

PSYCHOPATHIC TRAITS, VENGEANCE, AND MOTIVATIONS
TO PUNISH IN CRIMINAL SCENARIOS

by

LEAH MARIE EFFERSON

ANDREA L. GLENN, COMMITTEE CHAIR

JENNIFER COX
MICHAEL PARDO

A THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts
in the Department of Psychology
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2017

Copyright Leah Marie Efferson 2017
ALL RIGHTS RESERVED

ABSTRACT

The purpose of this study was to examine the influence of psychopathic traits on punishment allocations and the motivations those higher in psychopathy use in their decisions to punish others. A previous study found that individuals higher in psychopathic traits were less retributive when punishing a murderer (Aharoni, Weintraub, & Fridlund, 2007). However, those higher in psychopathy have also been found to be more vengeful after a personal mistreatment (Book & Quinsey, 2004) and this emotional vengeance has been associated with *more* retributive punishments and increased support for capital punishment (McKee & Feather, 2008). Therefore it is unclear if those higher in psychopathy would punish more retributively than those lower in these traits. I examined the relationship between psychopathy and punishment allocations for a variety of crimes, and explored the influence of emotional vengeance on the relationship between psychopathic traits and punishment allocations. Participants provided prison-sentencing recommendations for a variety of criminal acts. Individuals scoring higher in psychopathy allocated less harsh punishments than those scoring lower in psychopathy but these effects were small. Individuals scoring higher in psychopathy also scored higher on vengeance, but vengeance did not moderate the relationship between psychopathic traits and punishments. Individuals higher in psychopathy reported being slightly less influenced by all types of motivations for punishment than those lower in psychopathy. Overall, more research is needed to examine what motivates those higher in psychopathy to punish others in criminal scenarios.

DEDICATION

This thesis is dedicated to my mother, who has always supported me in my career and listened to me talk about psychopaths.

LIST OF ABBREVIATIONS AND SYMBOLS

LSRP	Levenson Self-Report Psychopathy Scale
IRI	Interpersonal Reactivity Index
PCL-R	Psychopathy Checklist Revised
<i>a</i>	Cronbach's index of internal consistency
β	Beta: standard regression coefficient
<i>M</i>	Mean: the sum of a set of measurements divided by the number of measurements in the set
<i>n</i>	Sample Size
<i>t</i>	t-statistic: computed by dividing the estimated value of the parameter by its standard error. This statistic is a measure of the likelihood that the actual value of the parameter is not zero.
<i>p</i>	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
<i>r</i>	Pearson product-moment correlation
SD	Standard deviation: value of variation from the mean

ACKNOWLEDGMENTS

I am extremely grateful for the individuals who have helped me with this research project. I would like to thank my mentor Andrea Glenn for her continuing support and encouragement and assistance in this thesis. I would also like to thank the members of my committee, Jennifer Cox and Michael Pardo for their helpful input throughout this process. Finally, I would like to thank my family and friends for the emotional support even at a distance. Thank you for motivating me and reminding me to be thankful for the opportunities I have received.

CONTENTS

ABSTRACT	ii
DEDICATION	iii
LIST OF ABBREVIATIONS AND SYMBOLS	iv
ACKNOWLEDGMENTS	v
LIST OF TABLES	vii
INTRODUCTION	1
METHODOLOGY STUDY 1	12
RESULTS STUDY 1	17
DISCUSSION STUDY 1	23
HYPOTHESES STUDY 2	25
METHODOLOGY STUDY 2	27
RESULTS STUDY 2	29
GENERAL DISCUSSION	40
REFERENCES	47
APPENDICES	52

LIST OF TABLES

1. Descriptive Statistics and Correlations	18
2. Differences between Genders on Study 1 Variables.....	20
3. Regression Analyses of Variables Study 1	22
4. Differences between Genders on Study 2 Variables.....	30
5. Descriptive Statistics of Motivations for Punishments	31
6. Regression Analyses of Variables Study 1 and 2	34
7. Predicting Motivations from Psychopathy.....	37
8. Predicting Criminal Scenarios from Psychopathy in Study 2.....	38

INTRODUCTION

Psychopathy is a construct that includes personality characteristics such as manipulateness, narcissism, shallow affect, callousness, lack of guilt/remorse, and lack of empathy along with behavioral characteristics such as impulsivity, irresponsibility, sensation seeking, and juvenile delinquency (Hare & Vertommen, 1991). Much research has focused on decision-making in individuals with psychopathic traits (Beszterczey, Nestor, Shirai, & Harding, 2013; Glenn, Raine, Schug, Young, & Hauser, 2009; Hughes, Dolan, & Stout, 2015; Koenigs, Kruepke, & Newman, 2010) and two studies have examined how those with higher levels of psychopathic traits punish offenders in criminal contexts (Aharoni, Weintraub, & Fridlund, 2007; Peace, & Valois, 2014). There are several features of psychopathy that may influence how psychopathic individuals would punish others.

Researchers have shown that those higher in psychopathy are more rationalistic in their thinking. Rationality is an intellectual, analytical ability to reason about a normalized activity in order to achieve the aim of the activity (Shneider, 1991). The criminal justice system aims to appropriately punish those who have committed crimes, therefore, a rational decision would be to use the facts of a case instead of emotions that are not based on fact to punish. Those higher in psychopathy may be more rationalistic when presented with emotional material because they are more likely to use facts to make decisions instead of relying on emotions (Dutton, 2012). For example, those higher in psychopathy were more likely to accept unfair offers in an ultimatum

game in which the rational decision is to accept any offer, even if unfair, to obtain reward (Osumi & Ohira, 2010). Also, in hypothetical personal moral dilemmas, in which one must decide whether to intentionally and directly kill one person in order to save many others, those higher in psychopathy are more likely to make the rational decision to kill one person, rather than relying more on emotions that result in allowing many others to die for the sake of one person (Koenigs, Kruepke, Zeier, & Newman, 2012). However, psychopathic individuals also may be prone to outbursts of anger or hostility (McCord & McCord, 1964; Millon, 1981). These and other aspects of psychopathy may influence punishment allocations.

Along with psychopathic traits, other personality factors such as the tendency to seek revenge may play a role in decisions about third-party punishment. The goal of these studies was to examine the influence of psychopathic traits and trait emotional vengeance on the allocation of punishments in a hypothetical legal setting and to examine whether potential influences apply across a variety of crimes.

Criminal punishment is a deliberate unpleasant consequence inflicted on an offender due to a violation of a system of rules and laws (Bourke, 1977). Studies have shown there are multiple motivations for allocating punishment. These include deterrence of future crimes by the offender or others in society (also called behavioral control), rehabilitation of the offender, restoration (e.g. bringing the victim and offender together to talk about the impact it had on the victim and to find a solution both parties accept), retribution, and incapacitation (Miceli, 2009). Retribution and deterrence are two motivations for punishment that may differ in individuals with psychopathic traits. Retribution justice involves the intent to restore a moral balance by ensuring that the wrongdoer also suffers a loss. A desire for behavior control or individual deterrence is intended to discourage the individual from committing future crimes (Bourke,

1977).

1. Why psychopathic individuals may be less retributive in allocating punishments

There are several reasons why people allocate retributive punishments.

First, it may be due to a desire for equality and may serve as a way to facilitate cooperation and restore welfare (Boyd & Richerson, 1992; Fehr & Fishbacher, 2004). For example, to restore equality someone may believe that it is fair to sentence an offender to death because the offender killed someone. This may also restore welfare in the community because people will feel satisfied that justice has been served. Second, it may be to “get back” at the offender; that is, allocating a punishment that is comparable to the inflicted harm (Turillo, Folger, Lavelle, Umphress, & Gee, 2002). Some research suggests that psychopathic individuals may be less concerned about these concepts. For example, those who score higher in psychopathy do not view preserving fairness as being as important to their concept of morality as those who score lower in psychopathy in both forensic (Aharoni, Antonenko, & Kiehl, 2011) and community samples (Glenn, Iyer, Graham, Koleva, & Haidt, 2009; Efferson, Glenn & Iyer, manuscript in preparation). Psychopaths are more likely to use non-cooperative tactics in games that test cooperation strategies (Koenigs, Kruepke, & Newman, 2010; Mokros, Menner, Eisenbarth, Alpers, Lange, & Osterheider, 2008). This suggests that individuals higher in psychopathic traits view fairness as less important to their moral systems than individuals lower in psychopathic traits, which might mean that psychopathic individuals are less motivated to punish for the sake of restoring justice or to enhance cooperation in society.

It has also been shown that those higher in psychopathy are more rationalistic in their thinking (Deigh, 1996; Koenigs, Kruepke, Zeier, & Newman, 2012) but are impaired in moral emotions (Blair, 1995), which is consistent with the finding from a previous study which found

that individuals with psychopathic traits allocated more utilitarian punishments as opposed to retributive punishments (Aharoni, Weintraub, & Fridlund, 2007). That is, those who are more rational when making decisions about third parties may think more about the facts in the scenario as opposed to using emotions such as anger to make decisions. Since outrage and righteous anger are related to punishing more retributively in third party judgments (Carlsmith, Darley, & Robinson, 2002; Darley, Carlsmith, & Robinson, 2000; Fessler & Haley, 2003), it may be that people who rely more on emotions such as anger (as opposed to being rational) to make these decisions would punish based on retribution motives.

Another reason why psychopathic individuals may be less likely to allocate retributive punishments is because they demonstrate deficits in empathy (Hare & Vertommen, 1991) and would thus be less likely to empathize with the victim(s) of the crime. This may decrease the likelihood that they would harshly punish a third party on the victim's behalf. Also, those higher in psychopathy are less concerned about harming others than those lower in psychopathy (Aharoni et al., 2011; Glenn, Iyer, Graham, Koleva, & Haidt, 2009; Efferson et al., manuscript in preparation), suggesting they may care less about the victim's pain and might be less motivated to punish retributively to right a wrong that was imposed on the victim.

Alternatively, psychopaths might also have trouble empathizing with the criminal, something that would usually lead to less harsh punishments. Therefore, it is unclear how a psychopath's lack of empathy would affect punishments.

2. Why psychopathic individuals may be more retributive in allocating punishments

Although those scoring higher in psychopathy are described as having blunted emotions, there are some situations in which they tend to demonstrate heightened emotional responses. Psychopathic individuals demonstrate increased reactive aggression, which is driven by anger in

response to provocation (Berkowitz, 1993). Psychopathy has also been shown to be positively associated with dispositional emotional vengeance (Book & Quinsey, 2004). Dispositional emotional vengeance, the tendency towards revenge, is the desire to “get back” at someone in response to a perceived maltreatment. It is associated with an inability to forgive due to increased anger, and is relatively stable across the lifespan (Stuckless & Goranson, 1992). Vengeance is motivated by the desire to bring relief from anger experienced by the vengeful individual.

Several studies have found psychopathic individuals to be more vengeful. One study found that incarcerated participants who scored above 25 on the Psychopathy Checklist-Revised (PCL-R)(Hare & Vertommen, 1991) scored higher on a measure of dispositional emotional vengeance than incarcerated participants who were non-psychopathic (PCL-R <20) (Book & Quinsey, 2004). Another study found that females higher in psychopathic traits self-reported that they were more likely to seek revenge against a cheating partner and romantic rival (Brewer, Hunt, James, & Abell, 2015) and males higher in psychopathic traits were more motivated by revenge during their index crimes using inferences from police reports than those lower in these traits (Williamson, Hare, & Wong, 1987). Therefore, those higher in psychopathic traits were more vengeful in situations in which they were personally affected by the mistreatment.

The studies described above refer to seeking revenge after one is personally harmed. However, it could be that those higher in certain psychopathic traits associated with Factor 2 (e.g., poor behavioral controls) might be more vengeful to people who have harmed someone else such as in third party judgments. In one study, those higher in psychopathy and Machiavellianism were more likely to endorse emotional vengeful decision-making, such as believing it is acceptable to use emotions such as anger when sentencing an individual (Giammarco & Vernon, 2014).

Although revenge is typically sought following a personal mistreatment and does not always apply to third party punishment such as allocating sentence lengths, studies have found that individuals with higher trait levels of vengeance allocate harsher punishments to third parties in criminal scenarios. One study found vengeful attitudes were positively related to retribution as a motive for punishment and greater support for capital punishment (McKee & Feather, 2008).

Another study found that increased attitudes about punishing criminals for revenge was related to increased attitudes that criminals should receive harsher punishments and the view that sentencing based on emotions should be used in courtrooms (Gerber & Jackson, 2013). Because vengeance has been associated with retributive punishment, in the present study we examine the influence of both psychopathy and vengeance on sentencing decisions.

3. Behavioral Control Motives in Psychopathy

Another reason why people higher in psychopathy might punish differently than those lower in psychopathy is because of differences in their motivation for behavioral control or deterrence. In addition to reactive aggression, those higher in psychopathy display proactive or instrumental aggression, which is planned and goal-oriented (e.g., robbing a store for money)(Cima & Raine, 2009; Woodworth & Porter, 2002).

In regards to punishment, proactive aggression is associated with behavior control in that it seeks to control another's behavior for personal gain and requires forethought (Kingsbury, Lambert, & Hendrickse, 1997). That is, the motivation of behavioral control is to prevent the offender from committing another crime through the threat of or actual punishment, therefore attempting to control the behavior of the individual. This has similar motivations as proactive aggression in which people may manipulate or threaten others so they do what they want. Also, both behavioral control motives and proactive aggression involve acting in advance of a future

situation, rather than just reacting (Vidmar, 2000; Dodge, 1991). Therefore, it may be that those higher in psychopathy who display more proactive aggression than those lower in psychopathy are less motivated to punish for retributive purposes and more motivated by behavioral control than those lower in psychopathy who desire cooperation in society.

4. The present studies

Overall, those higher in psychopathy have blunted emotions, less empathy, and are more rationalistic in their thinking, but also display reactive aggression and are more vengeful. Therefore, it is unclear whether they would punish more retributively when others are harmed. It has been shown that they respond more aggressively and seek revenge when they themselves have been wronged (Book & Quinsey, 2004; Brewer et al., 2015; Williamson et al., 1987) but it is unclear if they would respond similarly if another person is harmed.

One possibility is that different traits of psychopathy may predict retributive punishments differently. In one model of psychopathy, there are two overarching factors that include interpersonal/affective traits (Factor 1) and lifestyle/antisocial traits (Factor 2). The core features of psychopathy (Factor 1) such as shallow affect, lack of empathy and remorse, manipulateness, superficial charm, pathological lying, and grandiose sense of self-worth may be associated with less retributive punishments due to decreased motivation to empathize with a victim, restore cooperation in society, and seek revenge out of anger on another's behalf. In fact, Factor 1 traits were found to predict the level of proactive aggression associated with behavioral control motives of punishment, whereas Factor 2 traits did not (Woodworth & Porter, 2002). Therefore, I hypothesize that Factor 1 traits may better predict less retributive punishments than Factor 2.

Although I utilize a two-factor model of psychopathy in the present study, it is important

to note that there are additional models of psychopathy that would be worthy of examining in future studies. For example, the Triarchic model is a three-factor model that assesses boldness, meanness, and disinhibition and is assessed using the Triarchic Psychopathy Measure (TriPM; Patrick (2010)). Disinhibition involves externalizing problems such as impulsivity and irresponsibility, meanness involves traits such as lacking empathy and being cruel and manipulative, and boldness includes more adaptive traits such as fearlessness, dominance, and emotional stability (Krueger, Markon, Patrick, Benning, & Kramer, 2007). Another model includes eight subscales of psychopathy and two overarching factors (fearless dominance and impulsive antisociality) and is assessed by the Psychopathic Personality Inventory (PPI) (Lilienfeld (PPI; Lilienfeld & Andrews, 1996; Lilienfeld & Widows, 2005). The main difference between the two-factor model and other models is that the two factor model does not emphasize adaptive traits of psychopathy.

Only two studies have examined how psychopathy influences third-party punishment. Aharoni, Weintraub, & Fridlund (2007) presented a vignette of a murder to undergraduate students and manipulated whether the crime was intentional or unintentional (the offender had a brain tumor versus no brain tumor) and how likely the offender was to recidivate based on testimony given by an expert witness. Participants rated the degree to which the criminal should be freed, incarcerated or executed and a sentence length. This study found that unlike those who scored lower in psychopathy, those who scored higher in psychopathy allocated similar punishments regardless of whether the crime was intentional or unintentional, suggesting that they were less retributive when punishing. They also allocated fewer years of incarceration for an intentional, low-recidivism offender than those lower in psychopathy, suggesting that those higher in psychopathy are motivated more by behavioral control than retribution (Aharoni et al.,

2007). The fact that the crime was intentional did not increase sentence lengths for those higher in psychopathy because they may not have been focused on “getting back” at the offender (i.e., retributive motives) but instead may have focused on the fact that there was a low probability the offender would recidivate, which influenced them to allocate fewer years of incarceration than those lower in psychopathy who were more influenced by retribution. This contradicts findings from another study that found that psychopathic traits did not influence sentencing in a sexual assault case in which the victim and defendant varied in their emotionality when talking about the crime (Peace & Valois, 2014). That is, psychopathic traits did not influence rates of recommending guilty versus not guilty verdicts for a defendant or the type of sentencing he/she deserved even when the transcript of a crime was manipulated to provide details of high and low emotions from the victim and defendant (e.g., “Tears poured from [A.B.]’s eyes while talking about her life after the encounter with Mr. Smith” versus “In court, [A.B.] appeared unemotional while recounting these details.”). The authors suggest this may be because the mock jurors were not affected by the sentencing decision and therefore the manipulation may have only activated pathways associated with cognitive empathy (Peace & Valois, 2014). Another reason for this null result might be because most of their sample scored in the 85th percentile or above on their measure of psychopathy and their “low” psychopathy group still scored relatively high in psychopathic traits compared to what is typical seen in community samples, making it difficult to compare the two groups.

The present study will expand on these previous studies, which have included only one type of crime (i.e., either murder or sexual assault). Although the two prior studies examined psychopathy’s influence on specific punishing decisions (Aharoni et al., 2007; Peace, & Valois, 2014), no studies have examined the robustness of this effect by examining how psychopathic

personality traits may influence punishments on different categories of crimes such as violent versus nonviolent or premeditated crimes versus crimes of passion.

I hypothesized that those who score higher in psychopathy would allocate significantly less harsh punishments across different crimes than those who score lower. I hypothesize that this will be driven more so by Factor 1 traits than Factor 2 traits. I also hypothesized that those who score higher in dispositional emotional vengeance would allocate significantly harsher punishments across different crimes than those who score lower. I also expected that psychopathy would be associated with higher dispositional vengeance.

I hypothesized that vengeance would moderate the relationship between psychopathy and punishment allocations. At lower levels of vengeance, those higher in psychopathic traits would allocate less harsh punishment than those lower in psychopathic traits because they may not be as motivated to act retributively to decrease anger and facilitate cooperation as those who score lower in psychopathy. At higher levels of vengeance I hypothesized that there would not be a relationship between psychopathy and harshness of punishments.

I was also interested in examining relationships between psychopathy, empathy, and punishment allocations. Empathy is important in legal decision-making because it might affect sentencing recommendations depending on if the jurors empathize with the victim or defendant (Deitz & Byrnes, 1981). Previous research has shown that when empathy for a *defendant* was induced by asking participants to “try to put yourself in his position” in a criminal scenario, participants were more likely to attribute the behavior of the offender to the situation, consider the defendant less responsible, and allocate more lenient sentences (Johnson et al., 2002). Feelings of empathy for a *victim* have been shown to increase helping behaviors because someone who empathizes with a victim would understand the victim’s distress and might want to

help reduce that stress (Macaulay & Berkowitz, 1970). One way to help a victim is to ensure he or she will not come in contact with the perpetrator by allocating a lengthy prison sentence. In one study, those who empathized with a rape victim allocated longer prison sentences to the offender than those who did not empathize with the victim (Deitz, Blackwell, Daley, & Bentley, 1982).

Those higher in psychopathy lack empathy (Hare, 2003), which may influence how they decide to punish others. It might be that those higher in psychopathy are less concerned about both the victim and offender because of decreased empathy and concern about harming others. It might be that they would not empathize with an offender, which would usually predict harsher sentences, since they might not attribute the offender's behavior to the situation and would deem his or her more responsible (Johnson et al., 2002). However, in criminal scenarios in which there is not much background on the defendant, participants might focus more on how the victim was affected. Therefore, in short descriptions of a crime, a lack of victim empathy might be more influential in sentences than a lack of defendant empathy. One study found that a measure of trait empathic anger, which involves becoming angry on behalf of another person's suffering, predicted increased punishment for an offender who hurt a victim (Vitaglione & Barnett, 2003). It might be that those higher in psychopathy would allocate less harsh punishments to offenders *because* they are not as concerned or compassionate towards the victim of a crime as those lower in psychopathy. Therefore, I hypothesized that empathic concern would mediate the relationship between psychopathy and punishment allocations.

METHODOLOGY STUDY 1

Study 1: Participants and Procedure

Data was collected using self-report questionnaires on YourMorals.org, which is a data collection platform in which participants first provide demographics such as age, sex, education, and political identity and then can take part in any of 30-40 studies, each described with a title and a brief one sentence description. Participants self-selected to take the study measures and were not compensated. Participants were given a more detailed description of the measure after it was completed and were shown a graph of how their scores compared to others. The typical ways in which participants find out about the website are through publicity about the research or by typing in words such as morality into a search engine.

All methodologies used were reviewed and approved by the Institutional Review Board at the University of Southern California. Participants were people from all over the world who completed the questionnaires in their leisure time. Participants were included in this study if they were 18 years of age or older.

The total sample consisted of 599 participants who completed all three of our desired questionnaires. The majority of participants identified as male (65.6 percent) and lived in the United States when they registered on the website (88.2 percent), followed by the United Kingdom (2.8 percent), Canada (1.9 percent), Australia (1.4 percent), and Sweden (1.4 percent). The majority identified as leaning toward liberal political views (64.1 percent), followed by conservative political views (12.3 percent), middle of the road (9.4 percent), libertarian (7.1 percent), and other (4.7 percent). The average education level was in between completion of a

college degree and some graduate/professional school (M = 6.87 on a scale from 1 to 9: 1=some high school, 2=currently in high school, 3=completed high school, 4=some college, 5=currently in college, 6=completed college, 7=some graduate/professional school, 8=currently in graduate/professional school, 9=completed graduate/professional school).

Measures

Levenson's Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995). This is a 26-item rating scale with two subscales that reflect the two broad factors of psychopathy (affective/interposal vs. lifestyle/antisocial) based on the Psychopathy Checklist-Revised (PCL-R; Hare & Vertommen, 1991). The Factor 1 subscale measures personality traits that are considered to be the core features of psychopathy including lack of remorse and empathy, manipulateness, pathological lying, and glibness. The Factor 2 subscale assesses lifestyle and anti-social behaviors such as impulsivity, failure to accept responsibility, stimulation seeking/proneness to boredom, and juvenile and adult delinquency (Hare & Vertommen, 1991). Items are rated on a 4-point Likert scale with 1 = "Strongly disagree", 2="Somewhat disagree", 3="Somewhat agree", and 4= "Strongly agree". In order to make sure participants were unaware I am assessing psychopathy, the questionnaire will be named "Self-Report Personality Scale".

The LSRP and its factor structure have been validated in large samples of undergraduates (Levenson et al., 1995; Lynam, Whiteside, & Jones, 1999). These studies found excellent internal consistency ($\alpha = 0.85$ for both studies), test-retest reliability over eight weeks ($r = 0.83$; Lynam et al., 1999), and convergent validity of the LSRP with another self-report psychopathy scale ($r = 0.64$; Lynam et al., 1999). This scale has shown convergent validity with other scales that measure different antisocial behaviors ($r = 0.31$ $p < .001$; Lynam et al., 1999) and on tasks in

which incarcerated psychopaths show deficits such as passive avoidance tasks (Brinkley, Schmitt, Smith, & Newman, 2001). Taxometric analyses of the LSRP found it to support the dimensional interpretation of psychopathy, consistent with findings on the PCL-R and other self-report measures (Edens, Marcus, Lilienfeld, & Poythress Jr., 2006; Walters, Brinkley, Magaletta, & Diamond, 2008). In these two studies, all the items on the LSRP (total psychopathy) had good internal consistency (Study 1: $a = 0.83$; Study 2: $a = 0.79$). The items that comprise Factor 1 also had good internal consistencies in both studies (Study 1: $a = 0.83$; Study 2: $a = 0.72$). The internal consistencies with items that comprise Factor 2 were lower than Factor 1 (Study 1: $a = 0.66$; Study 2: 0.73). However, it should be noted there are other models of psychopathy with different measures that would be useful to examine in relation to vengeance and punishments.

Vengeance Scale (Stuckless & Goranson, 1992). This 20-item scale assesses attitudes toward revenge and responses to revenge-eliciting situations. Examples of items include: “I try to even the score with anyone who hurts me,” and “I find it easy to forgive those who have hurt me” (reverse scored). Half of the items are worded negatively on a 7-point Likert scale ranging from 1=“Strongly Disagree” to 7=“Strongly Agree”. This questionnaire has strong convergent validity in appropriate directions with measures of trait anger, empathy, and social desirability ($r_s = 0.62, -0.44, -0.51$) and is negatively correlated with certain personality traits such as cooperativeness, the ability to control impulses, and friendliness ($r_s = -0.44, -0.35, -0.48$). Confirmatory factor analysis suggests that this scale is a one-dimensional scale that assesses the tendency to be vengeful across situations (Ruggi, Gilli, Stuckless, & Oasi, 2012). Acceptable Cronbach’s alphas for internal consistency have been reported in large samples of undergraduate students ($a = 0.92, 0.88, 0.85$) (Stuckless, Ford, & Vitelli, 1995; Ruggi et al. 2012; McKee & Feather, 2008) along with acceptable test-retest reliability over eight weeks ($r = 0.90$; Stuckless,

1995). There were acceptable internal consistencies for both studies (Study 1: $a = 0.96$; Study 2: $a = 0.73$)

Punishment Allocations. In order to assess punishment allocations, the authors compiled 18 scenarios of criminal activities in which participants rated the appropriate prison sentences for an offender. Ideas for what types of crimes to include were taken from previous literature with already established sets of vignettes (Douglas & Ogloff, 1996; Krueger et al., 2013) along with others constructed by the authors who study antisocial behaviors. These vignettes consist of nonviolent and violent crimes, some of which are premeditated and some of which are reactive in nature (see Appendix D for all scenarios and their categories). Not all scenarios specified the gender of the perpetrator. Whether the perpetrator planned the crime (premeditated) or acted impulsively (reactive) was ambiguous for some of the scenarios.

Participants were asked to indicate the amount of time the perpetrator should be incarcerated for the crime (1 week to 100 years). Acceptable Cronbach's alphas were observed in both studies (Study 1: $a = 0.83$; Study 2: $a = 0.92$).

For the Punishment Attitudes Scale, sentencing lengths were computed into a ranking system (1=1 week, 2=1 month, 3=3 months, 4=6 months, 5=1 year, 6=3 years, 7=5 years, 8=7 years, 9=10 years, 10=15 years, 11=20 years, 12=30 years, 13=40 years, 14=50 years, 15=70 years, 16=100 years (life in prison)).

Interpersonal Reactivity Index (IRI). This scale is a 28-item scale that measures empathy defined as "the reactions of one individual to the observed experiences of another." It has four subscales that include: Fantasy (the extent to which individuals identify with fictional characters), Perspective-Taking (the extent to which individuals spontaneously try to adopt others' points of view), Empathic Concern (the extent of individuals "feelings of warmth,

compassion, and concern for others”), and Personal Distress (the extent of individuals “feelings of anxiety and discomfort” as a result of another’s negative experience). This questionnaire has been shown to have acceptable reliability and validity (Davis, 1983; De Corte, Buysse, Verhofstadt, Roeyers, Ponnet, & Davis, 2007). Acceptable Cronbach’s alphas were observed in both studies (Study 1: $\alpha=0.89$; Study 2: $\alpha=0.73$)

RESULTS STUDY 1

Study 1: Preliminary Analysis

Participants who failed to complete more than 20 percent of any of the three questionnaires were excluded from analyses (n=11). Age at registration, indicated gender, and education were used as covariates since they were all significantly correlated with psychopathy (See Table 1).

Males scored higher on total psychopathy, Factor 1, and vengeance than females (See Table 2). Female participants punished premeditated, nonviolent, and violent crimes along with crimes committed by male offenders more harshly than males did (Table 2).

Main Analyses

Zero-order correlations are listed in Table 1.

Table 1. Descriptive statistics and zero-order correlations between study variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.LSRP total	43.2 (8.8) 52.6(12.8)																				
2. Factor 1	23.9 (6.3) 30.5(9.1)	.90** .91**																			
3. Factor 2	19.3 (4.3) 22.0(5.7)	.73** .78**	.36** .45**																		
4. Age	39.4 (14.4)	-.32**	-.27**	-.24**																	
5.Education	6.8 (2.0)	-.20**	-.14**	-.21**	.23** ---																
6. Vengeance	2.7 (.97) 3.5 (.41)	.60** .59**	.63** .57**	.31** .40**	-.16** ---	-.11** ---															
7. All crimes sentence length	8.1 (1.9) 9.2 (2.0)	-.05 -.13*	-.08* -.11*	.00 -.11*	-.50** ---	-.04 ---	-.04 -.08														
8. Premeditated crimes	8.9 (2.2) 9.1 (2.1)	.00 -.09*	-.03 -.08	.03 -.08	-.12** ---	-.03 ---	-.03 -.05	.88** .95**													
9. Reactive crimes	5.7 (1.7) 10.6 (2.2)	.01 -.14*	.01 -.11*	.00 -.13**	-.06 ---	-.14** ---	.09 -.08	.63** .92**	.34** .88**												
10. Violent	8.7 (2.3) 9.0 (2.1)	-.09* -.13**	-.10** -.12*	-.03** -.10*	.00 ---	.00 ---	-.05 -.09*	.90** .96**	.76** .86**	.57** .88**											
11. Non-violent	7.4 (2.0) 9.2 (2.0)	.00 -.10*	-.03 -.07	.05 -.11*	-.10** ---	-.09* ---	-.01 -.04	.84** .91**	.58** .86**	.54** .84**	.58** .88**										
12. Male Offender	8.1 (2.1) 9.6 (2.0)	-.09* -.12**	-.11** -.09*	-.02 -.12**	-.07 ---	-.01 ---	-.07 -.08	.94** .96**	.83** .92**	.64** .92**	.89** .71**	.74** .72**									
13. Gender not specified	7.8 (1.9) 9.9 (2.3)	.00 -.09*	-.03 -.09*	.04 -.07	.00 ---	-.08* ---	.02 -.05	.85** .94**	.70** .93**	.53** .81**	.69** .88**	.83** .85**	.67** .62**								
14. IRI-PT	3.6 (.7) 2.7 (.3)	-.40** -.05	-.35** -.09*	-.30** .01	.06** ---	.08** ---	-.39** -.10*	.11 .03	.05 .04	.19** .01	.11 .03	.11 .02	.14* .03	.04 .03							

15. IRI-Fantasy	3.6 (.9) 3.1 (.4)	-.09** -.01	-.14** -.03	.03 .02	-.12** ---	.00 ---	-.04 -.12**	.11 -.03	.06 -.05	.15* -.04	.07 -.02	.14* -.04	.15* -.04	.06 -.01	.16** .12**							
16. IRI-EC	3.6 (.8) 3.3 (.3)	-.55** -.39**	-.63** -.40**	-.18** -.23**	.19** ---	.11** ---	-.45** -.34**	.11 .01	.06 -.02	.14* .02	.07 .01	.12* .00	.16** .01	.01 .00	.43** .12**	.35** .22**						
17. IRI-PD	2.4 (.8) 2.8 (.4)	.03 .09*	-.08** .12**	.21** .02	-.09** ---	-.06** ---	-.08 .10*	-.01 -.11*	-.01 -.11*	-.02 -.10*	-.03 -.10*	-.02 -.10*	.02 -.09*	-.01 -.10*	.19** .08	.13** .20**	-.01 -.04					
18. Retribution	38.9 (32.7)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19. Behavioral Control	38.9 (34.4)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20. Rehabilitation	40.5 (34.6)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21. Incapacitation	39.4 (32.8)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Note. IRI-PT = Perspective Taking subscale of the IRI, IRI-EC = Empathic Concern subscale of the IRI, IRI-PD = Personal Distress subscale of the IRI. Within each cell, the values on the top line are from study 1 (n=); below are study 2 (n=477). Values for variables 18-21 were calculated for study 2 only. There was a limited range of education and age, so correlations were not calculated for Study 2. Mean education level: 6=completed college, 7=some graduate/professional school. Values are higher in study 2 on psychopathy because the items ranged from 1-5 (1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly agree), whereas in study 1 they ranged from 1-4 (1=Disagree strongly, 2=Disagree somewhat, 3=Agree somewhat, 4=Agree strongly).

Table 2. Differences between Genders on Study 1 Variables

	Males Mean (SD)	Females Mean (SD)	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Total	47.3(10.2)	44.0(9.8)	14.5	<.001	0.32
Psychopathy					
Factor 1	24.7(6.1)	22.4(6.5)	2.49	.013	0.36
Factor 2	19.6(4.3)	18.7(4.3)	1.48	.138	0.20
Vengeance	3.2(1.2)	2.9(1.1)	3.8	<.001	0.26
All Crimes	7.9(1.9)	8.3(1.9)	1.8	.066	0.21
Premeditated	8.8(2.2)	9.1(2.3)	2.2	.027	0.13
Reactive	5.8(1.6)	5.9(1.7)	.43	.665	0.06
Violent	8.5(2.2)	8.8(2.4)	1.9	.054	0.13
Non-violent	7.4(1.9)	7.8(2.1)	2.3	.019	0.19
Male Offender	7.9(2.0)	8.3(2.1)	2.1	.031	0.19
No gender	7.7(2.0)	8.0(2.2)	1.5	.118	0.14

Note: T-test statistics showing differences between males and females on variables of interest.

Regression analyses were conducted to test for relationships between psychopathy and punishment, psychopathy and vengeance, and vengeance and punishment controlling for age, gender, and education (See Table 3). Total psychopathy scores marginally predicted scores on punishment allocations in that those higher in psychopathy allocated less harsh punishments than those lower in psychopathy $\beta=-.09$, $t(598)=-1.94$, $p=.053$. This relationship was stronger for Factor 1 traits than Factor 2 traits when each factor was entered separately in the model (Table 3). Even when controlling for Factor 2 traits by including both factors in the model, Factor 1 traits still significantly predicted scores on punishment allocations, $\beta=-.10$, $t(598)=-2.37$, $p=.018$. Total psychopathy strongly predicted scores on vengeance in that those higher in psychopathy scored higher on vengeance. Factor 1 and Factor 2 traits both significantly predicted vengeance scores (See Table 3). Vengeance did not significantly predict scores on punishment allocations, $\beta=-.03$, $t(218)=-.38$, $p=.70$. Multiple regression analyses revealed that the interaction between total psychopathy and vengeance did not significantly predict punishment allocations, $\beta=.18$, $t(211)=.43$, $p=.66$.

Analyses of the different types of crimes revealed that total psychopathy scores significantly predicted less harsh punishment allocations on the ten violent crimes but not the eight nonviolent crimes (Table 3). Factor 1 traits predicted less harsh punishments on violent crimes, but Factor 2 traits did not. Psychopathy did not predict premeditated or reactive crimes. Psychopathy significantly predicted less harsh punishment allocations on crimes in which the offender was male but not in scenarios where the gender of the offender was not specified. This association between psychopathy and punishments of male offenders was significant for Factor 1

but not Factor 2 traits (Table 3). Vengeance was not associated with any of the specific types of crimes or the gender of the offender.

Table 3. Regression Analyses Predicting Study 1 Measures from Psychopathy

	Psychopathy		
	Total	Factor 1	Factor 2
Prison Punishment Lengths			
All crimes(18)	-.085	-.103*	-.016
Violent (10)	-.088*	-.097*	-.031
Nonviolent(8)	-.047	-.083	.032
Premeditated (8)	-.041	-.065	.013
Reactive (4)	-.047	-.037	-.043
Male offender (9)	-.123**	-.137**	.04
No gender (6)	-.012	-.040	.035
Vengeance	.630***	.648***	.277***

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

Note: Summary of estimates from multiple regression models predicting vengeance and punishments from psychopathy scores, age, sex, education. Numbers indicate standardized beta (β). Beta values are multiple regressions including total psychopathy, Factor 1, and Factor 2 scores. Total psychopathy, Factor 1, and Factor 2 were all entered in separate models. Numbers next to each type of crime indicate how many scenarios comprised the type of crime. Negative β indicates lower scale ratings for individuals higher in psychopathy.

Empathic concern on the IRI was marginally associated with punishment allocations in that those who scored higher on this subscale allocated harsher punishments than those who scored lower, $\beta=.13$, $t(197)=1.78$, $p=.075$.

DISCUSSION STUDY 1

Overall, psychopathic traits predicted slightly less harsh punishments, but this relationship was weak and did not reach significance despite the large sample size. Psychopathic traits predicted significantly higher scores on vengeance and both Factor 1 and Factor 2 traits significantly predicted vengeance scores. Contrary to my hypothesis, vengeance did not predict punishment allocations. This is not consistent with a previous study that used the same vengeance questionnaire and found that vengeful attitudes contributed to greater endorsements of capital punishment and more retributive motives in sentencing (McKee & Feather, 2008). The differences in results may be due to variations in how we measured punishments. McKee and Feather (2008) asked participants to rate on a scale the extent to which participants support the reintroduction of capital punishment, which is a more harsh and definitive punishment compared to prison sentences. This study probably also had less variability in punishments than ours, since they only asked about either favoring or not favoring the death penalty. Also, they measured different sentencing goals such as retribution in terms of an overall attitude about their motivations to punish, whereas we specifically asked them to allocate sentences. It could be that vengeful people might generally report that they value retribution and harsh punishments, but might not allocate harsher punishments when asked to think about specific criminal scenarios.

The interaction between psychopathy and vengeance did not predict punishments. This could be because there were not many participants who scored high in psychopathy and low in vengeance, which would make it more difficult to examine these relationships. Because

psychopathy and vengeance are strongly related to one another, it might be difficult to recruit participants who are high on one and low on the other.

HYPOTHESES STUDY 2

Study 2

In the second study, I examined the specific motivations that individuals higher in psychopathic traits use when punishing others in criminal contexts. Study 1 did not ask participants about their motivations, so it is difficult to determine what influenced their punishments. The purpose of Study 2 was to examine the relationships among psychopathic traits, specific motivations for punishment, and sentencing decisions.

I hypothesized those higher in Factor 1 psychopathic traits would indicate they were less influenced by retributive motives than those lower in psychopathy and this would predict less harsh punishments. That is, I hypothesized that reduced motives for retribution would mediate the relationship between psychopathic traits and punishment allocations.

I was also interested in empathy's influence on the relationship between psychopathic traits and motivations to punish. Those who score higher in psychopathic traits lack empathy (Hare & Vertommen, 1991) and are less concerned about harming others (Aharoni, Antonenko, & Kiehl, 2011; Glenn, Iyer, Graham, Koleva, & Haidt, 2009; Efferson, Glenn & Iyer, manuscript in preparation), which may mediate the relationship between psychopathic traits and motivations to punish. Vitaglione and Barnett (2003) found that anger on behalf of someone's suffering predicted increased punishments towards the offender. That is, anger for another's suffering might influence motivations in punishments in that one might be motivated to make sure the offender suffers and gets what he or she deserves. Those higher in psychopathy might not experience as much empathic anger as those lower in psychopathy and would not be motivated

by retribution. Also, because those higher in psychopathy were more likely to use facts rather than emotions such as anger in decision-making (Dutton, 2012), they might be less likely to punish based off retribution. Therefore, those higher in psychopathic traits, particularly Factor 1 traits, may punish less retributively *because* they have trouble empathizing with a victim and are not as concerned about the harm inflicted on a victim as those lower in psychopathic traits.

I hypothesized that decreased empathic concern (feelings of warmth and compassion for others) would mediate the relationship between Factor 1 traits of psychopathy and decreased retribution motives in punishments.

METHODOLOGY STUDY 2

Study 2

Participants and Procedure

Participants (n=477) were recruited through the subject pool at the University of Alabama to complete an online survey. All methodologies used were reviewed and approved by the Institutional Review Board at the University of Alabama. Participants received one credit for participation in the study. They provided demographic information such as age, ethnicity, education level, religious and political identification. Participants were given informed consent and any who are below 18 years of age were excluded.

The majority of participants identified as female (78.2 percent) and 25.8 percent indicated they were from Alabama. The majority identified as Republican (54.7 percent), followed by Democrat (18.9 percent) and Independent (12.2 percent). The mean age was 18.5 years with the majority being 18-20 years of age.

Measures

Participants completed the LSRP, Vengeance Scale, the measure of punishment allocations, and the IRI. The Vengeance Scale and IRI were identical to Study 1. The LSRP contained the same items, but participants rated these on a scale from 1 to 5 (1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly agree). The punishment allocation questions contained an additional component – after each scenario participants were asked to indicate what motives they used to punish for each of the scenarios

Each subject was given a list of options he or she could select from which targeted the various motivations of punishment (See Appendix E). They were asked to rate on a scale (0-100 with increments of one) how influential each of the motives they selected were in their sentencing decisions. For some participants (N=150), I collected open-ended response data in which I asked participants, "Why did you decide on this level of punishment?" The purpose of doing this was to allow participants to indicate what their motivations were without being potentially influenced by the options. However, examination of the responses revealed that there were not enough responses that adequately indicated the motivations of interest. For example, many participants indicated: "the crime was wrong," "the person should know better", or "the person should be in prison," instead of providing motivations. Therefore, the open-ended data for motivations were not used. However, data from the other questionnaires for these participants were included in analyses to maximize power. I also added three criminal scenarios to include more female criminals and reactive crimes: "After her husband tries to hit her, a woman gives her husband a concussion by hitting him with a rock", "A woman is caught bringing a small bag of marijuana worth \$100 across state lines", "A man punches another man in the face after he talks back to him, breaking his nose."

RESULTS STUDY 2

Study 2

Preliminary Analysis

Participants who failed to complete more than 20 percent of the data on any of the three questionnaires were excluded from analyses (n=44). An additional twelve participants answered 0 on all the motivations and were excluded from analyses. The average of the ratings of each motivation (retribution, behavioral control, incapacitation, rehabilitation) was calculated. I averaged all the items that encompassed that motivation. In addition, I also calculated the maximum score of all items of each motivation type. For example, a participant might indicate a 100 on one item of the retribution, but zero on the others. This doesn't necessarily mean the participant is less retributive than a participant who indicated 100 for all the items. Therefore, I calculated the maximum score on any of the items that encompassed that motivation. For example, if a participant indicated a 100 on any of the items for retribution, that participant's score would be 100. If another participant indicated 100 on all the items, that participant would also score a 100.

I divided the sample into high and low psychopathy using a median split and compared the ranking of scenarios for each of the scenarios according to the mean sentence length. The purpose of doing this was to examine if those higher and lower in psychopathy punished individual scenarios differently. For example, those higher in psychopathy might have punished one crime much harsher than those lower in psychopathy.

In addition, I calculated a composite score that factored in the harshness of the punishments for each motivation. This was done by multiplying the punishment amount for each scenario by each motivation. For example, a participant may have a purely retributive motive for punishing (maximum score), but may have given a very light sentence (minimum punishment level). This composite score gave more weight to the motivations participants' had for harsher punishments. There were significant differences between males and females on total psychopathy, Factor 1 and Factor 2 psychopathy, vengeance, and punishments (Table 4).

Table 4. Differences between Genders on Study 2 Variables

	Males Mean (SD)	Females Mean (SD)	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Total	56.4(13)	51.5(12.5)	3.4	<.01	0.38
Psychopathy					
Factor 1	34.1(9.1)	29.5(8.8)	4.5	<.001	0.51
Factor 2	22.3(6.1)	21.9(5.6)	.60	>.05	0.06
Vengeance	3.6(.40)	3.5(.41)	3.6	<.001	0.24
All Crimes	8.4(1.7)	9.5(2.0)	4.8	<.001	0.59
Premeditated	8.1(1.7)	9.3(2.1)	6.1	<.001	0.62
Reactive	10.0(2.1)	10.8(2.2)	3.1	<.01	0.37
Violent	8.1(1.8)	9.3(2.1)	4.8	<.001	0.68
Non-violent	8.5(1.8)	9.4(2.0)	3.9	<.001	0.47
Male Offender	8.9(1.8)	9.8(2.1)	4.0	<.001	0.46
No gender	9.0(2.0)	10.1(2.3)	4.7	<.001	0.51

Note: T-test statistics showing differences between males and females on variables of interest. Values are higher in study 2 than study 1 on psychopathy because the items ranged from 1-5 (1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly agree), whereas in study 1 they ranged from 1-4 (1=Disagree strongly, 2=Disagree somewhat, 3=Agree somewhat, 4=Agree strongly)

Main Analyses

Regression analyses were conducted to test for relationships between psychopathy and punishments, psychopathy and vengeance, and vengeance and punishments controlling for gender. Because age and education were limited in range in this sample of undergraduates we did not enter these variables as covariates. There were no significant differences between participants who identified as Republican ($M=52.70$, $SD=13.39$) and Democrat ($M=52.63$, $SD=12.16$) on psychopathy, $t(349)=-.042$, $p=.96$, and on punishments, (Republican: $M=9.42$, $SD=1.99$; Democrat: $M=9.20$, $SD=2.07$), $t(349)=-.91$, $p=.36$. Means, standard deviations, and ranges for each motivation are provided in Table 5.

Table 5. Descriptive Statistics of Motivations for Punishments

Motivations	Mean	SD	Range
Retribution	30.5	25.4	0-99.3
Behavioral Control	38.9	34.4	0-100
Incapacitation	39.4	32.8	0-100
Rehabilitation	40.5	34.6	0-100
Seriousness	6.9	11.1	0-99.9
Understandable	5.2	10.7	0-99.9
Other	2.2	8.6	0-90.48

Note: Descriptive statistics of items measuring motivations of punishments. Participants rated to what extent (0-100 by increments of 1) each motivation influenced their punishments on each crime. For “serious” the item was: “I didn’t think the crime was that serious.” For “understandable” the item was: “The offender’s behavior was understandable.” For “punishment match” the item was: “I thought the punishment matched the amount of wrongdoing by the offender.”

Total psychopathy scores significantly predicted scores on punishment allocations in that those higher in psychopathy allocated less harsh punishments than those lower in psychopathy $\beta = -.10$, $t(476) = -2.1$, $p = .03$. Although this effect only reached trend-level significance in Study 1, the magnitude of effects were similar between studies. Unlike Study 1, Factor 2, rather than Factor 1, significantly predicted scores on punishment allocations (Table 6).

Total psychopathy significantly predicted scores on vengeance in that those higher in psychopathy scored higher on vengeance, which is consistent with Study 1. Factor 1 and Factor 2 traits both significantly predicted vengeance scores (Table 6) similar to Study 1.

There was a significant negative correlation between vengeance and punishment allocations ($r = -.083$, $p = .036$). However, vengeance did not significantly predict scores on punishment allocations when controlling for gender, $\beta = -.04$, $t(476) = -1.0$, $p = .31$. Multiple regression analyses revealed that the interaction between total psychopathy and vengeance did not significantly predict punishment allocations, $\beta = -.88$, $t(476) = -1.70$, $p = .089$. These findings are consistent with Study 1.

Total psychopathy scores significantly predicted punishment scores on violent and reactive crimes and also crimes committed by a male and female. Total psychopathy scores did not predict non-violent and premeditated crimes and crimes in which the gender was not specified (Table 6). This is consistent with Study 1 that found total psychopathy predicted scores on violent crimes and crimes committed by a male offender, but did not find psychopathy predicted reactive crimes.

Mean punishment lengths between those high and low in psychopathy were compared for each scenario to examine if those higher in psychopathy punished differently on particular

scenarios compared to those lower in psychopathy. There were no large differences in the rank order of crimes by punishment severity for those higher versus lower in psychopathy.

Total psychopathy scores did not predict scores on average retributive motives. Total psychopathy scores did predict scores on behavioral control, rehabilitation, and incapacitation motivations. Those who scored higher in psychopathy indicated they used less behavioral control, rehabilitation, and incapacitation motivations in punishing than those lower in psychopathy (Table 6). Using a composite score of all the types of motivations in which all the scores of the motivations were averaged together, those who scored higher in psychopathy indicated less motivations overall, $\beta = -.10$, $t(476) = -2.37$, $p = .018$.

Regression analyses were conducted to test for relationships between psychopathy and each motivation while taking into account the length of the punishment (multiplying prison length by the motivation rating for each scenario in order to create a weighted score) while controlling for gender. Total psychopathy scores did not predict scores on retribution when taking into account the length of the punishment. Total psychopathy scores predicted behavioral control, incapacitation, and rehabilitation motivations in that those higher in psychopathy indicated they used less of these motivations in their punishment allocations. These relationships were significant for Factor 2 but not Factor 1 (Table 6).

Table 6. Regression Analyses Predicting Study Measures from Psychopathy

	Study 1			Study 2		
	Total	Psychopathy Factor 1	Factor 2	Total	Psychopathy Factor 1	Factor 2
Prison Punishment Lengths						
All crimes(18)(21)	-.085	-.103*	-.016	-.099*	-.07	-.10*
Violent (10)(12)	-.088*	-.097*	-.031	-.10*	-.074	-.094*
Nonviolent(8)(9)	-.047	-.083	.032	-.074	-.038	-.102*
Premeditated (8)(8)	-.041	-.065	.013	-.055	-.031	-.072
Reactive (4)(4)	-.047	-.037	-.043	-.125**	-.092*	-.131**
Male offender (9)(10)	-.123**	-.137**	.04	-.10*	-.064	-.119**
Female offender (2)(3)	-----	-----	-----	-.108*	-.072	-.124**
No gender (6)(6)	-.012	-.040	.035	-.066	-.052	-.063
Vengeance	.630***	.648***	.277***	.577***	.564***	.40***
Motivations						
Retribution	-----	-----	-----	-.041	-.013	-.069
Behavioral Control	-----	-----	-----	-.11*	-.096*	-.109*
Rehabilitation	-----	-----	-----	-.12**	-.101*	-.117*
Incapacitation	-----	-----	-----	-.11*	-.099*	-.104*
All motivations	-----	-----	-----	-.10*	-.12**	-.11*
Retribution×Punishment	-----	-----	-----	-.09	-.032	-.087
Behavioral Control×Punishment	-----	-----	-----	-.10*	-.080	-.106*
Incapacitation×Punishment	-----	-----	-----	-.11*	-.089	-.115*
Rehabilitation×Punishment	-----	-----	-----	-.10*	-.081	-.112*

- p < .05, ** p < .01, *** p < .001

•

Note: Summary of estimates from multiple regression models predicting vengeance and punishments from psychopathy scores, age, sex, education (Study 1). Study 2 only controlled for gender. Numbers indicate standardized beta (β). Beta values to the left of the bold line are multiple regressions including total psychopathy, Factor 1, and Factor 2 scores of Study 1; values to the right are from multiple regressions including total psychopathy, Factor 1, and Factor 2 scores of Study 2. Total psychopathy, Factor 1, and Factor 2

were all entered in separate models for both studies. Motivations and female offender values were calculated for Study 2 only. Number next to each type of crime indicate how many scenarios comprised the type of crime in Study 1 and Study 2, respectively. Negative β indicates lower scale ratings for individuals higher in psychopathy.

Total psychopathy scores and Factor 2 scores predicted scores on rehabilitation when the maximum motivation score was taken into account instead of the average (Table 7). Psychopathy was not associated with any other maximum motivation scores.

Total, Factor 1, and Factor 2 psychopathy predicted scores on the behavioral control item, “I wanted the offender to be afraid of getting punished again, so he/she will not commit crimes in the future,” and “I wanted to send a signal to other people that they will be punished if they commit a similar crime,” (Table 7). Factor 2 psychopathy predicted scores on the retribution items, “the offender deserved it” and, “I wanted the offender to pay for what he/she did.” Total and Factor 1 psychopathy predicted scores on the items, “I didn’t think the crime was that serious,” and “the offender’s behavior was understandable,” (Table 7).

Table 7. Regression Analyses Predicting Motivations from Psychopathy

	Psychopathy		
	Total	Factor 1	Factor 2
Maximum Motivation Scores			
Retribution	-.069	-.047	-.052
Behavior Control	-.079	-.057	-.084
Incapacitation	-.061	-.043	-.067
“Offender locked up so cannot commit crimes”			
Rehabilitation	-.096*	-.072	-.10*
“Help offender learn from actions”			
Individual Motivation Items			
“Offender deserved it”	-.047	-.037	-.043
“Offender should pay”	-.079	-.050	-.096*
“Offender should suffer as much”	-.079	-.052	-.093*
“Offender should suffer as much”	-.013	-.011	-.044
“Offender will not commit crimes in the future”	-.114*	-.094*	-.106*
“Send a signal to others they will be punished”	-.117*	-.095*	-.109*
“Punishment matched wrongdoing”	-.011	-.034	-.013
“I didn’t think the crime was that serious”	.121**	.132*	.050
“The offender’s behavior was understandable”	.133**	.141**	.070
Other	.080	.070	.070

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

Note: Summary of estimates from multiple regression models predicting motivations using the maximum score from psychopathy scores while controlling for sex. Incapacitation and rehabilitation each had one item and the maximum score on this item (listed in quotations) was used. Numbers indicate standardized beta (β). Beta values are multiple regressions including total psychopathy, Factor 1, and Factor 2 scores. Total psychopathy, Factor 1, and Factor 2 were all entered in separate models. Negative β indicates lower scale ratings for individuals higher in psychopathy.

Regression analyses were conducted to test for relationships between psychopathy and individual criminal scenarios for both studies. Psychopathy did not predict punishments on any of the scenarios in Study 1. Psychopathy predicted several scenarios in Study 2 (Table 8).

Table 8. Regression Analyses Predicting Criminal Scenarios from Psychopathy in Study 2

	Total Psychopathy
“A lawyer steals a client's money to buy a \$50,000 apartment”	.032
“A man tricks an 11-year-old girl into posing nude for pornographic pictures on a website (where viewers must pay), without the girl's consent”	-.059
“A man breaks into an elderly couple's house and threatens them with a gun when confronted”	-.041
“Breaking into a bank's database to steal money by pretending to be someone else (identity theft)”	-.026
“A woman tries to smuggle \$100,000 dollar's worth of heroin into the US for resale”	.019
“A young man with prior traffic convictions drives with an excess breath alcohol level over twice the legal limit, after a police car chase”	-.042
“After getting fired, a man breaks into his former employer's office and shoots him with a gun, killing him”	-.085
“A man breaks into his employer's office and shoots him with a gun, killing him”	-.130**
“A nurse knowingly gave his/her patient too much medicine that killed him/her”	-.119*
“A developmental disabilities teacher hits his/her student out of frustration and breaks the child's arm”	.057
“Guardians leave a child at home for 2 weeks without food, water, or supervision and the child dies of starvation”	-.114*
“A homeless person attacks another homeless person to obtain money for drugs and the attacked man is put on life support”	-.126**
“A man catches his wife cheating on him, hunts down the man, and shoots him in the head”	-.146**
“A woman catches her husband cheating on him, hunts down the woman, and shoots her in the head”	-.132**
“A man breaks into a house and threatens the residents with a gun when confronted”	-.046
“An accountant embezzles \$100,000 from his company and does not report this on his tax return”	.033
“A man throws a vase at his partner, which results in her requiring several stitches”	.015
“A homeless person attacks another homeless person to obtain food and the attacked man is put on life support”	-.077
“After her husband tries to hit her, a woman gives her husband a concussion by hitting him with a rock”	-.015

“A woman is caught bringing a small bag of marijuana worth \$100 across state lines”	- .140**
“A man punches another man in the face after he talks back to him, breaking his nose”	- .057

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

Note: Summary of estimates from multiple regression models predicting criminal scenarios using psychopathy scores while controlling for sex. Numbers indicate standardized beta (β). Beta values are multiple regressions including total psychopathy. Negative β indicates lower scale ratings for individuals higher in psychopathy.

Behavioral control motives mediated the relationship between psychopathic traits and punishment (Sobel test statistic=2.59, $p < .01$), indicating that psychopathy was associated with less harsh punishments in part because of reduced motivation for behavioral control.

GENERAL DISCUSSION

The goal of Study 1 was to examine the influence of psychopathic traits and vengeance on third party judgments in criminal scenarios. I also aimed to see if those who scored higher in psychopathy would punish offenders less harshly across a variety of contexts, since only two studies have looked at the influence of psychopathic traits on punishment (Aharoni et al., 2007; Peace & Valois, 2014). Study 2 examined the types of motivations those higher in psychopathy use when they punish others. I found that psychopathic traits predicted slightly less harsh punishments crimes in Study 2; however, this effect was small and only reached trend-level significance in Study 1. On the one hand, studies have shown that those higher in psychopathy self-report as more vengeful (Book and Quinsey, 2004; Brewer, Hunt, James, & Abell, 2015) and endorse vengeful decision-making in sentencing (Giammarco & Vernon, 2014), and this vengeance is associated with endorsing retributive motives in sentencing and greater support for capital punishment (Gerber & Jackson, 2013; McKee & Feather, 2008). On the other hand, research suggests that those higher in psychopathy might be *less* retributive and harsh in their punishments because they care less about fairness and equality in society and are less concerned about harming and empathizing with victims (Aharoni, Antonenko, & Kiehl, 2011; Glenn, Iyer, Graham, Koleva, & Haidt, 2009; Efferson, Glenn & Iyer, manuscript in preparation) and are less likely to use emotions while making decisions (Deigh, 1996; Koenigs, Kruepke, Zeier, & Newman, 2012). Therefore, it could be that these factors essentially cancel each other out, which would result in small effects for the relationship between psychopathy and punishment.

In both studies, total and factor psychopathy scores strongly predicted scores on emotional vengeance. This is consistent with previous studies that found a positive association between psychopathy scores and trait vengeance in incarcerated samples (Book & Quinsey, 2004; Williamson et al., 1987) and an undergraduate sample (Brewer et al., 2015). Results from this study suggest that both Factor 1 and 2 traits are associated with increased vengeance regarding a perceived maltreatment towards the self. Factor 2 traits such as poor behavioral control, impulsivity and failure to take responsibility for one's actions may contribute to seeking revenge when one has been "wronged", and Factor 1 traits may allow a person to inflict harm on another after a personal maltreatment without feeling guilty or empathic towards the person.

Contrary to my hypothesis, emotional vengeance did not significantly predict punishment allocations for both studies. This contradicts the findings of McKee and Feather (2008) who found that attitudes towards vengeance predicted retributive motives in sentencing offenders and greater support for capital punishment. This study used the same vengeance questionnaire as the current study, so contradicting results cannot be due to methodological differences in measuring vengeance. Seeking revenge due to a personal mistreatment versus a wrongdoing towards a stranger may involve different thought processes and motivations. The vengeance scale in this study asked about *personal* mistreatments (e.g., "It is important to for *me* to get back at people who have hurt *me*"), whereas the punishment attitudes scale required participants to give punishments to people who hurt someone else. In the McKee and Feather (2008) study, the measurement of punishment asked about endorsements of capital punishment and general attitudes about retribution in sentencing and did not specify who the victim was. However, if participants had been victims of crime or knew someone who was a victim, answering these questions may have been more personal to them, whereas in my study it was clear the victim was

not the participant. This might be why McKee and Feather (2008) found relationships between vengeance and their measure of punishment and I did not. Future studies could ask participants to allocate punishments to offenders who victimize them (or someone they care about) to see if vengeance would predict punishments when the person allocating the punishment is affected.

The interaction between total psychopathy scores and emotional vengeance did not predict punishment allocations in both studies. That is, vengeance was not a moderating variable between psychopathy and punishments. This might be because the relationship between psychopathy and punishment was not strong. It might also be because vengeance may not predict punishments when a third party is affected, but could influence punishments if the crime is more personal (i.e., it was inflicted on the person doing the punishing). Another possibility is that we did not obtain many participants who were high in psychopathy but low on vengeance; psychopathy was highly correlated with vengeance, which may reduce the ability to detect a moderation effect. Indeed, when psychopathy and vengeance were split into thirds based on one SD below and above the mean, 27 were low on vengeance and high on psychopathy, 53 were at mid levels of vengeance and high on psychopathy, and 146 were high on both vengeance and psychopathy.

Also contrary to my hypothesis, empathic concern did not mediate the relationship between total psychopathy scores and punishments. Those higher in total psychopathy, Factor 1, and Factor 2 traits had less empathic concern, but this decrease in empathic concern was only marginally related to less harsh punishments. This supports the study by Peace and Valois (2014) that found psychopathic traits did not influence punishments when the court transcript was manipulated to evoke feelings of empathy in participants, suggesting other factors besides feelings of empathy that were not measured in this study may contribute to punishment

allocations such as cognitive empathy or how motivated one is to punish others. However, none of the other subscales of the IRI were associated with punishments including perspective taking that taps into cognitive empathy.

Those higher in psychopathic traits indicated they were influenced less by behavioral control, incapacitation, and rehabilitation motivations than those lower in psychopathic traits, but these effects were small. When the maximum score on each motivation was used, psychopathic traits predicted only rehabilitation motivations. This does not support my hypothesis that those higher in Factor 1 psychopathy would be less influenced by retributive motivations and those higher in total psychopathy would be influenced more by behavioral control motivations when they punish others. Instead, reduced behavioral control motivations partly mediated the relationship between psychopathy and punishments. Results were not consistent with Aharoni et al. (2007) that found that those higher in psychopathic traits punished a low-intention murderer similarly to a high-intention murderer, suggesting they did not use retribution as a motive for punishment. However, individuals higher in psychopathy reported that they were less influenced by all the motivations, suggesting they were either unmotivated to think about and report their motivations, or they had trouble recognizing what their motivations were. It could be that those higher in psychopathic traits care less about punishing others, which is why they allocated less harsh punishments and did not endorse the motivations as strongly. Although we tried using a more open-ended response format in an attempt to maximize construct validity and decrease biased responding, the responses we received could not be categorized into the different motivations. Future research should examine ways to measure motivations in punishment that decrease forced responding while at the same time categorizing responses into different motivations. However, it may be that motivations that philosophers have deemed influential in

punishments (e.g., retribution, rehabilitation) might not be how lay people construct the reasons for why they punish others. This is similar to how philosophical theories of free will do not necessarily map onto lay people's stated views of free will. Therefore, it might be difficult to assess motivations using an open-ended format. Future research should also examine what motivates people higher in psychopathy to punish others in a criminal context.

A couple limitations of the studies should be noted. These studies rely on self-report measures which are subject to positive illusions and impression management. Also, our sample from YourMorals.org is more diverse than college samples, but was also more educated, white, and liberal compared to a representative sample from the United States. However, the psychopathy scale that was used in this study has been used in other studies (Glenn et al., 2009) that have replicated the results using an interview-based measure of psychopathy –an assessment called the Psychopathy-Checklist Revised (PCL-R; Hare, 2003). Jones (2010) has replicated many of the findings in the YourMorals.org dataset in representative samples in the United States. Also, I used forced responses to measure both punishment allocations and motivations. I only used prison sentences as a potential punishment, and there may have been more variability if I had included other options for punishment (e.g., fines, probation, etc.). Also, I used the two-factor model of psychopathy to examine relationships, and other models of psychopathy might yield different results. For example, the Triarchic Model of Psychopathy assesses meanness as being callous and cruel and might be more strongly related to a lack of empathy than factor 1 in the two factor model (which combines interpersonal and affective traits). Therefore, the meanness component of psychopathy might more strongly predict decreased punishments than factor 1. It might also be useful to examine the psychopathic traits that are associated with a self-centeredness, such as glibness and grandiosity. It might be those higher in psychopathy are

focused more on how the crime affected them, and these traits might strongly influence the motivations to punish others. Finally, the samples that were used did not yield high levels of psychopathic traits compared to incarcerated populations. It is not clear how relationships among the constructs may change in a sample that exhibits higher levels of psychopathic traits.

The results of these studies have implications for predicting punishment allocations of jurors and judges with varying levels of psychopathic traits, empathy, and vengeance. It seems as though those higher in psychopathy tend to punish less harshly and indicate less motivations in punishments across different criminal scenarios in both an undergraduate and a general population sample. However, it is unclear what variables might be driving these punishments and motivations, since empathy did not mediate the relationship between psychopathy and punishment and psychopathy and retributive motivations. This information is important in jury selection in which prosecutors and defense attorneys want to select jurors who will punish in their favor. Also, because judges can give more arbitrary sentences, this research might have more implications in this population. Future studies should examine the constructs in this study in a sample of judges. These studies might also shed light onto how people with certain traits might vote on legislative issues such as mandatory minimum sentences.

Overall, I found that those who scored higher in psychopathy also scored higher in emotional vengeance, which replicates previous studies (Book & Quinsey, 2004; Brewer et al., 2015; Williamson et al., 1987). Those higher in psychopathy tended to give less harsh punishments to offenders, but this effect was small. Vengeance did not moderate the relationship between psychopathy traits and punishment allocations in both studies. Those higher in psychopathy also indicated they were less influenced by behavioral control, incapacitation, and rehabilitation motivations but again, these effects were small which contradicts the study by

Aharoni et al., (2007) that found those higher in psychopathy used less retributive motivations in punishments.

REFERENCES

- Aharoni, E., Antonenko, O., & Kiehl, K. A. (2011). Disparities in the moral intuitions of criminal offenders: The role of psychopathy. *Journal of research in personality, 45*(3), 322-327.
- Aharoni, E., Weintraub, L. L., & Fridlund, A. J. (2007). No skin off my back: Retribution deficits in psychopathic motives for punishment. *Behavioral sciences & the law, 25*(6), 869-889.
- Beszterczey, S., Nestor, P. G., Shirai, A., & Harding, S. (2013). Neuropsychology of decision making and psychopathy in high-risk ex-offenders. *Neuropsychology, 27*(4), 491.
- Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive-neoassociationistic perspective for the analysis of anger and other emotions. *In Perspectives on anger and emotion. Advances in social cognition* (1-46). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Blair, R. J. R. (1995). A cognitive developmental approach to morality: Investigating the psychopath. *Cognition, 57*, 1–29.
- Book, A. S., & Quinsey, V. L. (2004). Psychopaths: cheaters or warrior-hawks? *Personality and Individual Differences, 36*(1), 33-45.
- Bourke, V. J. (1977). The ethical justification of legal punishment. *American Journal of Jurisprudence, 22*, 1–19.
- Boyd, R., & Richerson, P. (1992). Punishment allows the evolution of cooperation (or anything else) in sizable groups. *Ethology and Sociobiology, 13*, 171–195.
- Brewer, G., Hunt, D., James, G., & Abell, L. (2015). Dark Triad traits, infidelity and romantic revenge. *Personality and Individual Differences, 83*, 122-127.
- Brinkley, C. A., Schmitt, W. A., Smith, S. S., & Newman, J. P. (2001). Construct validation of a self-report psychopathy scale: does Levenson's self-report psychopathy scale measure the same constructs as Hare's psychopathy checklist-revised? *Personality and Individual Differences, 31*(7), 1021-1038.
- Carlsmith, K. M., Darley, J. M., & Robinson, P. H. (2002). Why do we punish? Deterrence and just deserts as motives for punishment. *Journal of personality social psychology, 83*, 284.

- Cima, M., & Raine, A. (2009). Distinct characteristics of psychopathy relate to different subtypes of aggression. *Personality and individual differences*, 47(8), 835-840.
- Darley, J. M., Carlsmith, K. M., & Robinson, P. H. (2000). Incapacitation and just deserts as motives for punishment. *Law and Human behavior*, 24(6), 659-683.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of personality and social psychology*, 44(1), 113-126.
- De Corte, K., Buysse, A., Verhofstadt, L., Roeyers, H., Ponnet, K., & Davis, M. (2007). Measuring empathic tendencies: Reliability and validity of the Dutch version of the Interpersonal Reactivity Index. *Psychologica Belgica*, 47(4), 235-260.
- Deigh, D. (1996). Empathy and universalizability. In L. May, M. Friedman, & A. Clark (Eds.), *Mind and morals: Essays on cognitive science and ethics* (pp. 743–763). Cambridge: MIT Press.
- Deitz, S. R., Blackwell, K. T., Daley, P. C., & Bentley, B. J. (1982). Measurement of empathy toward rape victims and rapists. *Journal of personality and social psychology*, 43(2), 372.
- Deitz, S. R., & Byrnes, L. E. (1981). Attribution of responsibility for sexual assault: The influence of observer empathy and defendant occupation and attractiveness. *The Journal of Psychology*, 108(1), 17-29.
- Dodge, K. A. (1991). The structure and function of reactive and proactive aggression. In *Earlscourt Symposium on Childhood Aggression, Jun, 1988, Toronto, ON, Canada*. Lawrence Erlbaum Associates, Inc.
- Douglas, K. S., & Ogloff, J. R. (1996). An investigation of factors influencing public opinion of property bias in Canadian Criminal Code maximum sentences. *Law and Human Behavior*, 20(4), 395.
- Dutton, K. (2012). *The wisdom of psychopaths: What saints, spies, and serial killers can teach us about success*. Macmillan.
- Edens, J. F., Marcus, D. K., Lilienfeld, S. O., & Poythress Jr, N. G. (2006). Psychopathic, not psychopath: taxometric evidence for the dimensional structure of psychopathy. *Journal of Abnormal Psychology*, 115(1), 131.
- Efferson, L.M., Glenn A.L., & Iyer, R. (2015). *The influence of gender on the relationship between psychopathy and five moral foundations*. Manuscript in preparation.
- Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior*, 25, 63–87.

- Fessler, D. M., & Haley, K. J. (2003). The Strategy of Affect: Emotions in Human Cooperation 12. *The Genetic and Cultural Evolution of Cooperation*, P. Hammerstein, ed, 7-36.
- Gerber, M. M., & Jackson, J. (2013). Retribution as revenge and retribution as just deserts. *Social Justice Research*, 26(1), 61-80.
- Giammarco, E. A., & Vernon, P. A. (2014). Vengeance and the Dark Triad: The role of empathy and perspective taking in trait forgivingness. *Personality and Individual Differences*, 67, 23-29.
- Glenn, A. L., Iyer, R., Graham, J., Koleva, S., & Haidt, J. (2009). Are all types of morality compromised in psychopathy?. *Journal of personality disorders*, 23(4), 384-398.
- Glenn, A. L., Raine, A., Schug, R. A., Young, L., & Hauser, M. (2009). Increased DLPFC activity during moral decision-making in psychopathy. *Molecular Psychiatry*, 14(10), 909.
- Hare, R. D. (2003). Manual for the revised psychopathy checklist.
- Hare, R. D., & Vertommen, H. (1991). *The Hare psychopathy checklist-revised*. Multi-Health Systems, Incorporated.
- Hughes, M. A., Dolan, M. C., & Stout, J. C. (2015). Decision-making in psychopathy. *Psychiatry, Psychology and Law*, 1-17.
- Johnson, J. D., Simmons, C. H., Jordav, A., Maclean, L., Taddei, J., Thomas, D., ... & Reed, W. (2002). Rodney King and OJ revisited: The impact of race and defendant empathy induction on judicial decisions. *Journal of Applied Social Psychology*, 32(6), 1208-1223.
- Jones, B. (2010). Having Your Cake and Eating it too: Representativeness and the YourMorals data. YourMorals.org Blog. Available: <http://www.yourmorals.org/blog/2010/07/having-your-cake-and-eating-it-too-representativeness-and-the-yourmorals-data/>. Accessed 2016 Aug 12.
- Kingsbury, S. J., Lambert, M. T., & Hendrickse, W. (1997). A two-factor model of aggression. *Psychiatry*, 60(3), 224-232.
- Koenigs, M., Kruepke, M., & Newman, J. P. (2010). Economic decision-making in psychopathy: a comparison with ventromedial prefrontal lesion patients. *Neuropsychologia*, 48(7), 2198-2204.
- Koenigs, M., Kruepke, M., Zeier, J., & Newman, J. P. (2012). Utilitarian moral judgment in psychopathy. *Social Cognitive and Affective Neuroscience*, 7(6), 708-714.

- Krueger, R. F., Markon, K. E., Patrick, C. J., Benning, S. D., & Kramer, M. D. (2007). Linking antisocial behavior, substance use, and personality: an integrative quantitative model of the adult externalizing spectrum. *Journal of abnormal psychology, 116*(4), 645-666.
- Krueger, F., Parasuraman, R., Moody, L., Twieg, P., de Visser, E., McCabe, K., ... & Lee, M. R. (2013). Oxytocin selectively increases perceptions of harm for victims but not the desire to punish offenders of criminal offenses. *Social Cognitive and Affective Neuroscience, 8*(5), 494-498.
- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of personality and social psychology, 68*(1), 151-158.
- Lilienfeld, S. O., & Andrews, B. P. (1996). Development and preliminary validation of a self-report measure of psychopathic personality traits in noncriminal population. *Journal of personality assessment, 66*(3), 488-524.
- Lilienfeld, S. O., & Widows, M. R. (2005). *PPI-R: Psychopathic personality inventory revised: Professional Manual*. Psychological Assessment Resources, Incorporated.
- Lynam, D. R., Whiteside, S., & Jones, S. (1999). Self-reported psychopathy: A validation study. *Journal of Personality Assessment, 73*(1), 110-132.
- Macaulay, J., & Berkowitz, L. (Eds.). (1970). *Altruism and helping behavior: Social psychological studies of some antecedents and consequences*. Academic Press.
- McCord, W., & McCord, J. (1964). *The psychopath: An essay on the criminal mind*. Oxford, England: D. Van Nostrand.
- McKee, I. R., & Feather, N. T. (2008). Revenge, retribution, and values: Social attitudes and punitive sentencing. *Social Justice Research, 21*(2), 138-163.
- Miceli, T. J. (2009). Deterrence and incapacitation models of criminal punishment: can the Twain meet? (Working Paper No. 2009-25). Retrieved from Journal of Economic Literature Classification.
- Millon, T. (1981). *Disorders of personality: DSM-III, axis II*. John Wiley & Sons.
- Mokros, A., Menner, B., Eisenbarth, H., Alpers, G. W., Lange, K. W., & Osterheider, M. (2008). Diminished cooperativeness of psychopaths in a prisoner's dilemma game yields higher rewards. *Journal of abnormal psychology, 117*(2), 406-413.
- Osumi, T., & Ohira, H. (2010). The positive side of psychopathy: Emotional detachment in psychopathy and rational decision-making in the ultimatum game. *Personality and individual differences, 49*(5), 451-456.
- Patrick, C. J. (2010). Triarchic psychopathy measure (TriPM). *PhenX Toolkit Online assessment*

catalog.

- Peace, K. A., & Valois, R. L. (2014). Trials and tribulations: Psychopathic traits, emotion, and decision-making in an ambiguous case of sexual assault. *Psychology*, 5(10), 1239-1253.
- Ruggi, S., Gilli, G., Stuckless, N., & Oasi, O. (2012). Assessing Vindictiveness: Psychological Aspects by a Reliability and Validity Study of the Vengeance Scale in the Italian Context. *Current Psychology*, 31(4), 365-380.
- Shneider, V. B. (1991). What Is It to Be Rational?. *Philosophy Now*, 1, 30-33.
- Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological Methodology*, 13, 290-312.
- Stuckless, N., Ford, B. D., & Vitelli, R. (1995). Vengeance, anger and irrational beliefs in inmates: A caveat regarding social desirability. *Personality and Individual Differences*, 18(1), 1-6.
- Stuckless, N., & Goranson, R. (1992). The Vengeance Scale: Development of a measure of attitudes toward revenge. *Journal of Social Behavior & Personality*, 7(1), 25-42.
- Turillo, C. J., Folger, R., Lavelle, J. J., Umphress, E. E., & Gee, J. O. (2002). Is virtue its own reward? Self-sacrificial decisions for the sake of fairness. *Organizational Behavior and Human Decision Processes*, 89(1), 839-865.
- Vidmar, N. (2000). Retribution and revenge. In J. Sanders, & V. L. Hamilton (Eds.), *Handbook of justice research in law* (pp. 31–63). New York: Kluwer.
- Vitaglione, G. D., & Barnett, M. A. (2003). Assessing a new dimension of empathy: Empathic anger as a predictor of helping and punishing desires. *Motivation and Emotion*, 27(4), 301-325.
- Walters, G. D., Brinkley, C. A., Magaletta, P. R., & Diamond, P. M. (2008). Taxometric analysis of the Levenson self-report psychopathy scale. *Journal of Personality Assessment*, 90(5), 491-498.
- Williamson, S., Hare, R. D., & Wong, S. (1987). Violence: Criminal psychopaths and their victims. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 19(4), 454.
- Woodworth, M., & Porter, S. (2002). In cold blood: characteristics of criminal homicides as a function of psychopathy. *Journal of abnormal psychology*, 111(3), 436.

APPENDICES

A. Demographics Questions	53
B. Levenson Self-Report Psychopathy Scale.....	54
C. Interpersonal Reactivity Index	55
D. Punishment Attitudes Scale	57
E. Motivations to Punish.....	60
F. Vengeance Scale	61
G. IRB Approval Document	63

Appendix A

Demographics

Please answer the following questions:

Age: _____ Sex: Male _____ Female _____ (check one)

What is your ethnicity?

Hispanic/Latino _____ Non-Hispanic _____

What do you identify as your racial background?

White or Caucasian _____ Black or African-American _____ Hispanic _____

Other _____

What is the highest grade you completed in school? _____

What do you identify as your state of origin? _____

What do you identify as your religious affiliation (if any)?

Protestant (non-Evangelical) _____ Protestant (Evangelical) _____ Catholic _____
Jewish _____ Muslim _____ Hindu _____ Buddhist _____ Other _____ Spiritual but not
religious _____ Agnostic _____ Atheist _____

What do you identify as your political affiliation (if any)?

Democrat _____ Republican _____ Independent _____ Libertarian _____

Green Party _____ Other _____

Appendix B
Levenson Self-Report Psychopathy Scale

The test consists of twenty-six statements that could possibly apply to you. Please respond with the option that best describes you.

- 1=Strongly disagree
- 2=Disagree
- 3=Neither agree nor disagree
- 4=Agree
- 5=Strongly agree

- Success is based on survival of the fittest; I am not concerned about the losers.
- For me, what's right is whatever I can get away with.
- In today's world, I feel justified in doing anything I can get away with to succeed.
- My main purpose in life is getting as many goodies as I can.
- Making a lot of money is my most important goal.
- I let others worry about higher values; my main concern is with the bottom line.
- People who are stupid enough to get ripped off usually deserve it.
- Looking out for myself is my top priority.
- I tell other people what they want to hear so that they will do what I want them to do.
- I would be upset if my success came at someone else's expense.
- I often admire a really clever scam.
- I make a point of trying not to hurt others in pursuit of my goals.
- I enjoy manipulating other people's feelings.
- I feel bad if my words or actions cause someone else to feel emotional pain.
- Even if I were trying very hard to sell something, I wouldn't lie about it.
- Cheating is not justified because it is unfair to others.
- I find myself in the same kinds of trouble, time after time.
- I am often bored.
- I find that I am able to pursue one goal for a long time.
- I don't plan anything very far in advance.
- I quickly lose interest in tasks I start.
- Most of my problems are due to the fact that other people just don't understand me.
- Before I do anything, I carefully consider the possible consequences.
- I have been in a lot of shouting matches with other people.
- When I get frustrated, I often "let off steam" by blowing my top.
- Love is overrated

Appendix C
Interpersonal Reactivity Index

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

ANSWER SCALE:

A	B	C	D	E
DOES NOT				DESCRIBES ME
DESCRIBE ME				VERY
WELL				WELL

_____ I daydream and fantasize, with some regularity, about things that might happen to me.

_____ I often have tender, concerned feelings for people less fortunate than me.

_____ I sometimes find it difficult to see things from the "other guy's" point of view.

_____ Sometimes I don't feel very sorry for other people when they are having problems.

_____ I really get involved with the feelings of the characters in a novel.

_____ In emergency situations, I feel apprehensive and ill-at-ease.

_____ I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.

_____ I try to look at everybody's side of a disagreement before I make a decision.

_____ When I see someone being taken advantage of, I feel kind of protective towards them.

_____ I sometimes feel helpless when I am in the middle of a very emotional situation.

_____ I sometimes try to understand my friends better by imagining how things look from their perspectives.

_____ Becoming extremely involved in a good book or movie is somewhat rare for me.

_____ When I see someone get hurt, I tend to remain calm.

_____ Other people's misfortunes do not usually disturb me a great deal.

_____ If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

_____ After seeing a play or movie, I have felt as though I were one of the characters.

_____ Being in a tense emotional situation scares me.

_____ When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

_____ I am usually pretty effective in dealing with emergencies.

_____ I am often quite touched by things that I see happen.

_____ I believe that there are two sides to every question and try to look at them both.

_____ I would describe myself as a pretty soft-hearted person.

_____ When I watch a good movie, I can very easily put myself in the place of a leading character.

_____ I tend to lose control during emergencies.

_____ When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

_____ When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

_____ When I see someone who badly needs help in an emergency, I go to pieces.

_____ Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Appendix D
Punishment Attitudes Scale

We are interested in motivations that people use to punish others. Please indicate how long you feel the offender should be imprisoned for the below crimes, given the information provided. In each case, the person being punished has no previous criminal record and the victim did nothing to cause the incident, beyond the initial description.

A man throws a vase at his partner, which results in her requiring several stitches.

Violent, reactive, male

How long should they be imprisoned?

- 1 week
- 1 month
- 3 months
- 6 months
- 1 year
- 3 years
- 5 years
- 7 years
- 10 years
- 15 years
- 20 years
- 30 years
- 40 years
- 50 years
- 70 years
- 100 year

A man breaks into an elderly couple's house and threatens them with a gun when confronted.

Violent, male

A man tricks an 11-year-old girl into posing nude for pornographic pictures on a website (where viewers must pay), without the girl's consent.

Non-violent, premeditated, male

Breaking into a bank's database to steal money by pretending to be someone else (identity theft).

Non-violent, premeditated, no gender

A woman tries to smuggle \$100,000 dollar's worth of heroin into the US for resale.

Non-violent, premeditated, female

An accountant embezzles \$100,000 from his company and does not report this on his tax return.

Non-violent, premeditated, male

A lawyer steals a client's money to buy a \$50,000 apartment.

Non-violent, premeditated, no gender

A young man with prior traffic convictions drives with an excess breath alcohol level over twice the legal limit, after a police car chase.

Non-violent, reactive, male

After getting fired, a man breaks into his former employer's office and shoots him with a gun, killing him.

Violent, male

A man breaks into his employer's office and shoots him with a gun, killing him.

Violent, male

A nurse knowingly gave his/her patient too much medicine that killed him/her.

Non-violent, premeditated, no gender

A developmental disabilities teacher hits his/her student out of frustration and breaks the child's arm.

Violent, reactive, no gender

Guardians leave a child at home for 2 weeks without food, water, or supervision and the child dies of starvation.

Non-violent, no gender

A homeless person attacks another homeless person to obtain money for drugs and the attacked man is put on life support.

Violent, no gender

A man catches his wife cheating on him, hunts down the man, and shoots him in the head.

Violent, premeditated, male

A woman catches her husband cheating on her, hunts down the woman, and shoots her in the head.

Violent, premeditated, female

A man breaks into a house and threatens the residents with a gun when confronted.

Violent, reactive, male

A homeless person attacks another homeless person to obtain food and the attacked man is put on life support.

Violent, no gender

Added for Study 2

After her husband tries to hit her, a woman gives her husband a concussion by hitting him with a rock

Violent, female

A woman is caught bringing a small bag of marijuana worth \$100 across state lines

Female, non-violent

A man punches another man in the face after he talks back to him, breaking his nose

Male, violent

Appendix E
Motivations in Punishments

Please indicate how much each motivation you selected influenced your sentencing on a scale from 0-100. Higher rankings mean that motivation was more influential in your sentencing. Check all reasons that apply:

- The offender deserved it (retribution)
- I wanted the offender to pay for what he/she did (retribution)
- I wanted the offender to suffer as much as the victim(s) did (retribution)
- I thought the punishment matched the amount of wrongdoing by the offender (retribution)
- I wanted the offender to be locked up so he/she cannot commit more crimes (incapacitation)
- The punishment would help the offender learn from his/her actions (rehabilitation)
- I wanted the offender to be afraid of getting punished again, so he/she will not commit crimes in the future (behavior control)
- I wanted to send a signal to other people that they will be punished if they commit a similar crime (behavior control)
- I didn't think the crime was that serious
- The offender's behavior was understandable
- Other

Appendix F
Vengeance Scale

Listed below are a number of statements. Please read each one and decide whether you agree or disagree and to what extent. If you strongly agree, click on the button labeled "7"; if you strongly disagree click on the button labeled "1". If you feel somewhere in between, click on any of the numbers from 2-6.

1=Strongly disagree

7=Strongly agree

It is always better not to seek vengeance.

Honor requires that you get back at someone who has hurt you.

Revenge is morally wrong.

Revenge is sweet.

To have a desire for vengeance would make me feel ashamed.

Anyone who provokes me deserves the punishment that I give them.

I find it easy to forgive those who have hurt me.

I believe in the motto 'An eye for eye, a tooth for a tooth'.

It is always better to 'Turn the other cheek'.

If I am wronged, I can't live with myself unless I get revenge.

I try to even the score with anyone who hurts me.

There is nothing wrong in getting back at someone who has hurt you.

People who insist on getting revenge are disgusting.

I don't get mad, I get even.

It is important for me to get back at people who have hurt me.

I live by the motto 'Let bygones be bygones'.

It's not worth my time or effort to pay back someone who has wronged me.

It is usually better to show mercy than to take revenge.

I am not a vengeful person.

Appendix G
IRB Approval Document



Office of Institutional
Research & Educational Effectiveness
Institutional Review Board for the Protection of Human Subjects

March 21, 2016

Leah Efferson
Dept of Psychology
College of Arts & Sciences
Box 870348

Re: IRB # 16-OR-114, "Motivations to Punish in Criminal Scenarios"

Dear Ms. Efferson:

The University of Alabama Institutional Review Board has granted approval for your proposed research,

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on March 20, 2017. If your research will continue beyond this date, please complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, please complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure Form.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

Carpartato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance