is significantly associated with perceptions of procedural justice.[39] Those who received conditions marked by low procedural justice are less likely to perceive procedural justice

[38] These models control for the impact of low conventional legitimacy.
[39] The manipulation of interactional justice only marginally impacted perceptions of procedural injustice (Mean = 7.825; $F(3,1) = 3.30$; $p = 0.070$; in comparison to Mean of High Interactional Justice = 8.432).

(Mean = 6.885; F(3,1) = 55.96; p = 0.000; in comparison to Mean of High Procedural Justice = 9.384). Both objective manipulations of injustice are associated with perceptions of interactional justice. Those who received conditions marked by low interactional justice (Mean = 6.086; F(3,1) = 54.87; p = 0.000; in comparison to Mean of High Interactional Justice = 8.871) and low procedural justice (Mean = 6.690; F(3,1) = 17.54; p = 0.000; in comparison to Mean of High Procedural Justice = 8.264) are less likely to perceive interactional justice. In addition, the Group Project conditions reveal a significant interaction between low procedural and low interactional justice when examining perceptions of interactional justice. Those who received conditions marked with both types of injustice are less likely to perceive interactional justice (Mean = 5.771; F = 6.26 (4,1); p = 0.013; in comparison to Mean of High Procedural and High Interactional Justice = 10.111).

For the studying scenarios, the objective manipulation of procedural justice significantly reduces subjective perceptions of procedural justice (Mean = 8.596, F(3,1) = 15.15; p = 0.000; in comparison to Mean of High Procedural Justice = 10.139), and does not affect perceptions of interactional justice. Again, the manipulations of interactional (Mean = 7.695; F(3,1) = 22.29; p = 0.000; in comparison to Mean of High Interactional Justice = 9.651) and procedural injustice (Mean = 7.892; F(3,1) = 14.35; p = 0.000; in comparison to Mean of High Procedural Justice = 9.462) reduce subjective perceptions of interactional justice[40]

In summary, across the different scenarios, it appears that the objective measure of procedural justice is properly manipulated. Interestingly, perceptions of interactional

[40] Interestingly, low legitimacy of conventional behavior reduced perceptions of interactional justice (Mean = 8.089; F(3,1) = 7.77; p = 0.006; in comparison to Mean of High Legitimacy of Conventional Behavior = 9.244).

injustice are affected by the manipulations of procedural and interactional justice, which suggests that although these concepts are distinct, they do overlap to some degree (e.g., Tyler and Lind 1992). Importantly, these manipulations of injustice led respondents to perceive injustice. In the next section, I present the results that assess the relationships between injustice and crime.

Table 5: Estimated Marginal Means for Justice Manipulations (ANOVA)

	F-Statistic	*Marginal Means (s.e.)*			
		High Justice	SE	Low Justice	SE
Club: Perceptions of Procedural Justice					
*F(3,1) = 4.75**; n = 318*					
Procedural Justice	12.64***	10.435	0.266	9.091	0.268
Interactional Justice	0.48	9.898	0.267	9.636	0.267
Club: Perceptions of Interactional Justice					
*F(3,1) = 20.48***; n = 310*					
Procedural Justice	25.18***	9.729	0.264	7.852	0.265
Interactional Justice	35.46***	9.911	0.265	7.683	0.265
Group Project: Perceptions of Procedural Justice					
*F(3,1) = 19.87***; n = 312*					
Procedural Justice	55.96***	9.384	0.236	6.885	0.236
Interactional Justice	3.30^{+}	8.432	0.234	7.825	0.238
Group Project: Perceptions of Interactional Justice					
*F(3,1) = 24.73***; n = 314*					
Procedural Justice	17.54***	8.264	0.264	6.690	0.267
Interactional Justice	54.87***	8.871	0.265	6.086	0.267
*F(4,1) = 20.43***; n = 314*					
Procedural and Interactional Justice	6.26**	10.111	0.371	5.771	0.379
Studying: Perceptions of Procedural Justice					
*F(3,1) = 6.01***; n = 311*					
Procedural Justice	15.15***	10.139	0.282	8.596	0.279
Interactional Justice	0.33	9.476	0.283	9.248	0.278
Studying: Perceptions of Interactional Justice					
*F(3,1) = 15.21***; n = 312*					
Procedural Justice	14.35***	9.462	0.295	7.892	0.291
Interactional Justice	22.29***	9.651	0.294	7.695	0.292

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

C. Main Analyses

In order to test whether certain types and combinations of injustice are associated with criminal or deviant behavior, I performed a series of binomial logit regressions and OLS regressions. For the logit regressions, the output is interpreted in terms of odds ratios. In comparison to an event not occurring, an odds ratio larger than "1" indicates a greater likelihood of an event occurring, while an odds ratio lower than "1" represents a reduced probability. Moving from one odds to the next reflects a multiplicative change that is indicated by the odds ratio (Liao 1994). Before I present the regressions of criminal and deviant behavior on key factors (procedural justice, interactional justice, legitimacy, and individual-level characteristics), I present the correlation coefficients for the major variables in my models (Tables 6-8).[41]

1. Correlations

Tables 6, 7, and 8 present correlation coefficients for the Club, Group Project, and Studying scenarios, respectively. As expected, the justice manipulations are significantly correlated with measures of criminal and deviant behavior.[42] Low procedural justice is correlated with violence in the Club ($r = 0.120$; $p = 0.052$) and Group Project ($r = 0.163$; $p = 0.008$) scenarios, and taking the perpetrator of injustice's drinks in the Club scenario ($r = 0.122$; $p = 0.049$), while low interactional justice is correlated with violence in the Studying scenario ($r = 0.122$; $p = 0.049$). Low interactional justice is also associated with drinking and drug use in the Club scenario ($r = 0.113$; $p = 0.067$) and cheating in the Studying scenario ($r = 0.153$; $p = 0.013$). Moreover, low legitimacy of conventional

[41] Correlations presented are Pearson correlations that are based on listwise deletion.
[42] It is appropriate to use a phi correlation when examining the relationship between dichotomous variables, which can be given as a function of the Pearson correlation coefficient (Yaffee 2003). However, I receive the same results in STATA when I examine the phi and Pearson correlation coefficients between dichotomous variables.

behavior is significantly correlated with cheating in the Studying scenario (r = 0.130; p = 0.035). The behavioral measures of crime and deviance are also correlated with one another. One would expect that these behaviors would be related because delinquent or criminal individuals may engage in a range of illicit activities (e.g., Gottfredson and Hirschi 1990).

[Tables 6-8 about here]

The correlation between violence measures and gender is significant and negative across the scenarios (Club: r = -0.294; p = 0.000; Group Project: r = -0.326; p = 0.000; Studying: r = -0.254; p = 0.000). That is, females are less likely than males to have indicated that they would engage in violence in response to the scenarios. Females are also more likely to experience greater levels of negative emotionality (Club: r = 0.148; p = 0.016; Group Project: r = 0.148; p = 0.016; studying: r = 0.135; p = 0.028). Negative emotionality is also positively and significantly correlated with violent behavior across scenarios (Club: r = 0.135; p = 0.028; Group Project: r = 0.128; p = 0.037; Studying: r = 0.228; p = 0.000), and with drinking, drug use, stealing, and cheating. This suggests that the negative association between gender and violence is mainly due to differences in the expression of this type of behavior among males and females.

Surprisingly, females are more likely to have an external locus of control than males (Club: r = 0.147; p = 0.017; Group Project: r = 0.142; p = 0.021; Studying: r = .134; p = 0.029). Having an external locus of control typically produces greater feelings of anger because individuals are more likely to make external attributions for their misfortunes (Storms and Spector 1987), which would predict positive associations between gender and criminal or deviant behavior. For instance, locus of control is

positively and significantly correlated with negative emotionality across scenarios, such that those with an external locus of control are more likely to be high in negative emotionality. Moreover, this trait is negatively and significantly correlated with constraint across scenarios, which would suggest that those with an external locus of control would be more likely to engage in crime and deviance. Yet, in this study, having an external locus of control is only marginally positively associated with drinking and drug use in the Studying condition ($r = 0.102$; $p = 0.099$). Other research, however, suggests that due to the characteristic of agency associated with masculinity, males will be more internally controlled than females (Eagly 1987; Smith et al. 1997). It may be that this agency allows men a greater ability to express different criminal or deviant behaviors.

Race is positively and significantly correlated with drinking and drug use across conditions. Whites are more likely than non-whites to engage in this form of criminal or deviant behavior (Club: $r = 0.249$; $p = 0.000$; Group Project: $r = 0.224$; $p = 0.000$; Studying: $r = 0.199$; $p = 0.001$). The literature suggests that whites, especially white males, more readily engage in drinking and drug use on college campuses (O'Malley and Johnston 2002). Moreover, race is marginally and negatively correlated with violence in the Group Project scenario ($r = -0.103$; $p = 0.093$). Whites are less likely than non-whites to engage in violence.

Those who are higher in constraint are less likely to engage criminal or deviant behavior across scenarios (Gottfredson and Hirschi 1990). Constraint is also negatively associated with negative emotionality in all of the scenarios, which is expected.

Typically, individuals who are high in constraint are lower in negative emotionality (Caspi et al. 1994).

Across conditions, the tendency to express anger inwardly is positively associated with negative emotionality and locus of control. That is, those higher in negative emotionality and those who are externally controlled are less likely to express their anger outwardly in this study. Nevertheless, expressing one's anger inwardly is positively associated with whether individuals would choose to engage in violence, drinking and drug use, and cheating in the Studying scenario. Furthermore, expressing one's anger outwardly is positively correlated with locus of control and expressing anger inwardly. Perhaps the traits of anger expression are tapping into a general personality trait of the propensity individuals have for experiencing anger. Expressing anger outwardly is also associated with higher levels of negative emotionality and lower levels of constraint across scenarios, and with engaging in violence in the Club scenario, drinking and drug use in the Group Project scenario, and violence, drinking and drug use, and cheating in the Studying scenario.

In the next section, I present my main analyses. I discuss results that are significant at both the one- and two-tailed levels of significance because of the directional predictions I make. Namely, I argue that the experience of certain types and combinations of injustice will facilitate the likelihood that individuals will choose to cope with these aversive experiences with crime or deviance.

Table 6: Club Scenario Correlation Matrix

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1 Violence	1.000												
2 Drinking and Drug Use	0.179**	1.000											
3 Taking Money or Drinks	0.495***	0.236***	1.000										
4 Procedural Injustice	0.120*	-0.016	0.122*	1.000									
5 Interactional Injustice	0.051	0.113^{+}	-0.026	0.007	1.000								
6 Low Legitimacy	-0.023	-0.008	-0.031	0.022	-0.001	1.000							
7 Female	-0.294***	-0.022	-0.100	-0.022	-0.015	0.031	1.000						
8 Race (White)	-0.033	0.249***	0.025	-0.041	-0.006	-0.093	0.032	1.000					
9 Negative Emotionality	0.135*	0.134*	0.135*	0.053	-0.153**	0.054	0.148*	-0.055	1.000				
10 Constraint	-0.210***	-0.202***	-0.158**	-0.009	0.060	-0.031	0.053	0.049	-0.177**	1.000			
11 Locus of Control	0.040	0.052	0.062	0.083	-0.000	0.015	0.147*	-0.062	0.255***	-0.195**	1.000		
12 Anger In	0.037	0.062	0.054	0.044	-0.089	0.044	0.081	-0.085	0.555***	-0.047	0.171**	1.000	
13 Anger Out	0.163**	0.081	0.094	0.022	-0.029	-0.051	-0.007	0.049	0.526***	-0.239***	0.117^{+}	0.446***	1.000

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 7: Group Project Scenario Correlation Matrix

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1 Violence	1.000											
2 Drinking and Drug Use	0.309***	1.000										
3 Procedural Injustice	0.163**	0.032	1.000									
4 Interactional Injustice	0.059	0.005	-0.017	1.000								
5 Low Legitimacy	-0.015	0.032	0.012	-0.034	1.000							
6 Female	-0.326***	-0.101	-0.019	0.012	0.026	1.000						
7 Race (White)	-0.103^{+}	0.224***	-0.113^{+}	0.044	-0.088	0.021	1.000					
8 Negative Emotionality	0.128*	0.149*	0.041	-0.084	-0.044	0.148*	-0.057	1.000				
9 Constraint	-0.267***	-0.264***	-0.025	0.126*	-0.034	0.059	0.039	-0.172**	1.000			
10 Locus of Control	0.031	0.012	0.018	-0.097	0.016	0.142*	-0.057	0.254***	-0.185**	1.000		
11 Anger In	0.019	0.096	-0.032	-0.073	0.045	0.073	-0.076	0.551***	-0.053	0.174**	1.000	
12 Anger Out	0.081	0.147*	0.068	-0.101^{+}	-0.058	-0.008	0.049	0.528***	-0.223***	0.118^{+}	0.444***	1.000

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 8: Studying Scenario Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Violence	1.000												
2 Drinking and Drug Use	0.240***	1.000											
3 Cheating[43]	0.234***	0.174**	1.000										
4 Procedural Injustice	0.082	0.023	-0.006	1.000									
5 Interactional Injustice	0.122*	0.018	0.153**	0.002	1.000								
6 Low Legitimacy	0.086	-0.061	0.130*	-0.018	-0.026	1.000							
7 Female	-0.254***	0.018	-0.056	-0.005	-0.012	-0.049	1.000						
8 Race (White)	-0.069	0.199***	-0.080	-0.076	-0.068	-0.022	0.014	1.000					
9 Negative Emotionality	0.228***	0.190**	0.292***	-0.055	0.068	0.055	0.135*	-0.069	1.000				
10 Constraint	-0.198***	-0.211***	-0.215***	0.010	-0.021	-0.021	0.065	0.032	-0.175**	1.000			
11 Locus of Control	0.049	0.102^{+}	0.012	-0.037	0.013	0.033	0.134*	-0.055	0.253***	-0.175**	1.000		
12 Anger In	0.120*	0.198***	0.300***	0.050	-0.042	-0.075	0.067	-0.089	0.548***	-0.060	0.178**	1.000	
13 Anger Out	0.222***	0.212***	0.287***	-0.038	0.030	-0.011	-0.018	0.035	0.522***	-0.233***	0.121*	0.437***	1.000

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[43] This variable is not dichotomous.

2. Club Scenario

H1: Under conditions of distributive injustice, the experience of procedural or interactional injustice will promote crime or deviance.

In this scenario, Hypothesis 1 is only partially supported. Both procedural and interactional injustice are associated with criminal or deviant behaviors but they both do not consistently predict these behaviors. Experiencing procedural injustice facilitates violence. Interactional injustice only marginally promotes the intention to engage in violence at the one-tailed level (OR = 1.662; one-tailed p = 0.075) in Model 1 of Table 9. Procedural injustice has a much stronger relationship with violence, in that the experience of procedural injustice increases the odds of intending to respond violently by 1.942 (p = 0.065) times. Since the expression of criminal or deviant behavior may depend on how one expresses his or her anger, in Model 2, I control for anger expression. When controlling for anger expression, the experience of procedural injustice increases the odds of intending to respond violently by 2.136 times (p = 0.040) and the effect of interactional injustice on violence is not significant (Table 9).

The likelihood of stealing also increases when procedural injustice is experienced. The odds of taking the perpetrator of injustice's drinks or money increase by 1.664 times (p = 0.060). When anger controls are included in Model 2, the experience of procedural injustice increases the odds of stealing by 1.704 times (p = 0.053) (Table 11).

In contrast, interactional injustice facilitates drinking and drug use in the Club scenario by increasing the odds of this behavior by 1.857 times (p = 0.019) in Model 1 of Table 10. Accounting for anger expression, the odds of drinking and drug use increase by 1.982 times (p = 0.012) when interactional injustice is experienced (Table 10).

Summary: Although both types of injustice increase the likelihood of a criminal or deviant response, it appears that different types of injustice are associated with different criminal or deviant actions. The intentions to engage in violence or steal in the Club scenario are predicted by procedural injustice, while interactional injustice is associated with a heightened probability of drinking and drug use. Perhaps, interactional injustice predicts drinking and drug use in this scenario because receiving disrespectful and improper treatment may have led individuals to internalize their negative treatment, thus promoting depression and this form of criminal coping (Agnew 2006; Bao et al. 2004; Jang and Johnson 2003; Thompson 1999).

H2: The experience of interactional injustice is a stronger predictor of crime or deviance than the experience of procedural injustice.

Hypothesis 2 predicts that interactional injustice will be a stronger predictor of criminal or deviant behavior because of the centrality of this form of injustice (e.g., Agnew 2001, 2006). The Club scenario only partly supports this hypothesis. Interactional injustice emerges as a significant predictor of drinking and drug use but not of violence or stealing (Table 10). Moreover, the odds ratios for interactional injustice are higher only when predicting drinking and drug use. When examining the behaviors of violence and stealing, the odds ratios for procedural injustice are larger and significant. Next, I test whether the interaction between procedural and interactional injustice more strongly predicts the likelihood of criminal or deviant behavior than these types of injustice separately.

Table 9: Logit Regression Predicting Violence in Club Scenario

Club Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.942 (0.699)$^{+}$	0.065	2.136 (0.791)*	0.040
Low Interactional Justice	1.662 (0.586)	0.149	1.446 (0.529)	0.313
Low Legitimacy	0.827 (0.293)	0.592	0.757 (0.282)	0.455
Female	0.143 (0.060)***	0.000	0.138 (0.059)***	0.000
Race (White)	0.722 (0.261)	0.368	0.754 (0.280)	0.448
Negative Emotionality	1.071 (0.027)**	0.008	1.066 (0.036)$^{+}$	0.056
Constraint	0.901 (0.033)**	0.004	0.915 (0.034)*	0.016
Locus of Control	0.963 (0.044)	0.402	0.999 (0.047)	0.976
Anger In			0.961 (0.047)	0.415
Anger Out			1.054 (0.049)	0.258
N	276		265	
LR χ^2(df)	49.61(8)***	0.000	48.46(10)***	0.000
Log Likelihood	-105.782		-99.620	
Pseudo R^2	0.190		0.196	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 10: Logit Regression Predicting Drinking and Drug Use in Club Scenario

Club Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.049 (0.272)	0.855	0.972 (0.258)	0.916
Low Interactional Justice	1.857 (0.491)*	0.019	1.982 (0.538)**	0.012
Low Legitimacy	0.937 (0.244)	0.802	0.936 (0.250)	0.803
Female	0.820 (0.216)	0.451	0.837 (0.227)	0.512
Race (White)	3.105 (0.836)***	0.000	3.328 (0.925)***	0.000
Negative Emotionality	1.051 (0.020)**	0.008	1.055 (0.026)*	0.027
Constraint	0.921 (0.025)**	0.003	0.914 (0.026)**	0.002
Locus of Control	1.006 (0.033)	0.859	0.999 (0.033)	0.965
Anger In			1.012 (0.035)	0.723
Anger Out			0.967 (0.034)	0.341
N	278		267	
LR χ^2(df)	39.60(8)***	0.000	39.68(10)***	0.000
Log Likelihood	-172.831		-165.139	
Pseudo R^2	0.103		0.107	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 11: Logit Regression Predicting Stealing in Club Scenario

Club Stealing	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.664 (0.451)$^{+}$	0.060	1.704 (0.470)*	0.053
Low Interactional Justice	0.991 (0.268)	0.974	1.023 (0.285)	0.936
Low Legitimacy	0.833 (0.226)	0.502	0.807 (0.224)	0.440
Female	0.566 (0.156)*	0.038	0.605 (0.170)$^{+}$	0.074
Race (White)	1.113 (0.305)	0.695	1.192 (0.336)	0.533
Negative Emotionality	1.043 (0.020)*	0.029	1.046 (0.026)$^{+}$	0.073
Constraint	0.934 (0.026)*	0.015	0.939 (0.027)*	0.031
Locus of Control	0.993 (0.034)	0.844	1.003 (0.035)	0.924
Anger In			0.992 (0.036)	0.831
Anger Out			0.992 (0.036)	0.820
N	277		266	
LR χ^2(df)	21.93**	0.005	18.96*	0.041
Log Likelihood	-162.949		-156.413	
Pseudo R^2	0.063		0.057	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H2a: Procedural and interactional injustice will interact such that the effect of injustice on crime will be greatest when individuals experience both of these types of injustice.

Tables 12-14 show results of the relative effects of the interaction between procedural and interactional justice and their independent effects on criminal or deviant behavior. Hypothesis 2a is only partially supported for the Club scenario. The interaction between procedural and interactional injustice does not predict violence or stealing in this situation (Tables 12 and 14). The experience of procedural injustice still emerges as a better predictor of violence and stealing even when controlling for the interaction between the types of injustice (Violence: OR = 2.491; p = 0.086; Stealing: OR: 1.892; p = 0.090).[44] When accounting for this interaction effect and type of anger expression, experiencing procedural injustice increases the odds of engaging in violence by 2.600 (p = 0.073) times and the odds of engaging in stealing by 1.764 (p = 0.134) times. Only drinking and drug use are predicted by the interaction between procedural and interactional injustice at the one-tailed level, such that both forms of injustice increase the odds of these behaviors by 2.314 times (one-tailed p = 0.054). When controlling for anger expression, the experience of procedural and interactional injustice increases the odds of stealing by 2.311 (one-tailed p = 0.059) times (Table 13). Namely, drinking and using drugs are more likely when both interactional and procedural injustice are present.

[Tables 12-14 about here]

Summary: For the Club scenario, the combined presence of interactional and procedural injustice is not necessary to produce criminal or deviant behavior, as only one form of injustice is sufficient. Procedural injustice predicts violence and stealing, while the interaction between procedural and interactional injustice increases the likelihood of

[44] When not controlling for anger expression, the experience of interactional injustice marginally facilitates the intention to engage in violence at the one-tailed level (OR = 2.154; one-tailed p = 0.077).

drinking and drug use. In the next section, I examine whether the injustice-crime relationship is conditioned by the legitimacy of proposed criminal or deviant behaviors.

Table 12: Logit Regression Predicting Violence in Club Scenario with Injustice Interaction

Club Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.491 (1.325)$^{+}$	0.086	2.600 (1.386)$^{+}$	0.073
Low Interactional Justice	2.154 (1.156)	0.153	1.798 (1.004)	0.293
Low Legitimacy	0.831 (0.295)	0.602	0.759 (0.284)	0.461
Low PJ * Low IJ	0.632 (0.450)	0.519	0.684 (0.501)	0.604
Female	0.141 (0.059)***	0.000	0.136 (0.059)***	0.000
Race (White)	0.716 (0.260)	0.357	0.749 (0.279)	0.438
Negative Emotionality	1.069 (0.027)**	0.009	1.065 (0.036)$^{+}$	0.060
Constraint	0.900 (0.032)**	0.004	0.914 (0.034)*	0.015
Locus of Control	0.965 (0.044)	0.430	1.001 (0.048)	0.990
Anger In			0.961 (0.047)	0.418
Anger Out			1.054 (0.049)	0.265
N	276		265	
LR χ^2(df)	50.03(9)***	0.000	48.73(11)	0.000
Log Likelihood	-105.573		-99.485	
Pseudo R^2	0.192		0.197	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 13: Logit Regression Predicting Drinking and Drug Use in Club Scenario with Injustice Interaction

Club Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.692 (0.254)	0.316	0.648 (0.241)	0.244
Low Interactional Justice	1.235 (0.450)	0.562	1.323 (0.493)	0.453
Low Legitimacy	0.935 (0.244)	0.797	0.931 (0.250)	0.791
Low PJ * Low IJ	2.314 (1.206)	0.107	2.311 (1.235)	0.117
Female	0.836 (0.222)	0.499	0.859 (0.235)	0.580
Race (White)	3.162 (0.857)***	0.000	3.388 (0.947)***	0.000
Negative Emotionality	1.052 (0.020)**	0.007	1.056 (0.026)*	0.026
Constraint	0.920 (0.026)**	0.003	0.914 (0.027)**	0.002
Locus of Control	1.004 (0.033)	0.906	0.996 (0.034)	0.915
Anger In			1.013 (0.035)	0.702
Anger Out			0.968 (0.035)	0.355
N	278		267	
LR χ^2(df)	42.21(9)***	0.000	42.15(11)***	0.000
Log Likelihood	-171.526		-163.902	
Pseudo R^2	0.110		0.114	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 14: Logit Regression Predicting Stealing in Club Scenario with Injustice Interaction

Club Stealing	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.892 (0.712)$^{+}$	0.090	1.764 (0.669)	0.134
Low Interactional Justice	1.144 (0.455)	0.734	1.064 (0.433)	0.879
Low Legitimacy	0.834 (0.226)	0.503	0.807 (0.224)	0.440
Low PJ * Low IJ	0.765 (0.414)	0.621	0.929 (0.513)	0.893
Female	0.562 (0.155)*	0.036	0.604 (0.170)$^{+}$	0.074
Race (White)	1.112 (0.305)	0.698	1.191 (0.336)	0.534
Negative Emotionality	1.043 (0.020)*	0.030	1.046 (0.026)$^{+}$	0.073
Constraint	0.933 (0.026)**	0.014	0.939 (0.027)*	0.031
Locus of Control	0.994 (0.034)	0.866	1.004 (0.035)	0.919
Anger In			0.992 (0.036)	0.831
Anger Out			0.992 (0.036)	0.819
N	277		266	
LR χ^2(df)	22.17(9)**	0.008	18.98(11)$^{+}$	0.062
Log Likelihood	-162.827		-156.404	
Pseudo R^2	0.064		0.057	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H3**:** Having peers who fail to endorse the perpetrator of injustice and who support criminal or deviant behaviors in response to that injustice will increase the likelihood that individuals respond to the injustice with crime or deviance. Having peers who endorse a perpetrator of injustice and support conventional behaviors in response to that injustice will decrease the likelihood that individuals respond to the injustice with crime or deviance.

The legitimacy of conventional or deviant behavior may also impact whether injustice facilitates crime or deviance. Hypothesis 3 predicted that low legitimacy of conventional behavior, or endorsing criminal or deviant acts in response to injustice would increase the likelihood of this form of coping. This hypothesis is not supported for the Club scenario, even when violent responses were legitimated. Legitimacy did not significantly impact the likelihood that individuals would choose to engage in violence (Table 9), drinking and drug use (Table 10), or stealing (Table 11) in this situation.

Although a three-way interaction between procedural injustice, interactional injustice and low legitimacy of conventional behavior predicts drinking and drug use at the one-tailed level, this effect is only marginally significant (OR = 5.329; one-tailed p = 0.057) and disappears when controlling for anger expression (Model 2, Table 16). Yet, it is still surprising that a marginally significant effect is found when this variable is highly collinear and has a considerably large standard error.[45] An interaction between interactional injustice and legitimacy, however, does emerge when predicting stealing within the Club scenario. That is, low interactional justice and low legitimacy of conventional behavior increases the odds that individuals will respond to this situation by taking the perpetrator of injustice's drinks or money by 3.625 times (p = 0.020).

[45] Indeed, when predicting drinking and drug use, an ANOVA reveals a marginally significant three-way interaction between low procedural justice, low interactional justice, and low legitimacy at the one-tailed level when accounting for gender and race (F(2,1) = 2.41; one-tailed p = 0.061; Mean = 3.939 in comparison to Mean of High Procedural Justice* High Interactional Justice* High Legitimacy of Conventional Behavior = 3.042).

Controlling for anger expression, experiencing interactional injustice and having a peer legitimate deviant behavior increases the likelihood of stealing by 3.075 times ($p = 0.047$).[46] When injustice is present and criminal or deviant behavior is endorsed, regardless of this behavior being different than the intended behavior, individuals will be more likely to engage in drinking and drug use and stealing in this scenario.

Summary: Legitimacy is largely irrelevant in predicting the likelihood of crime or deviance in response to injustice within the Club scenario. Yet, legitimizing criminal or deviant behavior does in some ways impact these types of responses when injustice is also experienced. Even though a peer endorsed a violent response to this scenario, condoning violence could have indicated that this peer would endorse other criminal or deviant acts. Thus, when one or more forms of injustice occur in a situation, and peers endorse criminal or deviant behavior to deal with these strains, criminal coping may be more likely to occur. Next, I test how gender might condition the association between injustice and crime or deviance.

[46] The two-way interactions between types of injustice and legitimacy were not significant for predicting violence and drinking and drug use in the Club scenario, and therefore are not reported. An ANOVA also reveals that an interaction between interactional injustice and low legitimacy of conventional behavior increases the likelihood that individuals respond to the Club scenario with violence when controlling for gender, race, and the interaction between procedural and interactional injustice (Mean of Low Interactional Justice*Low Legitimacy = 3.108; $F(6,1) = 3.03$; $p = 0.083$; in comparison to mean = 2.608).

Table 15: Logit Regression Predicting Violence in Club Scenario with Legitimacy and Injustice Interaction[47]

Club Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.643 (1.161)	0.482	1.957 (1.394)	0.346
Low Interactional Justice	1.340 (0.996)	0.684	1.276 (0.949)	0.744
Low Legitimacy	0.450 (0.374)	0.337	0.505 (0.423)	0.415
Low PJ * Low IJ	1.326 (1.307)	0.775	1.236 (1.233)	0.832
Low PJ * Low Legit	2.534 (2.707)	0.384	1.907 (2.051)	0.548
Low IJ * Low Legit	0.211 (0.303)	0.358	2.211 (2.489)	0.481
Low PJ * Low IJ * Low Legit	0.139 (0.059)	0.278	0.273 (0.404)	0.380
Female	0.139 (0.059)***	0.000	0.136 (0.059)***	0.000
Race (White)	0.714 (0.260)	0.355	0.747 (0.280)	0.436
Negative Emotionality	1.068 (0.027)**	0.010	1.064 (0.036)$^{+}$	0.063
Constraint	0.897 (0.033)**	0.004	0.910 (0.034)**	0.013
Locus of Control	0.964 (0.044)	0.428	0.999 (0.048)	0.990
Anger In			0.961 (0.048)	0.427
Anger Out			1.053 (0.049)	0.272
N	276		265	
LR χ^2(df)	51.26(12)***	0.000	49.52(14)***	0.000
Log Likelihood	-104.960		-99.093	
Pseudo R^2	0.196		0.200	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[47] In models 1 and 2 of Tables 15-17, the VIFs for the three-way interaction between low procedural justice, low interactional justice, and low legitimacy of conventional behavior are 7.14 and 6.91, respectively. Although a VIF of 10 or higher does not discount these results (O'Brien 2007), caution must be applied when interpreting this table.

Table 16: Logit Regression Predicting Drinking and Drug Use in Club Scenario with Legitimacy and Injustice Interaction

Club Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.968 (0.488)	0.949	0.839 (0.433)	0.733
Low Interactional Justice	1.885 (0.984)	0.225	1.897 (0.995)	0.222
Low Legitimacy	1.333 (0.682)	0.574	1.280 (0.660)	0.632
Low PJ * Low IJ	1.011 (0.742)	0.988	1.255 (0.938)	0.761
Low PJ * Low Legit	0.485 (0.361)	0.330	0.579 (0.437)	0.469
Low IJ * Low Legit	0.438 (0.321)	0.261	0.480 (0.359)	0.327
Low PJ * Low IJ * Low Legit	5.329 (5.624)	0.113	3.532 (3.818)	0.243
Female	0.830 (0.222)	0.485	0.859 (0.236)	0.579
Race (White)	3.228 (0.885)***	0.000	3.454 (0.978)***	0.000
Negative Emotionality	1.056 (0.020)**	0.004	1.057 (0.026)*	0.024
Constraint	0.921 (0.026)**	0.004	0.915 (0.027)**	0.003
Locus of Control	1.006 (0.033)	0.851	0.998 (0.034)	0.953
Anger In			1.016 (0.035)	0.655
Anger Out			0.968 (0.035)	0.361
N	278		267	
LR χ^2(df)	44.79(12)***	0.000	43.60(14)***	0.000
Log Likelihood	-170.234		-163.180	
Pseudo R^2	0.116		0.118	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 17: Logit Regression Predicting Stealing in the Club Scenario with Legitimacy and Injustice Interaction

Club Stealing	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.664 (0.455)$^{+}$	0.063	1.699 (0.472)$^{+}$	0.056
Low Interactional Justice	0.527 (0.204)$^{+}$	0.098	0.595 (0.233)	0.185
Low Legitimacy	0.446 (0.172)*	0.036	0.472 (0.185)$^{+}$	0.055
Low IJ * Low Legit	3.625 (2.001)*	0.020	3.075 (1.736)*	0.047
Female	0.544 (0.152)*	0.029	0.580 (0.165)$^{+}$	0.056
Race (White)	1.076 (0.298)	0.793	1.145 (0.326)	0.635
Negative Emotionality	1.043 (0.020)*	0.029	1.043 (0.026)$^{+}$	0.094
Constraint	0.939 (0.027)	0.793	0.943 (0.028)*	0.045
Locus of Control	1.001 (0.034)*	0.029	1.009 (0.036)	0.797
Anger In		0.025	0.999 (0.036)	0.982
Anger Out		0.981	0.993 (0.036)	0.842
N	277		266	
LR χ^2(df)	27.47(9)***	0.001	22.97(11)*	0.018
Log Likelihood	-160.177		-154.409	
Pseudo R^2	0.079		0.069	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H4: Women will be less likely than men to engage in criminal or deviant behaviors in response to injustice.

An important finding that the previous models alluded to is the effect of gender on whether individuals would choose to engage in crime or deviance in response to distributive injustice. Females are consistently and significantly less likely than males to indicate that they would engage in violence and stealing in response to the situations presented in the Club scenario (Tables 9-17). The only exception to this finding emerged in models predicting drinking and drug use. Even though females are still less likely than males to perform these behaviors, this difference was non-significant (Tables 10, 13, and 16). As supported by the literature, females have a lower rate of offending than males. Moreover, the gender gap in crime is lowest for minor crimes, such as drinking and drug use, in contrast to violent crimes (Agnew 2009), which may explain why there is no gender difference in these behaviors.

H4a: Interactional injustice will increase the likelihood of crime or deviance for men and not for women.

Certain types of injustice, however, may differentially predict crime and deviance for males and females. Tables (18-20) present models that test whether or not a significant interaction between gender and interactional injustice emerges. I present models with the full sample and models for males and females separately when this interaction is significant. In these models, I also test for the interaction between gender and procedural injustice in order to assess whether interactional injustice is a stronger predictor of crime and deviance among males than procedural injustice.

[Tables 18-20 about here]

Hypothesis 4a is not supported for the Club scenario. Gender does not significantly interact with interactional injustice to predict criminal or deviant behavior.[48]

[48] An ANOVA, however, reveals a significant interaction between gender and interactional injustice when predicting drinking and drug use in the Club scenario. Females are more likely to engage in drinking and drug use when they are treated in an unfair manner (Female*Low Interactional Injustice Mean = 3.742; $F(6,1) = 3.22$; $p = 0.074$; in comparison to Male*Low Interactional Injustice Mean = 3.502).

Table 18: Logit Regression Predicting Violence in Club Scenario with Gender and Injustice Interaction

Club Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.187 (0.814)*	0.035	2.676 (1.157)*	0.023
Low Interactional Justice	1.134 (0.477)	0.765	1.427 (0.524)	0.334
Low Legitimacy	0.736 (0.275)	0.413	0.753 (0.283)	0.450
Female	0.079 (0.054)***	0.000	0.230 (0.144)*	0.019
Race (White)	0.746 (0.278)	0.431	0.713 (0.269)	0.371
Females * Low IJ	2.689 (2.324)	0.252	--	--
Females * Low PJ	--	--	0.413 (0.349)	0.295
Negative Emotionality	1.067 (0.036)*	0.053	1.067 (0.036)$^{+}$	0.055
Constraint	0.917 (0.035)*	0.021	0.911 (0.034)**	0.013
Locus of Control	0.996 (0.047)	0.936	0.998 (0.047)	0.960
Anger In	0.960 (0.047)	0.410	0.960 (0.048)	0.408
Anger Out	1.056 (0.049)	0.248	1.057 (0.050)	0.237
N	265		265	
LR χ^2(df)	49.82(12)***	0.000	49.54(11)***	0.000
Log Likelihood	-98.940		-99.080	
Pseudo R^2	0.201		0.200	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 19: Logit Regression Predicting Drinking and Drug Use in Club Scenario with Gender and Injustice Interaction

Club Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.989 (0.264)	0.969	0.843 (0.324)	0.656
Low Interactional Justice	1.459 (0.558)	0.323	2.002 (0.546)**	0.011
Low Legitimacy	0.921 (0.247)	0.759	0.936 (0.250)	0.804
Female	0.621 (0.236)	0.210	0.727 (0.280)	0.409
Race (White)	3.310 (0.924)***	0.000	3.427 (0.975)***	0.000
Gender * Low IJ	1.836 (0.988)	0.259	--	--
Gender * Low PJ	--	--	1.324 (0.722)	0.607
Negative Emotionality	1.057 (0.026)*	0.022	1.055 (0.026)*	0.028
Constraint	0.917 (0.027)**	0.003	0.915 (0.027)**	0.002
Locus of Control	0.998 (0.034)	0.959	1.000 (0.034)	0.998
Anger In	1.012 (0.035)	0.738	1.013 (0.035)	0.710
Anger Out	0.969 (0.035)	0.381	0.966 (0.034)	0.336
N	267		267	
LR χ^2(df)	40.96(11)***	0.000	39.94(11)***	0.000
Log Likelihood	-164.500		-165.006	
Pseudo R^2	0.111		0.108	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 20: Logit Regression Predicting Stealing in Club Scenario with Gender and Injustice Interaction

Club Stealing	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.693 (0.468)$^{+}$	0.057	1.244 (0.474)	0.566
Low Interactional Justice	1.130 (0.434)	0.750	1.044 (0.292)	0.877
Low Legitimacy	0.811 (0.226)	0.452	0.810 (0.225)	0.449
Female	0.669 (0.257)	0.296	0.418 (0.177)*	0.039
Race (White)	1.198 (0.338)	0.522	1.272 (0.366)	0.403
Gender * Low IJ	0.810 (0.452)	0.706	--	--
Gender * Low PJ	--	--	1.964 (1.116)	0.235
Negative Emotionality	1.045 (0.026)$^{+}$	0.076	1.045 (0.026)$^{+}$	0.081
Constraint	0.937 (0.028)*	0.029	0.940 (0.028)*	0.036
Locus of Control	1.004 (0.035)	0.919	1.006 (0.035)	0.861
Anger In	0.993 (0.036)	0.842	0.993 (0.036)	0.856
Anger Out	0.991 (0.036)	0.799	0.991 (0.036)	0.805
N	266		266	
LR χ^2(df)	19.10(11)$^{+}$	0.059	20.38(11)*	0.040
Log Likelihood	-156.342		-155.703	
Pseudo R^2	0.058		0.061	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H5: Individuals high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to engage in criminal or deviant behavior in response to injustice than those who do not possess these traits.

The previous section indicated that gender is a conditioning factor that affects the likelihood that individuals will engage in criminal or deviant behaviors in response to distributive injustice. I also hypothesized that the personality traits of negative emotionality, constraint, and locus of control would impact the injustice-crime relationship. I do find that some of these personality traits matter when predicting certain criminal or deviant behaviors. Being high in negative emotionality increases the odds that individuals will engage in violence, drinking and drug use, and stealing, while being high in constraint decreases the likelihood of these behaviors (Tables 9-17). Surprisingly, locus of control did not significantly impact the likelihood of criminal or deviant behavior in the Club scenario.

These models, however, only examine whether negative emotionality, constraint, and locus of control promote crime or deviance in response to a distributive injustice. I also test whether procedural and interactional injustice may interact with these traits to predict criminal or deviant coping (Tables 21-27). I only present those models that indicate a significant interaction between injustice and certain personality traits. To avoid multicollinearity the interaction terms were created with mean-centered personality traits.

[Tables 21-27 about here]

Although a three-way interaction between negative emotionality, procedural injustice, and interactional injustice emerges when predicting violence in the Club scenario, this interaction is neither significant, nor in the expected direction (Table 21). When presented with both procedural and interactional injustice, those high in constraint

are 18 percent less likely to perpetrate violence than those low in constraint; however, this effect is only marginally significant at the one-tailed level (OR = 0.820; one-tailed p = 0.099) (Table 22). Last, those with an external locus of control are 20 percent less likely to engage in violence when presented with procedural injustice than those with an internal locus of control (OR = 0.800; p = 0.019) (Table 23). Although the finding regarding the interaction between constraint and injustice is expected, the pattern of results regarding the interaction of injustice and locus of control is not. I would expect that those with an external locus of control to be more likely to engage in criminal or deviant behavior when more than one type of injustice is experienced.

Negative emotionality did not interact with injustice to predict drinking and drug use in the expected direction (Table 24). Also, unexpectedly, those with an external locus of control are 22 percent less likely to engage in drinking and drug use when both procedural and interactional injustice are present (OR = 0.777; p = 0.065) (Table 26). Yet, as expected, respondents who are highly constrained are 21 percent less likely to engage in drinking and drug use when procedural and interactional injustice is experienced (OR = 0.792; p = 0.043) (Table 25).

Stealing, in this scenario, is less likely to occur when individuals are high in constraint and experience procedural and interactional injustice (Table 27). When presented with procedural and interactional injustice, those high in constraint are 18 percent less likely to steal in this scenario in comparison those low in constraint (OR = 0.816; p = 0.088) (Table 27).

Summary: Certain personality traits influence the odds of engaging in criminal or deviant behaviors in the hypothesized directions. Being high in negative emotionality and

low in constraint promotes criminal or deviant coping in this scenario. However, when examining the interactions between these traits and certain combinations of injustice, those who are high in constraint and with an external locus of control are less likely to engage in violence and drinking and drug use. Last, those who are high in constraint are less likely to steal upon the experience of procedural and interactional injustice. The interactions between personality and injustice, however, were mainly non-significant. In the next section, I present the main findings for the Group Project scenario.

Table 21: Logit Regression Predicting Violence in Club Scenario with Negative Emotionality and Injustice Interaction[49]

Club Violence	Model 1	
	Odds Ratios (SE)	p-value
Low Procedural Justice	2.033 (1.202)	0.230
Low Interactional Justice	1.750 (0.996)	0.325
Low Legitimacy	0.756 (0.286)	0.460
Low PJ * Low IJ	0.829 (0.647)	0.811
Female	0.141 (0.062)***	0.000
Race (White)	0.740 (0.279)	0.425
Negative Emotionality	1.049 (0.062)	0.420
Constraint	0.906 (0.034)**	0.009
Locus of Control	1.012 (0.050)	0.814
Anger In	0.956 (0.047)	0.364
Anger Out	1.063 (0.050)	0.195
Negative Emotionality * Low PJ	1.078 (0.080)	0.311
Negative Emotionality * Low IJ	1.025 (0.078)	0.743
Negative Emotionality * Low PJ * Low IJ	0.849 (0.090)	0.121
N	265	
LR χ^2(df)	52.85(14)***	0.000
Log Likelihood	-97.429	
Pseudo R^2	0.213	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[49] The VIF is above four for constraint (4.56), the interaction between constraint and procedural injustice (4.12) and the interaction between constraint and interactional injustice (4.13).

Table 22: Logit Regression Predicting Violence in Club Scenario with Constraint and Injustice Interaction

Club Violence	*Model 1*	
	Odds Ratios (SE)	p-value
Low Procedural Justice	2.943 (1.747)$^{+}$	0.069
Low Interactional Justice	2.007 (1.233)	0.257
Low Legitimacy	0.701 (0.268)	0.353
Low PJ *Low IJ	0.540 (0.427)	0.436
Female	0.138 (0.061)***	0.000
Race (White)	0.761 (0.288)	0.470
Negative Emotionality	1.060 (0.036)$^{+}$	0.086
Constraint	0.887 (0.083)	0.199
Locus of Control	0.997 (0.048)	0.944
Anger In	0.974 (0.049)	0.606
Anger Out	1.044 (0.050)	0.368
Constraint * Low PJ	1.069 (0.120)	0.553
Constraint * Low IJ	1.084 (0.130)	0.504
Constraint * Low PJ * Low IJ	0.820 (0.126)	0.198
N	265	
LR χ^2(df)	50.94(14)	0.000
Log Likelihood	-98.383	
Pseudo R^2	0.206	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 23: Logit Regression Predicting Violence in Club Scenario with Locus of Control and Injustice Interaction

Club Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.261 (0.852)*	0.030	2.120 (0.787)*	0.043
Low Interactional Justice	1.578 (0.590)	0.222	1.449 (0.531)	0.311
Low Legitimacy	0.755 (0.286)	0.459	0.760 (0.284)	0.463
Female	0.135 (0.058)***	0.000	0.136 (0.059)***	0.000
Race (White)	0.721 (0.272)	0.386	0.758 (0.283)	0.458
Negative Emotionality	1.073 (0.036)*	0.037	1.068 (0.036)*	0.052
Constraint	0.902 (0.035)**	0.007	0.914 (0.034)*	0.016
Locus of Control	1.122 (0.078)$^{+}$	0.098	0.980 (0.066)	0.768
Anger In	0.946 (0.047)	0.258	0.962 (0.047)	0.429
Anger Out	1.059 (0.049)	0.216	1.050 (0.050)	0.309
Locus of Control * Low PJ	0.800 (0.076)*	0.019	--	--
Locus of Control * Low IJ	--	--	1.035 (0.094)	0.701
N	265		265	
LR χ^2(df)	54.32(11)***	0.000	48.61(11)***	0.000
Log Likelihood	-96.692		-99.546	
Pseudo R^2	0.219		0.196	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 24: Logit Regression Predicting Drinking and Drug Use in Club Scenario with Negative Emotionality and Injustice Interaction

Club Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.969 (0.259)	0.906	0.975 (0.259)	0.925
Low Interactional Justice	1.977 (0.539)**	0.012	2.003 (0.546)**	0.011
Low Legitimacy	0.959 (0.258)	0.878	0.929 (0.249)	0.784
Female	0.867 (0.237)	0.602	0.857 (0.234)	0.572
Race (White)	3.372 (0.942)***	0.000	3.399 (0.950)***	0.000
Negative Emotionality	1.086 (0.033)**	0.007	1.038 (0.030)	0.206
Constraint	0.910 (0.027)***	0.001	0.915 (0.027)**	0.002
Locus of Control	0.998 (0.034)	0.954	1.000 (0.034)	0.994
Anger In	1.011 (0.035)	0.756	1.013 (0.035)	0.707
Anger Out	0.966 (0.034)	0.326	0.965 (0.034)	0.313
Negative Emotionality * Low PJ	0.942 (0.035)	0.105	--	--
Negative Emotionality * Low IJ	--	--	1.037 (0.039)	0.327
N	267		267	
LR χ^2(df)	42.34(11)***	0.000	40.65(11)***	0.000
Log Likelihood	-163.808		-164.654	
Pseudo R^2	0.114		0.110	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 25: Logit Regression Predicting Drinking and Drug Use in Club Scenario with Constraint and Injustice Interaction[50]

Club Drinking and Drug Use	Model 1	
	Odds Ratios (SE)	p-value
Low Procedural Justice	0.670 (0.254)	0.290
Low Interactional Justice	1.326 (0.503)	0.457
Low Legitimacy	0.917 (0.250)	0.752
Low PJ * Low IJ	2.375 (1.129)	0.111
Female	0.920 (0.256)	0.765
Race (White)	3.511 (0.996)***	0.000
Negative Emotionality	1.054 (0.026)*	0.034
Constraint	0.828 (0.055)**	0.004
Locus of Control	0.995 (0.034)	0.883
Anger In	1.018 (0.036)	0.609
Anger Out	0.969 (0.035)	0.381
Constraint * Low PJ	1.161 (0.096)$^{+}$	0.071
Constraint * Low IJ	1.158 (0.097)$^{+}$	0.080
Constraint * Low PJ * Low IJ	0.792 (0.091)*	0.043
N	267	
LR χ^2(df)	46.83(14)***	0.000
Log Likelihood	-161.563	
Pseudo R^2	0.127	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[50] The VIF is above four for constraint (4.56), the interaction between constraint and procedural injustice (4.12), and the interaction between constraint and interactional injustice (4.13).

Table 26: Logit Regression Predicting Drinking and Drug use in Club Scenario with Locus of Control and Injustice Interaction

Club Drinking and Drug Use	Model 1	
	Odds Ratios (SE)	p-value
Low Procedural Justice	0.639 (0.240)	0.234
Low Interactional Justice	1.363 (0.514)	0.411
Low Legitimacy	0.905 (0.246)	0.714
Low PJ * Low IJ	2.422 (1.315)	0.103
Female	0.862 (0.237)	0.589
Race (White)	3.494 (0.991)***	0.000
Negative Emotionality	1.054 (0.026)*	0.034
Constraint	0.913 (0.027)**	0.002
Locus of Control	0.993 (0.059)	0.910
Anger In	1.009 (0.035)	0.807
Anger Out	0.983 (0.036)	0.639
Locus of Control * Low PJ	1.064 (0.100)	0.513
Locus of Control * Low IJ	1.071 (0.093)	0.431
Locus of Control * Low PJ * Low IJ	0.777 (0.106)$^{+}$	0.065
N	267	
LR χ^2(df)	46.95(14)***	0.000
Log Likelihood	-161.506	
Pseudo R^2	0.127	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 27: Logit Regression Predicting Stealing in Club Scenario with Constraint and Injustice Interaction[51]

Club Stealing	Model 1	
	Odds Ratios (SE)	p-value
Low Procedural Justice	1.776 (0.674)	0.130
Low Interactional Justice	1.062 (0.437)	0.884
Low Legitimacy	0.734 (0.210)	0.279
Low PJ * Low IJ	0.876 (0.498)	0.816
Female	0.587 (0.171)$^{+}$	0.068
Race (White)	1.202 (0.345)	0.523
Negative Emotionality	1.043 (0.027)	0.101
Constraint	0.941 (0.057)	0.319
Locus of Control	1.003 (0.036)	0.924
Anger In	1.002 (0.037)	0.953
Anger Out	0.980 (0.037)	0.596
Constraint * Low PJ	1.098 (0.085)	0.227
Constraint * Low IJ	0.973 (0.085)	0.755
Constraint * Low PJ * Low IJ	0.816 (0.097)$^{+}$	0.088
N	266	
LR χ^2(df)	28.09(14)**	0.014
Log Likelihood	-151.849	
Pseudo R^2	0.085	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[51] The VIF is above four for constraint (4.56), the interaction between constraint and procedural injustice (4.12), and the interaction between constraint and interactional injustice (4.13).

3. Group Project Scenario

H1: Under conditions of distributive injustice, the experience of procedural or interactional injustice will promote crime or deviance.

Hypothesis 1 is partially supported for the Group Project scenario. Procedural injustice and interactional injustice significantly predict violence in this situation (Model 1, Table 28). When controlling for anger expression, the experience of procedural injustice increases the odds of choosing to engage in violence by 2.723 times ($p = 0.013$), while the experience of interactional injustice increases these odds by 2.221 times ($p = 0.045$) (Table 28).

[Table 28 about here]

Drinking and drug use, however, are not impacted by the experience of either type of injustice (Table 29). This is surprising because I expected that the Group Project scenario would promote the occurrence of an internal attribution for harm experienced, which would promote depression and increase the likelihood of drug and alcohol use. Yet, the emotion of depression is not adequately evoked in this scenario (Table 2). Frustration and anger are the strongest emotions that occurred in response to this scenario and these emotions are more highly associated with violence, which would explain why procedural and interactional injustice did impact the intention to violently respond to the stress produced by this scenario.

[Table 29 about here]

H2: The experience of interactional injustice is a stronger predictor of crime or deviance than the experience of procedural injustice.

Hypothesis 2 is not supported for the Group Project scenario. Interactional injustice did not significantly predict drinking and drug use. Although interactional

injustice does increase the odds of violence in response to this scenario, this effect is not as robust and the odds ratios are slightly less than that of procedural injustice (Table 28). Next, I test how the interaction between procedural and interactional injustice predicts criminal or deviant behavior in this scenario.

Table 28: Logit Regression Predicting Violence in Group Project Scenario

Group Project Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.311 (0.880)*	0.028	2.723 (1.100)**	0.013
Low Interactional Justice	2.046 (0.781)$^{+}$	0.061	2.221 (0.883)*	0.045
Low Legitimacy	0.744 (0.283)	0.437	0.652 (0.263)	0.290
Female	0.079 (0.038)***	0.000	0.082 (0.040)***	0.000
Race (White)	0.464 (0.186)$^{+}$	0.055	0.460 (0.192)$^{+}$	0.063
Negative Emotionality	1.080 (0.030)**	0.005	1.093 (0.041)*	0.017
Constraint	0.857 (0.034)***	0.000	0.862 (0.035)***	0.000
Locus of Control	0.979 (0.046)	0.654	0.989 (0.050)	0.823
Anger In			0.982 (0.053)	0.739
Anger Out			0.979 (0.050)	0.679
N	278		267	
LR χ^2(df)	74.25(8)***	0.000	69.76(10)***	0.000
Log Likelihood	-93.862		-87.804	
Pseudo R^2	0.283		0.284	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 29: Logit Regression Predicting Drinking and Drug Use in Group Project Scenario

Group Project Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.176 (0.331)	0.566	1.270 (0.367)	0.408
Low Interactional Justice	1.175 (0.335)	0.572	1.203 (0.349)	0.525
Low Legitimacy	1.325 (0.374)	0.319	1.238 (0.357)	0.458
Female	0.571 (0.163)*	0.049	0.599 (0.174)$^{+}$	0.078
Race (White)	3.253 (0.952)***	0.000	3.430 (1.029)***	0.000
Negative Emotionality	1.052 (0.021)**	0.011	1.037 (0.026)	0.148
Constraint	0.878 (0.027)***	0.000	0.882 (0.028)***	0.000
Locus of Control	0.964 (0.034)	0.293	0.974 (0.035)	0.455
Anger In			1.033 (0.039)	0.390
Anger Out			0.996 (0.038)	0.926
N	278		267	
LR χ^2(df)	48.44(8)***	0.000	45.23(10)***	0.000
Log Likelihood	-152.961		-147.334	
Pseudo R^2	0.137		0.133	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H2a: Procedural and interactional injustice will interact such that the effect of injustice on crime will be greatest when individuals experience both of these types of injustice.

The interaction between interactional and procedural injustice did not significantly predict criminal or deviant behavior and therefore, Hypothesis 2a is not supported for the Group Project scenario (Tables 30 and 31). Only procedural injustice predicted violent behavior at the one-tailed level when controlling for anger expression (Table 31, Model 2). That is, the experience of procedural injustice increases the odds of engaging in violence by 2.223 times (one-tailed $p = 0.082$) even when controlling for the interaction between procedural and interactional injustice. Similar to the Club scenario, this scenario showcases how only one form of injustice (in addition to distributive injustice) is necessary to increase one's propensity for engaging in crime or deviance when presented with a stressful situation. Specifically, from the Club and Group Project scenarios, it appears that procedural injustice is a stronger predictor of violence than interactional injustice.

[Tables 30 and 31 about here]

Table 30: Logit Regression Predicting Violence in Group Project Scenario with Injustice Interaction

Group Project Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.838 (0.971)	0.249	2.223 (1.271)	0.163
Low Interactional Justice	1.548 (0.917)	0.461	1.725 (1.118)	0.401
Low Legitimacy	0.747 (0.285)	0.443	0.651 (0.263)	0.287
Low PJ * Low IJ	1.593 (1.208)	0.539	1.492 (1.214)	0.722
Female	0.078 (0.038)***	0.000	0.081 (0.040)***	0.000
Race (White)	0.458 (0.184)*	0.052	0.458 (0.191)$^{+}$	0.062
Negative Emotionality	1.081 (0.030)**	0.005	1.093 (0.041)*	0.017
Constraint	0.858 (0.034)***	0.000	0.863 (0.035)***	0.000
Locus of Control	0.978 (0.046)	0.640	0.988 (0.050)	0.814
Anger In			0.986 (0.053)	0.794
Anger Out			0.974 (0.051)	0.620
N	278		267	
LR χ^2(df)	74.63(9)***	0.000	70.00(11)***	0.000
Log Likelihood	-93.673		-87.683	
Pseudo R^2	0.285		0.285	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 31: Logit Regression Predicting Drinking and Drug Use in Group Project Scenario with Injustice Interaction

Group Project Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.019 (0.395)	0.961	1.029 (0.408)	0.942
Low Interactional Justice	1.003 (0.412)	0.994	0.949 (0.401)	0.901
Low Legitimacy	1.322 (0.373)	0.323	1.229 (0.354)	0.475
Low PJ * Low IJ	1.353 (0.761)	0.591	1.563 (0.903)	0.440
Female	0.574 (0.164)*	0.051	0.602 (0.176)$^{+}$	0.082
Race (White)	3.210 (0.943)***	0.000	3.388 (1.018)***	0.000
Negative Emotionality	1.052 (0.021)**	0.010	1.037 (0.026)	0.151
Constraint	0.878 (0.027)***	0.000	0.881 (0.028)***	0.000
Locus of Control	0.963 (0.034)	0.287	0.973 (0.035)	0.451
Anger In			1.037 (0.039)	0.341
Anger Out			0.994 (0.038)	0.878
N	278		267	
LR χ^2(df)	48.73(9)***	0.000	45.83(11)***	0.000
Log Likelihood	-152.816		-147.035	
Pseudo R^2	0.138		0.135	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H3: Having peers who fail to endorse the perpetrator of injustice and who support criminal or deviant behaviors in response to that injustice will increase the likelihood that individuals respond to the injustice with crime or deviance. Having peers who endorse a perpetrator of injustice and support conventional behaviors in response to that injustice will decrease the likelihood that individuals respond to the injustice with crime or deviance.

The relationship between injustice and crime, however, may be impacted by the legitimacy granted to criminal or deviant behavior. Legitimizing drinking and drug use in the Group Project scenario, however, does not significantly predict the likelihood of these behaviors (Tables 29 and 31).[52] Low legitimacy of conventional behavior, however, does interact with interactional injustice when predicting violence at the one-tailed level when controlling for anger expression.[53] Namely, when drinking and drug use were endorsed and interactional injustice was experienced, the odds of engaging in violent behavior increase by 3.508 times (one-tailed $p = 0.059$) (Table 32). Furthermore, procedural injustice still predicts violent behavior when controlling for the relationship between interactional injustice and legitimacy, such that the experience of procedural injustice increases the odds of violence by 2.353 times ($p = 0.026$). Accounting for anger expression, the experience of procedural injustice increases the odds of engaging in violence by 2.797 times ($p = 0.012$) (Table 32).

[Table 32 about here]

In contrast, Table 33 indicates that the interaction between interactional injustice and low conventional legitimacy reduces the likelihood of drinking and drug use. The odds that individuals will drink and use drugs decrease by 67 percent when interactional

[52] An ANOVA revealed an effect of legitimacy such that legitimizing drinking and drug use increased the likelihood that individuals would choose to engage in these behaviors at the one-tailed level when accounting for gender and race (Mean of Low Legitimacy= 3.355; $F(5,1) = 2.55$; one-tailed $p = 0.056$; in comparison to Mean of High Legitimacy = 2.951).

[53] The interaction between procedural injustice and legitimacy is not significant and therefore is not reported.

injustice is experienced and a peer endorsed these behaviors in response to the situation presented in this scenario. Controlling for anger expression, the odds that individuals will drink and use drugs upon the experience of injustice, and when these behaviors are endorsed, decrease by 64 percent (Table 33). Perhaps, this is due to the fact that the interaction between low conventional legitimacy and interactional injustice facilitates a more active form of criminal behavior, i.e., violence, in the Group Project scenario (Table 32).

[Table 33 about here]

Summary: Hypothesis 3 is somewhat supported. Criminal or deviant behaviors are more likely when crime and deviance are endorsed and interactional injustice is experienced. It could be that the association between interactional injustice and violence is due to the fact that: 1) males are more likely than females to engage in this form of behavior; and 2) males are more likely than females to be affected by interactional injustice. Next, I examine the relationship gender has with injustice and crime and test for the interaction between gender and interactional injustice.

Table 32: Logit Regression Predicting Violence in Group Project Scenario with Legitimacy and Injustice Interaction

Group Project Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.353 (0.902)*	0.026	2.797 (1.141)**	0.012
Low Interactional Justice	1.263 (0.689)	0.668	1.211 (0.671)	0.730
Low Legitimacy	0.470 (0.252)	0.159	0.339 (0.201)$^{+}$	0.069
Low IJ * Low Legit	2.562 (1.947)	0.216	3.508 (2.811)	0.117
Female	0.079 (0.039)***	0.000	0.081 (0.040)***	0.000
Race (White)	0.486 (0.195)$^{+}$	0.073	0.493 (0.207)$^{+}$	0.092
Negative Emotionality	1.079 (0.030)**	0.006	1.096 (0.042)*	0.016
Constraint	0.861 (0.034)***	0.000	0.866 (0.035)***	0.000
Locus of Control	0.974 (0.047)	0.584	0.982 (0.050)	0.723
Anger In			0.980 (0.052)	0.706
Anger Out			0.973 (0.051)	0.601
N	278		267	
LR χ^2(df)	75.80(9)***	0.000	72.27(11)***	0.000
Log Likelihood	-93.088		-86.551	
Pseudo R^2	0.289		0.295	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 33: Logit Regression Predicting Drinking and Drug Use in Group Project Scenario with Legitimacy and Injustice Interaction

Group Project Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.171 (0.333)	0.579	1.272 (0.371)	0.409
Low Interactional Justice	2.111 (0.888)$^{+}$	0.075	2.027 (0.856)$^{+}$	0.094
Low Legitimacy	2.231 (0.883)*	0.043	1.993 (0.803)$^{+}$	0.087
Low IJ * Low Legit	0.330 (0.191)$^{+}$	0.056	0.364 (0.214)$^{+}$	0.086
Female	0.545 (0.157)*	0.036	0.574 (0.169)$^{+}$	0.060
Race (White)	3.180 (0.938)***	0.000	3.346 (1.010)***	0.000
Negative Emotionality	1.056 (0.021)**	0.007	1.042 (0.027)	0.107
Constraint	0.874 (0.027)***	0.000	0.878 (0.028)***	0.000
Locus of Control	0.969 (0.034)	0.367	0.978 (0.035)	0.538
Anger In			1.032 (0.039)	0.412
Anger Out			0.996 (0.038)	0.911
N	278		267	
LR χ^2(df)	52.17(9)***	0.000	48.22(11)***	0.000
Log Likelihood	-151.095		-145.837	
Pseudo R^2	0.147		0.142	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H4: Women will be less likely than men to engage in criminal or deviant behaviors in response to injustice.

Hypothesis 4 is supported for the Group Project scenario. Women are consistently less likely than men to indicate that they would engage in violence and drinking and drug use in response to the situations presented in this scenario. Understanding how types of injustice may interact with gender may further our comprehension of this relationship.

H4a: Interactional injustice will increase the likelihood of crime or deviance for men and not for women.

The Group Project scenario supports the argument that men and women are differentially affected by interactional injustice, thus supporting Hypothesis 4a. Specifically, interactional injustice promotes the occurrence of both violence and drug use in this scenario among men, but reduces the likelihood that women will engage in these behaviors (Tables 34-37). Interactional injustice increases the odds that men engage in violence by 4.771 ($p = 0.002$) times (Table 35) and drinking and drug use by 3.437 times ($p = 0.006$) (Table 37). The effects of interactional injustice on reducing violence by females (OR = 0.133; one-tailed $p = 0.068$) (Table 35) and drinking and drug use by females (OR = 0.549; one-tailed $p = 0.088$) (Table 37), however, are only marginally significant at the one-tailed level. Females are 87 percent less likely to engage in violence and 45 percent less likely to drink and use drugs when they experience interactional injustice.

Interestingly, procedural injustice also facilitates violence among men, such that this form of injustice increases the odds of violence by 3.277 times ($p = 0.013$); procedural injustice does not significantly affect the propensity of this behavior for women. Consequently, males appear to be more sensitive to the experience of injustice

than females. This suggests that differences in socialization and gender norms play an important role in affecting the injustice-crime relationship.

[Tables 34-37 about here]

Table 34: Logit Regression Predicting Violence in Group Project Scenario with Gender and Injustice Interaction

Group Project Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.930 (1.222)**	0.010	2.831 (1.285)*	0.022
Low Interactional Justice	4.462 (2.144)**	0.002	2.228 (0.888)*	0.044
Low Legitimacy	0.640 (0.264)	0.280	0.655 (0.265)	0.296
Female	0.271 (0.156)*	0.023	0.093 (0.077)**	0.004
Race (White)	0.403 (0.174)*	0.035	0.454 (0.192)$^{+}$	0.062
Female * Low IJ	0.040 (0.049)**	0.009	--	--
Female * Low PJ	--	--	0.825 (0.838)	0.850
Negative Emotionality	1.116 (0.044)**	0.006	1.093 (0.041)*	0.017
Constraint	0.871 (0.037)***	0.001	0.863 (0.035)***	0.000
Locus of Control	0.989 (0.052)	0.839	0.988 (0.050)	0.818
Anger In	0.957 (0.053)	0.426	0.982 (0.053)	0.739
Anger Out	0.981 (0.052)	0.713	0.980 (0.050)	0.691
N	267		267	
LR χ^2(df)	79.15(11)***	0.000	69.79(11)***	0.000
Log Likelihood	-83.109		-87.786	
Pseudo R^2	0.323		0.285	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 35: Logit Regression Predicting Violence in Group Project Scenario by Gender

Group Project Violence	Males		Females	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	3.277 (1.562)**	0.013	4.281 (5.181)	0.230
Low Interactional Justice	4.771 (2.364)**	0.002	0.133 (0.180)	0.136
Low Legitimacy	0.453 (0.227)	0.114	1.267 (1.400)	0.830
Race (White)	0.369 (0.177)*	0.037	0.868 (0.944)	0.896
Negative Emotionality	1.143 (0.056)**	0.006	1.089 (0.111)	0.404
Constraint	0.914 (0.043)$^{+}$	0.059	0.716 (0.077)**	0.002
Locus of Control	1.019 (0.061)	0.757	0.798 (0.120)	0.133
Anger In	0.962 (0.062)	0.544	0.961 (0.135)	0.779
Anger Out	0.973 (0.060)	0.662	0.913 (0.127)	0.512
N	131		136	
LR χ^2(df)	36.01(9)***	0.000	21.52(9)**	0.011
Log Likelihood	-61.761		-16.823	
Pseudo R^2	0.226		0.390	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 36: Logit Regression Predicting Drinking and Drug Use in Group Project Scenario with Gender and Injustice Interaction

Group Project Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.225 (0.360)	0.489	1.535 (0.617)	0.287
Low Interactional Justice	2.716 (1.129)*	0.016	1.197 (0.348)	0.535
Low Legitimacy	1.186 (0.348)	0.562	1.249 (0.361)	0.441
Females	1.306 (0.525)	0.506	0.740 (0.314)	0.478
Race (White)	3.292 (1.005)***	0.000	3.320 (1.009)***	0.000
Gender * Low IJ	0.184 (0.111)**	0.005	--	--
Gender * Low PJ	--	--	0.670 (0.3930	0.496
Negative Emotionality	1.053 (0.028)*	0.051	1.038 (0.026)	0.141
Constraint	0.884 (0.029)***	0.000	0.884 (0.028)***	0.000
Locus of Control	0.968 (0.035)	0.378	0.972 (0.035)	0.435
Anger In	1.012 (0.039)	0.749	1.032 (0.039)	0.398
Anger Out	0.992 (0.039)	0.841	0.999 (0.039)	0.985
N	267		267	
LR χ^2(df)	53.30(11)***	0.000	45.69(11)***	0.000
Log Likelihood	-143.301		-147.102	
Pseudo R^2	0.157		0.134	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 37: Logit Regression Predicting Drinking and Drug Use in Group Project Scenario by Gender

Group Project Drinking and Drug Use	Males		Females	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.647 (0.700)	0.240	1.122 (0.507)	0.799
Low Interactional Justice	3.437 (1.554)**	0.006	0.549 (0.243)	0.175
Low Legitimacy	0.634 (0.289)	0.318	1.606 (0.695)	0.273
Race (White)	2.729 (1.166)*	0.019	3.739 (1.787)**	0.006
Negative Emotionality	1.128 (0.047)**	0.004	1.010 (0.041)	0.804
Constraint	0.907 (0.042)*	0.034	0.867 (0.041)**	0.002
Locus of Control	0.910 (0.050)$^{+}$	0.089	1.006 (0.054)	0.916
Anger In	1.003 (0.055)	0.950	1.039 (0.058)	0.498
Anger Out	0.992 (0.057)	0.884	0.981 (0.056)	0.740
N	131		136	
LR χ^2(df)	35.17(9)***	0.000	24.44(9)**	0.004
Log Likelihood	-69.514		-69.276	
Pseudo R^2	0.202		0.150	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H5: Individuals high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to engage in criminal or deviant behavior in response to injustice than those who do not possess these traits.

Being high in negative emotionality increased the likelihood of violence and drinking and drug use in the Group Project scenario, while being high in constraint reduced the likelihood of these behaviors (Tables 28-37). Negative emotionality, however, did not significantly impact the odds of engaging in violence and drinking and drug use for females (Tables 35 and 37) or when controlling for anger expression.

Locus of control did not have any effect on criminal or deviant behavior in this scenario when examining males and females together. Having an external locus of control reduced the likelihood of violence among women at the one-tailed level (OR = 0.798; one-tailed p = 0.067). That is, females who are externally controlled are 20 percent less likely to engage in violence than those who are internally controlled (Table 35). Moreover, having an external locus of control reduced the likelihood of drinking and drug use among males (OR: 0.910; p = 0.089). That is, males who are externally controlled are 9 percent less likely to drink and use drugs (Table 37).

When examining the interactions between personality traits and injustice, the results reveal that negative emotionality, constraint, and locus of control do not interact with injustice to predict drinking and drug use in the Group Project scenario. However, the likelihood of violence decreases by 17 percent when individuals who are high in constraint are presented with a procedural injustice (OR = 0.830; p = 0.028) (Table 38).

[Table 38 about here]

Summary: The impact of personality traits on criminal or deviant behaviors generally reveals that being high in negative emotionality and low in constraint increases

the likelihood of crime and deviance. These traits may also differentially impact males and females. Despite having higher levels of negative emotionality (as revealed by this study), females were not more likely than males to engage in violence and drinking and drug use. Females may not be expressing their negative emotions in deviant ways. In the next section, I present the findings from the final scenario.

Table 38: Logit Regression Predicting Violence in Group Project Scenario with Constraint and Injustice Interaction

Group Project Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.073 (0.880)$^{+}$	0.086	2.686 (1.088)*	0.015
Low Interactional Justice	2.082 (0.843)$^{+}$	0.070	2.107 (0.877)	0.073
Low Legitimacy	0.656 (0.270)	0.306	0.639 (0.261)	0.272
Female	0.083 (0.042)***	0.000	0.082 (0.041)***	0.000
Race (White)	0.517 (0.221)	0.122	0.453 (0.190)$^{+}$	0.060
Negative Emotionality	1.090 (0.041)*	0.022	1.095 (0.041)*	0.017
Constraint	0.959 (0.061)	0.518	0.878 (0.053)*	0.031
Locus of Control	0.998 (0.051)	0.973	0.991 (0.050)	0.861
Anger In	0.994 (0.055)	0.915	0.980 (0.053)	0.712
Anger Out	0.979 (0.052)	0.692	0.979 (0.050)	0.677
Constraint * Low PJ	0.830 (0.070)*	0.028	--	--
Constraint * Low IJ	--	--	0.968 (0.078)	0.685
N	267		267	
LR χ^2(df)	74.88(11)***	0.000	69.92(11)***	0.000
Log Likelihood	-85.246		-87.722	
Pseudo R^2	0.305		0.285	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

4. Studying Scenario

H1: Under conditions of distributive injustice, the experience of procedural or interactional injustice will promote crime or deviance.

Hypothesis 1 is mainly supported for the Studying scenario. Both procedural and interactional injustice predict violent behavior (Table 39). When controlling for anger expression, experiencing procedural injustice increases the odds that individuals will engage in violence by 2.310 times ($p = 0.043$). The odds of violence also increase by 2.197 times ($p = 0.061$) when interactional injustice is present and when anger expression is controlled. Only interactional injustice, however, predicts the likelihood that individuals will engage in cheating behavior (Table 41). Accounting for anger expression, interactional injustice increases the odds that individuals will cheat in response to situations in this scenario by 1.563 times ($p = 0.011$). Procedural and interactional injustice do not predict drinking and drug use in this scenario (Table 40).[54]

[Tables 39-41 about here]

H2: The experience of interactional injustice is a stronger predictor of crime or deviance than the experience of procedural injustice.

Hypothesis 2 is partially supported for the studying scenario. Interactional injustice predicts violence and cheating behavior, while procedural injustice is only associated with violence. The odds that procedural injustice will increase the likelihood of violence, however, are higher than that of interactional injustice. Consequently, procedural injustice appears to be a stronger predictor of violence across the scenarios. Next, I test whether the combination of these forms of injustice will predict violence, drinking and drug use, and cheating.

[54] An ANOVA reveals that interactional injustice facilitates drinking and drug use in the Studying scenario when controlling for gender and race (Mean of Low Interactional Justice = 3.505; $F(5,1) = 5.44$; $p = 0.020$; in comparison to Mean of High Interactional Justice = 2.918).

Table 39: Logit Regression Predicting Violence in Studying Scenario

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.965 (0.765)$^{+}$	0.083	2.310 (0.957)*	0.043
Low Interactional Justice	2.075 (0.838)$^{+}$	0.070	2.197 (0.923)$^{+}$	0.061
Low Legitimacy	1.467 (0.561)	0.316	1.581 (0.634)	0.254
Female	0.170 (0.075)***	0.000	0.153 (0.070)***	0.000
Race (White)	0.702 (0.278)	0.372	0.697 (0.288)	0.382
Negative Emotionality	1.123 (0.033)***	0.000	1.099 (0.040)**	0.010
Constraint	0.913 (0.035)*	0.018	0.924 (0.037)*	0.051
Locus of Control	0.949 (0.046)	0.274	0.986 (0.051)	0.789
Anger In			0.994 (0.054)	0.916
Anger Out			1.084 (0.054)	0.107
N	275		264	
LR χ^2(df)	52.55(8)***	0.000	54.43(10)***	0.000
Log Likelihood	-91.264		-85.073	
Pseudo R^2	0.224		0.242	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 40: Logit Regression Predicting Drinking and Drug Use in Studying Scenario

Studying Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.226 (0.333)	0.452	1.209 (0.343)	0.504
Low Interactional Justice	1.126 (0.308)	0.666	1.204 (0.344)	0.516
Low Legitimacy	0.635 (0.174)$^{+}$	0.098	0.739 (0.211)	0.290
Female	0.881 (0.243)	0.645	1.010 (0.291)	0.972
Race (White)	2.554 (0.707)***	0.001	2.875 (0.837)***	0.000
Negative Emotionality	1.058 (0.020)**	0.003	1.017 (0.025)	0.501
Constraint	0.918 (0.026)**	0.002	0.918 (0.027)**	0.004
Locus of Control	1.026 (0.035)	0.443	1.023 (0.037)	0.534
Anger In			1.071 (0.040)$^{+}$	0.071
Anger Out			1.033 (0.038)	0.382
N	277		266	
LR χ^2(df)	37.24(8)***	0.000	39.64(10)***	0.000
Log Likelihood	-160.755		-150.402	
Pseudo R^2	0.104		0.116	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 41: OLS Regression Predicting Cheating in Studying Scenario

Studying Cheating	Model 1		Model 2	
	b (SE)	p-value	b (SE)	p-value
Low Procedural Justice	0.270 (0.614)	0.660	-0.055 (0.612)	0.929
Low Interactional Justice	1.217 (0.618)*	0.050	1.563 (0.613)**	0.011
Low Legitimacy	1.434 (0.616)*	0.021	1.591 (0.614)**	0.010
Female	-0.635 (0.628)	0.313	-0.550 (0.624)	0.378
Race (White)	-0.336 (0.622)	0.590	-0.509 (0.621)	0.413
Negative Emotionality	0.201 (0.044)***	0.000	0.063 (0.055)	0.249
Constraint	-0.158 (0.063)**	0.012	-0.177 (0.063)**	0.005
Locus of Control	-0.071 (0.077)	0.359	-0.123 (0.077)	0.112
Anger In			0.258 (0.080)***	0.001
Anger Out			0.130 (0.080)	0.104
Constant	10.262 (3.644)**	0.005	10.297 (3.700)**	0.006
N	276		265	
F(df)	5.92(8, 267)***	0.000	6.62(10, 254)***	0.000
R^2	0.151		0.207	
Adjusted R^2	0.125		0.175	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H2a: Procedural and interactional injustice will interact such that the effect of injustice on crime will be greatest when individuals experience both of these types of injustice.

Tables 42-44 test for the interaction between procedural and interactional injustice. Hypothesis 2a is mainly supported in the Studying scenario. The interaction between procedural and interactional injustice predicts violent behavior when controlling for anger expression (OR = 4.443; p = 0.087). When individuals are treated in procedurally and interactionally unjust ways, the odds of engaging in violence are 4.443 times higher in comparison to when these forms of injustice are not present (Table 42). This same relationship exists when predicting drinking and drug use, such that the experience of interactional and procedural injustice increases the odds of individuals responding with these behaviors by 2.910 times (p = 0.067) (Table 43). The interaction between these two forms of injustice, however, is not significant when predicting cheating (Table 44). The experience of interactional injustice still increases the likelihood that students will cheat in response to this scenario, when controlling for the interaction between procedural and interactional injustice (b = 1.326; one-tailed p = 0.069).

[Tables 42-44 about here]

Summary: The experience of both procedural and interactional injustice promotes crime and deviance in this scenario. When both forms of injustice are present violence and drinking and drug use become more likely in this scenario. Next, I examine the relationship that exists between legitimacy and injustice for predicting crime and deviance within the Studying scenario.

Table 42: Logit Regression Predicting Violence In Studying Scenario with Injustice Interaction

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.937 (0.600)	0.920	0.921 (0.609)	0.901
Low Interactional Justice	1.040 (0.643)	0.950	0.905 (0.586)	0.878
Low Legitimacy	1.387 (0.537)	0.398	1.465 (0.597)	0.349
Low PJ * Low IJ	3.176 (2.597)	0.158	4.443 (3.868)$^{+}$	0.087
Female	0.161 (0.072)***	0.000	0.137 (0.065)***	0.000
Race (White)	0.708 (0.282)	0.387	0.703 (0.295)	0.401
Negative Emotionality	1.128 (0.033)***	0.000	1.103 (0.041)**	0.008
Constraint	0.909 (0.035)**	0.014	0.918 (0.038)*	0.037
Locus of Control	0.951 (0.046)	0.296	0.994 (0.052)	0.904
Anger In			1.001 (0.055)	0.981
Anger Out			1.089 (0.055)$^{+}$	0.094
N	275		264	
LR χ^2(df)	54.55(9)***	0.000	57.41(11)***	0.000
Log Likelihood	-90.264		-83.583	
Pseudo R^2	0.232		0.256	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 43: Logit Regression Predicting Drinking and Drug Use in Studying Scenario with Injustice Interaction

Studying Drinking and Drug Use	Model 1		Model 2	
Low Procedural Justice	0.706 (0.283)	0.385	0.692 (0.288)	0.375
Low Interactional Justice	0.647 (0.261)	0.281	0.684 (0.288)	0.367
Low Legitimacy	0.613 (0.170)$^{+}$	0.077	0.714 (0.206)	0.243
Low PJ * Low IJ	2.831 (1.580)$^{+}$	0.062	2.910 (1.698)$^{+}$	0.067
Female	0.852 (0.238)	0.567	0.972 (0.283)	0.932
Race (White)	2.631 (0.735)***	0.001	2.960 (0.870)***	0.000
Negative Emotionality	1.063 (0.021)**	0.002	1.020 (0.026)	0.431
Constraint	0.914 (0.026)**	0.002	0.912 (0.027)**	0.002
Locus of Control	1.029 (0.035)	0.413	1.026 (0.037)	0.484
Anger In			1.077 (0.041)*	0.054
Anger Out			1.031 (0.038)	0.405
N	277		266	
LR χ^2(df)	40.77(9)***	0.000	43.05(11)***	0.000
Log Likelihood	-158.988		-148.695	
Pseudo R^2	0.114		0.127	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 44: OLS Regression Predicting Cheating in Studying Scenario with Injustice Interaction

Studying Cheating	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.226 (0.896)	0.801	-0.293 (0.888)	0.742
Low Interactional Justice	1.172 (0.896)	0.192	1.326 (0.888)	0.137
Low Legitimacy	1.432 (0.618)*	0.021	1.578 (0.616)**	0.011
Low PJ * Low IJ	0.085 (1.243)	0.945	0.458 (1.235)	0.711
Female	-0.637 (0.631)	0.313	-0.566 (0.626)	0.367
Race (White)	-0.335 (0.624)	0.592	-0.504 (0.622)	0.419
Negative Emotionality	0.201 (0.044)***	0.000	0.065 (0.055)	0.240
Constraint	-0.158 (0.063)**	0.012	-0.179 (0.063)**	0.005
Locus of Control	-0.071 (0.077)	0.361	-0.123 (0.078)	0.114
Anger In			0.260 (0.080)***	0.001
Anger Out			0.129 (0.080)	0.108
Constant	10.288 (3.670)**	0.005	10.437 (3.726)**	0.005
N	276		265	
F(df)	5.24(9, 266)***	0.000	6.01(11, 253)***	0.000
R^2	0.151		0.207	
Adjusted R^2	0.122		0.173	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H3: Having peers who fail to endorse the perpetrator of injustice and who support criminal or deviant behaviors in response to that injustice will increase the likelihood that individuals respond to the injustice with crime or deviance. Having peers who endorse a perpetrator of injustice and support conventional behaviors in response to that injustice will decrease the likelihood that individuals respond to the injustice with crime or deviance.

Legitimacy does impact certain behavioral responses in the Studying scenario. Contrary to expectations, when cheating is endorsed, the odds of drinking and drug use decrease by 37 percent (OR = 0.635; p = 0.098) (Table 40). This effect holds when controlling for the interaction between procedural and interactional injustice (OR = 0.613; p = 0.077) (Table 43). Low legitimacy of conventional behavior, however, does not affect drinking and drug use when anger expression is controlled (Tables 40 and 43). Perhaps legitimacy reduced the likelihood of drinking and drug use because these behaviors were not endorsed in the scenario and therefore were not appropriate responses to the injustice presented. Indeed, as expected, legitimacy affects more strongly the likelihood that individuals will cheat. When cheating is endorsed, cheating increases (b = 1.434; p = 0.021). This effect holds when controlling for anger expression (b = 1.591; p = 0.010) (Table 41) and for the interaction between procedural and interactional injustice (b = 1.578; p = 0.011) (Table 44).

A three-way interaction between procedural injustice, interactional injustice, and low legitimacy of conventional behavior predicted violence in this scenario. When controlling for anger expression, the models reveal that the likelihood of violence decreases by 99 percent (OR = 0.014; p = 0.018) (Table 45), and the odds of engaging in drinking and drug use increase by 6.557 times (one-tailed p = 0.056) when injustice is

experienced and cheating is endorsed (Table 46).[55] This three-way interaction also marginally decreased the likelihood of cheating at the one-tailed level (b = -3.493; one-tailed p = 0.074) (Model 4, Table 47). Last, procedural injustice and legitimacy interacted to predict cheating in the studying scenario. When controlling for anger expression, the experience of procedural injustice and the endorsement of cheating increases the likelihood that cheating will occur (b = 3.484; p = 0.004) (Model 2, Table 47).

[Tables 45-47 about here]

Summary: Legitimacy affects the likelihood of criminal or deviant behaviors in the studying scenario. Endorsing cheating behaviors increases the likelihood that individuals will cheat in the Studying scenario. In contrast, endorsing cheating behavior decreases the odds that respondents will drink and use drugs in this scenario. This may be due to the fact that drinking and drug use were not appropriate behavioral responses in the context of the scenario. Furthermore, legitimacy does at times interact with procedural and interactional injustice to predict crime and deviance. Legitimating cheating and experiencing interactional injustice increases the likelihood of drinking and drug use, while experiencing procedural injustice facilitates cheating. A three-way interaction between low procedural justice, low interactional justice, and low legitimacy of conventional behavior does emerge when predicting crime and deviance in this scenario. This interaction decreases the likelihood of violence and cheating, and increases the likelihood of drinking and drug use. Because of multicollinearity, however, these results must be interpreted with caution.

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[55] An ANOVA also reveals that the interaction between procedural injustice, interactional injustice, and low legitimacy of conventional behavior increases the likelihood of drinking and drug use in response to the Studying scenario (Mean of Low Procedural Justice*Low Interactional Justice* Low Legitimacy = 3.963; F(9,1)= 3.83; p = 0.051; in comparison to Mean of High Procedural Justice*High Interactional Justice*High Legitimacy = 3.016).

Table 45: Logit Regression Predicting Violence in Studying Scenario with Legitimacy and Injustice Interaction[56]

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.164 (0.176)$^{+}$	0.092	0.124 (0.138)$^{+}$	0.060
Low Interactional Justice	0.304 (0.280)	0.196	0.200 (0.199)	0.106
Low Legitimacy	0.310 (0.303)	0.231	0.239 (0.242)	0.158
Low PJ * Low IJ	30.472 (40.222)**	0.010	60.321 (85.197)**	0.004
Low PJ * Low Legit	16.452 (22.789)*	0.043	25.366 (36.634)*	0.025
Low IJ * Low Legit	7.688 (9.591)	0.102	11.111 (14.628)$^{+}$	0.067
Low PJ * Low IJ * Low Legit	0.023 (0.040)*	0.028	0.014 (0.026)*	0.018
Female	0.147 (0.067)***	0.000	0.124 (0.060)***	0.000
Race (White)	0.650 (0.268)	0.297	0.618 (0.272)	0.275
Negative Emotionality	1.141 (0.035)***	0.000	1.118 (0.043)**	0.004
Constraint	0.905 (0.035)**	0.010	0.916 (0.038)*	0.032
Locus of Control	0.939 (0.047)	0.204	0.984 (0.052)	0.766
Anger In			0.991 (0.056)	0.879
Anger Out			1.104 (0.058)$^{+}$	0.062
N	275		264	
LR χ^2(df)	59.81(12)***	0.000	63.69(14)***	0.000
Log Likelihood	-87.635		-80.441	
Pseudo R^2	0.254		0.284	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[56] The VIF for the interaction between low procedural justice, low interactional justice, and low legitimacy of conventional behavior in Models 1 and 2 are 7.33 and 7.41, respectively.

Table 46: Logit Regression Predicting Drinking and Drug Use in Studying Scenario with Legitimacy and Injustice Interaction[57]

Studying Drink Drugs	Model 1		Model 2		Model 3		Model 4	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.206 (0.331)	0.495	1.178 (0.339)	0.569	0.715 (0.390)	0.538	0.771 (0.437)	0.647
Low Interactional Justice	0.650 (0.244)	0.251	0.628 (0.246)	0.235	0.517 (0.286)	0.233	0.522 (0.305)	0.266
Low Legitimacy	0.332 (0.138)**	0.008	0.346 (0.149)**	0.014	0.340 (0.201)$^{+}$	0.068	0.407 (0.249)	0.141
Low PJ * Low IJ	--	--	--	--	1.452 (1.098)	0.622	1.354 (1.076)	0.703
Low PJ * Low Legit	--	--	--	--	0.844 (0.696)	0.837	0.621 (0.536)	0.581
Low IJ * Low Legit	3.283 (1.830)*	0.033	4.089 (2.376)*	0.015	1.468 (0.120)	0.639	1.616 (1.374)	0.573
Low PJ * Low IJ * Low Legit	--	--	--	--	4.981 (5.620)	0.155	6.557 (7.740)	0.111
Female	0.866 (0.241)	0.605	1.002 (0.292)	0.996	0.817 (0.233)	0.479	0.938 (0.280)	0.831
Race (White)	2.543 (0.710)***	0.001	2.874 (0.846)***	0.000	2.681 (0.765)***	0.001	3.024 (0.911)***	0.000
Negative Emotionality	1.064 (0.021)**	0.002	1.023 (0.026)	0.365	1.067 (0.022)***	0.001	1.022 (0.027)	0.395
Constraint	0.918 (0.026)**	0.003	0.919 (0.028)**	0.005	0.914 (0.026)**	0.002	0.911 (0.028)**	0.002
Locus of Control	1.025 (0.035)	0.470	1.022 (0.037)	0.556	1.029 (0.036)	0.419	1.027 (0.038)	0.480
Anger In			1.073 (0.041)$^{+}$	0.068			1.083 (0.042)*	0.040
Anger Out			1.033 (0.038)	0.386			1.034 (0.039)	0.372
N	277		266		277		266	
LR χ^2(df)	41.87(9)***	0.000	45.65(11)***	0.000	49.45(12)***	0.000	53.02(14)***	0.000
Log Likelihood	-158.439		-147.395		-154.698		-143.714	
Pseudo R^2	0.117		0.134		0.138		0.156	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[57] The VIF for the interaction between low procedural justice, low interactional justice, and low legitimacy of conventional behavior in Models 3 and 4 are 7.33 and 7.41, respectively.

Table 47: OLS Regression Predicting Cheating in Studying Scenario with Legitimacy and Injustice Interaction[58]

Studying Cheating	Model 1		Model 2		Model 3		Model 4	
	b (SE)	p-value	b (SE)	p-value	b (SE)	p-value	b (SE)	p-value
Low Procedural Justice	-1.221 (0.849)	0.152	-1.775 (0.848)*	0.037	-2.244 (1.254)$^{+}$	0.075	-2.948 (1.245)*	0.019
Low Interactional Justice	1.165 (0.613)$^{+}$	0.058	1.483 (0.605)*	0.015	0.507 (1.262)	0.688	0.890 (1.252)	0.478
Low Legitimacy	-0.142 (0.874)	0.871	-0.199 (0.866)	0.819	-0.757 (1.285)	0.556	-0.540 (1.263)	0.670
Low PJ * Low IJ	--	--	--	--	1.940 (1.725)	0.262	2.251 (1.710)	0.189
Low PJ * Low Legit	3.071 (1.219)**	0.012	3.484 (1.206)**	0.004	5.002 (1.774)**	0.005	5.322 (1.742)**	0.002
Low IJ * Low Legit	--	--	--	--	1.150 (1.770)	0.516	0.605 (1.745)	0.729
Low PJ * Low IJ * Low Legit	--	--	--	--	-3.676 (2.450)	0.135	-3.493 (2.409)	0.148
Female	-0.687 (0.623)	0.271	-0.610 (0.615)	0.322	-0.687 (0.624)	0.272	-0.631 (0.617)	0.307
Race (White)	-0.292 (0.617)	0.636	-0.505 (0.612)	0.410	-0.265 (0.618)	0.668	-0.462 (0.612)	0.451
Negative Emotionality	0.200 (0.043)***	0.000	0.055 (0.054)	0.305	0.204 (0.044)***	0.000	0.057 (0.055)	0.295
Constraint	-0.155 (0.062)**	0.013	-0.174 (0.062)**	0.005	-0.158 (0.062)**	0.012	-0.178 (0.062)**	0.004
Locus of Control	-0.081 (0.077)	0.294	-0.139 (0.077)$^{+}$	0.070	-0.085 (0.077)	0.269	-0.141 (0.076)$^{+}$	0.066
Anger In			0.263 (0.079)***	0.001			0.266 (0.079)***	0.001
Anger Out			0.144 (0.079)$^{+}$	0.069			0.146 (0.079)$^{+}$	0.064
Constant	11.069 (3.622)**	0.002	11.295 (3.664)**	0.002	11.452 (3.657)**	0.002	11.681 (3.688)**	0.002
N	276		265		276		265	
F(df)	6.07(9, 266)***	0.000	6.95(11, 253)***	0.000	4.77(12, 263)***	0.000	5.70(14, 250)***	0.000
R^2	0.171		0.232		0.179		0.242	
Adjusted R^2	0.142		0.199		0.141		0.200	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[58] The VIF for the interaction between low procedural justice, low interactional justice, and low legitimacy of conventional behavior in Models 3 and 4 are 7.39 and 7.47, respectively.

H4: Women will be less likely than men to engage in criminal or deviant behaviors in response to injustice.

Besides legitimacy, gender is another important conditioning factor of the injustice crime relationship. Females are less likely than males to engage in violence (Tables 39, 42, 45). The relationship between gender and drinking and drug use, and cheating (Table 41), however, were not significant. Therefore, Hypothesis 4 is partially supported in the Studying scenario. The association between gender and crime and deviance is not surprising, as a greater proportion of crimes committed by females involve minor crimes, such as drinking and drug use, in contrast to violent crimes (Agnew 2009). Yet, the relationship between gender and crime may be further qualified by the effect that injustice has on the behavior of men and women.

H4a: Interactional injustice will increase the likelihood of crime or deviance for men and not for women.

Hypothesis 4a is not supported for the Studying scenario. Gender does not interact with interactional injustice (Tables 49-51). Only a marginally significant effect of procedural injustice emerges at the one-tailed level, indicating that procedural injustice decreases cheating among females and not males ($b = -1.598$; one-tailed $p = 0.098$) (Table 50). When examining males and females separately, only interactional injustice increases the likelihood of cheating among males ($b = 2.529$; $= 0.004$) (Table 51).

[Tables 48-51 about here]

Table 48: Logit Regression Predicting Violence in Studying Scenario with Gender and Injustice Interaction

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.340 (0.974)*	0.041	2.873 (1.411)*	0.032
Low Interactional Justice	2.496 (1.242)$^{+}$	0.066	2.247 (0.950)$^{+}$	0.056
Low Legitimacy	1.583 (0.636)	0.253	1.602 (0.645)	0.241
Female	0.205 (0.150)*	0.030	0.241 (0.165)*	0.037
Race (White)	0.691 (0.286)	0.372	0.718 (0.298)	0.425
Female * Low IJ	0.632 (0.590)	0.623	--	--
Female * Low PJ	--	--	0.464 (0.418)	0.394
Negative Emotionality	1.100 (0.041)**	0.010	1.097 (0.041)**	0.013
Constraint	0.920 (0.039)*	0.046	0.924 (0.037)*	0.050
Locus of Control	0.984 (0.051)	0.754	0.991 (0.051)	0.858
Anger In	0.995 (0.054)	0.928	0.998 (0.054)	0.964
Anger Out	1.084 (0.054)	0.109	1.085 (0.055)	0.105
N	264		264	
LR χ^2(df)	54.67(11)***	0.000	55.15(11)***	0.000
Log Likelihood	-84.954		-84.712	
Pseudo R^2	0.243		0.246	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 49: Logit Regression Predicting Drinking and Drug Use in Studying Scenario with Gender and Injustice Interaction

Studying Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.229 (0.350)	0.469	1.384 (0.565)	0.426
Low Interactional Justice	1.707 (0.706)	0.196	1.215 (0.348)	0.496
Low Legitimacy	0.738 (0.212)	0.290	0.746 (0.213)	0.305
Female	1.450 (0.611)	0.378	1.160 (0.483)	0.720
Race (White)	2.918 (0.853)***	0.000	2.897 (0.846)***	0.000
Female * Low IJ	0.510 (0.291)	0.237	--	--
Female * Low PJ	--	--	0.768 (0.438)	0.644
Negative Emotionality	1.017 (0.026)	0.502	1.016 (0.025)	0.521
Constraint	0.915 (0.027)**	0.003	0.918 (0.027)**	0.004
Locus of Control	1.019 (0.037)	0.608	1.024 (0.037)	0.508
Anger In	1.072 (0.041)$^{+}$	0.068	1.073 (0.041)$^{+}$	0.066
Anger Out	1.032 (0.038)	0.398	1.033 (0.038)	0.383
N	266		266	
LR χ^2(df)	41.05(11)***	0.000	39.85(11)***	0.000
Log Likelihood	-149.699		-150.295	
Pseudo R^2	0.121		0.117	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 50: OLS Regression Predicting Cheating in Studying Scenario with Gender and Injustice Interaction

Studying Cheating	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	-0.017 (0.612)	0.978	0.748 (0.869)	0.391
Low Interactional Justice	2.352 (0.873)**	0.008	1.618 (0.614)**	0.009
Low Legitimacy	1.595 (0.613)**	0.010	1.646 (0.615)**	0.008
Female	0.273 (0.900)	0.762	0.275 (0.890)	0.758
Race (White)	-0.475 (0.621)	0.444	-0.480 (0.620)	0.440
Female * Low IJ	-1.551 (1.223)	0.206	--	--
Female * Low PJ	--	--	-1.598 (1.231)	0.195
Negative Emotionality	0.062 (0.055)	0.256	0.057 (0.055)	0.302
Constraint	-0.183 (0.063)**	0.004	-0.178 (0.063)**	0.005
Locus of Control	-0.132 (0.078)$^{+}$	0.090	-0.115 (0.078)	0.139
Anger In	0.259 (0.080)***	0.001	0.271 (0.080)***	0.001
Anger Out	0.129 (0.080)	0.106	0.130 (0.080)	0.103
Constant	10.260 (3.696)**	0.006	9.770 (3.717)**	0.009
N	265		265	
F(df)	6.17(11, 253)***	0.000	6.18(11, 253)***	0.000
R^2	0.212		0.212	
Adjusted R^2	0.177		0.178	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 51: OLS Regression Predicting Cheating in Studying Scenario by Gender

Studying Cheating	Males		Females	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	0.839 (0.863)	0.332	-0.782 (0.896)	0.385
Low Interactional Justice	2.529 (0.869)**	0.004	0.789 (0.881)	0.372
Low Legitimacy	1.922 (0.871)*	0.029	1.659 (0.885)$^{+}$	0.063
Race (White)	0.336 (0.879)	0.703	-1.421 (0.894)	0.114
Negative Emotionality	0.098 (0.075)	0.191	0.022 (0.084)	0.789
Constraint	-0.126 (0.091)	0.166	-0.234 (0.091)**	0.011
Locus of Control	-0.195 (0.110)$^{+}$	0.078	-0.062 (0.112)	0.584
Anger In	0.371 (0.115)**	0.002	0.177 (0.114)	0.123
Anger Out	0.065 (0.113)	0.566	0.171 (0.115)	0.140
Constant	5.017 (5.264)	0.342	15.230 (5.423)**	0.006
N	131		134	
F(df)	4.88(9, 121)***	0.000	3.45(9, 124)***	0.001
R^2	0.266		0.201	
Adjusted R^2	0.212		0.142	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

H5: Individuals high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to engage in criminal or deviant behavior in response to injustice than those who do not possess these traits.

Hypothesis 5 is partly supported in the Studying scenario. The likelihood of engaging in crime or deviance is highest among those who are high in negative emotionality and lowest among those who are high in constraint (Tables 39-48). When controlling for anger expression, negative emotionality does not significantly impact drinking and drug use and cheating (Tables 40, 41, 43, 44, 46, and 47), and when controlling for the interactions between gender and type of injustice (i.e., procedural and interactional injustice) (Tables 49 and 50). Constraint, however, reduces the likelihood of drinking and drug use and cheating when controlling for the interaction between gender and injustice (Tables 49 and 50). In general, locus of control does not affect the likelihood of crime or deviance in the Studying scenario. Being externally controlled only marginally decreases the likelihood of cheating when controlling for: 1) the interaction between procedural injustice and legitimacy ($b = -0.139$; $p = 0.070$); 2) the interaction between procedural injustice, interactional injustice, and legitimacy ($b = -0.141$; $p = 0.066$) (Models 2 and 4, Table 47); and 3) the interaction between gender and interactional injustice ($b = -0.132$; $p = 0.090$) (Model 1, Table 50). Last, having an external locus of control reduces the likelihood that males would cheat, and not females ($b = -0.195$; $p = 0.078$), while constraint reduced the likelihood that females would cheat ($b = -0.234$; $p = 0.011$) (Table 51).

Examining the interactions between personality traits and injustice shows that, contrary to expectations, individuals who are high in negative emotionality are less likely to engage in violence when interactional injustice is experienced in the Studying scenario

(OR = 0.847; p = 0.020) (Table 52). Constraint does not interact with injustice to predict violence in this scenario. Last, having an external locus of control reduces the likelihood that violence will occur when interactional injustice is present in this scenario (OR = 0.837; p = 0.087) (Table 53).

[Tables 52 and 53 about here]

Unexpectedly, being high in negative emotionality also reduces the likelihood of drinking and drug use when procedural and interactional injustice are present (OR = 0.875; p = 0.097) (Table 54). Constraint also decreases the odds of drinking and drug use when interactional injustice is present (OR = 0.917; one-tailed p = 0.069) (Table 55). This effect, however, is only marginally significant at the one-tailed level.

[Tables 54 and 55 about here]

Cheating is less likely to occur in the Studying scenario among individuals who are high in negative emotionality when interactional injustice is present (b = -0.183; p = 0.029) (Table 56). Also, individuals in the Studying scenario who experience procedural injustice and are externally controlled are more likely to cheat (b = 0.249; p = 0.096) (Table 57).

[Tables 56 and 57 about here]

Summary: Although the Studying scenario reveals that personality traits impact crime and deviance in expected ways, the relationship these factors have with criminal or deviant behavior is not straightforward when examining how these traits interact with injustice. Constraint reduces the likelihood of criminal or deviant behavior when injustice is present. Yet, when interactional injustice is experienced, the likelihood of engaging in violence decreases among those high in negative emotionality and with an external locus

of control. Being high in negative emotionality also decreases the likelihood of drinking and drug use when procedural and interactional injustice are present, and cheating when either of these types of injustice are experienced. In contrast, the experience of procedural injustice facilitated cheating among those who are externally controlled. In the next section, I synthesize the results presented in this chapter and discuss the contributions, limitations, and future directions of this study.

Table 52: Logit Regression Predicting Violence in Studying Scenario with Negative Emotionality and Injustice Interaction

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.125 (0.948)$^{+}$	0.091	2.094 (0.878)$^{+}$	0.078
Low Interactional Justice	2.248 (0.954)$^{+}$	0.056	4.299 (2.527)**	0.013
Low Legitimacy	1.581 (0.635)	0.254	1.551 (0.633)	0.282
Female	0.153 (0.071)***	0.000	0.158 (0.072)***	0.000
Race (White)	0.699 (0.290)	0.388	0.659 (0.280)	0.326
Negative Emotionality	1.083 (0.052)	0.101	1.236 (0.083)**	0.002
Constraint	0.923 (0.038)*	0.051	0.905 (0.039)*	0.020
Locus of Control	0.986 (0.051)	0.789	0.994 (0.051)	0.905
Anger In	0.993 (0.054)	0.890	0.993 (0.055)	0.903
Anger Out	1.083 (0.054)	0.109	1.070 (0.056)	0.193
Negative Emotionality * Low PJ	1.027 (0.059)	0.638	--	--
Negative Emotionality * Low IJ	--	--	0.847 (0.061)*	0.020
N	264		264	
LR χ^2(df)	54.65(11)***	0.000	60.71(11)***	0.000
Log Likelihood	-84.962		-81.931	
Pseudo R^2	0.243		0.270	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 53: Logit Regression Predicting Violence in Studying Scenario with Locus of Control and Injustice Interaction

Studying Violence	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	2.286 (0.942)*	0.045	2.203 (0.921)$^{+}$	0.059
Low Interactional Justice	2.326 (0.992)*	0.048	2.328 (1.003)*	0.050
Low Legitimacy	1.557 (0.629)	0.273	1.517 (0.614)	0.302
Female	0.141 (0.067)***	0.000	0.139 (0.066)***	0.000
Race (White)	0.703 (0.292)	0.396	0.675 (0.281)	0.345
Negative Emotionality	1.097 (0.041)**	0.012	1.104 (0.042)**	0.009
Constraint	0.922 (0.038)*	0.046	0.918 (0.038)*	0.036
Locus of Control	0.934 (0.067)	0.338	1.104 (0.092)	0.235
Anger In	0.995 (0.054)	0.920	0.998 (0.055)	0.969
Anger Out	1.092 (0.055)$^{+}$	0.083	1.090 (0.056)$^{+}$	0.092
Locus of Control * Low PJ	1.114 (0.110)	0.276	--	--
Locus of Control * Low IJ	--	--	0.837 (0.087)$^{+}$	0.087
N	264		264	
LR χ^2(df)	55.63(11)***	0.000	57.44(11)***	0.000
Log Likelihood	-84.471		-83.567	
Pseudo R^2	0.248		0.256	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 54: Logit Regression Predicting Drinking and Drug Use in Studying Scenario with Negative Emotionality and Injustice Interaction[59]

Studying Drinking and Drug Use	Model 1	
	Odds Ratios (SE)	p-value
Low Procedural Justice	0.631 (0.275)	0.290
Low Interactional Justice	0.681 (0.293)	0.373
Low Legitimacy	0.720 (0.210)	0.261
Low PJ * Low IJ	3.177 (1.901)*	0.054
Female	0.991 (0.292)	0.976
Race (White)	2.997 (0.892)***	0.000
Negative Emotionality	0.996 (0.041)	0.918
Constraint	0.909 (0.028)**	0.002
Locus of Control	1.025 (0.038)	0.493
Anger In	1.076 (0.042)$^{+}$	0.058
Anger Out	1.023 (0.039)	0.545
Negative Emotionality * Low PJ	1.095 (0.062)	0.110
Negative Emotionality * Low IJ	1.034 (0.061)	0.573
Negative Emotionality * Low PJ *Low IJ	0.875 (0.071)$^{+}$	0.097
N	266	
LR χ^2(df)	47.17(14)***	0.000
Log Likelihood	-146.639	
Pseudo R^2	0.139	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

[59] The VIF is above four for negative emotionality (5.25), the interaction between: negative emotionality and procedural injustice (4.34), negative emotionality and interactional injustice (4.64), and negative emotionality, low procedural justice, and low interactional justice (4.49).

Table 55: Logit Regression Predicting Drinking and Drug Use in Studying Scenario with Constraint and Injustice Interaction

Studying Drinking and Drug Use	Model 1		Model 2	
	Odds Ratios (SE)	p-value	Odds Ratios (SE)	p-value
Low Procedural Justice	1.177 (0.336)	0.569	1.249 (0.357)	0.437
Low Interactional Justice	1.249 (0.360)	0.441	1.178 (0.339)	0.569
Low Legitimacy	0.740 (0.212)	0.292	0.731 (0.210)	0.275
Female	1.016 (0.293)	0.956	0.990 (0.287)	0.973
Race (White)	2.886 (0.843)***	0.000	3.003 (0.886)***	0.000
Negative Emotionality	1.014 (0.026)	0.594	1.016 (0.026)	0.521
Constraint	0.949 (0.039)	0.200	0.959 (0.040)	0.319
Locus of Control	1.024 (0.037)	0.506	1.020 (0.037)	0.582
Anger In	1.079 (0.042)*	0.049	1.074 (0.041)$^{+}$	0.060
Anger Out	1.035 (0.039)	0.353	1.027 (0.038)	0.468
Constraint * Low PJ	0.933 (0.054)	0.237	--	--
Constraint * Low IJ	--	--	0.917 (0.054)	0.137
N	266		266	
LR χ^2(df)	41.05(11)***	0.000	41.86(11)***	0.000
Log Likelihood	-149.697		-149.291	
Pseudo R^2	0.121		0.123	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 56: OLS Regression Predicting Cheating in Studying Scenario with Negative Emotionality and Injustice Interaction

Studying Cheating	Model 1		Model 2	
	b (SE)	p-value	b (SE)	p-value
Low Procedural Justice	-0.069 (0.611)	0.910	-0.224 (0.613)	0.715
Low Interactional Justice	1.470 (0.616)*	0.018	1.538 (0.609)	0.012
Low Legitimacy	1.621 (0.614)**	0.009	1.437 (0.614)*	0.020
Female	-0.563 (0.623)	0.367	-0.593 (0.619)	0.339
Race (White)	-0.553 (0.621)	0.374	-0.514 (0.616)	0.405
Negative Emotionality	0.121 (0.070)$^{+}$	0.086	0.155 (0.068)*	0.025
Constraint	-0.177 (0.063)**	0.005	-0.195 (0.063)**	0.002
Locus of Control	-0.120 (0.077)	0.123	-0.114 (0.077)	0.140
Anger In	0.264 (0.080)**	0.001	0.263 (0.079)***	0.001
Anger Out	0.125 (0.080)	0.118	0.107 (0.080)	0.180
Negative Emotionality * Low PJ	-0.108 (0.082)	0.192	--	--
Negative Emotionality * Low IJ	--	--	-0.183 (0.083)*	0.029
Constant	7.934 (4.112)$^{+}$	0.055	7.838 (3.839)*	0.042
N	265		265	
F(df)	6.19(11, 253)***	0.000	6.54(11, 253)***	0.000
R^2	0.212		0.222	
Adjusted R^2	0.178		0.188	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

Table 57: OLS Regression Predicting Cheating in Studying Scenario with Locus of Control and Injustice Interaction

Studying Cheating	Model 1		Model 2	
	b (SE)	p-value	b (SE)	p-value
Low Procedural Justice	-0.036 (0.610)	0.953	-0.086 (0.613)	0.889
Low Interactional Justice	1.615 (0.612)**	0.009	1.552 (0.613)**	0.012
Low Legitimacy	1.505 (0.614)*	0.015	1.574 (0.615)**	0.011
Females	-0.636 (0.624)	0.309	-0.598 (0.626)	0.341
Race (Whites)	-0.469 (0.619)	0.449	-0.520 (0.621)	0.403
Negative Emotionality	0.055 (0.055)	0.319	0.063 (0.055)	0.250
Constraint	-0.179 (0.063)**	0.005	-0.183 (0.063)**	0.004
Locus of Control	-0.240 (0.104)*	0.022	-0.053 (0.108)	0.628
Anger In	0.257 (0.079)***	0.001	0.263 (0.080)***	0.001
Anger Out	0.143 (0.080)$^{+}$	0.074	0.130 (0.080)	0.103
Locus of Control * Low PJ	0.249 (0.149)$^{+}$	0.096	--	--
Locus of Control * Low IJ	--	--	-0.139 (0.149)	0.352
Constant	12.009 (3.827)**	0.002	9.655 (3.765)**	0.011
N	265		265	
F(df)	6.31(11, 253)***	0.000	6.09(11, 253)***	0.000
R^2	0.215		0.209	
Adjusted R^2	0.181		0.175	

$p \leq .10^{+}$, $p \leq .05$, $p \leq .01$**, $p \leq .001$*** (two-tailed tests)*

VII. CONCLUSION

This study sought to enhance the criminological and social psychological literatures by further examining the effect of three major forms of injustice – distributive, procedural, and interactional – on criminal or deviant behavior. The study reveals how different types of injustice alone or in conjunction with individual or situational factors facilitate individual actions to "even the score." Below I discuss the results of this study and identify the main findings for each hypothesis.

H1: Under conditions of distributive injustice, the experience of procedural or interactional injustice will promote crime or deviance.

Table 58 presents an overview of the main findings of this study. In regard to Hypothesis 1, I hypothesized that either procedural or interactional injustice, in combination with a distributive injustice, would increase the likelihood of criminal or deviant behavior. Injustice generally promotes feelings of anger (Van Yperen et al. 2000), which is a crime inducing emotion (Agnew 2006). Procedural and interactional injustice, respectively, predicted crime and deviance in four out of eight responses to injustice (Table 58). The effects of these types of injustice on criminal and deviant behavior, however, were inconsistent and associated with specific criminal or deviant behaviors. Procedural injustice predicted violence in the Club and Group Project scenarios and stealing in the Club scenario, while interactional injustice was associated with drinking and drug use in the Club Scenario and cheating in the Studying scenario. The only behavior that both forms of injustice affected was violence in the Group Project and Studying scenarios. *Therefore, in partial support of Hypothesis 1, the results suggest that distributive injustice need accompany only one additional type of injustice to increase one's propensity for crime or deviance.*

H2: The experience of interactional injustice is a stronger predictor of crime or deviance than the experience of procedural injustice.

For Hypothesis 2, I argued that interactional injustice would be a stronger predictor of crime or deviance than procedural injustice as it is a more central form of strain than procedural injustice (Agnew 2001). Moreover, research suggests that interactional injustice is an important predictor of criminal or deviant behavior. Van Yperen et al. (2000) find that the major forms of injustice operate on two different pathways to predict destructive work behaviors. They show that destructive responses are predicted through an increase in negative affect by the interaction between procedural and distributive injustice, and separately by interactional injustice. This study likewise finds that the combined effect of procedural and distributive injustice predicts violence across scenarios and stealing in the Club scenario.

Yet, in contrast to Van Yperen et al. (2000), interactional injustice did not predict crime and deviance more strongly than procedural injustice. Thus, the findings fail to support Hypothesis 2. Like procedural injustice, interactional injustice was associated with crime and deviance for four out of eight responses (Table 58). The experience of interactional injustice – in combination with a distributive injustice – influences only marginally the likelihood of violence in the Group Project and Studying scenarios, drinking and drug use in the Club scenario, and stealing in the Studying scenario. Moreover, when both interactional and distributive injustice were associated with violence the effect was weaker than that of procedural injustice. *These findings suggest that the combined presence of procedural and distributive injustice predicts more strongly the occurrence of crime and deviance than the experience of interactional and distributive injustice.*

Unlike Van Yperen et al.'s (2000) research, the current study was unable to test the unique influence of interactional injustice on criminal or deviant behavior. Although some research finds that the interaction between interactional and distributive injustice is not significant when predicting counterproductive work behaviors (Barling and Phillips 1993), lack of this effect is generally interpreted as a function of methodological rather than theoretical explanations. Brockner and Wiesenfeld (1996) note that the ordering in which injustice is experienced may influence intended outcomes. Van den Bos, Vermunt, and Wilke (1997) find that even though the order in which the manipulations of procedural and distributive fairness were presented failed to modify the interaction, subtle differences in their results did occur. Namely, the manipulation presented first predicted the outcome more strongly than the other. Since interactional injustice was experienced last in each scenario, respondents may have perceived that unfair treatment intensified only marginally than overall perceptions of injustice, thus limiting the effect of the combination of interactional and distributive injustice. Indeed, interactional injustice only facilitated crime and deviance after a procedural injustice occurred.[60]

It is interesting to speculate as to why procedural injustice (in combination with a distributive injustice) emerged as a stronger predictor of violence than interactional injustice in this study, which suggests that certain combinations of injustice appear to be more criminogenic than others. Ambrose et al. (2002) note that each form of injustice is associated with specific motivations for organizational sabotage, which is a form of aggression (Neuman and Baron 1998). Distributive injustice promotes sabotage in the attempt to restore equity, while interactional injustice facilitates this deviant act in order

[60] In this study, interactional injustice facilitated drinking and drug use in the Club scenario, violence in the Group Project scenario, and violence, drinking and drug use, and cheating in the Studying scenario when procedural injustice was present.

to retaliate against the source of perceived injustice. Procedural injustice, however, is just as likely to promote sabotage for restoration or retaliation. Perhaps, the dual motivations associated with procedural injustice explain why it predicts violence more strongly.

Procedural injustice also could have been perceived as more unjust than interactional injustice in this study. Support for aggression is associated more strongly with scenarios perceived to be the most unjust (Kennedy, Homant and Homant 2004). In analyses not presented here, it was revealed that interactional injustice was consistently perceived to be more unjust than procedural injustice, which suggests that something about the nature of procedural injustice lends itself to the promotion of violence. In addition, although procedural injustice generally promoted anger in response to the scenarios, this type of injustice also facilitated depression in the Club and Studying scenarios. Together, these emotions have been associated with increased delinquency and/or deviance (De Coster and Zito 2010; Sharp et al. 2001).

H2a: Procedural and interactional injustice will interact such that the effect of injustice on crime will be greatest when individuals experience both of these types of injustice.

The finding that procedural and interactional injustice inconsistently impact criminal or deviant behavior may also help to explain why the interaction between these forms of injustice was generally not significant, thus failing to support Hypothesis 2a. I expected that the combination of procedural and interactional injustice – in addition to a distributive injustice – would produce the most intense strain for individuals, thus promoting criminal or deviant coping. Consistent with the literature, the combination between these three types of injustice predicted crime and deviance for three out of eight responses: violence in the Studying scenario and drinking and drug use in the Club and

Studying scenarios. The effects, however, were only marginally significant. These findings suggest that specific combinations of injustice are better predictors of criminal or deviant behaviors than when certain types of injustice occur in isolation. This finding helps to specify the conditions under which objective manipulations of injustice may be more likely to be perceived as unjust (Agnew 2001). *It appears that a threshold effect may be occurring in that two types of injustice generally are sufficient to promote the view that a situation is unjust in order to foster crime and deviance.* Some studies find that the interaction between distributive, procedural, and interactional injustice does not predict either destructive behaviors (Ambrose et al. 2002; Van Yperen et al. 2000), or psychological strain (Francis and Barling 2005). Therefore, the findings of prior research that support the interaction between distributive, procedural, and interactional injustice may reflect the context and conditions manipulated in particular studies (Francis and Barling 2005).

The null effects of the combination of distributive, procedural, and interactional injustice on criminal or deviant behavior may also depend on how injustice is experienced, i.e., whether injustice is experienced contemporaneously or cumulatively. Although the literature suggests that the relationship between injustice and crime may largely be contemporaneous (Agnew 2005), the distress associated with injustice could take longer to manifest (Francis and Barling 2005). Individuals may need to draw on their prior experiences of injustice in order to commit criminal or deviant behavior when they are subjected to unfair outcomes, procedures, or treatment. Agnew (2005) notes that the relationship between causes of crime and crime may be nonlinear, and the amount or type of injustice one experiences may need to reach a tipping point before it promotes anger

and crime or deviance. In addition, each type of injustice should have lagged effects on crime and each other (Agnew 2005). Considering past injustices, or experiencing multiple injustices of similar types in a short time frame, may then increase the perceived severity of current injustices, thus promoting the likelihood of criminal or deviant coping. For instance, when investigating the relationship between injustice and strain longitudinally, Tepper (2001) reports that the interaction between distributive and procedural injustice consistently predicted depression and exhaustion. Slocum (2010) finds that past stressors can affect future stressors to explain the likelihood of drug abuse among adolescents. The interactive effects between types of injustice may therefore intensify and produce stronger effects on the likelihood of crime and deviance as it is increasingly experienced across time and place.

In reference to Hypotheses 1-2a, the results of this study indicate the need for future work to disentangle the influence of procedural and interactional injustice on criminal and deviant behavior, especially when distributive injustice is present. Findings within the justice literature are largely inconsistent regarding how different forms of injustice interact to predict behavior (Francis and Barling 2005) and it is unclear as to whether the effect of multiple forms of injustice on crime or deviance are additive or interactive (Ambrose et al. 2002). Perhaps these inconsistencies are due to the fact that crime and deviance are more likely when certain types of injustice occur separately or in combination (Van Yperen et al. 2000). Comparisons should also be made between longitudinal and contemporaneous evaluations of the effect of injustice on crime and deviance (Francis and Barling 2005). A singular occurrence of multiple injustices may better predict criminal or deviant behavior when similar injustices are experienced in

other contexts or are left to fester, making the injustice more intense and longer in duration (Agnew 2001).

H3: Having peers who fail to endorse the perpetrator of injustice and who support criminal or deviant behaviors in response to that injustice will increase the likelihood that individuals respond to the injustice with crime or deviance. Having peers who endorse a perpetrator of injustice and support conventional behaviors in response to that injustice will decrease the likelihood that individuals respond to the injustice with crime or deviance.

In addition to the impact of types of injustice, I also examined how the contextual factor of the legitimacy of criminal or deviant behaviors affects responses to injustice. Legitimacy was expected to influence responses directly, or in combination with various types of injustice. When criminal or deviant behavior is endorsed by peers, individuals may then engage in these actions in order to avoid potential social costs that would ensue for not responding appropriately. Separate from injustice, however, legitimacy was not a strong predictor of crime and deviance in this study and predicted deviant behavior for only one out of eight responses, providing little evidence to support Hypothesis 3. Low legitimacy of conventional behavior predicted cheating only in the Studying scenario (Table 58). Endorsing cheating in the Studying scenario also reduced the likelihood of drinking and drug use. These effects may be due to the fact that drinking and drug use was not supported and not appropriate for the context of the scenario. When violence and drinking and drug use were endorsed in the Club and Group Project scenarios, legitimacy did not significantly affect the likelihood that individuals would engage in these behaviors.

Legitimacy – in combination with a distributive injustice – may only directly influence the likelihood of certain criminal or deviant acts when these behaviors are considered less deviant. The cultural context of my sample therefore could have limited

the effects of legitimacy on more serious criminal or deviant behaviors, i.e., violence and drinking and drug use. On the other hand, minor forms of deviance that are more common among students, i.e., cheating, are more likely to be affected by peer pressure. Mustaine and Tewksbury (2005) highlight how cheating is present in the academe. As such, having a peer encourage cheating could have significantly affected the likelihood that respondents would cheat.[61]

Legitimacy, however, did interact with certain combinations of injustice to affect the occurrence of crime and deviance (Table 58). For four out of eight responses, a three-way interaction between procedural injustice, interactional injustice, and legitimacy affected crime and deviance by predicting drinking and drug use in the Club and Studying scenarios and reducing the likelihood of violence and cheating in the Studying scenario. For three out of eight responses, a two-way interaction between legitimacy and interactional injustice predicted behavior: stealing in the Club scenario and violence in the Group Project scenario, and reduced the likelihood of drinking and drug use in the Group Project scenario. Last, for one of eight responses, a two-way interaction between legitimacy and procedural injustice increased the likelihood that cheating would occur in the Studying scenario. Nevertheless, these interactions are inconsistently significant and the results regarding the interaction between legitimacy, procedural injustice, and interactional injustice should be interpreted with caution as multicollinearity was present. Last, the two-way interaction that reduced the likelihood of drinking and drug use in the Group Project scenario may reflect the fact that interactional injustice and legitimacy had no direct effects on these types of behavior.

[61] Having delinquent peers did not significantly impact the likelihood of crime or deviance in this study. Peer delinquency only facilitated the likelihood of drinking and drug use and cheating in the Studying scenario.

These findings, however, suggest that legitimacy may predict criminal or deviant behavior more strongly when it occurs in addition to two or more types of injustice. GST argues that crime is more likely to occur among individuals who have delinquent peers who model criminal or deviant behavior in response to strain (Agnew 2001). The legitimizing effect of perceiving that others support criminal or deviant behavior (see Younts 2008; Welch et al. 2005) may further promote crime or deviance when individuals are also subject to some form of injustice or strain. Future research should further examine how legitimacy interacts with different types of injustice; separately and in combination.

H4: Women will be less likely than men to engage in criminal or deviant behaviors in response to injustice.

As supported by the existing literature, gender clearly plays a role in influencing criminal or deviant responses. It was hypothesized that males would be more likely to respond to injustice with crime or deviance because of the type of emotions they experience in response to strain and the expectations that exist regarding how they should respond to negative conditions they experience (e.g., Broidy and Agnew 1997; De Coster and Zito 2010). In support of Hypothesis 4, for six out of eight responses, males were more likely than females to indicate that they would engage in crime and deviance. Females were less likely than males to engage in violence, drinking and drug use, stealing, and cheating in response to injustice. Gender, however, did not affect the likelihood of drinking and drug use in the Club and Studying scenarios. This may be due to the fact that males and females tend to engage in minor crimes, such as drinking and drug use, at similar rates (Agnew 2009). *In general, however, males are more likely to cope with injustice in a criminal or deviant manner.*

H4a: Interactional injustice will increase the likelihood of crime or deviance for men and not for women.

It was also hypothesized that interactional injustice would predict crime or deviance more strongly for men than for women due to the association between respect (i.e. interactional justice) and masculinity (Anderson 1999; Brezina et al. 2004; Kupers 2005). Injustice interacted with gender for two out of eight responses (Table 58). Interactional injustice increased the likelihood that males would engage in violence and drinking and drug use in the Group Project scenario, and did not influence the likelihood of these behaviors among females, thus only partially supporting Hypothesis 4a. Although these results support the literature that identifies the importance of the experience of injustice for men and masculinity (Anderson 1999; Brezina et al. 2004; Kupers 2005), recent research finds that women are also concerned with respect and status (Griffiths, Yule, and Gartner 2011; Miller and Mullins 2006). The experience of interactional injustice may also matter for females because they are socialized to be more interpersonally oriented (Tata 2000). For instance, in this study, gender did not interact with injustice to promote crime or deviance in the Club scenario, which presented an unjustified affront, a strain that should have been more highly associated with masculine values such as authority, control, aggressiveness, competitive individualism, independence, and the capacity for violence (Messerschmidt 1993). *Thus, interactional injustice may be equally important for predicting criminal or deviant behavior among males and females.*

H5: Individuals high in negative emotionality, low in constraint, and who have an external locus of control will be more likely to engage in criminal or deviant behavior in response to injustice than those who do not possess these traits.

I also examined whether certain personality traits have implications for the probability of criminal or deviant behavior upon the experience of a distributive injustice. In general, high negative emotionality and low constraint increased the likelihood of engaging in crime and deviance. For four out of eight responses negative emotionality increased the probability of criminal or deviant behavior, while constraint reduced this probability for all eight behaviors. Locus of control was not relevant for predicting the occurrence of crime and deviance (Table 58). Having an external locus of control only marginally reduced the likelihood of drinking and drug use among men and violence among females in the Group Project scenario, and cheating in the Studying scenario. This is a surprising finding as the relationship between locus of control and workplace deviance is well established (Jones and Kavanagh 1996; Storms and Spector 1987). Yet, locus of control does not always predict behavior. Hepworth and Towler (2004) find that negative attribution style does not predict workplace aggression. Individuals, however, are more likely to engage in this form of workplace deviance when they perceive that the negative events they experienced, and blamed others for, were controllable, intentional, stable, and that there were no mitigating circumstances (Douglas and Martinko 2001). Even if respondents blamed other people for their unfair outcomes, procedures, or treatment, they may not have perceived that the injustice they experienced was controllable; therefore limiting the effect this personality dimension would have on crime or deviance.

Moreover, these personality traits interacted with procedural and interactional injustice to affect the likelihood of criminal or deviant behavior. Being high in constraint reduces the likelihood of violence and stealing when injustice is experienced for five out

of eight responses (Table 58). Despite the experience of injustice, individuals who are highly constrained will resist engaging in crime or deviance. Interestingly, negative emotionality and locus of control seemed to affect predominantly the likelihood of crime or deviance in an unexpected direction when interacting with injustice. For three out of eight responses those who are higher in negative emotionality, and for four out of eight responses those with an external locus of control, are less likely to engage in crime and deviance upon the experience of procedural and interactional injustice (Table 58). Studies do find that negative emotionality (Douglas and Martinko 2001; Hepworth and Towler 2004) and locus of control predict workplace aggression inconsistently (Hepworth and Towler 2004). Aquino et al. (1999a) also identify that negative emotionality may produce feelings of anxiety and fear and, as such, individuals may not actively engage in hostility when threatened. Future research is needed in order to disentangle how personality characteristics interact with injustice to predict criminal or deviant behavior. *These findings, however, suggest that the experience of only one type of injustice is necessary to increase the likelihood of crime or deviance among those who are high in negative emotionality and low in constraint.*

Table 58: Overview of Results (Full Models)

	H1		H2	H2a	H3				H4		H4a	
Club Scenario	**Low PJ**	**Low IJ**	**Low IJ+**	**Low PJ*IJ**	**Low Legit**	**Low Legit * Low PJ**	**Low Legit * Low IJ**	**Low Legit*Low PJ * Low IJ**	**Males**	**Females**	**Males*IJ**	**Females*IJ**
Violence	✓								✓			
Drinking and Drug Use		✓	✓	✓				✓				
Stealing	✓						✓		✓			
Group Project Scenario												
Violence	✓	✓					✓		✓		✓	
Drinking and Drug Use							✓(-)		✓		✓	
Studying Scenario												
Violence	✓	✓		✓				✓(-)	✓			
Drinking and Drug Use				✓				✓				
Cheating		✓	✓		✓	✓		✓(-)	✓			

+Indicates greater importance.
(-)Identifies that a finding is in an unexpected direction.

Table 58: Overview of Results (Full Models)

	H5											
Club Scenario	**Neg. Emot.**	**Constraint**	**LOC**	**Neg. Emot. *PJ**	**Neg. Emot. *IJ**	**Neg. Emot.* PJ*IJ**	**Constraint* PJ**	**Constraint *IJ**	**Constraint *PJ *IJ**	**LOC *PJ**	**LOC *IJ**	**LOC *PJ* IJ**
Violence	✓	✓							✓	✓(-)		
Drinking and Drug Use	✓	✓							✓			✓(-)
Stealing	✓	✓							✓			
Group Project Scenario												
Violence		✓					✓					
Drinking and Drug Use		✓										
Studying Scenario												
Violence	✓	✓			✓(-)						✓(-)	
Drinking and Drug Use		✓				✓(-)		✓				
Cheating		✓			✓(-)					✓(-)		

+Indicates greater importance.
(-)Identifies that a finding is in an unexpected direction.

Overall, the results of this study highlight the importance of distinguishing between types of injustice in order to predict crime and deviance. The strong association between procedural injustice and violence justifies further research. Indeed, future scholarship should disentangle how injustice impacts criminal and deviant behavior when certain situational and individual-level factors are present. This study demonstrates that the experience of injustice separately and in combination with the conditioning factors of legitimacy and gender promote criminal and deviant coping. Moreover, personality traits traditionally associated with crime and deviance are generally more likely to promote these behaviors in response to a distributive injustice but not when procedural and interactional injustice are also present.

Contributions and Directions for Future Research

This project is unique in its attempt to broaden both the criminological and social psychological literatures regarding the relationship between injustice and crime. In particular, this study expands upon the criminological literature by further specifying how different types and combinations of injustice influence the likelihood that individuals respond to their unfair treatment with crime or deviance. The findings from this project help to address the breadth of GST by identifying strains that promote criminal or deviant coping (refer to Agnew 2001) and will increase the scope of the organizational justice literature by examining how experiences of injustice outside of the work context may encourage criminal or deviant acts.

By focusing on three central forms of strains known to be associated with crime (Agnew 2006), this study revealed that certain types and combinations of injustice predicted criminal or deviant behavior. Although it was expected that each form of strain

would produce a particular criminal or deviant response, this did not occur across scenarios. It was expected that an unjustified affront would promote anger and result in violence, while a harm for which an internal attribution was made would foster depression and drinking and drug use. Last, I expected that a blocked goal would be associated with frustration and lead to cheating (Agnew 2006; Ganem 2010; Morgan 2005). In this study, an unjustified affront affected violence (Club scenario), while a blocked goal affected cheating (Studying scenario). A harm for which an internal attribution was made did not influence drinking and drug use (Group Project scenario). This null finding may have been due to the fact that individuals did not make internal attributions for the harm they received in this situation. Out of each of these scenarios, however, it appears that the unjustified affront in the Club scenario more strongly predicted criminal or deviant behavior when injustice was experienced. In this scenario, either procedural or interactional injustice – in addition to a distributive injustice – influenced the likelihood of all three forms of criminal or deviant behaviors in which respondents had the option to engage. Research suggests that an unjustified affront fosters violence (Ganem 2010) and anger (Averill 1982), which is a crime-inducing emotion (Agnew 2006). Injustice may therefore play a stronger role in increasing the likelihood of crime or deviance when associated with an unjustified affront.

The underlying emotions that each scenario produced in response to strain and injustice, however, may reveal a more detailed story. Indeed, anger and frustration were the strongest emotions produced in the Group Project scenario, and in contrast to more passive emotions, are not strongly associated with drinking and drug use (Agnew 2006; Bao et al. 2004; Jang and Johnson 2003; Piquero and Sealock 2000). In addition, despite

the fact that anger emerged in response to the Group Project and Studying scenarios, these situations also elicited emotions that hinder crime and deviance, fear and frustration (Ganem 2010), more so than in the Club scenario. Researchers should examine the role that certain emotions, alone and in combination, play in mediating or moderating the relationship between injustice and criminal or deviant behavior. Research suggests that certain strains produce different types of emotions that affect differentially the likelihood of crime (Broidy and Agnew 1997; De Coster 2005; Morgan 2006; Van Gundy 2002). The types and combinations of emotions that foster qualitatively different kinds of behaviors in response to injustice should be explored, in addition to whether they vary by gender. It would be interesting to note whether perceptions of procedural and interactional justice produce different types of emotions, which is something the current project did not do.

Furthermore, one of the central arguments of this study was that interactional injustice would be a stronger predictor of crime and deviance than procedural injustice when these forms of injustice coincide with a distributive injustice. Interactional injustice entails disrespect, which may be a more central and intense type of strain for individuals to experience. Although this argument received some support, I cannot make firm conclusions about the relative importance of interactional injustice in predicting criminal or deviant behavior. Procedural injustice also emerged as an important source of crime and deviance, particularly for violence. The combined effect of procedural and interactional injustice was not necessary to increase the likelihood that crime and deviance would occur. It appears that context matters in attempting to understand when individuals choose to engage in crime and deviance in response to injustice, with an

unjustified affront providing a more conducive context to respond to multiple forms of injustice with crime or deviance and violence being more likely when procedural and distributive injustice are present.

Various limitations of this study may have produced these mixed findings. For instance, the use of a larger sample or a non-college sample may produce stronger and more significant results. These individuals may experience more strain and be more likely exposed to criminal role models that foster criminal or deviant acts in response to injustice (e.g., Anderson 1999). Moreover, legitimacy may have stronger effects among a younger population, such as middle or high school students. The importance of peers increases and peaks in mid to late adolescence (Brennan 1982). The significance of the peer group also diminishes with age, with late adolescents placing less value on being in a popular group and perceiving more group conformity and leadership than early and middle adolescents (Gavin and Furman 1989). Having peers in this developmental group legitimate a criminal or deviant response to injustice may then provide stronger social costs that individuals would not be willing to avoid.

By contrast, stronger effects of injustice on crime or deviance may depend on the severity of the consequences of injustice for adults. Studies that focus on the relationship between different types of injustice on deviance typically examine adults in the workplace. Employees, who experience unfair outcomes, procedures, or treatment, may face more severe consequences than not receiving an "A" on a project or exam. For instance, workers may not earn enough money, be able to advance in their careers, or may perceive that their injustice is more severe if they cannot move to another employer. The effect of injustice on crime or deviance may be more predictive for adolescents or

adults rather than college-age individuals. Future research should manipulate the severity of the consequences of injustice to see whether this variable or age can account better for when injustice promotes criminal or deviant acts.

Various improvements can also be made regarding the study design. For instance, the lack of firm support for the importance of interactional injustice in facilitating crime and deviance may be due to sequencing effects within the scenarios. Not only do the type and combination of injustice matter, but also the order in which certain injustices occur may explain the injustice-crime relationship (van den Bos et al. 1997). The fact that distributive injustice was always present in this study and occurred prior to procedural and interactional injustice serves as an important limitation that future research should attempt to address. Distributive, procedural, and interactional injustice should be separated and randomly ordered in order to determine whether the experience of interactional injustice before that of a distributive or procedural injustice better promotes criminal or deviant behavior. Doing so will also allow researchers to truly assess how each type of injustice separately facilitates crime or deviance, which is something this study could not do. It could be that interactional justice more strongly predicts crime and deviance when it operates as a singular force. In other words, in the absence of distributive injustice, interactional injustice may have a greater impact on criminal or deviant behavior than procedural injustice (Van Yperen et al. 2000).

The ways in which procedural and interactional injustice are operationalized may also affect the likelihood of criminal or deviant responses to these forms of injustice. In this study, procedural justice was assessed by the consistency rule, which guarantees that procedures are consistent across persons and time, and the bias suppression rule, which

necessitates that personal self-interest and narrow preconceptions should be based on accurate information and informed opinions. Other dimensions of procedural justice include accuracy, correctability, representativeness, and ethicality (Colquitt et al. 2005). Studies typically assess procedural justice according to these six rules (e.g., Moorman 1991; Skarlicki and Folger 1997; Van Yperen et al. 2000), and as such ignore whether possible aspects of procedural injustice are more criminogenic than others.

Although all of the dimensions of procedural justice should have some relationship with facilitating criminal behavior when they are violated, research should identify which rules of procedural justice impact crime and deviance more strongly than others. In particular, increased focus should be placed on the rules of representativeness and ethicality, as these rules involve the views and values of those individuals who experience procedural injustice. The representativeness rule requires that the viewpoints of the individuals affected by the allocative process be taken into account, while the ethicality rule specifies that the procedures enacted agree with the morals and values held by the individuals involved (Colquitt et al. 2005). These rules of procedural justice might then more strongly affect the severity of injustice felt and increase the propensity for criminal or deviant behavior.

Interactional justice was measured according to the principles of respect and propriety. Other rules include truthfulness and justification (Colquitt et al. 2005). The truthfulness rule dictates that authorities should be honest and openly communicate with their subordinates when they implement decision-making procedures. Last, justification requires that authorities adequately explain outcomes of the decision-making process (Colquitt et al. 2005). These other rules may interact with the dimension of respect. If

individuals perceive that they are not being adequately informed of important decisions that affect them, and of the explanation of those decisions, they may further feel disrespected and be more inclined to respond to interactional injustice with crime or deviance. Consequently, the many components of each type of justice demonstrate a need for research that investigates how particular and specific combinations of dimensions of procedural and interactional justice affect the likelihood of criminal and deviant behavior when they are violated.

Interestingly, gender did not emerge as a strong predictor of the injustice-crime relationship. It was argued that interactional injustice would more strongly affect males because of the implications that the disrespect associated with this injustice has for masculinity, which was largely unsupported. Future research should further examine potential similarities and differences in how different types and combinations of injustice may impact males and females.

In addition, this study supported the literature by highlighting how being high in negative emotionality and low in constraint promotes engaging in criminal or deviant behavior. Importantly, the findings also showcased the need to further specify how different types and combinations of injustice interact with the personality traits of negative emotionality, constraint, and locus of control to affect crime and deviance. The literature identifies inconsistencies in the ways in which locus of control (Hepworth and Towler 2004) and negative emotionality impact workplace aggression (Douglas and Martinko 2001; Hepworth and Towler 2004). Future studies should further investigate how injustice moderates the effect of personality traits on crime and deviance.

Regardless of the complex findings and limitations mentioned above, this study helped to clarify an aspect of GST by linking it to a concern common in the social psychology literature, that of the experience of injustice. In addition to distributive injustice, the experience of procedural and interactional injustice separately and in combination promote criminal or deviant coping.

Implications

Although the amount or type of strain that individuals experience may not be reduced, the likelihood that individuals perceive this strain as unjust may be lessened. A clearer understanding of how the types of injustice are related to strain might reduce crime or deviance by ensuring that procedural and interactional justice occur in situations marked by distributive injustice. Greater insight into the injustice-crime relationship may generate programs to minimize the effect of injustice on subsequent deviant behaviors. Agnew (2001) suggests that the policy implications of GST are to reduce individuals' exposure to strain and the likelihood that they will cope with strain through crime. Guaranteeing that individuals receive rewards through decision making processes that are unbiased, consistent, and marked with respectful and proper treatment, can help lessen the injustice associated with strain and reduce the likelihood of criminal or deviant behavior in multiple situations.

Ensuring that justice is upheld is a way of altering a characteristic of strains to reduce criminal or deviant coping. Infusing justice into various situational contexts can reduce crime. For example, school programs that use interactive, proactive, and cooperative learning strategies have reduced delinquency. These programs stress that teachers clearly state rules for classroom behavior, reward good behavior, and ensure that

teachers treat their students fairly by providing objective criteria for instruction, grading, and teacher-student interactions (Agnew 2006).

Policies may also reduce the effect of injustice on crime by targeting those characteristics that lead to criminal coping (refer to Agnew 2006). For instance, individuals could learn skills and traits that allow them to avoid or cope with injustice-induced strain. Social skills programs teach individuals how to better achieve their goals and to interact more positively with others, which may lessen their experience of interactional injustice. Programs may also increase conventional social support through companionship (Big Brothers/Big Sisters) and focus on minimizing interactions with delinquent peers to reduce instances in which the social learning of crime can occur. Enhancing the bonds individuals share with conventional others would foster positive self-worth and reduce the likelihood that individuals would associate with delinquent peers who have a legitimating influence on criminal or deviant behavior.

In essence, the implications that injustice and legitimacy have for crime and deviance entail programs or processes that reduce the costs of strains for individuals and increase the costs of crime or deviance as a coping response. Adhering to justice norms or values would reduce the costs associated with injustice, thereby lessening the need individuals would have to engage in crime or deviance when stressful situations occur. In addition, maintaining or improving ties to conventional others would enhance social control and make criminal or deviant behavior more costly for the individual. Conventional others could also further reduce the likelihood of crime or deviance by legitimating conventional responses to the experience of injustice. Therefore, limiting the negative effects of the injustice associated with strain and understanding how others

might legitimate criminal or deviant responses to strain provide fruitful avenues for policies to lessen the effects of injustice on crime or deviance.

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IX. APPENDIX A

Perceptions of Stressful Situations Survey

1. Introduction

Project Title: Perceptions of Stressful Situations
Principal Investigator: Heather Scheuerman, Ph.D. student
Advisor: Dr. Karen A. Hegtvedt

You are being invited to volunteer to participate in a study about perceptions of stressful situations. The purpose of this study is to determine how individuals perceive and respond to stressful situations. You are being asked to volunteer for this research study because you are a student at Emory University. Your decision to participate or not participate will in no way affect your standing in the class from which you were recruited.

Participation involves responding to an online questionnaire. First, you will be asked to take the role of the main actor in each of three short stories. After you read each story you will be asked a number of questions about how you perceive the situation and how you would most likely respond to it. Next, you will be asked questions about the type of person you perceive yourself to be, the amount of stress you experience in your life, and your prior involvement in criminal behavior. The questionnaire will take about 30 minutes to complete.

There is minimal foreseeable risk or discomfort associated with this study. Although the risks of participating in this study are not different from those encountered in daily life, some of these questions may be stressful for you to answer. Any question that causes you distress may be skipped. Even though taking part in this research may not benefit you personally, your responses will increase our knowledge about the responses to stressful situations and guide future research.

All of your responses will be confidential. Although I have access to your email address, I will not be able to couple your name and email address to your survey responses. I will be the only person with access to your completed survey. Agencies that make rules and policy about how research is done have the right to review study records. So do agencies that pay for the study. Those with the right to look at your study records include Emory University Institutional Review Board. Records can also be opened by court order. I will keep your responses private to the extent allowed by law. I will do this even if outside review occurs. Analysis of the survey will be based only on aggregated responses, and no names or identifying information will be associated with these analyses. All data will be stored on a password protected computer. I plan to submit the results for publication and present them at research and educational conferences. There is no way that your information will be identified upon presentation or publication of the results of this study.

To compensate you for your time responding to the survey you will receive a credit of $10.00 on your Emory card. To ensure that you are compensated, upon completion of the survey you will be directed to another survey that will ask you to identify your 7-digit Emory Student Identification Number and email address. Once you have been compensated, I will delete your Emory Student Identification Number and email address from my records.

Participation in this study is completely voluntary. You are free to decline to participate or to cease participation at any time. Your decision to participate or not to participate will not affect your standing as a student at Emory. Also, if you choose to participate, you may skip questions; you do not have to answer any specific question in order to answer subsequent questions.

Please print out or save a copy of this form and keep it for your records. The first question of the survey will ask if you agree to participate. By indicating "yes" and providing your gender you will be able to continue to other questions. Thank you!

1. Do you AGREE TO PARTICIPATE in this study?

2. Please indicate your GENDER

2. <u>Vignettes</u>

<u>Club Scenario</u>

PERCEPTIONS ABOUT THE SITUATION

To what extent do you perceive that Matt was intentionally breaking his promise to buy your three drinks?

How unfair or fair do you perceive to be the number of drinks Matt buys for you?
How unexpected or expected was the number of drinks Matt offered to buy for you?

How unfair or fair do you perceive how Matt decides how many drinks to buy for you?
How biased or unbiased is the way Matt decides how many drinks to buy for you?
How inconsistent or consistent is the way Matt decides how many drinks to buy for you and James?

How unfair or fair do you perceive how Matt treats you?
How disrespectful or respectful is Matt's treatment of you?
How inappropriate or appropriate is what Matt says to you?

EMOTIONS

In response to Matt's actions in this situation, how much do you feel:

ANGRY?
FRUSTRATED?
DEPRESSED?
FEARFUL?
WORRIED?
CONTENT?

BEHAVIOR

What would you most likely DO in this situation? Please describe in your own words what you might do in response to Matt's actions in this situation.

The following lists other possible behaviors. Please indicate how LIKELY you would be to:

-Hit Matt?
-Push or shove Matt?
-Take Matt's or James' drinks?
-Drink a lot of alcohol that night?
-Do drugs?
-Curse Matt out or call him a bad name?
-Yell at Matt?
-Try to reason with Matt?
-Leave the club?
-Justify Matt's behavior?
-Complain to your friends about Matt's behavior to get their sympathy or advice?

If you indicated that you would be likely to do drugs in response to Matt's actions, please write in the space below which drugs you would use.

How BELIEVABLE do you think this scenario is?
How EASY was it for you TO IMAGINE BEING in this situation?
How CONFIDENT are you that your answers reflect WHAT YOU WOULD ACTUALLY DO if you were in this situation?

Group Project Scenario

PERCEPTIONS ABOUT THE SITUATION

To what extent do you perceive that Stacy was intentionally performing poorly on your joint project?

How unfair or fair to you perceive to be the amount of work Stacy finishes on your joint project?
How unexpected or expected was the amount of work that Stacy finished on your joint project?

How unfair or fair do you perceive how Stacy decided to perform her work?
How biased or unbiased is the way Stacy decides to perform her work?
How inconsistent or consistent is the way Stacy decides to perform her work?

How unfair or fair do you perceive how Stacy treats you?
How disrespectful or respectful is Stacy's treatment of you?
How inappropriate or appropriate is what Stacy says of you?

EMOTIONS

In response to Stacy's actions in this situation, how much do you feel:

ANGRY?
FRUSTRATED?
DEPRESSED?
FEARFUL?
WORRIED?
CONTENT?

BEHAVIOR

What would you most likely DO in this situation? Please describe in your own words what you might do in response to Stacy's actions in this situation.

The following lists other possible behaviors. Please indicate how LIKELY you would be to:

-Hit Stacy?
-Push or shove Stacy?
-Drink a lot of alcohol that night?
-Do drugs?
-Yell at Stacy?
-Inform the professor of Stacy's behavior?
-Try to reason with Stacy?
-Do nothing?
-Justify Stacy's behavior?
-Complain to your friends about Stacy's behavior to get their sympathy or advice?

If you indicated that you would be likely to do drugs in response to Stacy's actions, please write in the space below which drugs you would use.

How BELIEVABLE do you think this scenario is?
How EASY was it for you TO IMAGINE BEING in this situation?
How CONFIDENT are you that your answers reflect WHAT YOU WOULD ACTUALLY DO if you were in this situation?

Studying Scenario

PERCEPTIONS ABOUT THE SITUATION

To what extent do you perceive that Daniel was intentionally breaking his promise to help you study for three hours?

How unfair or fair do you perceive to be the amount of time Daniel helps you study?
How unexpected or expected was the amount of time Daniel helped you study?

How unfair or fair do you perceive how Daniel decides how much time to help you study?
How biased or unbiased is the way Daniel decides how much time to help you study?
How inconsistent or consistent in the way Daniel decides how much time to help you study?

How unfair or fair do you perceive how Daniel treats you?
How respectful or disrespectful is Daniel's treatment of you?
How inappropriate or appropriate is what Daniel says to you?

EMOTIONS

In response to Daniel's actions in this situation, how much do you feel:

ANGRY?
FRUSTRATED?
DEPRESSED?
FEARFUL?
WORRIED?
CONTENT?

BEHAVIOR

What would you most likely DO in this situation? Please describe in your own words what you might do in response to Daniel's actions in this situation.

The following lists other possible behaviors. Please indicate how LIKELY you would be to:

-Hit Daniel?
-Push or shove Daniel?
-Steal the calculator?
-Copy Daniel's formulas and leave the calculator?
-Use the calculator and give it back to Daniel after the exam?
-Drink a lot of alcohol that night?

-Do drugs?
-Yell at Daniel?
-Try to reason with Daniel?
-Justify Daniel's behavior?
-Complain to your friends about the Daniel's behavior to get their sympathy or advice?

How BELIEVABLE do you think this scenario is?
How EASY was it for you TO IMAGINE BEING in this situation?
How CONFIDENT are you that your answers reflect WHAT YOU WOULD ACTUALLY DO if you were in this situation?

3. <u>Negative Emotionality and Low Constraint</u>

Please rank yourself in comparison with other people of YOUR AGE and SEX on each of the following traits or characteristics. For each trait, select a number from 1 to 5, with 3 indicating about average. *(Indicates items that are reverse coded).

Negative Emotionality

1. 1 = I am not at all tense, nervous, or worried
   5 = I am extremely tense, nervous, or worried

2. 1 = I believe that people often make things difficult for me
   5 = I do not believe that people make things difficult for me*

3. 1 = I am not at all tough. I do not take advantage of others
   5 = I am extremely tough. I take advantage of others

4. 1 = I worry a great deal
   5 = I don't worry very much*

5. 1 = I do not feel poorly treated by others at all
   5 = I feel others treat me very poorly and unfairly

6. 1 = I carry a grudge. I try to get even
   5 = I am extremely conciliatory. I turn "the other cheek"*

7. 1 = I am not at all suspicious. I do not feel exploited
   5 = I am extremely suspicious. I feel exploited by others

8. 1 = I remain calm, even in difficult situations
   5 = I am easily upset about things

9. 1 = I do not feel unlucky at all
   5 = I feel extremely unlucky, poorly treated

10. 1 = I sometimes enjoy teasing or frightening others
    5 = I could never enjoy teasing or frightening others*

11. 1 = I am not at all aggressive
    5 = I am extremely aggressive, always ready for a fight

12. 1 = I am not at all even-tempered. I tend to be moody and emotionally unstable
    5 = I am extremely even-tempered. I am emotionally stable*

13. 1 = I believe people are nice to me only when they want something
    5 = I believe people are nice to me just to be nice*

14. 1 = I am not at all sensitive. My feelings are not easily hurt.
    5 = I am extremely sensitive. My feelings are easily hurt.

15. 1 = I am often ready to hit people when I'm angry at them
    5 = Even when I'm angry, I wouldn't hit someone

Constraint

1. 1 = I am careful, I think before I act
   5 = I am extremely impulsive, I act without thinking*

2. 1 = I value having a good reputation in the community
   5 = I do not particularly care about my reputation*

3. 1 = I am not at all interested in good manners, proper behavior
   5 = I am extremely high on good manners, proper behavior

4. 1 = I am not at all adventurous. I prefer safe activities
   5 = I am extremely adventurous. I take risks*

5. 1 = I usually finish one activity before starting another
   5 = I usually don't finish an activity before I start another one*

6. 1 = I am not at all level-headed, sensible, or orderly
   5 = I am extremely level-headed, sensible, or orderly

7. 1 = I am not at all safety conscious
   5 = I am extremely safety conscious, I avoid risks

8. 1 = I avoid thrills and adventures
   5 = I seek thrills and adventures*

9. 1 = I am not at all strict. I am flexible about rules
   5 = I am extremely strict. I believe in rules and discipline

10. 1 = I do not respect my parents or their ideas
    5 = I always respect and admire my parents and their ideas

11. 1 = I don't plan for the future at all
    5 = I plan carefully for the future

12. 1 = I believe that children owe their parents love and gratitude
    5 = I do not believe that children owe their parents love and gratitude*

4. <u>Locus of Control Scale</u>

Directions: Select the statement that best describes what you feel. Remember that you have the opportunity to change your answer.

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he or she tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks, one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try, some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen.

b. Trusting in fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student, there is rarely, if ever, such a thing as an unfair test.
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence on government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
b. There is some good in everybody.

15. a. In my case, getting what I want has little or nothing to do with luck.
b. *Many times we might just as well decide what to do by flipping a coin.*

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends on how nice of a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people do decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
b. There is not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as on a local level.

5. <u>Prior Criminal Activity</u>

How many times have you:

1. Purposely damaged or destroyed property belonging to others?

2. Stolen (or tried to steal) things worth $50 or less?

3. Stolen (or tried to steal) something worth more than $50?

4. Purposely set fire to a building, a car, or other property or tried to do so?

5. Lied about your age to gain entrance or to purchase something, for example, lying about your age to buy liquor or get into a bar or club?

6. Used checks illegally or used phony money to pay for something?

7. Attacked someone with the idea of seriously hurting him/her?

8. Cheated on school tests?

9. Plagiarized a paper or part of a paper?

10. Helped another student when he or she asked you to help him or her cheat on an exam?

11. Hit (or threatened to hit) someone?

12. Taken a vehicle for a ride (drive) without the owner's permission?

13. Used force to get money or things from another person?

14. Avoided paying for thing such as movies, bus or subway rides, and/or food?

15. Been drunk in a public place?

16. Broken into a building or vehicle (or tried to break in) to steal something or just to look around?

17. Failed to return extra change that a cashier gave you by mistake?

18. Used or tried to use credit cards without the owner's permission?

19. Drank more than 4 alcoholic beverages in less than 2 hours?

20. Used tobacco?

21. Used marijuana or hashish (grass, pot, hash)?

22. Used other illegal drugs such as heroin, cocaine, or LSD, etc…?

23. Used your own or other's prescription drugs for a reason other than the prescribed reason?

24. Downloaded music illegally?

25. Engaged in vomiting or the use of laxatives after eating to control your weight?

6. Prior Strain

Below is a list of events that college students have experienced at some time or another. Please indicate the degree to which these experiences have been a part of your life during the PAST YEAR.

1. Conflicts with boyfriend's/girlfriend's/spouse's family
2. Being let down or disappointed by friends
3. Conflict with professor(s)
4. Social rejection
5. Too many things to do at once
6. Being taken for granted
7. Financial conflicts with family members
8. Having your trust betrayed by a friend
9. Separation from people you care about
10. Having your contributions overlooked
11. Struggling to meet your own academic standards
12. Being taken advantage of
13. Not enough leisure time
14. Struggling to meet the academic standards of others
15. A lot of responsibilities
16. Decisions about intimate relationship(s)
17. Not enough time to meet your obligations
18. Important decisions about your future career
19. Financial burdens
20. Important decisions about your education

21. Loneliness
22. Lower grades than you hoped for
23. Conflict with teaching assistant(s)
24. Not enough time for sleep
25. Conflicts with your family
26. Heavy demands from extracurricular activity
27. Finding courses too demanding
28. Conflicts with friends
29. Hard effort to get ahead
30. Poor health of a friend
31. Getting "ripped off" or cheated in the purchase of services
32. Social conflicts over smoking
33. Difficulties with transportation
34. Disliking your fellow student(s)
35. Conflicts with boyfriend/girlfriend/spouse
36. Social isolation
37. Long waits to get service (e.g., at banks, stores, etc.)
38. Being ignored
39. Dissatisfaction with your physical appearance
40. Finding course(s) uninteresting
41. Gossip concerning someone you care about
42. Failing to get an expected job
43. Slur(s) or insult(s) yelled at you just because of your race, sex, sexual orientation, or cultural background

44. Hassled by the police just because of your race, sex, sexual orientation, or cultural background

45. Threatened physically just because of your race, sex, sexual orientation, or cultural background

46. Pressured or pushed by someone do so more sexually than you wanted to

47. Unwelcome sexual comments or advances

7. <u>Social Control</u>

I'd like to ask you some questions about your relationship with your family and friends. Please indicate how much you agree or disagree with the following statements.

1. I feel close to my father/stepfather.

2. I feel close to my mother/stepmother.

3. I want to be like my father/stepfather.

4. I want to be like my mother/stepmother.

5. I feel close to my friends.

6. I want to be like my friends.

Please indicate how much you agree or disagree with the following statements.

1. I try my best at school.

2. I work much harder than my classmates in school.

3. I want to go to graduate school or professional school after graduation.

4. I plan on having a career after I graduate.

5. In general what kind of grades do you make?
   -Mostly A's
   -Mostly A's and B's
   -Mostly B's
   -Mostly B's and C's
   -Mostly C's and D's
   -Mostly D's
   -Mostly D's and F's
   -Mostly F's

How wrong do you think it is to:

1. Get around the law if you can get away with it?
2. Do some things that are not right to get ahead?
3. Hit someone if someone else started the fight?
4. Get drunk if you have had a bad day?
5. Use marijuana or hashish (grass, pot, hash) if you have had a bad day?
6. Use heroin, cocaine, or LSD if you have had a bad day?
7. Take something from a store without paying for it if you really need something?
8. Cheat on an exam if you really need to improve your grade?

Please indicate the likelihood of the following. If I did not listen to the advice of my friends they would:

1. Not speak to me
2. Punish me
3. Be angry with me
4. Yell at me
5. Stop being my friend

8. Social Support

Statements about your relationships with your family and friends are listed below. Please indicate the extent to which you agree or disagree with these statements.

1. I can rely on my family to help me with my problems.
2. I can rely on my friends to help me with my problems.
3. My family looks out for me.
4. My friends look out for me.
5. My family and I have done a lot for one another.

6. My friends and I have done a lot for one another.
7. My family and I are very close in our feelings for each other.
8. My friends and I are very close in our feelings for each other.

9. Social Learning

Think about your current friends. During the past YEAR how many of your friends have:

1. Hit someone?
2. Gotten drunk?
3. Used marijuana or hashish (grass, pot, hash)?
4. Used heroin, cocaine, or LSD?
5. Intentionally taken something from a store without paying for it?
6. Cheated on a school test?

Think about your current friends. How wrong do your friends think it is to:

7. Get around the law if they can get away with it?
8. Do some things that are not right to get ahead?
9. Hit someone if someone else started the fight?
10. Get drunk if they have had a bad day?
11. Use marijuana or hashish (grass, pot, hash) if they have had a bad day?
12. Use heroin, cocaine, or LSD if they have had a bad day?
13. Take something from a store without paying for it if they really need something?
14. Cheat on an exam if they really need to improve their grade?

10. Anger Expression (STAXI-2)

Now I would like you answer some questions about yourself. Please indicate the extent to which YOU engage in the following behaviors.

1. I express my anger

2. I keep things in

3. If someone is annoying, I am apt to tell him or her

4. I pout or sulk

5. I lose my temper

6. I withdraw from people

7. I make sarcastic remarks to people

8. I boil inside, but don't show it

9. I do things like slam doors

10. I tend to harbor grudges that I don't tell anyone about

11. I argue with others

12. I am secretly quite critical of others

13. I strike out at whatever is infuriating me

14. I am angrier than I am willing to admit

15. I say nasty things

16. I am irritated a great deal more than people are aware of

11. Depression

Please indicate on how many days during the past week have you:

1. Felt that you just couldn't get going?

2. Felt that everything was an effort?

3. Felt sad?

4. Felt lonely?

12. <u>Demographics</u>

1. What is your age?
2. What is your race?
3. What is your relationship status?
4. What best describes your class standing?
5. What is your major or intended major?
6. What is the highest level of education your mother received?
7. What is the highest level of education your father received?
8. What is your family's annual household income?

Post Survey

Please enter your 7-digit Emory student identification number and email address in order to receive $10.00 in compensation for your time in taking the survey.

Thank you again for your participation. Your card should be credited in about 2-5 weeks.

X. APPENDIX B

Prior Criminal Activity

A respondent's prior criminal activity may influence his or her likelihood to respond to injustice in a deviant or criminal manner. Individuals who have prior deviant experiences are more likely to have a disposition toward crime or deviance due to their low self-control (Gottfredson and Hirschi 1990) and impulsivity (Moffitt 1993). Twenty-five items assessed respondents' prior criminal behavior in the past year regarding drug use, minor assault, theft, vandalism, and sexual violence. In addition, I assessed their prior deviant behavior by asking if they have engaged in cheating. Respondents indicated how frequently they perpetrated those acts (never, once or twice, once every 2-3 months, once every month, once every 2-3 weeks, once a week, once a week or more) in the past year. I borrowed those items from a version of the National Youth Survey, as modified by Matthews (2009) (see Appendix A). I combine these data into a scale to generate a general delinquency measure ($\alpha = .904$).

In addition, since my scenarios ask about specific forms of crime and deviance (i.e., assault, drinking and drug use, and stealing and cheating); I created different variables that reflect these types of prior crime using factor analysis. In this way, I can assess whether it is most useful to control for prior crime or for the specific type of crime I am trying to explain.

Although principal factor analyses with oblique rotation revealed different combinations regarding which items of prior crime should be summed to measure a particular dimension of crime, I grouped items according to theoretical assumptions. Violent prior crime is measured by summing together "attacked someone with the idea of

seriously hurting him/her" and "hit (or threatened to hit) someone" (α = .682). Prior drinking and drug use is created by summing "lied about your age to gain entrance or to purchase something, for example, lying about your age to buy liquor or get into a bar or club," "been drunk in a public place," "drank more than 4 alcoholic beverages in less than 2 hours," "used marijuana or hashish (grass, pot, hash)," "used tobacco," "used other illegal drugs such as heroin, cocaine, or LSD, etc…," and "used your own or other's prescription drugs for a reason other than the prescribed reason" (α = .857). Prior cheating behavior is measured by adding the items, "cheated on school tests," "plagiarized a paper or part of a paper," and "helped another student when he or she asked you to help him or her cheat on an exam" (α = .710). Last, prior stealing is measured by summing the items "stolen (or tried to steal) things worth $50 or less," "stolen (or tried to steal) something worth more than $50," "used checks illegally or used phony money to pay for something," "taken a vehicle for a ride (drive) without the owner's permission," "used force to get money or things from another person," "avoided paying for things such as movies, bus or subway rides, and/or food," "broken into a building or vehicle (or tried to break in) to steal something or just to look around," "failed to return extra change that a cashier gave you by mistake," "used or tried to use credit cards without the owner's permission," and "downloaded music illegally" (α = .793).

Prior Strain

Given that the experience of prior strain may also influence how individuals respond to injustice with crime or deviance, I assess the extent to which respondents experienced objective and subjective strain in the past year through the use of the Inventory of College Student's Recent Life Experiences (ICSRLE) created by Kohn,

Lafreniere, and Gurevich (1990). This scale is composed of 49 items that measure the extent to which students experience typical college stressors (1 = not at all; 4 = very much), such as having conflicts with significant others, finding course work too difficult, and not having enough leisure time. I deleted seven items from this scale that dealt with strains not known to be associated with crime (see Agnew 2001), resulting in a total of 42 items. I also added five items derived from the College Student Life Events Scale (CSLES) that dealt with discrimination and sexual victimization (Levine and Perkins 1980). I summed these items to form an overall measure of objective strain ($\alpha = .920$). To assess subjective strain, I asked individuals to measure the extent to which the strains they experienced bothered them (1 = not at all; 4 = very much). I summed these items to form a general measure of subjective strain ($\alpha = .918$).[62]

Social Control

Individuals low in social control are those who have weaker bonds to conventional others and institutions, and are less likely to believe that crime is wrong (Hirschi 1969). Those low in social control therefore should be more likely to respond to injustice in a deviant or criminal way. Attachment to conventional others is assessed by questions that asked respondents how close they are to their family and friends (1 = not close at all; 4 = very close), while attachment to conventional institutions is measured by questions that asked students about their educational and occupational goals and plans.

Due to the large literature that highlights the importance of family attachment over friend attachment in reducing crime or delinquency (e.g., Gottfredson and Hirschi

[62] I coded missing data for the items that assessed objective and subjective strain "1" or "not at all." In theory, those who failed to answer these items did not experience prior strain.

1990); I only concentrate on family attachment.[63] I measured family attachment by summing the items: "I feel close to my father/stepfather," "I feel close to my mother/stepmother," "I want to be like my father/stepfather," and "I want to be like my mother/stepmother" ($\alpha = .761$). Commitment, or attachment, to conventional institutions is measured by adding the items: "I try my best at school," "I work much harder than my classmates in school," "I want to go to graduate school or professional school after graduation," and "I plan on having a career after I graduate" ($\alpha = .625$) (1 = strongly disagree; 5 = strongly agree).[64] In addition, commitment is measured by an item that asked students the type of grades they typically make (1 = Mostly A's; 4 = Mostly B's and C's). Those students who make "mostly A's" and "mostly A's and B's" are considered to be more highly attached to the conventional institution of education.

I measured moral beliefs, or whether respondents view criminal behavior as wrong, by a scale that asked respondents to indicate their attitudes toward a variety of delinquent acts (1 = always wrong; 5 = never wrong). Drawing from Brownfield (2006) and Matthews (2009), I asked students how wrong they believe it is to: "get around the law if you can get away with it;" "do some things that are not right to get ahead;" "hit someone if someone else started the fight;" "get drunk if you have had a bad day;" "use marijuana or hashish (grass, pot, hash) if you have had a bad day;" "use heroin, cocaine or LSD if you have had a bad day;" "take something from a store without paying for it if you really need something;" and "cheat on an exam if you really need to improve your grade" ($\alpha = .776$) (see Appendix A).

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[63] I also created a variable that measured friend attachment, which I generated by summing "I feel close to my friends" and "I want to be like my friends."

[64] For my measures of attachment and commitment, I coded missing data as "neither agree nor disagree." Only 15 students indicated that they did not plan on having a career after they graduate.

Social Support

Experiencing social support from conventional others, such as family members and friends, aids individuals in coping with their strains (Agnew 2006). Some research suggests that individuals who fail to receive help and advice from conventional others will be more likely to respond to strain with deviant or criminal acts (Cullen 1994; Wright and Cullen 2001). I assess social support through eight items that asked respondents to indicate the extent they feel they can count on their friends and family for help (1= strongly disagree; 5 = strongly agree). Respondents scoring high on these items should be less likely to engage in criminal coping upon the experience of injustice than low scorers.

I created two measures of support, one for family and the other for friend support. Family/friend support are measured by summing the items "I can rely on my family/friends to help me with my problems," "My family/friends look(s) out for me," "My family/friends and I have done a lot for one another," and "My family/friends and I are very close in our feelings for each other (Family α = .824; Friends α = .792).

Social Learning

Affiliation with delinquent peers is also important for this study because of the legitimating effect these individuals may have on one's propensity to engage in crime. I asked respondents how many of their friends engaged in various delinquent acts represented by the modified version of the National Youth Survey and my scenarios. Respondents indicated how many of their friends in the past year have: hit someone; gotten drunk; used marijuana or hashish (grass, pot, hash); used heroin, cocaine, or LSD; intentionally taken something from a store without paying for it; and cheated on a school

test (1 = none of them; 5 = all of them). I summed these items to form a general measure of peer delinquency (α = .863).[65] Association with delinquent peers is believed to increase the likelihood of criminal or deviant behavior because these individuals hold favorable definitions of crime, which then become learned.

I also asked respondents about the attitudes their friends hold toward these delinquent acts. Students specified the extent to which their friends think it is wrong to: "get around the law if they can get away with it;" "do some things that are not right to get ahead;" "hit someone if someone else started the fight;" "get drunk if they have had a bad day;" "use marijuana or hashish (grass, pot, hash) if they have had a bad day;" "use heroin, cocaine or LSD if they have had a bad day;" "take something from a store without paying for it if they really need something;" and "cheat on an exam if they really need to improve their grade" (1 = always wrong; 5 = never wrong). I summed the answers to these statements to form a single variable (α = .873).

[65] Missing data for these variables are coded as "don't know." In total, there were 12 missing responses for this variable.