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Psychopathy and Moral Decision Making

Dimitra Kourtesi

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PSYCHOPATHY AND MORAL DECISION MAKING

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A dissertation submitted in partial fulfillment
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ABSTRACT

PSYCHOPATHY AND MORAL DECISION MAKING

Since the 1800s, psychopathy has been regarded as the absence of morality. The goal of our study was to explore whether psychopathic traits can affect the moral decision-making process in sacrificial moral dilemmas. Participants completed multiple self-report measures of psychopathic traits, utilitarian tendencies, and 16 sacrificial moral dilemma vignettes. After each hypothetical vignette, participants decided whether they believed it was morally right, permissible, and whether they behaviorally intended to sacrifice one person to save five people. Positive correlations emerged among all variables, which allowed us to perform a mediation analysis. Instrumental Harm – the idea of sacrificing one individual to save a greater number – accounted for more than half of the relationship between Callous Affect traits and ratings of Permissibility and Behavioral Intent. Specifically, the bias corrected indirect effect for permissibility was 0.07 (95% CI [0.01, 0.14]), which represents 54.5% of the total effect. The bias corrected indirect effect for behavioral intent was 0.08 (95% CI [0.01, 0.15]), which represents 53.6% of the total effect. Results indicated that participants high on psychopathic traits find it permissible and had the intent to sacrifice one person to save five. These findings imply that the concept of “moral insanity,” long associated with psychopathy, may not be an accurate representation of this population. Instead, it seems that individuals with Callous Affect psychopathic traits find it more permissible and are more likely to act on behaviors that minimize suffering for the largest amount of people.

Keywords: Psychopathy, Morality, Utilitarianism, Deontology, Sacrificial Moral Dilemmas, The Trolley Problem

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LIST OF ABBREVIATIONS

DSM	Diagnostic and Statistical Manual of Mental Disorders
PCL-R	Psychopathy Checklist-Revised
TriPM	Triarchic Psychopathy Measure
SRP	Self-Report Psychopathy
OUS	Oxford Utilitarianism Scale
CA	Callous Affect
IH	Instrumental Harm
IB	Impartial Beneficence

CHAPTER 1

INTRODUCTION

Morality

Most people think of morality and being moral as doing “the right thing”. First-order morality (Greene, 2002) can be described in terms of cultural duties, principles, and obligations that people are expected to abide by to refrain from harming others. McCarthy (2002) adds that first-order morality refers to the “permissibility” or “impermissibility” of actions. Permissible actions are believed to lead to good outcomes, whereas impermissible actions lead to bad outcomes, though it would be insufficient to reduce morality to a set of tenets. Morality is the drive to do good in a way that benefits not only the self but also others and promotes respect for human life. Greene (2002) posited that second-morality is concerned with the welfare of others – both actively helping them and refraining from harming them. According to Pavlakos (Pavlakos, 2015), second-order morality is also action guided, but unlike first-order, evidence, reasoning, and arguments ought to be examined before action is taken. One of the many definitions of morality involves an internal compass that guides people’s actions in a way that secures the happy existence of humanity (Mill, 1863). People, consciously or unconsciously, utilize moral reasoning to help them decide what to do and create the intention to complete that action. Moral action is the ideal rather than the real; a concept that no one can ever satisfy completely but only strive to get as close to as possible through rational judgment. It follows that making the right judgment when no right answer exists can be a difficult task.

Moral Decision-Making

Regan’s (1992) Limitations on Moral Decision Making

From a philosophical standpoint, various guidelines have been put forth by thinkers to guide moral decision-making. One moral ideology, subjectivism, supports that there is no

universal truth when it comes to morality and judgments are subjective and personal. Although judgments can be personal, people should avoid equating them with *personal preferences* (Regan, 1992). Personal preferences can be individually held without coming into conflict with other people's preferences and without justification. However, moral judgments are global statements about what is right or wrong that necessarily invalidate the judgments of those who would hold the opposite opinion to other people's opinions on the matter. Furthermore, moral opinions (e.g., views on the death sentence) hold greater weight than personal preferences (e.g., views on pineapple on pizza) because they have a greater ability to impact people's lives (e.g., the death sentence can cause people to lose their lives). Thus, when one expresses a moral opinion, one should be able to provide justification for that opinion.

Another proposition has been to avoid relying on *feelings* when making moral judgments. Although emotions are an important part of the human experience and the quest for morality can be partially justified through feeling empathy for others, feelings can be misleading and favor the self or our personal relationships rather than the good of humanity as a whole. According to Regan (1992), relying on feelings can stir us further from the ideal. However, according to emotivists (Ayer, 1952; Stevenson, 1945), it is impossible to separate feelings from making moral judgments, and anytime that we make a judgment we are inevitably expressing emotions, such as approval and disapproval for certain actions.

Others rely on *statistics* to make moral judgments. It would be reasonable to assume that if most people agree with a judgment, and the pursuit of morality is motivated by doing the most good for the most people, then that judgment must be the most moral. However, Regan (1992) argues that what these numbers reveal is not necessarily the truth but opinions that could be guided by thoughts, feelings, and personal preferences without adequate justification. For

example, though there was a time that most people thought that earth was the center of the universe, that belief turned out to be false. That is especially true when it comes to minority standing. One theory, relativism (Gowans, 2021) supports that what is morally right depends on a person's culture, social pressure, master narratives, the educational system, modeling, and other influences. For example, even though abortion is generally socially acceptable in North America and Europe, it is highly condemnable in several South American countries where it is viewed as murder. Thus, just because most people think something is right does not necessarily make it right.

Some theories, such as moral absolutism (Baghramian & Carter, 2022), propose that actions as intrinsically right or wrong are established by a *moral authority*. Many people believe in the existence of a higher being (usually God), which can unmistakably answer all moral questions and can rely on its authority to resolve moral dilemmas. However, the existence of such a being is controversial and has not been undeniably proven. It can be argued that any moral guidelines set forth by a higher being and written in books such as the bible have been created by humans and are thus fallible to all the concerns mentioned above. Therefore, according to Regan (1992), relying on a moral authority to guide moral decision-making is problematic.

Moral Intuitionism in Lay Moral Judgments

From a neuropsychological standpoint, when we engage in moral-decision making, we utilized systems of affective appraisal, planning and regulation, intention-reading, and social skills (Leben, 2011). It has been hypothesized that humans have a Functional Network for Moral Appraisal (FNMA). Some researchers believe that morality is hard-wired into humans instead of socially introduced and that humanity would prosper were they to live by their intuitive responses to moral dilemmas (Gazzaniga, 2005). According to this view, also called the “guide

view”, if everyone used cognitive-neural systems to guide their decisions, ethics would become universal, and war and suffering would be eliminated. Another way to frame the guide view is through moral intuitionism, a concept that arose in the 18th century among British philosophers. Intuitionism refers to morality that is ingrained and can be instantaneously retrieved without the use of argument or reasoning (Beeler, 1998). This proposition supports that some truths are evident and can be apprehended immediately and without the use of any mental processes.

Though others support that similar to how craving high caloric food to store excess calories for times of famine no longer serves the modern society inhabiting individuals, humanity has outgrown these neural systems and they are no longer adequate in serving the complexity of human existence (Greene, 2002). According to this view, also called the “set aside” view, the application of universal ethics based on biological mechanisms does not account for diversity, multiculturalism, and the immense variety in moral perspective.

Research suggests that even though the FMNA, or in other words moral intuitivism, might not be the most optimal method for arriving at complex moral decisions, it may be the most efficient model for making quick everyday judgments (Leben, 2011). Most people’s ethical decisions involve mundane things such as returning a lost wallet or not littering. These decisions are best made using a quick and accurate system, such as heuristics, which do not exhaust the limited time and resources of a decision maker (Gigerenzer, 2006). However, when more important moral decisions are at stake such as those of life or death, or those that affect public policy and health, we must use more in-depth analysis, critical thinking, logic, and reasoning. Given the significant impact of those situations, it is perhaps best to avoid intuition and resort to a moral ideology to carefully weigh values and arrive at the best possible moral decision.

Regan’s Criteria for Moral Reasoning

To arrive as close as possible to the ideal moral judgment, Regan (1992) proposes six criteria. First, *clarity* on the matter is essential to moral judgment. One cannot make an informed decision on a controversial topic if they do not understand the premise of the topic. For example, one cannot make a judgment on whether climate change is the result of human activity when one do not fully understand the patterns in earth's temperature and the factors that influence it. Second, having adequate *information* on a topic is especially important in making sound moral judgments. For example, it is important to have enough information about the characteristics of all stages of prenatal development before making a judgment regarding abortion. Further, although hard to define, *rationality* is another concept one should follow at arriving at a moral judgment. One way to achieve rationality is to carefully inspect whether one's beliefs come in contradiction with other beliefs one holds. For instance, one cannot rationally advocate for healthy work-life boundaries but also deny their employees time off. Additionally, *impartiality* on a topic can facilitate moral judgment. Just as a surgeon cannot be trusted to make a sound moral decision when the patient on the table is their immediate relative, one cannot do the "right" thing when they are biased towards one side or the other. Similarly, to avoid making decisions based on feelings, one should avoid making judgments when emotions are heightened. *Coolness* provides a level-headed approach to decision-making. A lack of coolness can intercept rationality and lead to decisions that people will regret after their emotions have settled. Lastly, Regan (1992) brings forth the concept of *Correct Moral Principles* which suggests that judgments should be based on the most correct and reasonable moral principles.

Although those guidelines are helpful in getting closer to ideal morality, they do not provide a straightforward path to reaching the ultimate truth. Moral decision-making is like a tree rather than a one-way street, with each branch leading to different consequences. The decision-

maker must decide which choice will lead to the best outcome and which consequences they are willing to live with. Two branches of moral reasoning, utilitarianism, and deontology, are particularly concerned with consequences and propose different paths to arriving at the best outcome.

Utilitarian and Deontological Moral Reasoning

Hume's Utilitarianism

David Hume (1738) was the first philosopher to entertain the principles of social utility which involves acting in ways that benefit society as a whole. Bentham (1738) defined the concept of utility as “a property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness” despite the observer. One widely accepted definition of utilitarianism as outlined by John Stuart Mill (1863) involves the concept of happiness such that “actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness”. Mill (1863) believed that the sole purpose of morality was to produce happiness since all people’s desires are directly tied to happiness,” where happiness is defined as the maximization of pleasure and minimization of pain. Of note is that even though both Hume and Mill believed that we are driven by the pursuit of happiness, they focused on different types of happiness. Hume placed a greater emphasis on hedonic happiness (pleasure and enjoyment) while Mill focused on eudaimonic happiness (meaning and purpose) which he considered superior to hedonism (Mill, 1863). Utilitarianism can be conceptualized as a computational model of arriving at moral decisions where cost and benefit are heavily considered and rational and cognitive reasoning are favored (Cushman & Greene, 2012). Utilitarian acts depend entirely on the maximization of people’s welfare as defined by happiness (Eggleston, 2012).

Utilitarianism is composed of five traits: consequentialism, welfarism, individualism, aggregation, and maximization (Eggleston, 2012). Consequentialism ascribes rightness or wrongness to actions based on their outcome by weighing their consequences, though the method for assigning weights to these consequences is often unspecified. Welfarism is entirely concerned with the welfare that actions produce. Individualism supports that the individual is more valuable than nations, tribes, and other groups of people; thus, the individual's welfare should be the focus of moral decision-making. Aggregation proposes that the value of a given situation is determined by summing the values associated with the individuals in that situation; consistent with the focus on the individual, non-linear values of good, shared arising from the interactions among individuals are not considered. Finally, maximization is the view that it is desirable for the value of any situation to be as large as possible. Because utilitarianism typically considers linear sums of good over individuals, utilitarian computations often do not consider the problems of identifying local maxima of good for subsets of circumstances versus the absolute global maximum good.

Further, Eggleston (2012) proposes two forms of utilitarianism. Both are concerned with the Rightness of acts on account of well-being. The first, act utilitarianism, supports that an act is considered right as long as it produces as much well-being as another similar act would. The second, rule utilitarianism, would prohibit certain acts that are otherwise considered immoral despite their desirable consequences. In rule utilitarianism, an act is only considered right if it obeys a system of generally accepted rules. Objections against act utilitarianism include allowing immoral actions, such as stealing money from the rich to maximize the well-being of the poor, and not accounting for individual differences when it comes to hedonic vs. eudaimonic

pleasures. Objections against rule utilitarianism include refusing to enact a trivial moral transgression, such as breaking a promise, that would create a substantial amount of well-being.

Though a well-respected view of morality, utilitarianism as a whole has received multiple criticisms (Eggleston, 2012). Even though it is an ideology based on promoting pleasure and happiness, it is unclear who determines what is pleasurable and how various pleasures should be weighed against each other. Additionally, it has been claimed that utilitarianism does not respect human rights including those of life, liberty, and fair treatment. Another criticism is that utilitarianism tends to focus on the future rather than the past and does not allow for other morals of backward reasoning, such as keeping promises and or repaying someone's generosity. Further, the demands of the action-oriented nature of utilitarianism have come into question. According to the doctrine, an individual is expected to act on their moral beliefs in order to achieve welfare, and such obligation can involve a major sacrifice that not many are willing to commit (Eggleston, 2012). Just because someone ought to do something does not mean they can (McCloskey, 1973).

Kant's Deontology

Deontology is often viewed as the polar opposite of utilitarianism (Alexander & Moore, 2021). Deon, in ancient Greek, refers to the concept of duty which describes what we ought to do as humans or citizens. Duty is concerned with decisions that are morally required, forbidden, or permitted. Unlike utilitarianism and one of its core traits, consequentialism, deontology is not concerned with the consequences of actions but rather with the moral permissibility to perform such actions. A deontologist would not perform a morally forbidden action, even if its consequences led to performing fewer such actions in the future (Alexander & Moore, 2021). To take an extreme example, murder is a morally forbidden action, yet even if the murder of Adolf

Hitler led to a halt in the murdering of millions of Jews and others, deontologists would still condemn such action. Although such an approach may seem extreme on its surface, there may be reasons moral principles must be followed, even if they seem inconvenient at the time. For instance, it is possible that the murder of Adolf Hitler could prevent the murder of another much more powerful dictator who could have led millions to their deaths.

Immanuel Kant (1724-1804) can be credited with the conceptualization of deontology as a doctrine, sometimes referred to as Kantian deontology (Kranak, 2019). Kant (1785) rejected the notion of making moral decisions based on the consequences of our actions. He distinguished right and wrong from good and bad and described the former as deontic categories and the latter as values. Kant (1785) equated morality to science and believed moral decisions should be governed by laws such as the universe is governed by them. He described moral duties as “imperatives” meaning that an individual has no choice but to perform such duties. He further divided imperatives into hypothetical (what you ought to do as a condition for doing something else) and categorical (what you ought to do, unconditionally). Additionally, he posited that all human life is priceless and irreplaceable, meaning that no human has a greater right to live than another. This position means that the value of any one life is incalculable, rendering utilitarian computations of the relative worth of people meaningless. Lastly, he proposed that we become part of a “kingdom of ends,” which represents a world inhabited by rational beings who treat each other as an end (Kranak, 2019).

Deontology prioritizes the “Right” over the “Good”. Unlike utilitarianism, in which the sacrifice of human life is appropriate in cases when such a sacrifice entails more overall good for more human lives, deontology supports that sacrifice is always unacceptable. Utilitarianism weights the relative worth of one person versus five (one doctor versus five criminals), whereas

deontology dictates that every person has equal worth no matter their status. Kant's theory in relevance to sacrificial moral dilemmas posits that all humans deserve equal moral consideration and that we should not be tempted to make exceptions for some but not for others based on their personal attributes (Kranak, 2019).

Similar to utilitarianism, deontology has received its criticisms. Deontology is formulated around conforming to moral rules and doing what is right, but it is unclear who decides what is right or makes up these rules (Alexander & Moore, 2021). Even though deontology is not built around theism, it implies that moral principles derive from higher considerations – possibly a deity or set of deities – that dictate the right thing to do. Another criticism is that deontologists sometimes have to choose to stick to their own values of right-doing, even if that makes the world a worse place. This criticism is one of the strengths of utilitarianism, where what is best is chosen over what is seemingly right (e.g., killing one person instead of five). Finally, deontological rules are not as practical as they seem in their application. For example, a simple maxim such as “thou shalt not murder” is a summary statement that entails several nuances that are necessary to understand the deontological principles at play – and to inform moral actions. For instance, the definition of “murder” is not straightforward, as it requires considerations of proportional self-defense in the face of aggression, the defense of family or friends in imminent harm, and service in the armed or police forces of a lawfully constituted authority.

Sacrificial Moral Dilemmas as Measures of Utilitarian and Deontological Thinking

As noted earlier, unless employed as a judge in criminal court, most people encounter mundane and trivial moral decisions, such as deciding whether to keep a friend's disclosure of an affair secret. However, when we study moral decision-making, we use vignettes of such major moral importance that asking people to make such decisions could result in psychological harm

were the situations described in vignettes to be encountered in real life rather than in fiction. For example, one of the most famous moral dilemmas is that of the Trolley Problem (Foot, 1967). The trolley problem places the participant in a nearby control room of a speeding train that is destined to kill five people who are working on one set of tracks. The dilemma incurs when you are asked whether you would pull a lever that will divert the train toward a different set of tracks where only one person will be killed instead of five. Although most people would rather kill one person to save five, they still struggle with the idea of taking fate into their own hands and possibly feeling responsible for the murder. Another version of the dilemma places the participant on a bridge and asks them to decide whether they would physically push one individual to their death to halt the speeding train and save the five workers. Although the premise of this version of the dilemma is exactly the same as the last, most people refuse to become directly involved, which causes them to question their own morals and can result in psychological distress. It raises the question: Why do we choose to study such extreme scenarios when science is concerned with real-world phenomena and attempts to understand behavior in terms of what most people would do in a similar situation?

Sacrificial moral dilemmas have been criticized as unreflective of people's genuine utilitarian views of everyday moral judgment and behavior (Kahane et al., 2015), and as lacking external validity (Bauman et al., 2014). Consequently, some researchers have turned to everyday moral dilemma vignettes (Hofmann et al., 2014; Sommer et al., 2010), though many studies continue to examine morality through extremes. Perhaps one reason why is that studying extremes can help us examine people's second-order morality, the characteristics of which are harder to agree on than first-order morality. As noted earlier, what distinguishes second from first-order morality is the examination of evidence and reasoning before taking action (Pavlakos,

2015). For instance, asking people whether they would litter examines moral duties, principles, and obligations and permissibility to perform an action (first-order morality), but asking people whether they would commit murder examines a more complex type of morality in which an act that is normally morally unacceptable can be right in a specific time, circumstance, and purpose. Although a consensus exists that littering is bad, people find it extremely hard to decide whether sacrificing one person to transplant their organs into five other sick people is moral. Therefore, studying extremes allows us to learn something about the depths of the human thought process that we do not already know.

Further, extremes allow us to detect larger effects on behavior overall, especially with respect to emotional reactions (Greene et al., 2001b). Not every type of dilemma can evoke the same emotional reaction, and emotional reactions greatly impact moral decision-making. For example, the bridge version of the trolley problem should logically evoke the same decision as participants would make in the control room version of the problem which is to kill one person to save five. However, research shows that only 10% of people choose to push another person to their death, while over 90% endorse diverting the train via a lever in a virtual reality study (Navarrete et al., 2012). Further results of the Navarrete and colleagues' study (Navarrete et al., 2012) indicate that emotional arousal, as well as direct behavioral action (pulling the lever versus doing nothing), is associated with aversion to killing one to save five. It follows that emotion and physical involvement can sway people's moral judgment for better or for worse.

When people are faced with such difficult thought experiments, they resort to one of many theories that have been developed over the centuries to guide moral decision-making. The two main schools of thought engaged in sacrificial moral dilemmas are utilitarianism and deontology. Individuals differ in the degree to which they engage each kind of reasoning during

sacrificial moral dilemmas. One of the most striking individual differences historically tied to morality and its deficits is psychopathy.

Psychopathy

What is Psychopathy?

According to Cleckley (1942/1984), an American psychiatrist, psychopathy is characterized by a set of personality traits and behaviors such as superficial charm, intelligence, and an ability to mimic normal emotions and social interactions. They often display a lack of remorse or guilt for their actions and have a remarkable capacity to manipulate and deceive others to achieve their own goals. Cleckley also highlighted the profound emotional shallowness exhibited by psychopaths. Despite their ability to mimic emotions, they lack true emotional depth and fail to form genuine and lasting emotional connections with others. They may engage in impulsive and irresponsible behavior, showing a disregard for social norms and the consequences of their actions. Cleckley (1941), emphasized that psychopaths can exist in various walks of life, including business, politics, and other social settings, where their ability to manipulate and deceive may lead to success and power.

Models of Psychopathy

Cleckley's book sparked a surge of research on psychopathy. There are several modern models or theories that attempt to explain the nature and components of psychopathy. While there is no universally agreed-upon model, three prominent ones are the Cleckley-Hare psychopathy model, the Four-Factor Model, and the Triarchic Model.

Developed by Hervey Cleckley and further expanded upon by Robert Hare, the Cleckley-Hare Psychopathy Model emphasizes the core characteristics of psychopathy. It describes psychopaths as individuals who lack empathy, exhibit superficial charm, engage in manipulative

behaviors, and display a lack of remorse or guilt. The Cleckley-Hare model also identifies factors such as impulsivity, poor behavioral controls, and a parasitic lifestyle as defining features of psychopathy. This model gave birth to the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), which is a semi-structured interview that provides ratings on 20 distinct traits and yields a score of 0-40 with scores of 30 and above being indicative of clinical psychopathy. The interview is mostly used in forensic settings.

Self-report instruments are also common as psychopathy exists on a spectrum and can be found in non-offenders (Levenson et al., 1995). Despite pathological lying being part of the condition, research has shown that participants do not tend to give socially desirable responses under confidentiality (Kelly et al., 2017). Further, these instruments have shown consistent validity and reliability (Sellbom et al., 2018), justifying their use with this population (e.g. Jones & Miller, 2012; Edens et al., 2008).

Proposed by Dutton and Cooke, the Four-Factor Model identifies four distinct dimensions of psychopathy: interpersonal, affective, lifestyle, and antisocial. The interpersonal dimension includes traits such as grandiosity, manipulation, and deceitfulness. The affective dimension encompasses a lack of remorse, callousness, and shallow emotions. The lifestyle dimension includes impulsivity, irresponsibility, and a need for stimulation. Finally, the antisocial dimension involves a history of antisocial behavior and criminality. This model gave birth to the Self-Report Psychopathy Scale (SRP; Hare, 1985) and its revisions (SRP-II, SRP-III, SRP-4). These scales have demonstrated effectiveness in measuring psychopathy in several samples, but they differ in the way that they assess the condition. The SRP-III and SRP-4 represent instruments that are faithful to the four-facet structure of psychopathy embodied in the PCL-R. According to the SRP model, those features are best grouped under interpersonal (e.g.,

deceitfulness and grandiosity), affective (e.g., lack of empathy and remorse), lifestyle (e.g., impulsivity and sensation-seeking), and antisocial (e.g., delinquency and criminality) categories that align with the factors of the PCL-R (Paulhus et al., 2009). The SRP-III has been validated with both undergraduate and forensic samples (Mahmut et al. 2011; Neal & Sellbom, 2012; Seibert et al., 2011). The latest revision (SRP-4) maintains the same factor structure but reduces the number of items for each scale; due to its recent publication, fewer data exist to support its validity (Massa & Eckhardt, 2020). The SRP-III and later SRP measures were revised from earlier versions (SRP and SRP-II) to exclude most items related to fearlessness and low anxiety, which largely eliminated the factor analogous to fearless dominance in the earlier instruments (Benning, Patrick, Salekin, et al., 2005), to align with the four-facet structure of the PCL-R (Massa & Eckhardt, 2020).

Developed by Patrick, Fowles, and Krueger, the Triarchic Model address the above deficit through its dimension of Boldness. The authors suggested that psychopathy can be understood through three primary dimensions: boldness, meanness, and disinhibition. This model gave birth to the Triarchic Psychopathy Measure (Patrick et al., 2009) which is a 58-item self-report measure assessing psychopathy on a spectrum of severity. Meanness encompasses traits such as callousness, lack of empathy, and a willingness to exploit others. Disinhibition relates to impulsivity, irresponsibility, and a failure to control one's behavior. Finally, Boldness refers to a lack of fear, social dominance, and a tendency to take risks. Boldness was particularly created to reflect the fearless-dominance dimension of psychopathy (Benning, Patrick, Blonigen, et al., 2005). The authors find this dimension essential as it can capture people who are functional members of society yet still exhibit psychopathic tendencies, termed “successful psychopathy” (Benning et al., 2018). Assessing for this dimension also has the benefit of distinguishing

between antisocial personality disorder (ASPD) and psychopathy as both conditions display mean and disinhibited characteristics (Wall et al., 2015). The TriPM has been used successfully in forensic (e.g., Sellbom & Phillips, 2013; Stanley et al., 2013) and community samples (e.g., Crego & Widiger, 2014; Poy et al., 2014; Strickland et al., 2013).

Overall, these models contribute to our understanding of psychopathy by providing theoretical frameworks that guide research, assessment, and treatment approaches. It is important to note that these models are not mutually exclusive and can be complementary in capturing the complexity of psychopathy.

Emotional Processes in Psychopathy

Emotion has long been implicated in the study of psychopathy (Patrick, 2018). As basic emotions go, it has been argued that people with psychopathy have a specific deficit in recognizing fear and sadness in others (Blair, 1995; 2006). Other studies by the same author have confirmed these findings in forensic samples (e.g., Blair et al., 2002, 2005); however, such findings were not replicated in one study of 88 incarcerated adult males which used psychophysiological measures to test facial mimicry and autonomic arousal in response to others emotions (Deming et al., 2022). Additionally, results have been inconsistent in community samples (Del Gaizo & Falkenbach, 2008). The deficit in recognition of fear and sadness has been implicated in the development of the condition of psychopathy as conceptualized through lack of empathy, which comes as a direct result of the inability to recognize distress in others. Some studies have replicated the findings associating psychopathy with impaired fear recognition (Fairchild et al., 2009) and sadness (Eisenbarth et al., 2008; Fairchild et al., 2009, 2010; Hastings et al., 2008; Woodworth & Waschbusch, 2008), but others have found evidence for impaired disgust (Hansen et al., 2008), anger (Muñoz, 2009), happiness (Hastings et al., 2008), and even

surprise (Fairchild et al., 2009). These studies indicate that the emotional impairment in psychopathy may be broader than initially thought. A follow-up study examining psychopathy and emotion in pre-teens (R. J. R. Blair & Coles, 2000) found that higher psychopathy scores were correlated with lower accuracy in recognizing negative emotions (most discernibly fear, but also sadness and anger). Results from one meta-analysis (Dawel et al., 2012) showed a relationship between psychopathy and deficits in both positive and negative emotions. These findings are contradictory to the results of another meta-analysis (Marsh & Blair, 2008) which found emotion deficits only for fear and sadness in psychopathy.

Those high on psychopathy are not impaired only in recognizing emotions but also in expressing them. From a triarchic model perspective, the emotions of fear and empathy correspond to the fearless dominant (boldness) and callous-unemotional (meanness) features of psychopathy (Patrick, 2018). A meta-analysis of 40 studies examining psychopathy and aversive startle potentiation (ASP) revealed a negative relationship between the two which particularly pertained to the boldness and meanness facets of the construct (Oskarsson et al., 2021). As for the two-factor structure of the PCL-R, studies have found that people with psychopathy display a deficit in aversive startle potentiation which has been associated with the first (affective-interpersonal) factor (Vaidyanathan et al., 2011; Verona et al., 2013). Patrick and colleagues (1993) have also confirmed that reduced fear reactivity is associated specifically with affective-interpersonal traits. However, most researchers use the term fear loosely and have not examined what particular components of fear are associated with psychopathy. Hoppenbrouwers et al. (2016) deconstructed the emotion of fear and found that the deficits seen in individuals with psychopathic traits lie particularly in threat detection and responsivity and not so much in the reduced subjective experience of fear.

Psychopathy and Morality

Psychopathic Deficits in Cognition or Emotion?

Whether people subscribe to a utilitarian or deontological viewpoint may be a product of personality traits. People with psychopathic traits, commonly disregard the rights of others and act in ways that favor the self (Hare, 1991), which comes in opposition with second-order morality. Further, they are often indifferent to social norms and disobey laws which are actions that contradict first-order morality. Not surprisingly, the psychopathic personality has been previously described as the absence of morality (Prichard, 1837; Cleckley, 1941). Since then, psychopathy and morality have been consistently linked in research (Blair, 1995; Blair, 1997).

Individuals with successful psychopathy might exhibit intact moral₁ reasoning to the extent they analyze their decisions in life scrupulously. However, they may show weaknesses in moral₂ reasoning, as their moral calculations may exclude the interests of others or actively work against the interests of others. People with these traits might exhibit intact first-order moral reasoning to the extent that they have coherent moral principles that they apply consistently rather than capriciously. However, the egocentric psychopathic reasoning style is opposed to second-order moral reasoning, which is concerned with the interests of others. People with psychopathic traits commonly disregard the rights of others and act in ways that favor the self (Hare, 1991). Further, they are often indifferent to social norms and disobey laws which are actions that contradict morality's emphasis on duties, principles, and obligations. Not surprisingly, the psychopathic personality has been previously described as the absence of morality (Prichard, 1837; Cleckley, 1941). Since then, psychopathy and morality have been consistently linked in research (Blair, 1995; Blair, 1997).

However, rather than representing a deficit in basic moral reasoning, the amoral behavior associated with psychopathy may be attributed to deficits in emotional processing (Blair et al., 2013). According to the Integrated Emotion System model (IES; Blair, 1995, 2007), the absence of morality seen in psychopathy is a direct consequence of emotional hyporeactivity to signs of suffering. Some would argue that rationality and reasoning are the principles that should guide people's moral decision-making and that emotional reasoning should be avoided (Bentham, 1948; Regan, 1992). However, others would argue that it is impossible to remove emotional experience from the decision-making process (Ayer, 1952; Stevenson, 1945) especially when those decisions involve being personally involved in a sacrifice (Greene et al., 2001). Such people would support that morality is more complex than just using a mathematical model to ensure the largest survival rate of the species. Removing emotional involvement from decision-making would remove the considerations of the emotional ramifications of an ethical decision to both the actor and the people being acted on. Research has indeed shown that moral decision-making is undeniably tied to emotional processing (Haidt & Bjorklund, 2008; Nichols, 2002; Prinz, 2006), and perhaps for good reason.

Dual-Process Moral Reasoning and Psychopathy

The dual-process model (Greene et al., 2001, 2004; Greene, 2009) states that emotional reactions come first and fast at the presentation of moral dilemmas, as an instinctual reaction, but are eventually suppressed by cognitive rationalization. One factor that can influence the ability to override these emotional reactions is how personally involved the person tasked with making the moral judgment is. Research shows that when someone is tasked with sacrificing someone else for the benefit of others by pushing them off a bridge themselves (personal), overriding their emotional reaction is much harder (Koenigs et al., 2007) than when tasked with pulling a lever

from inside a private room (impersonal). Thus, utilitarian decisions are not favored in situations in which an actor must apply force personally to someone else to sacrifice that person (Côté et al., 2013; Greene et al., 2001, 2004; Koenigs et al., 2012). From a utilitarian standpoint, suppressing emotional reactions and promoting cognitive reasoning is essential to making ethical decisions.

Psychopathy is associated with neural substrates of emotional and cognitive processing that would make utilitarian responses to sacrificial moral dilemmas more likely. One of the defining characteristics of psychopathy is affective deficits (Dawel et al., 2012). Those deficits have been attributed to reduced amygdala reactivity during emotionally provoking stimuli (Blair, 2007; Glenn et al., 2009) and more specifically the basolateral part of the amygdala which receives sensory input (Moul et al., 2012). The amygdala functions to integrate the emotional valence and salience of stimuli to activate an organism's behavior (Kong & Zweifel, 2021). Psychopathy has been repeatedly associated with a deficiency in fear-related amygdala activity (Levenston et al., 2000; Patrick et al., 1993; Sutton et al., 2002) and prefrontal cortex functionality. A malfunction in the prefrontal cortex could cause psychopathic traits of impulsivity and poor behavioral control (Bechara et al., 1997; Hare, 2003), as its principal function involves regulating and filtering emotional responses. Prefrontal cortex activity has also been previously linked to moral judgment (Koenigs et al., 2007; Mendez et al., 2005). Previous research has detected abnormal activity in the ventromedial prefrontal cortex and anterior temporal cortex of the brains of psychopaths characterized by a reduced ability to distinguish between pictures of moral and nonmoral violations (Harenski et al., 2010). Another study showed increased activity in the dorsolateral prefrontal cortex while making decisions on moral

dilemmas, which may indicate that other cognitive strategies are used in place of emotional strategies to arrive at moral decisions (Glenn et al., 2009).

The principle of utility (Bentham, 1948) dictates that the sacrifice of one person is acceptable if the outcome is that of saving many. However, making the decision to kill one unsuspecting and perhaps undeserving individual is hard and emotionally disturbing for most people. Though given the emotional deficits of psychopathy, people with those traits may be more inclined to endorse utilitarian ideologies when making such decisions. A few researchers have attempted to provide support for the above hypothesis, but the results have been mixed. Koenigs and colleagues (2012) examined the relationship between utilitarianism and psychopathy in a forensic sample using moral dilemmas (Greene et al., 2001b, 2004) and the Psychopathy Checklist-Revised (PCL-R). Higher endorsements of impersonal utilitarian decisions were found among psychopaths as opposed to non-psychopaths. Additionally, higher endorsements of personal utilitarian decisions were found among low-anxious psychopaths as opposed to high-anxious psychopaths (Koenigs et al., 2012a). Similarly, higher endorsement of utilitarian decisions was found among psychopaths across all dilemmas in a similar study (Glenn et al., 2010). However, no differences between psychopaths and non-psychopaths in utilitarian decision-making were found in a later study by Cima and colleagues (2010).

The relationship between psychopathy and utilitarianism has also been examined in college samples. Bartels and Pizarro (2011) measured students' responses to 14 sacrificial dilemmas and the Self-Report Psychopathy scale (SRP-III; Paulhus et al., 2009). They found that those who scored higher on the psychopathy scale made more utilitarian decisions. Across three studies using the Levenson Self-Report Psychopathy Scale (LSRP; Levenson et al., 1995), higher utilitarian endorsement in sacrificial dilemmas was found among the high psychopathy

(HP) groups as opposed to the low psychopathy (LP) groups. In the first study, the HP group was also more inclined to endorse harmful actions than the LP group in non-sacrificial, everyday moral dilemmas (Pletti et al., 2017). A second study found higher behavioral intent (“choice of action”) to perform utilitarian actions among the HP group, but not higher endorsement of permissibility (“moral judgment”). The effect was specific to the affective-interpersonal traits of psychopathy (Tassy et al., 2013). A third study in a community sample found higher utilitarian endorsement in sacrificial moral dilemmas among the HP group. Notably, psychopathy was also found to be related to a weaker moral identity, or how strongly one considers morality to be tied to their sense of self (Glenn et al., 2010).

Using the Psychopathic Personality Inventory - Short Form (PPI-SF; Lilienfeld & Andrews, 1996), Gao and Tang (2013) found that only Factor 2 (Blame Externalization, Machiavellian Egocentricity, Carefree Nonplanfulness, and Impulsive Nonconformity) was associated with utilitarian decision making. However, another study emphasized the importance of callous and unsentimental features of psychopathy on those results rather than the disorder’s impulsive and antisocial features. Balash and Falkenbach (2018) examined the relationship between psychopathic traits as measured by the PPI-R and the Triarchic Psychopathy Measure (TriPM; Patrick, 2010) and utilitarian moral endorsement in a college sample. Results showed that total TriPM scores and Meanness were related to overall utilitarian decision-making, as well as personal and impersonal decisions. Disinhibition was only related to overall utilitarianism and personal decisions. Higher overall psychopathic traits (both PPI-R and TriPM derived) were related to the endorsement of more personal sacrifices than low traits. The authors concluded that the results of this study, as well as those of Cima and colleagues (2010) and Gao and Tang (2013), point to an adaptive function of low emotionality where one can harvest the advantages

of sustaining rationality without the influence of emotion in order to make the ethical decision benefiting the most people.

In a variation of the above studies, Pasion and colleagues (2018) used the TriPM and a subset of Greene's dilemmas to examine the relationship between psychopathy and moral decision-making in a community sample of 388 participants. They found that Meanness and Disinhibition both predicted utilitarian responses to dilemmas. Interestingly, they also found that people with higher scores on these two factors were willing to overturn their moral decisions if financially rewarded. This study demonstrated that utilitarian preferences may be instrumentally motivated by people with higher psychopathic traits. In another study (Luke et al., 2022) using a community sample of 488 participants and a set of 12 moral-dilemmas developed for research using the CNI model (Körner et al., 2020), the authors found that total SRP-4 scores and all its individual facets were positively correlated with utilitarian moral decisions.

Perhaps the inconsistency in results seen in these studies are demonstrating that people with psychopathy possess the ability to distinguish right from wrong (moral competency) but are unable to distinguish between moral conventions. For example, someone with those traits may be unable to distinguish between the immorality of harming someone and violating a social norm. Most of the previous literature has used vignettes that examined the intent to harm others to detect moral deficits in psychopathy. However, one study by Young and colleagues (2012) took a unique approach to examine the study of moral judgment in psychopathy through accidental harm. An example of accidental harm provided by the authors was killing a neighbor's child by offering them peanuts, not knowing that they have a peanut allergy. In this case, the harmful outcome is morally evaluated in the context of innocent intention as opposed to a calculated weighing of consequences. Participants consisted of inmates rated as psychopathic or not

through the PCL-R. Results revealed that psychopaths found accidental harm more morally permissible than non-psychopaths perhaps due to an underappreciation for the emotional experience of the victim.

Finally, a study under review (Paruzel-Czachura & Farny, 2022), examined the relationships between psychopathy (LSRP, TriPM, PPI-R) and moral decision-making (Footridge and Switch trolley dilemma, CNI dilemmas, and OUS), in a community sample of 702 Polish participants. The results indicated a positive relationship between all psychopathy scales and willingness to perform the sacrifice. Further, a positive relationship was found between instrumental harm and all psychopathy scores.

Current Study

Our study used 16 sacrificial moral dilemmas based on Trolley Problems and the Greene sacrificial vignettes (Foot, 1967; Greene, 2009; Greene et al., 2001a) to study moral decision-making. The set of vignettes consisted of a central prompt accompanied by different variations involving the type (impersonal/personal) and emotion (sadness/disgust) targeted in each moral dilemma (refer to Appendix A). In addition to the well-known influence of emotion on moral decision-making, the manipulation of personal and impersonal factors has been shown to significantly affect various moral decisions in previous research (Cushman et al., 2006; Greene et al., 2001a, 2009).

In this study, we will focus on two target emotions that could be elicited during these moral dilemmas – sadness and disgust. A link between psychopathy and a lack of general negative emotionality has been well-established in the literature (see Herpertz & Sass, 2000 for a review). Fear was eliminated as a target out of the three basic negative emotions (fear, sadness, disgust) because participants cannot be personally harmed in these dilemmas and thus the

vignettes are unlikely to elicit a fearful response. However, sadness is likely to be elicited when participants are confronted with the death and sacrifice of others, as well as disgust when they are exposed to the gory nature of the dilemmas.

Three primary dependent variables (moral Rightness, permissibility, and behavioral intent) were selected for this study based on response choices found in previous similar dilemmas (Bass et al., 1999; Greene et al., 2001a; Kahane et al., 2015; Kahane & Shackel, 2010). Through these variables, we were able to assess both Greene's (2002) and McCathy's (2002) interpretation of first-order morality. Three questions followed each vignette presentation: "In this situation is it morally right or wrong to sacrifice one person to save five people?"; "In this situation is it permissible to sacrifice one person to save five people?"; and lastly "In this situation would you sacrifice one person to save five people?"

The main objective of this study is to investigate how psychopathic traits in the general population relate to moral decision-making. To achieve this, moral dilemma scenarios were created to determine whether participants would hypothetically choose to sacrifice one person in order to save five people. Personal dilemmas involved participants imagining themselves exerting direct force on another individual, whereas impersonal dilemmas did not require participants to envision any direct interaction with others.

Hypotheses

Hypothesis 1: There will be a positive relationship between specific factors of psychopathy and moral decision-making.

1a) There will be a positive correlation between SRP-III Callous Affect and utilitarian moral judgments in sacrificial moral dilemmas.

1b) There will be a positive correlation between TriPM Meanness and utilitarian moral judgments in sacrificial moral dilemmas.

1c) There will be a positive correlation between TriPM Disinhibition and utilitarian moral judgments in sacrificial moral dilemmas.

Hypothesis 2: There will be a positive relationship between specific factors of psychopathy and factors of utilitarianism.

2a) There will be a positive correlation between SRP-III Callous Affect and instrumental harm.

2b) There will be a positive correlation between TriPM Meanness and instrumental harm.

2c) There will be a positive correlation between TriPM Disinhibition and instrumental harm.

2e) There will be a positive correlation between TriPM Boldness and impartial beneficence.

Hypothesis 3: There will be a positive relationship between instrumental harm within utilitarianism and moral decision-making.

Hypothesis 4: Instrumental harm will mediate the relationship between psychopathy and utilitarian moral judgments in sacrificial moral dilemmas.

CHAPTER 2

METHOD

Participants

A total of 228 participants were recruited for the purposes of this study. Out of the 228, 16 participants were excluded due to missing data (10) and experimenter error (6), resulting in a final sample of 212 participants. Our sample met the minimum sample size indicated by a power analysis. The final sample size ensured that we could detect a population correlation of $|\cdot 17|$ with a critical α level of .05 in the direction of our hypotheses.

The sample comprised predominantly of women (58.8%) and men (39.2%). Less than 2% of the sample identified as non-binary. The age of the sample ranged from 18 to 39 years ($M = 20.5$, $SD = 3.92$).

With regard to the ethnicity of the sample, 39.3% of the participants identified as White, 24.7% as Asian (Filipino, Chinese, Vietnamese, Japanese, Korean), 17.6% as Hispanic (Mexican/Mexican American/Chicano, Spanish, Latino), 10.4% as Black/African American, 1.4% as Pacific Islander, and 1.4% as multiracial. The remaining participants identified as “Other” (4.7%) or chose to not disclose their ethnicity (0.9%).

Materials

Participants completed a self-report survey containing demographic questions, several validated scales, and a set of sacrificial moral decision-making dilemmas created by the researchers for this study. Table 1 gives descriptive statistics for the measures used in this study.

Table 1*Descriptive Statistics*

Variable	Scale	Mean	SD	Median	Min	Max	Skewness	Kurtosis
FOCAL PSYCHOPATHY VARIABLES								
Utilitarianism	OUS - Instrumental Harm	3.98	1.14	4.00	1.00	6.50	-0.37	-0.33
	OUS - Impartial Beneficence	4.02	1.20	4.00	1.00	6.60	-0.14	-0.66
Psychopathy	SRP-III - Callous Affect	2.32	0.42	2.34	1.28	3.58	0.19	-0.20
	TriPM - Boldness	2.56	0.53	2.58	1.26	3.79	-0.05	-0.54
	TriPM - Meanness	1.70	0.44	1.63	1.05	3.16	0.75	0.21
	TriPM - Disinhibition	1.93	0.43	1.85	1.10	3.22	0.49	-0.27
DEPENDENT VARIABLES								
Rightness		3.13	1.14	3.22	1	6	-0.01	-0.52
Permissibility		3.36	1.01	3.44	1	6	-0.14	-0.02
Behavioral intent		3.64	1.04	3.67	1	6	-0.17	0.09
EXPLORATORY VARIABLES								
Psychopathy	SRP-III Criminal Tendencies	1.56	0.45	1.44	1.00	3.06	0.94	0.34

	SRP-III - Erratic Lifestyle	2.74	0.60	2.81	1.25	3.94	-0.26	-0.70
	SRP-III - Interpersonal Manipulation	2.55	0.58	2.50	1.19	4.50	0.29	0.31

Self-Report Psychopathy Scale - III (SRP-III; Paulhus et al., 2009)

The SRP-III is a 64-item self-report inventory, which was based on the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), and is most commonly used with non-offender samples. The SRP-III was created to assess the same four facets but in self-report rather than semi-structured interview format. The scale comprises four subscales: Callous Affect, Interpersonal Manipulation, Erratic Lifestyle, and Criminal Tendencies. Total psychopathy scores can be derived from the summation of all four subscales. Respondents mark whether they *Disagree Strongly*, *Disagree*, are *Neutral*, *Agree*, or *Agree Strongly*, with each statement.

The Callous Affect subscale includes 16 items. A sample item is “*I never feel guilty over hurting others*”. The Interpersonal Manipulation subscale includes 16 items. A sample item is “*I think I could beat a lie detector*”. The Erratic Lifestyle subscale includes 16 items. A sample item is “*I’ve often done dangerous things just for the thrill of it*”. The Criminal Tendencies subscale includes 16 items and measures traits. A sample item is “*I have tried to hit someone with a vehicle*”.

The Cronbach’s alpha has been reported as .93 for the SRP-III total scores, .76 for Callous Affect, .86 for Interpersonal Manipulation, .84 for Erratic Lifestyle, and .82 for Criminal Tendencies (Drislane et al., 2014). In this study, Total SRP-III scores yielded an ω_H of .91,

which indicates a high degree of internal consistency. The internal consistencies of the four subscales were also assessed. The Interpersonal Manipulation subscale yielded an ω_H of .83, the Callous Affect subscale yielded an ω_H of .76, the Erratic Lifestyle subscale yielded an ω_H of .78, and the Criminal Tendencies subscale yielded an ω_H of .82.

Triarchic Psychopathy Measure (TriPM; Patrick, 2010)

The TriPM is a 58-item self-report inventory that is most commonly used with non-offender samples. Respondents mark whether they experience each statement as *True*, *Somewhat True*, *Somewhat False*, or *False*. Psychopathy is measured dimensionally rather than categorically with higher scores indicating a higher presence of psychopathic traits. The scale comprises three subscales: Boldness, Meanness, and Disinhibition.

The Boldness subscale includes 19 items and measures traits such as low anxiety, high dominance, and risk-taking (Patrick, 2010). A sample item for low anxiety is: “*I am well-equipped to deal with stress*”, a sample item for dominance is: “*I’m a born leader*”, and a reverse-scored sample item for risk-taking is: “*I have no strong desire to parachute out of an airplane*”. The Meanness subscale includes 19 items and measures callousness, aggression, lack of honesty, and lack of empathy (Patrick, 2010). A sample item for aggression is: “*I’ve injured people to see them in pain*”, a reverse-scored sample item for lack of honesty is: “*For me, honesty really is the best policy*”, and a sample item for lack of empathy is: “*I don’t mind if someone I dislike gets hurt.*” The Disinhibition subscale includes 20 items and measures irresponsibility, impulsivity, need for stimulation, and criminality as evidenced by theft and fraud (Patrick, 2010). A sample item for irresponsibility is: “*I have missed work without bothering to call in*”, a sample item for impulsivity is: “*My impulsive decisions have caused problems with loved ones*”, a sample item for the need for stimulation is: “*I often get bored*

quickly and lose interest”, and a sample item for criminality is: *“I have stolen something out of a vehicle”*.

The Cronbach’s alpha has been reported to range from .77 to .89 for Boldness, from .83 to .91 for Meanness, and .79 to .89 for Disinhibition across various studies (Poy et al., 2014; Sellbom & Phillips, 2013; Smith, Lilienfeld, Coffey, & Dabbs, 2013; Stanley, Wygant, & Sellbom, 2013; Venables, Hall, & Patrick, 2013). In this study, the Boldness subscale yielded an ω_H of .87, the Meanness subscale an ω_H of .87, and the Disinhibition subscale an ω_H of .82.

Oxford Utilitarianism Scale (OUS; Kahane et al., 2018)

The OUS is a 9-item self-report questionnaire created to assess Utilitarian viewpoints in the general population. Utilitarianism is a philosophical doctrine that proposes that the prosperity of the many should be prioritized over the prosperity of one, and actions taken to ensure that are considered morally right. The concept of utilitarianism is measured through two subscales: Impartial Beneficence and Instrumental Harm. Impartial Beneficence refers to “the tendency to endorse the impartial promotion of everyone’s personal welfare.” This factor is considered the core feature of Utilitarian judgment. Instrumental Harm “reflects the extent to which people endorse harm that brings about a greater good” which is more closely aligned with the kinds of utilitarian judgments required in sacrificial moral dilemmas. Respondents are asked to evaluate each item on a 7-point agreement-disagreement scale ranging from “strongly disagree” to “strongly agree.” Both factors of the OUS predict sacrificial intent in classical moral dilemmas written in the third person (Kahane et al., 2018). In this study, the Impartial Beneficence factor yielded an ω_H of .66 and Instrumental Harm factor an ω_H of .67.

Sacrificial Moral Dilemmas

Modeled after the traditional framework of the Switch and Footbridge Dilemmas (Foot, 1967; Greene, 2009; Greene et al., 2001), 16 sacrificial moral dilemma vignettes were created for this study (see Appendix A). Just as presented in the famous trolley problem thought experiment, a scenario was put forth in each vignette where five people were at risk of dying unless one other person was sacrificed to save them. The vignettes were set up in a way where the participant was removed from the situation and was neither in danger nor could they opt out to sacrifice themselves. However, they were responsible for making the decision whether one person should be sacrificed to save five.

The dilemmas were presented one by one, in the same order, as text on the screen complemented by an audio reading of the dilemma on headphones. Following the presentation of the original dilemma, the following manipulations were presented:

Type

Personal Conditions: vignettes required personal force to be applied to the victim's body that is to be sacrificed such as physically touching the person that is to be sacrificed.

Impersonal Conditions: vignettes did not require personal force for the victim to be sacrificed. The sacrifice could be completed through indirect means such as pushing a button or pulling a lever.

Emotion

Sadness Condition: Sadness descriptions focused on feelings of interconnectedness between the participants and the individuals who will die.

Disgust Condition: Disgust descriptions focused on the gore and mutilation of those who would die.

Audio recordings of each manipulation were played consecutively, and the text display terminated when the last audio recording finished. After each vignette was presented, participants were asked to rate the moral Rightness of the sacrifice, the moral permissibility to sacrifice one person to save five, and their behavioral intent to perform the sacrifice either personally or impersonally. These questions were answered on a 6-point scale rating the scenarios as strongly, moderately, or slightly morally wrong/right, permissible/not permissible, and likely/unlikely to perform the sacrifice.

Procedure

The participants were recruited from and signed up for the study through Sona, a system used by the psychology department of the University of Nevada, Las Vegas (UNLV) to recruit undergraduate students for research studies in exchange for class credit in PSY 101. The study took up to 4 hours to complete with an average of 2 hours and 21 minutes. Only one participant was unable to finish within 4 hours and opted to discontinue the study. When each participant arrived, a research assistant explained the purpose and methods of the study, the accompanying risks, and the voluntary nature of participation with the ability to withdraw at any time without penalty. Following this, participants provided informed consent.

The measures were presented on the computer in the following order: Demographics questionnaire, OUS, SRP-III, TriPM. Once all Qualtrics questionnaires were completed, the 16 sacrificial moral dilemmas were presented through PsychoPy as described above. At the end of the study, participants were debriefed on the goals of the study and were invited to ask questions they might have about the study. A copy of the consent form was given to the participants containing the contact information of the principal investigator should any questions or concerns

arise in the future. Participants were compensated with Sona credits within a week following the completion of the experiment.

Data Analysis

The focal analyses described in Hypotheses 1-3 used one-tailed tests of Pearson's correlations at a critical α value of .05.

Hypothesis 1: We conducted Pearson's correlations between scores on the three focal psychopathy measures (SRP-III Callous Affect, and TriPM Meanness and Disinhibition), and the three moral decision variables (moral Rightness, permissibility, and behavioral intent).

Hypothesis 2: We conducted Pearson's correlations between scores on the four focal psychopathy measures (SRP-III Callous Affect, and TriPM Boldness, Meanness, and Disinhibition) and the two OUS subscales (Instrumental Harm and Impartial Beneficence).

Hypothesis 3: We conducted Pearson's correlations between scores on the two OUS subscales (Instrumental Harm and Impartial Beneficence) and the three moral decision variables (moral Rightness, permissibility, and behavioral intent).

Hypothesis 4: For the psychopathy and moral decision-making variables that correlated with utilitarianism (OUS), we tested the indirect effects of utilitarianism (OUS) on the relationship between psychopathy and moral decision-making.

We then conducted exploratory analyses between scores on the remaining psychopathy measures (SRP-III Criminal Tendencies, Erratic Lifestyle, and Interpersonal Manipulation) and the three moral decision-making variables.

Further, we examined interactions between demographic variables (gender, race) and our main dependent variables. Out of 15 main effects and 45 interactions that we computed, only the Asian race by Emotion interaction emerged for permissibility, $F(1, 203) = 4.16, p = .043, \eta^2_p =$

.001. However, obtaining 1/45 interactions discernibly different from zero would be expected given the critical alpha level in this study, binomial sign test $p = .665$. Thus, we eliminated the demographics from the analyses because we did not have strong *a priori* hypothesis about them.

CHAPTER 3

RESULTS

Part I: Preliminary Analysis

The individual scales of each measure were standardized using z-scores. Preliminary factorial ANOVAs were performed to assess the effectiveness of the manipulations on the three dependent variables (morally right, morally permissible, and behavioral intent) following each of the 16 sacrificial vignettes. These ANOVAs employed type x emotion as within-subject factors, with type referring to personal or impersonal scenarios, and emotion representing sadness or disgust. Additionally, a series of three factorial ANCOVAs (one for each moral dilemma dependent variable) were conducted, incorporating Type (personal versus impersonal) and Emotion (disgust versus sadness) as factors.

Moral Decision-Making ANOVAs

As previously reported in *Dark Tetrad Responses To Moral Dilemmas* (Wrenn, 2020), the results below provide the ANOVAs for each of the three responses (morally right, morally permissible, and behavioral intent) that followed each of the 16 sacrificial vignettes.

Moral Rightness

“Sacrificing one person to save five people was rated as more morally right in impersonal ($M = 3.21, SE = .06$) than in personal scenarios ($M = 2.91, SE = .06$), $F(1, 211) = 64.3, p < .001$, $\eta^2_p = .23$. However, the moral rightness of this decision was not discernibly affected whether the scenario entailed disgust ($M = 3.06, SE = .06$) or sadness ($M = 3.12, SE = .06$), $F(1, 211) = 2.78, p = .097$, $\eta^2_p = .01$. There was also no discernible Type x Emotion interaction effect on judgments of sacrificial moral rightness, $F(1, 211) = 0.46, p = .498, \eta^2_p = .00$.”

Permissibility

“Sacrificing one person to save five people was rated as more morally permissible in impersonal ($M = 3.47$, $SE = .05$) than in personal scenarios ($M = 3.18$, $SE = .05$), $F(1, 211) = 39.83$, $p < .001$, $\eta^2_p = .16$. It was also rated as more morally permissible in scenarios featuring sadness ($M = 3.36$, $SE = .05$) versus disgusting ($M = 3.29$, $SE = .06$) descriptions of the sacrifice, $F(1, 211) = 4.02$, $p = .046$, $\eta^2_p = .02$. There was no discernible Type x Emotion interaction effect on judgments of sacrificial moral permissibility, $F(1, 211) = 1.61$, $p = .206$, $\eta^2_p = .01$.”

Behavioral Intent

“The behavioral intent to sacrifice one person to save five people was rated as more likely to occur in impersonal ($M = 3.82$, $SE = .06$) than in personal scenarios ($M = 3.63$, $SE = .06$), $F(1, 211) = 62.24$, $p < .001$, $\eta^2_p = .23$. However, the behavioral intention of this decision was not discernibly affected by whether the scenario elicited disgust ($M = 3.58$, $SE = .06$) or sadness ($M = 3.63$, $SE = .06$), $F(1, 211) = 1.16$, $p = .283$, $\eta^2_p = .01$. There was also no discernible Type x Emotion interaction effect on reports of behavioral intentions, $F(1, 211) = 0.02$, $p = .877$, $\eta^2_p = .00$.”

Part II: Hypothesis Testing

Table 2 provides the correlations among the focal variables in the tests of Hypotheses 1-3 that are required for the mediation models in Hypothesis 4.

Table 2*Correlations among Focal Psychopathy Variables and Moral Decision Making*

		TriPM			SRP-III	OUS		Moral Decision Making		
		Boldness	Meanness	Disinhibition	Callous Affect	IH	IB	Moral Rightness	Permissibility	Behavioral Intent
TriPM	Boldness	1	.26***	-.10	.34***	-.01	-.13*	-.03	-.01	.02
	Meanness	.26**	1	.47***	.72***	.19***	-.22***	.06	.10	.10
	Disinhibition	-.10	.47***	1	.32***	.12	.05	.09	.07	.12*
SRP-III	Callous Affect	.34**	.72***	.32***	1	.17**	-.18**	.11	.13*	.14**
OUS	IH	-.01	.19***	.12	.12**	1	.12	.42***	.45***	.48***
	IB	-.13	-.22***	.05	-.18**	.12	1	.08	-.01	.11
Moral Decision Making	Moral Rightness	-.03	.06	.09	.11	.42	.08	1	.84***	.75***
	Permissibility	-.01	.10	.68	.13*	.45	-.01	.84***	1	.80
	Behavioral Intent	.02	.10	.12*	.14**	.48	.11	.75***	.80***	1

Note. $n = 212$. TriPM = Triarchic Psychopathy Measure, SRP-III = Self-Report Psychopathy scale, OUS = Oxford Utilitarian Scale, IH=Instrumental Harm, IB=Impartial Beneficence

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

Hypothesis 1: The Relationship between Psychopathy and Moral Decision Making

Pearson's correlations were conducted to examine the relationship between scores on the three focal psychopathy measures (SRP-III Callous Affect and TriPM Meanness and Disinhibition) and the three moral decision variables (moral Rightness, permissibility, and

behavioral intent). We hypothesized overall positive relationships between the two constructs. We found:

1a) No discernible correlation between Callous Affect (SRP-III) and moral Rightness, $r(210) = .11, p = .060$; however, there was a positive correlation between Callous Affect and permissibility, $r(210) = .14, p = .025$, and a positive correlation between Callous Affect and behavioral intent, $r(210) = .14, p = .019$. For moral Rightness and behavioral intent, there were no interactions between Callous Affect, dilemma Type, and dilemma Emotion, $F(1, 210)s < 2.4, ps > .12, \eta_p^2s < .01$. However, for moral permissibility, there was an unexpected interaction between Callous Affect and Emotion, $F(1, 210) = 5.63, p = .019, \eta_p^2 = .03$. Based on *post hoc* two-tailed tests, this relationship was greater for disgust, $r(210) = .17, p = .013$, than for sadness, $r(210) = .09, p = .188$. There were no interactions involving Type for permissibility, $F(1, 210)s < 0.6, ps > .44, \eta_p^2s < .01$.

1b) No discernible correlation between Meanness (TriPM) and moral Rightness [$r(210) = .06, p = .215$], permissibility [$r(210) = .10, p = .078$], or behavioral intent [$r(210) = .10, p = .067$]. There were no interactions between Meanness, dilemma Type, and dilemma Emotion, $F(1, 210)s < 3.1, ps > .08, \eta_p^2s < .02$.

1c) No discernible correlation between Disinhibition (TriPM) and moral Rightness [$r(210) = .09, p = .093$] or permissibility [$r(210) = .07, p = .163$]. However, Disinhibition correlated positively with behavioral intent [$r(210) = .12, p = .038$]. There were no interactions between Disinhibition, dilemma Type, and dilemma Emotion, $F(1, 210)s < 2.7, ps > .10, \eta_p^2s < .02$.

Hypothesis 2: The Relationship between Psychopathy and Utilitarianism

Pearson's correlations were conducted between scores on the four focal psychopathy measures (SRP-III Callous Affect; TriPM Boldness, Meanness, and Disinhibition) and the two OUS subscales (Instrumental Harm and Impartial Beneficence). We hypothesized positive correlations of SRP-III Callous Affect, TriPM Meanness, and Disinhibition with Instrumental Harm. We hypothesized negative correlations of TriPM Boldness with Impartial Beneficence. We found:

2a) A positive correlation between Callous Affect (SRP-III) and Instrumental Harm, $r(210) = .17, p = .007$.

2b) A positive correlation between Meanness (TriPM) and Instrumental Harm, $r(210) = .19, p = .002$.

2c) A positive correlation between Disinhibition (TriPM) and Instrumental Harm, $r(210) = .12, p = .046$.

2d) A negative correlation between Boldness (TriPM) and Impartial Beneficence $r(210) = -.13, p = .028$.

Hypothesis 3: The Relationship between Utilitarianism and Moral Decision-Making

We conducted Pearson's correlations between scores on the two OUS subscales (Instrumental Harm and Impartial Beneficence) and the three moral decision variables (moral Rightness, permissibility, and behavioral intent). We hypothesized a positive relationship between instrumental harm within utilitarianism and moral decision-making. We found main effects between all three moral decision-making variables and instrumental harm. Specifically:

3a) Instrumental Harm was associated with higher judgments of moral Rightness, $F(1, 210) = 44.1, p < .001, r(210) = .42$. There were no interactions involving dilemma type or emotion, $F_s < 2.65, p_s > .105, \eta^2_{ps} < .234$.

3b) Instrumental Harm was associated with higher judgments of permissibility, $F(1, 210) = 54.2, p < .001, r(210) = .45$. There were no interactions involving dilemma type or emotion, $F_s < 3.88, p_s > .050, \eta^2_{ps} < .205$.

3c) Instrumental Harm was associated with higher judgments of behavioral intent, $F(1, 210) = 61.2, p < .001, r(210) = .48$. There were no interactions involving dilemma type or emotion, $F_s < 1.38, p_s > .241, \eta^2_{ps} < .226$.

No main effects or interactions were found between Impartial Beneficence and any of the three moral decision-making variables, $F_s < 1.7, p_s > .20, \eta^2_{ps} < .01$. No discernible correlations were found between Impartial Beneficence and moral Rightness [$r(210) = .08, p = .238$], permissibility [$r(210) = -.001, p = .926$], or behavioral intent [$r(210) = .11, p = .101$].

Hypothesis 4: Testing the Mediating Role of Utilitarianism between Psychopathy and Moral Decision-Making

We hypothesized that instrumental harm would mediate the relationship between psychopathy and utilitarian moral judgments in sacrificial moral dilemmas. SRP-III Callous Affect within psychopathy along with permissibility and behavioral intent within moral decision making were all associated with each other and with Instrumental Harm scores. Additionally, TriPM Disinhibition within psychopathy along with behavioral intent within moral decision-making were associated with each other and with Instrumental Harm scores. Thus, the necessary relationships were established to test whether utilitarian instrumental harm mediated the relationships between SRP-III Callous Affect and both permissibility and behavioral intent, and TriPM Disinhibition and behavioral intent.

In this analysis, a partial mediation was observed for Callous Affect but not Disinhibition, so the hypothesis was mostly supported. Callous Affect predicted Instrumental

Harm, and Instrumental Harm predicted permissibility and behavioral intent after adjusting for Callous Affect. Instrumental Harm scores mediated the relationship between Callous Affect within psychopathy and utilitarian moral judgments regarding permissibility and behavioral intent. As shown in Figure 1, the bias-corrected indirect effect including permissibility was 0.07 (95% CI [0.01, 0.14]), which represents 54.5% of the total effect. As shown in Figure 2, the bias-corrected indirect effect including behavioral intent was 0.08 (95% CI [0.01, 0.15]), which represents 53.6% of the total effect. However, the bias-corrected indirect effect including Disinhibition and behavioral intent was only 0.05 (95% CI [-0.01, 0.12]), which represents 44.1% of the total effect.

Part III: Exploratory Analyses

We conducted exploratory two-tailed analyses between the remaining independent variables not included in our hypotheses and all three moral decision-making variables. Those variables included: SRP-III Criminal Tendencies, Erratic Lifestyle, and Interpersonal Manipulation, and moral Rightness, permissibility, and behavioral intent. There were no discernible correlations between the independent variables and moral decision-making. Results are shown in Table 3.

Table 3*Correlations among Exploratory Psychopathy Variables and Moral Decision Making*

		SRP-III			Moral Decision Making		
		Criminal Tendencies	Erratic Lifestyle	Interpersonal Manipulation	Moral Rightness	Permissibility	Behavioral Intent
SRP-III	Criminal Tendencies	-	.45***	.41	.12	.09	.07
	Erratic Lifestyle	.45***	-	.50***	.06	.05	.09
	Interpersonal Manipulation	.41	.50***	-	.10	.12	.12
Moral Decision Making	Moral Rightness	.12	.06	.10	-	.84***	.75***
	Permissibility	.09	.05	.12	.84***	-	.80***
	Behavioral Intent	.07	.09	.12	.75***	.80***	-

Note. $n = 212$. SRP-III = Self-Report Psychopathy scale

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

CHAPTER 4

DISCUSSION

The primary objective of the study was to examine the relationship between psychopathy and moral decision-making by demonstrating the effect of multiple factors of psychopathy on making moral judgments during sacrificial moral dilemmas. Additionally, the effect of utilitarianism views was examined as a mediator between the two. Thus far, previous research has been able to establish a link between psychopathy and moral reasoning. However, those studies have exclusively focused on assessing what people are willing to do in a moral dilemma (their behavioral intent) but people's actions do not necessarily reflect their worldviews. In the philosophy literature, moral Rightness, permissibility, and behavioral intent are closely intertwined concepts that relate to ethical decision-making. Moral Rightness refers to the belief that certain actions or behaviors are inherently right or wrong, regardless of their consequences. Permissibility, on the other hand, is concerned with whether or not an action or behavior is allowed or permitted based on moral or ethical principles. Behavioral intent refers to the underlying motive or reason behind an action or behavior, which can influence its moral status. Together, these concepts form a complex framework for evaluating the morality of human actions and behaviors, taking into account both the objective moral status of an act and the subjective intentions of the actor. Philosophers have debated the interplay between these concepts for centuries, with some arguing that moral Rightness should always take precedence over permissibility or intent, while others suggest a more flexible approach (Gert & Gert, 2002). Nevertheless, our current account of moral reasoning with respect to psychopathy remains incomplete.

This study aimed to close a gap in the literature by examining three different types of moral reasoning that examine people's views on what is right, what may not be right but is at least permissible in certain situations, and what they are willing to do. Further, our study offered a range of response options as opposed to asking participants to give a dichotomous answer to a complex matter of morality.

Psychopathy and Moral Decision Making

Participants who reported higher levels of Callous Affect were more likely to report that it was morally permissible and had the behavioral intent to sacrifice 1 in order to save 5 and thus act in a utilitarian manner. A relationship between psychopathy and utilitarian response styles has also been reported in prior literature (Koenigs et al., 2012a). These results indicate that individuals who lack empathy and concern for others believe that certain actions, such as murder are acceptable under certain circumstances, and they would be willing to assume the role of the executioner. Therefore, individuals who score high on certain aspects of psychopathy may experience higher levels of moral flexibility than the general population.

It can be argued that people's perspective on moral Rightness and wrongness is tied to cognitive reasoning, whereas our views on permissibility and behavioral intent are influenced by emotional reasoning. For example, our sympathy for a close friend might sway us to help them get away with murder, even though our cognitive reasoning is strongly reflective of saving lives. The emotional detachment of people with psychopathy may reduce hesitation to inflict suffering on one person in order to maximize the well-being of a large number of people. These results coincide with one other study which used the SRP-III and found specific relationships between Callous Affect and certain types of dilemmas (Spears et al., 2014). In our study, no relationship was found between any of the other facets of the SRP-III and moral judgments. Previous

literature results have been mixed. Luke and colleagues (2022) found relationships between all facets of the SRP-SF and moral judgments, whereas Seara-Cardoso and colleagues (2013) found higher endorsement of utilitarian responses to dilemmas among participants high on the Affective-Interpersonal dimension of the SRP-SF only. The only known study to use the SRP-III (Bartelz & Pizzaro, 2011) did not break down psychopathy into its individual facets and only reported a relationship between the total SRP score and behavioral intent.

However, no relationship was found between Callous Affect and moral Rightness. Despite claiming so, no previous literature had examined individuals with psychopathic traits' ability to judge right from wrong. For example, Cima and colleagues (2010) stated that "psychopaths know right from wrong but don't care"; however, the methodology of their study strictly examined behavioral intent (using dilemmas followed by a "Would you X?" question) and not moral Rightness. Another study used dilemmas followed by the "Is it morally appropriate for you to [do action] in order to [prevent some other danger]?" question (Glenn et al., 2010). It is unclear whether this question targets behavioral intent, permissibility, or moral Rightness. In our study, participants who lack empathy and concern for others did not describe the sacrifice as more morally right or wrong than others without these traits, which indicates that their cognitive moral reasoning is intact.

Psychopathy did not interact with the nature of the sacrifice in predicting moral decision-making in our study. This result replicated the results of Cima and colleagues (2010), who found no differences between psychopathic and non-psychopathic groups in the utilitarian judgment of impersonal vs personal dilemmas. Similarly, Glenn and colleagues (2010) found that the psychopathic group endorsed higher utilitarian judgment regardless of the nature of the sacrifice.

Only one study found that participants with psychopathic traits were less willing to perform a sacrifice only in the personal condition (Koenigs et al., 2012).

Lastly, Callous Affect, the type of dilemma (personal/impersonal), and emotion did not interact with moral Rightness or behavioral intent. However, an interaction was found for permissibility between Callous Affect and emotion (but not type). Specifically, participants' exposure to disgusting details of the sacrifice affected the relationship between their callous affective traits and reports of permissibility. Because permissibility was the only form of moral reasoning in which disgust elicited lower ratings than sadness, these results imply that callous-affective traits may only have utilitarian effects on moral decision-making when considering the acceptability of the gory consequences of sacrificing people. It is also possible this singular interaction was a false positive result, as it is puzzling how disgust did not affect participants' willingness to perform the sacrifice. The lack of psychopathy's relations with moral Rightness makes it possible that judgments regarding moral Rightness exclusively trigger cognitive rather than affective reasoning. However, determining whether it is acceptable to perform a repulsive act appeals to people's affective reasoning as they are called to decide whether it is okay to go against their better judgment under these circumstances.

Further, no discernible results were indicating that participants who scored high in Meanness reported that sacrificing 1 to save 5 was more morally right, more permissible, or were willing to perform the sacrifice themselves. However, we found that participants who scored high in Disinhibition were more willing to perform the sacrifice but did not report more moral Rightness or permissibility. Even though we expected Disinhibition to be correlated with utilitarian behavioral intent as found in previous studies (Balash & Falkenbach, 2018; Pasion et al., 2018), the lack of a significant relationship between Meanness and behavioral intent was

surprising as a relationship between behavioral intent and affective/interpersonal traits of psychopathy has been previously found in research (Tassy et al., 2013). Furthermore, TriPM Meanness has been specifically correlated with utilitarian behavioral intent (Balash & Falkenbach, 2018; Pasion et al., 2018). However, no interactions were found among these variables, emotion, and type, suggesting that the effect of Callous Affect and moral judgement is much more robust.

In summary, this study's findings suggest that psychopathy is associated with more than just behavioral intent in decisions about committing particular sacrificial behaviors with moral implications. We found associations between permissibility of action as well as behavioral intent and specific traits of psychopathy relevant to lack of empathy and having little concerns for others. Interestingly, that relationship was partially dependent on a dilemma manipulation that involved disgust. Further, there was a relationship between behavioral intent and traits of impulsivity and irresponsibility.

Psychopathy and Utilitarianism

As found in previous literature (Paruzel-Czachura & Farny, 2022), participants who reported higher Callous Affect, Meanness, and Disinhibition were more likely to report stronger utilitarian views relevant to Instrumental Harm. Instrumental Harm refers to “the sacrifice of an individual to save a greater number of individuals,” so it is not surprising that those who encompass personality traits of callousness, aggression, dishonesty, lack of empathy, little concern for others, impulsivity, irresponsibility, and hostility are more likely to hold views that endorse such sacrifices. Making any type of sacrifice, whether justified or unjustified requires a certain level of detachment from emotions that arise in most humans when holding the trigger such as indecision, sadness, guilt, and even a physical aversion to death. The active ingredient in

one of our most robust findings, the facet of Callous-Affect, is emotional detachment, which would decrease any aversion associated with sacrificing another human being.

Further, participants who reported higher Boldness were less likely to report utilitarian views relevant to Impartial Beneficence. Impartial Beneficence refers to “the tendency to endorse the impartial promotion of everyone’s personal welfare even at the personal sacrifice of oneself” (Kahane et al., 2018). Boldness encompasses traits of psychopathy that are associated with emotional stability and extraversion (e.g. (Miller et al., 2016). Individuals with such traits are more likely to be fearless and take risks, so we hypothesized that they would be more willing to sacrifice themselves for the benefit of others. Nonetheless, such extreme altruism may not be the result of such traits.

Extreme altruism refers to the willingness of some people to take great personal risks or make significant sacrifices to help others. Research on real-world extreme altruism (Marsh et al., 2014) such as kidney donation to strangers who are not a family member or a close friend suggests such traits are instead related to a heightened sensitivity to the suffering of others, as well as a strong sense of moral obligation to help those in need. Marsh and colleagues (2014) argue that these traits are likely rooted in the brain's systems for empathy and moral reasoning. Indeed, impartial beneficence has been previously associated with “empathic concern, identification with the whole of humanity, and concern for future generations” (Kahane et al., 2018). Although self-sacrifice sounds like a *bold* move, the results of the above studies suggest that it requires deep empathy and appreciation for others’ pain rather than bravery and fearlessness.

Utilitarianism and Moral Decision Making

Participants who reported higher utilitarian views relevant to Instrumental Harm were more likely to report that sacrificing one person to save five was more morally right, and more permissible, and were more behaviorally inclined to perform the sacrifice than others. There were no discernible results that indicated that participants who reported higher utilitarian views in relevance to Impartial Beneficence were more likely to make any kind of utilitarian moral judgments. This was expected as none of our sacrificial moral dilemmas were geared towards personal sacrifice. Similar results were found by Park and colleagues (2023). Even when moral judgments were related to both Instrumental Harm and Impartial Beneficence (Navajas et al., 2021), the correlation with Instrumental Harm was stronger. This is expected as Instrumental Harm is concerned with how one approaches the promotion of the greater good and it arguably represents the more important aspect of utilitarian thought (Kahane et al., 2018).

Utilitarian Harm as an Indirect Effect of the Relationship between Psychopathy and Moral Decision Making

In our study, Instrumental Harm scores indirectly affected the relationship between psychopathy and utilitarian moral judgments regarding permissibility and behavioral intent. This finding is unique and has not been examined in any previous literature. Instrumental harm – the idea of sacrificing one individual to save a greater number – accounted for more than half of the relationship between Callous Affect and ratings of permissibility and behavioral intent. It seems that individuals with callous-affective psychopathic traits find it more permissible and are more likely to act on behaviors that minimize suffering for the largest amount of people. Although psychopathy is sometimes viewed as the absence of morality (Cleckley, 1941; Prichard, 1837)

the emotional detachment of people with psychopathy may eliminate any hesitation to sacrifice one to save many.

While utilitarianism offers a framework for promoting overall happiness and well-being, it raises important questions about the role of individual rights and the distribution of resources in society. For example, a utilitarian might support policies that provide affordable healthcare to all citizens, since this would promote the overall well-being of society. However, they might also pull the plug on an individual who is still breathing to harvest their organs for five other people on the transplant list. Thus, the implications of utilitarianism for social justice are complex and controversial.

Clinical Implications

While psychopaths frequently partake in criminal activities, criminal behavior is not an obligatory component of this condition (Cleckley, 1941/1976). Successful psychopathy refers to individuals with psychopathic traits who are able to function effectively in society without engaging in criminal behavior. These individuals often excel in business and political settings, where their manipulative and charismatic qualities can be advantageous. Successful psychopaths possess traits such as deceitfulness, lack of empathy, and grandiosity, which may be rewarded in competitive environments (Babiak & Hare, 2006; Lykken, 1995). They are skilled at manipulating others to serve their own self-interest and can often rise to positions of power and influence. Despite lacking moral scruples and exhibiting callous behavior, successful psychopaths are able to navigate within legal boundaries, allowing them to maintain a façade of respectability. Their ability to mask their true nature and blend in socially, combined with their strategic thinking and charm, enables them to thrive in positions where their Machiavellian

tendencies are encouraged. However, their actions may ultimately have negative consequences, as their self-centered and unscrupulous behavior can harm those around them.

Psychopathic traits can have negative implications for the welfare of individuals, particularly in cases where a psychopathic CEO places the financial progress of the company above the well-being of their employees. For instance, Elizabeth Holmes, the founder of Theranos, was charged with multiple counts of fraud and conspiracy when she claimed to have developed a revolutionary health technology that can detect diseases with a few blood drops. Her charismatic and ambitious personality helped her manipulate a large number of people and cost investors millions of dollars, and gave patients inaccurate or unreliable test results, which could have had serious consequences for their health (*United States Department of Justice*, 2022)

Likewise, a psychopathic politician may place their personal interests above the welfare of the individuals they are supposed to represent and serve. Grandiose and charismatic Adolf Hitler' was able to lead millions to their death through the use of violence and coercion in realizing his vision of a "master race" that will rule the world. Hitler's actions had a profound impact on the world and led to one of the deadliest conflicts in human history. His legacy serves as a stark reminder of the dangers of psychopathic leaders and the importance of preventing such individuals from gaining power (disorderedworld, 2013).

On the other hand, psychopathic traits may be beneficial to the well-being of most people in situations where inhibited emotionality is essential for making the most moral choice. Individuals in positions of power are often tasked with making moral decisions that can affect the lives of many others. A person with psychopathy may be better equipped to make utilitarian-type decisions that will benefit the most as a result of their callousness. One example is Harry S. Truman, the 33rd President of the United States. Truman made the difficult decision to drop

atomic bombs on Hiroshima and Nagasaki during World War II, which ultimately led to the end of the war and saved countless lives that would have been lost in a prolonged conflict. While Truman's decision was the source of much controversy some argue that it was a utilitarian decision that was made in the interest of saving the most lives possible (*Presidential Decision-Making: Utilitarianism vs Duty Ethics / Issue 64 / Philosophy Now*, n.d.). In a hypothetical example that ties back to our vignettes, an engineer without psychopathic traits may have difficulty deciding whether it would be best to design a self-driving car that will choose to run over a child in order to save five adults, but the unemotionality of someone with psychopathy may eliminate such hesitation.

Ideally, decisions that would benefit others may align with the interests of the individual with psychopathy. For example, when Volkswagen needed to reduce its workforce to improve its revenue, it could have chosen to lay off a large number of current employees as many companies often do. Instead, they opted out for a moral high ground by choosing to reduce their workforce with time, by not filling the positions of retiring employees (https://www.facebook.com/*, 2019). Another example is Costco's decision to pay its employees higher than average rather than minimum wages to ensure employee satisfaction and quality customer service (Montgomery, 2007). These choices benefitted the largest number of people including the employees and the company since they stayed in favor of the public eye. While these expeditions present up-front financial costs to the companies, they support the good of the many (employees) and the one (CEO), while adhering to moral standards. Though one could argue that those decisions are far from altruistic given that they have resulted in growing revenues and a good reputation, they nevertheless serve the public and benefit the one as much as the many.

Moral decision-making is a crucial aspect of ensuring people's wellbeing, especially when those decisions lie in the hands of highly psychopathic individuals appointed to positions of power. Therefore, investigating the pattern of decision-making among individuals with those traits along with contemplating our moral ideals will bring clarity upon which individuals we should employ to make decisions of such importance.

Limitations and Future Directions

Response options

As seen in Appendix A, the questions posed after each of the 16 sacrificial scenarios were presented from a utilitarian perspective by assessing people's thoughts on the morality of sacrificing one person to save five people. None of the questions were formulated from a deontological perspective, such as assessing thoughts on the morality of letting five people die by not intervening. Therefore, participants' answers might have been influenced due to the phrasing of the questions. Future studies should consider including both deontological and utilitarian-phrased questions to receive more well-rounded responses.

An additional limitation regarding wording includes combining both concepts of moral rightness and wrongness in one sentence as such: "Is it morally right or wrong to sacrifice 1 person to save 5 people in this situation?" A 6-item Likert-type response scale with the following options was provided: Strongly Morally Wrong, Moderately Morally Wrong, Slightly Morally Wrong, Slightly Morally Right, Moderately Morally Right, and Strongly Morally Right. Interestingly, the study did not yield any significant results related to moral wrongness or moral rightness as opposed to permissibility and behavioral intent. Perhaps combining both concepts within a single question might have confused participants and influenced their response patterns.

Future studies would benefit from splitting this question into two separate inquiries, one of which examines moral rightness and the other wrongness.

Finally, all three questions following the 16 sacrificial vignettes were presented in the same order which may have influenced the results. It is possible that arranging the questions in this manner could have affected how participants responded, as they were first prompted to consider the morality of the situation before being asked about their actions. However, we did not find any significant results for the first question (morally right/wrong), while various significant results emerged for both the second (moral permissibility) and third (behavioral intention) question 3. Therefore, in this particular study, the order effects appeared to amplify rating effects rather than diminish them, with the strongest correlations observed for behavioral intention, followed by permissibility, and then moral rightness. However, future studies may benefit from randomizing the presentation of the questions.

Elicitation of emotions

The aim of a significant portion of this study was to investigate whether feelings of sadness or disgust influenced participants' reactions to sacrificial vignettes. Our results did not indicate the interaction of emotion with participants' responses. However, the emotion-targeted dilemma variations used in this study may have simply not been intense enough to induce the desired emotions. Thus, the limited findings concerning emotions in this study might be attributed to the characteristics of the vignettes themselves rather than the actual impact of emotion on altering people's thoughts and actions on these vignettes. Future studies could benefit from conducting some initial tests to better gauge the actual emotional responses of participants. One approach could be to utilize self-report and ask participants to rate whether they felt any sadness or disgust after each vignette.

Sampling

The participants for this study were selected from a convenience sample of undergraduate students. Convenience samples have inherent limitations when it comes to generalizability as they may not represent the broader population accurately. Convenience samples tend to lack diversity in terms of demographic characteristics, experiences, and perspectives, and it is therefore crucial to exercise caution when generalizing results obtained from convenience samples. However, this sample was quite ethnically diverse due to its sampling location. Further, previous research has shown similar findings to ours in forensic (Koenigs et al., 2012a), community (Glenn et al., 2010; Luke et al., 2022), and student samples (Bartels & Pizarro, 2011a; Gao & Tang, 2013; Tassy et al., 2013).

Vignettes

The fundamental nature of sacrificial vignettes is based on highly unrealistic and extreme scenarios (Foot, 1967; Greene, 2009; Greene et al., 2001a). One limitation of using sacrificial vignettes, such as the trolley problem, is that they present extreme and hypothetical scenarios that may not fully capture the complexities and nuances of real-life moral decision-making (Bostyn et al., 2018). A branch of research in moral decision-making has alternatively focused on the use of more realistic vignettes (Kruepke et al., 2018). The vignettes in this study were deliberately crafted in an extreme sacrificial manner to evoke strong emotional responses from participants. However, there is a possibility that individuals may not act in accordance with their reported behavioral intentions in real-life scenarios.

Most people tend to agree with the idea of sacrificing one person to save many when they lack specific information about the individuals involved in these scenarios. However, variations of the original trolley problem have shown that the decision becomes much more difficult when

the person being sacrificed is someone we feel empathy towards, such as a young child, a family member, or a romantic partner (Bleske-Rechek et al., 2010). In future research on psychopathy and moral decision-making, such variations could be employed to elicit stronger emotional reactions in these individuals.

Conclusions

The findings of this study align with previous reports indicating a clear association between psychopathy and utilitarian responses to sacrificial moral dilemma vignettes (e.g., Bartels & Pizarro, 2011; Koenigs et al., 2012). This study found that the Callous Affect facet of psychopathy was related to moral permissibility and the behavioral intention to act in a utilitarian manner and the Disinhibition facet was related to behavioral intent only. Our hypotheses uniquely predicted that utilitarian attitudes of instrumental harm indirectly affect the relationship between psychopathy and utilitarian moral judgments regarding permissibility and behavioral intent. The differentiation between moral rectitude, moral permissibility, and behavioral intent (Kahane & Shackel, 2010) emphasizes that psychopathy could be linked to a preserved moral reasoning ability but a greater inclination towards flexible behavior.

APPENDIX A

Moral Dilemma Vignettes (16)

1. Organ Transplant Dilemma

You are a farmer living in a third world country. Five people from your village have saved up enough money to see a doctor who has opened a small hospital nearby. You, the five people from the village, and a driver travel to see the doctor. The doctor explains to everyone (including the driver) that the five people are about to die, each from a different failing organ. The doctor also says that the only way to save the five people is for the doctor to humanely kill the driver and to transplant the organs from the driver into the other five bodies. Unlike the driver, your blood is incompatible with the five blood types.

TYPE

- Personal: You will have to strap the driver onto the hospital bed.
- Impersonal: You will have to notify the doctor to kill the one driver to save the five.

EMOTION

- Sadness: You have known the five ill people and the driver your whole life. You grew up together in your small village. You cannot imagine anyone to miss the harvest and not to be around any longer. You love all of them and losing any one of them would cause you great pain for years to come.
- Disgust: If you sacrifice the one person, you would see the bloody organs being cut and pulled out of the body, and only a bloody mess would be left behind. If you let the five people die, they will sweat and vomit as their organs begin to slowly fail.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

2. Kidnapper Dilemma

On your vacation in South America you and six other travelers have been kidnapped. The kidnappers have hung up five members of your group from the ceiling in front of your cell. The kidnappers tell you, your cellmate and the other five group members that if your cellmate is killed, they are going to let the five people live. If you refuse to kill your cellmate, the kidnappers will kill the five people and release your cellmate to tell the media about the situation.

TYPE

- Personal: You will have to kill your cellmate using an axe.
- Impersonal: You will tell the kidnappers to kill your cellmate.

EMOTION

- Sadness: It is quiet and one after another you share how much you mean to each other and how awful it is that some of you must die. The misery is overwhelming and you all begin to cry. You share old memories; you talk about plans you had for the future.
- Disgust: You can see the axe they use to decapitate prisoners. In the corner lies a decaying body. The head is nearby, and you can see where the axe sliced through the throat. A smell of rotten flesh is creeping towards you.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

3. Circus Elephant Dilemma

An angry circus elephant has broken free. The elephant is running down an exit hallway towards five circus crew members and is going to trample them in an attempt to leave the tent. The five crew members are aware they will die unless you help them.

TYPE

- Personal: You can push a very large worker into the hallway where the elephant is running. This will trip the elephant so that it does not reach the exit with the five crew members, but the large person will die in the process. The large person is aware that their body could be used to stop the elephant and is too weak to stop you from pushing them.
- Impersonal: You can push a button that will close the exit gate. This will stop the elephant from trampling the five crew members. However, if you push the button, the elephant will run to the other exit without a gate and kill the worker who is standing there. The one worker at the gate is aware you may push the button and has no way to escape.

EMOTION

- Sadness: You have traveled the country with your circus coworkers for many years. They have all become your family and you cannot imagine your life without any of them. You begin to weep as you try and decide what to do from the overwhelming sense of loss you begin to feel.
- Disgust: You've seen a person crushed to death before. Their blood and guts splattered flat across the floor. Tiny pieces of bone were stuck to the ground and you could only tell that the crushed corpse used to be human due to the chunks of clothing mixed into the bloody mess.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

4. Car Dilemma

You are an engineer testing your new self-driving vehicle. Your car is malfunctioning and is about to run over five of your coworkers. If you take control of the vehicle, your only other option is to run over the one coworker standing on the sidewalk nearby. The five coworkers and the coworker on the sidewalk are aware that you will have to decide who to crash into and kill.

TYPE

- Personal: You are in the self-driving vehicle and will have to take over control of the steering wheel just in time to crash into your one coworker nearby. The airbags will protect you during impact.
- Impersonal: You are in the control room and will have to flip a switch to make the car turn just in time to crash into your one coworker nearby.

EMOTION

- Sadness: You spend more time with your coworkers than with your family and have become very close to them. You become heartbroken thinking about losing them.
- Disgust: You will hear bones breaking as the car crashes against bodies and drives over them. Blood will smear across the street.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

5. Construction Dilemma

You are working on the roof of a building. A large steel plank has become loose and is about to roll down the roof and kill five workers on the ground. The five workers hear the steel plank break loose and look up in dismay as they realize that it will fall on them and there is no time to escape.

TYPE

- Personal: You are standing on the roof and can push a very large coworker next to you in the way of the steel plank rolling down the roof. The person would stop the steel plank from falling off the roof. This would kill the large coworker but save the other five coworkers. The coworker is aware of the decision you have to make and would not be able to stop you.
- Impersonal: You can push a button on the crane that would move the position of the steel plank before it falls down from the roof. While you would save the five people working on the ground, you would kill another person on the ground nearby who is on break. The coworker is aware of the decision you have to make and does not have enough time to escape.

EMOTION

- Sadness: You feel depressed thinking about this senseless death. Pictures of family members at the grave come into your mind. You feel like crying.
- Disgust: You have seen someone else being crushed by one of these heavy steel planks before. Bones will crack. Intestines and blood will cover the area.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

6. Blood Transplant Dilemma

You are a soldier on the front line of an active war zone and are in a medical tent with five soldiers who have been injured by a landmine. There is also one healthy soldier who is in the same medical tent. You have been trained to use a machine that handles blood transfusions. The only way to save the five soldiers is to kill the last healthy soldier in your group and transfer the blood of that person into the other five bodies. Unlike the healthy soldier, your blood is incompatible with the other blood types. The five injured soldiers and the last healthy soldier are aware you will have to decide who will live. The healthy soldier is too small to fight you.

TYPE

- Personal: You will have to strap the soldier to be killed onto the hospital bed and hook up the blood transfer machine.
- Impersonal: The soldier to be killed is already hooked up the blood transfer machine. All you have to do is flip the switch of the blood transfer machine.

EMOTION

- Sadness: You have spent a lot of time with all of the soldiers in your group. It pains you to think about anyone one of them dying. Tears are streaming down your face as you think about the loss of life.
- Disgust: The tent you are in with the soldiers is smelling badly from their injuries. The body of the person who would have to be killed would turn blue as the blood is transferred into the other five bodies.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

7. Dam Dilemma

You are working on a dam. You spot a leak in the dam and realize that the water pressure is about to bust the dam open and kill five people working on a water pathway attached to the dam. The five workers are aware they will die and have no time to escape.

TYPE

- Personal: You are standing on a bridge and can push a very large coworker next to you over the bridge who would clog the leak and prevent the dam bursting open just in time. This would kill the large coworker but save the other five coworkers. The large coworker is aware that their body may prevent the dam from bursting open and know that they would be too weak to stop you from pushing them.
- Impersonal: You can push a button that would divert the bursting dam to another pathway. This would save the five people working on the new pathway of the dam, but you would kill another person who is working on an old pathway of the dam. The person on the old pathway is aware that the dam may be diverted and would not be able to escape.

EMOTION

- Sadness: You feel helpless being faced with such a horrible decision. The thought that any of your coworkers would die hurts you deeply. They all have much life ahead of them and do not deserve to die.
- Disgust: You have heard of people drowning in the dam water. It is dirty water with germs that will quickly fill up the lungs. Corpses infested by these germs will turn green and blue and smell horribly.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

8. Terrorist Dilemma

You are a cameraman at a news station and come in to work on the weekend. You find that terrorists are holding five of your coworkers hostage and is about to kill them using poison. The terrorists give you the option that they will not kill the five coworkers if you help them find the news anchor who is well known to the public. The five coworkers are listening to this conversation. You see the news anchor is hiding in the adjacent room and can also hear the conversation. You are safe because you are the only one who knows how to use the equipment that will broadcast the execution.

TYPE

- Personal: You will have to inject the deadly poison.
- Impersonal: You will have to tell the terrorist your decision.

EMOTION

- Sadness: You consider all your coworkers to be your friends and you cannot imagine a world without them. You think about the grief that will overwhelm everyone who will watch the video. You are disappointed and heartbroken thinking about all the bad news you have seen lately and that more people will be hurt today.
- Disgust: The recording will show that the poison causes a slow death. Green foam will begin to seep from their mouth and they will slobber and choke. Their eyes will turn bright red and bleed. Vomit will spill out and splatter on the ground.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

9. Helicopter Dilemma

You are in your helicopter flying over your flight training academy. Your propeller has stopped functioning and you are about to crash into a field with five people from your helicopter class directly below you. If you veer the helicopter to the left, you will avoid crashing into the five people but will instead land on one person from your class in the adjacent field. Your helicopter is malfunctioning and cannot be steered in any other direction. The five people below you and the one person in the adjacent field are aware that you will have to decide who dies. None of the people have enough time to run away.

TYPE

- Personal: You will turn the helicopter to the left, killing your one classmate as you crash. Your harness will protect you during impact.
- Impersonal: You will turn the helicopter to the left, and then jump to safety using your parachute to land.

EMOTION

- Sadness: You've spent the past year training with the people in the fields below you. You are overwhelmed with grief as you think of crashing into any of them. You've gotten to know everyone's families and feel sorrowful thinking about their potential loss. You begin to weep as the helicopter plummets towards the ground.
- Disgust: The propeller blades are sharp and will surely cut through any flesh they meet. You imagine the blades decapitating your classmates causing blood to spray everywhere. Limbs, organs, and soft tissue will splatter across the windshield as the helicopter crashes.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

10. Cult Dilemma

You are a member of a cult. Six members of the cult have offended the cult's beliefs. Five of the six cult members have been caught and sentenced to death by sacrifice. You know where the sixth member is hiding. The cult leader has told you and the five cult members that if you find the sixth member who escaped, he will only sacrifice the cult member who escaped and will spare the other five cult members. You know the escaped cult member is hiding in the adjacent room and is listening to your conversation through the wall.

TYPE

- Personal: You will have to catch and deliver the escaped member to the cult leader.
- Impersonal: You will have to tell the cult leader where the escaped cult member is hiding.

EMOTION

- Sadness: You have a close bond to every member of your cult. You have lived together for many years and you consider them your chosen family. You feel crushed and will feel lonely if any cult members die.
- Disgust: Whoever will be sacrificed will be chained up and burnt alive. Skin will melt and peel from the bone. Eyes will pop out and roll on the ground towards you. Blood will leak from the body and create a mess on the floor.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

11. Government Dilemma

Your country has been taken over by a government that intends to kill anyone who does not follow their belief system. A family of five people from your neighborhood are hiding in your house. Soldiers from the new government are at your door asking if you know of anyone hiding in your neighborhood. If you do not help them, they will search your house, and be able to find the five neighbors hiding in your house and kill them. If you tell them about the one person hiding in the house next door, the soldiers will kill that person and not search your house. The person next door and the five people in your house can hear your conversation with the soldiers on the street and have no way to escape. No matter what happens, you will be safe because you are a teacher and are needed to take care of children in the neighborhood.

TYPE

- Personal: You will have to help the soldiers tie up whoever was captured.
- Impersonal: You will have to point to where someone is hiding.

EMOTION

- Sadness: You have known all your neighbors for many years and feel sorry that you will have to make the choice who will die. You remember happy celebrations you have had with them. You think about how much you will miss them and how empty your life will feel without them. You have to stop yourself from crying.
- Disgust: You know whoever will be caught by the soldiers will face a terrible fate. Before the soldiers kill their victims, they force them to work in an old factory where they have to sleep on dirty floors and in clothes infested with lice. The only food given to them are insects and rats. The factory smells of sick and dying people.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

12. Chemical Production Plant Dilemma

You are a worker at a chemical production plant. You are standing on a bridge above a tank containing toxic chemicals in a securely locked room. The tank is malfunctioning and about to spill over. Five coworkers are standing next to the tank and will die from the chemical burns if the tank overflows. They are aware of the situation but have no way of escaping. You can redirect the flow of chemicals, but another coworker would be exposed to the chemicals and surely die.

TYPE

- Personal: You are standing on a bridge above the tank with another coworker. Your coworker is much larger than yourself. If you push the large coworker into the tank, the tank will shut down. The large coworker is aware that their body could be used to shut down the malfunctioning tank and would not be able to stop you from pushing them in.
- Impersonal: You can push a button to redirect the chemicals to an emergency drain, but the chemicals would kill a coworker cleaning the emergency drain. The coworker can hear you discussing the situation on the radio but would not have enough time to climb out of the drain.

EMOTION

- Sadness: You have worked with your coworkers for many years. You spend time with all of their families and think about how hurt their children will feel over the loss of their parent. You feel helpless and begin to cry.
- Disgust: The chemicals will peel skin from red, burning flesh. Organs will burst, releasing bodily fluids. The mix of chemicals and decay will create a sickening smell.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

13. Joker Dilemma

You are on your way to a party. After entering a dark room in a hotel, the door suddenly slams shut, and you are trapped in the room. The lights go on and you see five people tied to electric chairs. Through the speakers you and the five people can hear the voice of a famous mass murderer informing you that these five people will be executed unless you decide that the guest locked in the adjacent room will die. The person in the adjacent room can hear the speaker through the wall. The person cannot escape because the doors are locked. You know all of the five people in the room and the one person in the adjacent room. The person cannot communicate with the outside world because all communication devices are disrupted. You know from news reports that the mass murderer is known for playing evil games like this and always keeps their word.

TYPE

- Personal: You will either have to strap the person from the adjacent room in an electric chair or secure the straps of the five people already trapped in the electric chairs.
- Impersonal: You will have to tell the murderer your decision.

EMOTION

- Sadness: You know everyone has a family and people who depend on them. This senseless death seems like an immense loss. You feel overwhelmed with grief and sorrow.
- Disgust: You have seen pictures of former victims and know how brutal the mass murderer's techniques of killing are. One of the victims had its hands cut off to bleed out. Another had its eyeballs and tongue removed. The mass murderer likes to eat cut off body parts.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

14. Waterfall Dilemma

A raft containing five people is traveling down a river towards a waterfall. The waterfall is very steep and the five people will die if they go over the edge. Nearby, there is one person strapped into a canoe. If the canoe collides with the raft, it will push the raft with the five people to safety on the shore. However, the canoe will then go over the waterfall killing the one person in the process. The five people and the one person in the canoe is aware of the decision you will have to make. The person in the canoe does not have enough time to get out of the restraints of the canoe.

TYPE

- Personal: You will have to push the canoe with the one person in it.
- Impersonal: You will have to quickly untie the rope connecting the canoe to the shore.

EMOTION

- Sadness: All of you have tears in your eyes and you are sobbing. Everyone is extremely upset. The thought of anyone going over the waterfall is heartbreaking, and you feel hopeless.
- Disgust: Whoever goes over the waterfall will land on the sharp rocks below. Their bones will break through the skin and organs will rupture from the impact. You imagine the bloody mess their bodies will make.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

15. Occupied Dilemma

Your country is being occupied by a foreign enemy. A high-ranking military doctor has set up a base in the local hospital and is conducting deadly experiments on human subjects. The doctor captured five people from your village and has begun to experiment on them. You are in the room with the five people and the doctor. He gives you two choices: either he will kill these five people, or he will release them if you help him capture the last healthy person in your village. You know the last healthy person is hiding in the adjacent room and is listening to your conversation. The one healthy person cannot escape because the only exit leads past the doctor. The doctor does not want to sacrifice you because you are the only trained cook and has been using you to cook for the soldiers.

TYPE

- Personal: You must capture and then strap the one person onto the hospital bed.
- Impersonal: You must tell the soldiers where the one person is hiding.

EMOTION

- Sadness: You feel very depressed about the choice you will have to make. You fought alongside one another to prevent the country from being occupied. You have formed a deep bond with all of them and feel heartbroken about the possibility of losing any of them. Tears swell as you think of the decision you have to make.
- Disgust: You have seen the experimental corpses lying in a dumpster behind the hospital. One person had their arms and legs cut off, and another one had those arms and legs sewn onto their body. Another body had been cut in half at the torso causing the intestines to stretch in between the two halves.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

16. THE Trolley Dilemma

A trolley is malfunctioning and is speeding down a track towards five workers. The workers are aware the trolley may kill them unless it is stopped or redirected. They have no way of escaping the pathway of the trolley in time because the tracks run through a deep trench that they cannot climb out of quickly.

TYPE

- Personal: You are in a nearby control room. If you press a button, the trolley will be switched onto a different set of tracks. This will save the five workers but will kill a different worker who is working on the other set of tracks. The worker on the different set of tracks is aware of the decision you will have to make but has no way of escaping.
- Impersonal: You are on a bridge. You can push a very large worker standing next to you off the bridge. This would kill the large worker but would stop the trolley and save the five workers on the tracks. The large worker is aware of the decision you will have to make and knows that they would be unable to stop you from pushing them.

EMOTION

- Sadness: You have worked together with all the workers for many years. If any of them would die, it would break your heart. You cannot imagine the loss their family members would feel if any of them die.
- Disgust: Whoever will be hit by the trolley will tumble beneath the wheels causing blood and guts to spew over the track. You imagine a skull being crushed, causing eyeballs to erupt from the sockets.

MORAL REASONING

- In this situation, is it morally right or wrong to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Morally Wrong; Moderately Morally Wrong; Slightly Morally Wrong; Slightly Morally Right; Moderately Morally Right; Strongly Morally Right
- In this situation, is it permissible to sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Not Permissible; Moderately Not Permissible; Slightly Not Permissible; Slightly Permissible; Moderately Permissible; Strongly Permissible
- In this situation would you sacrifice 1 person to save 5 people?
 - 6-point Likert-type response options: Strongly Unlikely; Moderately Unlikely; Slightly Unlikely; Slightly Likely; Moderately Likely; Strongly Likely

APPENDIX B

List of Figures

Indirect Effect of Instrumental Harm on the Callous Affect and Permissibility Relationship

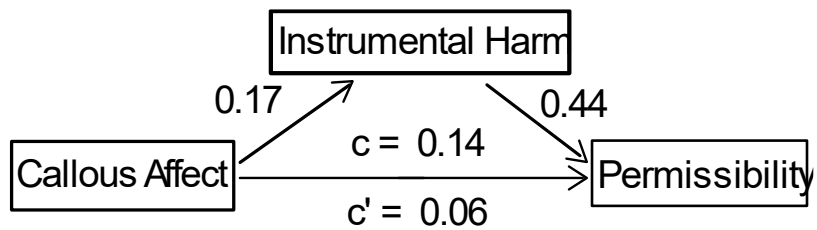


Figure 1: Mediation analysis: Indirect effect of Instrumental Harm on the Callous Affect – Permissibility relationship

Indirect Effect of Instrumental Harm on the Callous Affect and Behavioral Intent Relationship

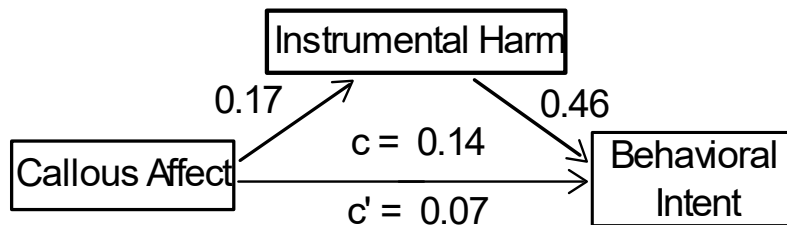


Figure 2: Mediation analysis: Indirect effect of Instrumental Harm on the Callous Affect – Behavioral Intent relationship

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CURRICULUM VITAE

DEMI KOURTESI

demikourtesi@gmail.com

EDUCATION

Doctorate (Ph.D.) in Clinical Psychology | GPA: 3.98

Expected 2024

University of Nevada, Las Vegas (APA-Accredited)

- *Dissertation topic:* Psychopathy and Moral Decision Making
- *Successfully defended on 05/11/2022.*

Master of Arts (M.A.) in Psychology | GPA: 4.0

2019

California State University, Los Angeles

- *Thesis topic:* Cross-Cultural Psychopathy
- *Special Recognition in Graduate Studies*
for outstanding scholastic achievement

Bachelor of Arts (B.A.) in Psychology | GPA: 3.6

2016

California State University, East Bay

- Dean's and Honors List – 4 quarters

MANUSCRIPTS IN PREPARATION

Jacobson, R., Cox, K., **Kourtesi, D.**, Kraus, S. (2022). *Suicidal Ideation and Gambling Disorder: A Systematic Review*. Manuscript in progress, Psychology Department, University of Nevada, Las Vegas.

Islas, B. S., **Kourtesi, D.**, & Benning, S. D. (2022). *Psychopathic Traits and Interpersonally Rated Adjectives in Friend Dyads*. Manuscript in progress, Psychology Department, University of Nevada, Las Vegas.

Kourtesi, D., & Fernando, G. A. (2022). *Cold, Callous, and Individualistic: Cultural Differences in Psychopathy*. Manuscript in progress Psychology Department, California State

University, Los Angeles.

Kourtesi, D., & Fernando, G. A. (2022). *Bred in Malice: Culture and Other Risk Factors for Psychopathy*. Manuscript in progress, Psychology Department, California State University, Los Angeles.

ORAL PAPERS

Kourtesi, D., Peixoto Couto A. L., & Benning, S. (2023). *Psychopathy and Moral Decision Making: Would a psychopath Kill One to Save Five?* Oral presentation at the European Congress of Psychology, Brighton, UK.

Peixoto Couto, A. L., **Kourtesi, D.,** & Benning, S. (2023). *Psychopathy and Utilitarianism: Two sides of the same coin?* Oral presentation at the UNLV Graduate Student Research Forum, Las Vegas, NV.

- ***Won 1st place award in podium session.***

Kourtesi, D. (2022). *Psychopathy and Moral Decision Making: Would a psychopath Kill One to Save Five?* Oral presentation at the Rebel Grad Slam 3-min thesis/dissertation competition, Las Vegas, NV.

- ***Won 1st place award in preliminary rounds.***

Kourtesi, D., Peixoto Couto, A. L., & Benning, S. (2023). *Utilitarian Tendencies in Psychopaths Drive Moral-Decision Making in Sacrificial Dilemmas*. Oral presentation at the SouthWestern Psychological Association, Frisco, TX.

- ***Graduate student research competition finalist.***

Benning S. D., **Kourtesi, D.,** Poston M. A., Islas, B. S., Fobian, K., Peixoto Couto, A. L., & Wrenn, K. (2022). *Mean Interactions: Evidence for the Emergent Interpersonal Syndrome Model of Meanness in Psychopathy*. Oral paper presentation at the Society for the Scientific Study of Psychopathy, Virtual.

Kourtesi, D., Fernando, G. A., & Fanti, K. (2019). *Bred in Malice: Early Life Experiences Aid in the Development of Psychopathic Traits*. Oral paper presentation at the Society for the Scientific Study of Psychopathy conference, Las Vegas, NV.

Kourtesi, D., & Fernando, G. A., (2019). *The Lone Ranger: an American Hero or Remorseless Individualist? Linking cultural orientation and psychopathy*. Oral paper session chair at the Western Psychological Association convention, Pasadena, CA.

POSTER PRESENTATIONS

Kourtesi, D., Peixoto Couto, A. L., & Benning, S. (2023). *Utilitarian Tendencies in Psychopaths Drive Moral-Decision Making in Sacrificial Dilemmas*. Poster presentation at the Western Psychological Association, Riverside, CA.

- **Psi Chi poster session**

Kourtesi, D., Peixoto Couto, A. L., & Benning, S. (2022). *Psychopathic Malice Potentiates Coldness' Impaired Emotion Recognition*. Poster presentation at the Society for the Scientific Study of Psychopathy, Virtual.

Michal Newhouse, **Kourtesi, D.,** & Benning, S. (2022). *Emotional Detachment in Psychopathy Drives Utilitarian Decisions in Sacrificial Dilemmas*. Poster presentation at the Society for the Scientific Study of Psychopathy, Virtual.

Kourtesi, D., Michal Newhouse, & Benning, S. (2022). *Psychopathy and Moral Decision Making: Would a Psychopath Kill One to Save Five?* Poster presentation at the Western Psychological Association, Portland, OR.

Kourtesi, D., Michal Newhouse, & Benning, S. (2022). *Psychopathy and Moral Decision Making: Would a Psychopath Kill One to Save Five?* Poster presentation at the UNLV Graduate Student Research Forum, Las Vegas, NV.

- ***Won 2nd place award for poster presentation.***

Kourtesi, D., Peixoto Couto, A. L., & Benning, S. (2022). *Psychopathic Malice Potentiates Coldness' Impaired Emotion Recognition*. Poster presentation at the UNLV Graduate Student Research Forum, Las Vegas, NV.

- ***Won 1st place award for poster presentation.***

Phillips, E., Carfagno, N., **Kourtesi, D.,** & Benning, S. (2021). *Psychopathy and Emotional Intelligence: Can we understand what we cannot feel?* Poster presentation at the Society for the Scientific Study of Psychopathy, Virtual.

Dennis, S., **Kourtesi, D.**, Carfagno, & N., Benning, S. (2021). *Meanness in Psychopathy: A Representation of Psychopathic Traits within the Non-Pathological Personality*. Poster presentation at the American Psychology-Law Society, Virtual.

Phillips, E., Carfagno, N., **Kourtesi, D.**, & Benning, S. (2020). *Examining Relationships Between Trait Emotional Intelligence and Factors of Psychopathy*. Poster presentation at the Nevada Psychological Association, Las Vegas, NV.

Dennis, S., **Kourtesi, D.**, Carfagno, & N., Benning, S. (2020). *Examining Relationships between Normal-Range Personality Traits and Meanness in Psychopathy*. Poster presentation at the Nevada Psychological Association, Las Vegas, NV.

Fernando, G. A., **Kourtesi, D.**, & Lanre-Orepo, S. (2020). *The Effect of Violence in the Media on the Emergence of Psychopathic Traits*. Poster presentation at the Western Psychological Association, San Francisco, CA.

Van Camp, L., Margolin, C. A., & **Kourtesi, D.** (2020). *Reading With Meaning: How Fast Can You Read This?* Poster presentation at the Western Psychological Association, San Francisco, CA.

Kourtesi, D., Fernando, G. A., & Fisher, A. (2020). *Culturally-Shaped Psychopaths*. Poster presentation at the UNLV Graduate Student Research Forum, Las Vegas, NV.

- ***Received honorable mention (2nd place) for poster presentation.***

Kourtesi, D., Fernando, G. A., & Fisher, A. (2020). *Culturally-Shaped Psychopaths*. Poster presentation at the American Psychology-Law Society convention, New Orleans, LA.

Kourtesi, D., & Fernando, G. A., (2019). *Sugar, Spice, and Everything Mean: Cultural Group Differences Across the Triarchic Facets of Psychopathy*. Poster presentation at the American Psychological Association convention, Chicago, IL.

Kourtesi, D. (2019). *“Thou shalt not kill”: Religiosity and Social Desirability as Correlates of Psychopathy*. Poster presentation at the Western Psychological Association convention, Pasadena, CA.

Kourtesi, D., & Fernando, G. A. (2019). *Cold, Callous, and Individualistic: A Comprehensive Analysis of Old and New Predictors of Psychopathy*. Poster presentation at the American Psychology-Law Society, Portland, OR.

Kourtesi, D., & Fernando, G. A. (2019). *“My Culture Made Me Do It”: Risk Factors in the Expression of Psychopathic Traits in Two Diverse Cultures*. Poster presentation at the Annual Symposium in Forensic Psychology, San Diego, CA.

Kourtesi, D., & Fernando, G. A., (2019). *Evaluating risk factors in the development of psychopathic traits in the general population*. Poster presentation at the Cal State LA 27th Annual Student Symposium, Los Angeles, CA.

Kourtesi, D., & Fernando, G. A. (2018). *Criminals Without Borders: An Intercontinental Meta-analysis of the Prevalence of Psychopathy*. Poster presentation at the Association for Criminal Justice Research conference, Irvine, CA.

Fernando, G. A., Franklin, M., & **Kourtesi, D.** (2018). *Not Just a Straight Thing: IPV in Heterosexual and Same-sex Relationships*. Poster presentation at the American Psychological Association convention, San Francisco, CA.

Vidales, C., Fernando, G. A., **Kourtesi, D.,** & Mylvaganam, I. (2018). *SHUNNED into Depression & Anxiety: Outcomes of Homophobia and Microaggressions for Hispanic Men*. Poster presentation at the Western Psychological Association convention, Portland, OR.

Hayes, K., & **Kourtesi, D.** (2015). *Student Engagement in Middle School Science Classrooms*. Poster presentation at the Annual Research Symposium at California State University, East Bay, Hayward, CA.

RESEARCH EXPERIENCE

INTERESTS

- Psychopathy, Offenders & general populations, Psychology and law/forensics, Cross-cultural issues

TRAINING

- Trained rater of the Psychopathy Checklist-Revised (PCL-R) for research purposes (*May 2019; 1-day workshop; 8 hours*)
- Trained to conduct research using Electroencephalogram (EEG) equipment, Heart Rate (HR), Skin Conductance Level (SCL), Skin Conductance Response (SCR), Zygomatic, Corrugator, Postauricular Reflex, and Startle Blink EMGs
- Completed Responsible Conduct of Research (RCR) and Protecting Human Research Participants training modules

EXPERIENCE

Graduate Research Assistant - Psychophysiology and Emotion/Personality Lab 2019 -Present

University of Nevada, Las Vegas- Dept. of Psychology

Lab Director: Stephen Benning, Ph.D.

Responsibilities:

- Run research studies using EEG equipment
- Hire and train new research assistants
- Mentor research assistants in publications and poster presentations
- Participated in Journal club

Achievements:

- Promoted to lab manager and served in 2020-2021.

Research Assistant – Howard Hughes Medical Institute (HHMI) 2018 - 2019

California State University, Los Angeles- College of Natural and Social Sciences

Grant: \$ 1,000,000 grant over 5 years

Principal Investigator: Andre Ellis, Ph.D.

Responsibilities:

- Assisted with a project designed to increase retention of students in STEM at CSULA
- Recorded and transcribed audio files
- Assisted in setting up and running focus groups
- Qualitatively observed and documented participant behavior
- Aided in qualitative and quantitative data coding and analysis

Graduate Research Assistant – Post-Traumatic Stress Laboratory 2017 – 2019

California State University, Los Angeles- Dept. of Psychology

Lab Director: Gaithri Fernando, Ph.D.

Responsibilities:

- Read and discussed literature about the impact of disasters on psychological functioning and resilience in the face of traumatic stress in different cultures
- Conducted empirical research to uncover protective/risk factors in the expression of psychopathic traits in the general population
- Developed a 40 min survey in Qualtrics, combining a variety of measures and performing a back-translation from English to Greek
- Prepared an IRB package for human subject research
- Recruited ~500 participants from the community and collected data.
- Collaborated with lab team on other research projects
- Mentored 2 undergraduate lab members

Achievements:

- Promoted to lab manager.
Independently conceptualized and determined the direction of the research project.
- Was the first graduate student within the cohort to receive IRB approval and complete recruitment. Data collection was completed within the 1st year of the MA program.
- Initiated collaboration with experts in psychopathy to receive advice, measures, data, and assistance with participant recruitment.

Research Assistant – Feigner Research

2016 - 2017

Psychiatric Centers at San Diego

Principal Investigator: Michael McManus, M.D.

Responsibilities:

- Helped conduct 4 different clinical trials with high ethical and clinical standards
- Responsible for recruiting participants
- Assisted with laboratory tests, electrocardiograms (ECGs), and physical examinations
- Shadowed interviews and follow-up visits
- Accurate processing of source documentation

Achievements:

- Obtained Clinical Trials Certification from UCSD Extension.
- Gained face-to-face experience with clients diagnosed with Autism, Bulimia, Tourette's Disorder, and Tardive Dyskinesia.

Collaborative Research Study Assistant– Sensation and Perception Laboratory
California State University, East Bay - Dept. of Psychology

2016

Laboratory Director: David Fencsik, Ph.D.

Responsibilities:

- Critically reviewed empirical research articles and formulated a hypothesis
- Conducted an experiment on gender stereotypes and mental rotation performance

- Designed an ethically and methodologically sound research project
- Recruited and ran participants
- Coded and managed a data set

Achievements:

- Wrote and orally presented research findings to other lab members.

Research Assistant – Integrated Middle School Science (IMSS) Partnership 2015 - 2016

California State University, East Bay

Project funded by the National Science Foundation.

Principal Investigator: Kathryn Hayes, Ph.D.

Responsibilities:

- Assisted with a project designed to increase engagement of students in science
- Transcribed data from Audio and Video files
- Designed research poster with findings

Achievements:

- Presented research poster at CSU, East Bay symposium.

Collaborative Research Study Assistant– Clinical Psychology Laboratory 2015

California State University, East Bay - Dept. of Psychology

Laboratory Director: David Sandberg, Ph.D.

Responsibilities:

- Critically reviewed empirical research articles and formulated a hypothesis
- Conducted research on Borderline Personality Disorder and insecure attachment styles
- Recruited and ran participants
- Coded and managed a data set

Achievements:

- Wrote and orally presented research findings to other lab members.

Independent Research Study 2013 - 2014

Dominican University of California

Advisor: William Phillips, Ph.D.

Responsibilities:

- Critically reviewed empirical research articles and formulated a hypothesis
- Conducted research on factors influencing restaurant tipping behavior
- Collected data on the sales and tips of a local restaurant

- Coded and managed a large data set

Achievements:

- Independently conceptualized, designed, and executed a research project.
- Wrote research findings in American Psychological Association (APA) format.

CLINICAL EXPERIENCE

TRAINING

- Assessment instruments:
Cognitive: *WISC, WAIS, WJ-COG/ACH/OL, WMS, DKEFS, RBANS, MoCa, CPT-3, WRAT-5.*
Personality: *PID-5, PAI, MCMI, MMPI (2&3)*
Common screening measures: *TVSF, Y-BOCS, PCL-5, BDI, BAI, NPI, AUDIT*
Other: *Conners, BASC-3, Vineland, Mind in the Eyes, CAT-A, Young-DIVA, AAA*
- Structured and unstructured clinical interviews (e.g., *SCID-5, MINI, KSADS*)
- Recovery-Oriented Cognitive Therapy (CT-R)– Beck Institute (*January 2023; 3-day workshop; 14 hours*)
- Professional Assault Crisis Training (Pro-ACT; *2018; 1-day workshop; 8 hours*)
- Crisis Prevention Institute Training (CPI; *2017; 1-day workshop; 8 hours*)
- Applied Behavioral Analysis training (*2015, 40 hours*)
- Introduction to Clinical Trials online course at UCSD extension
- Telepsychology Best Practice 101 Series

CERTIFICATIONS

- Registered Behavior Technician (RBT) Certification
- CPI and Pro-ACT Certification
- Clinical Trials Certification
- Telepsychology Certification
- HIPAA Awareness Training certification

INTERNSHIP

Psychological Intern

2023-2024

The University of Texas, El Paso

APA-Accredited Internship Site

Student Counseling Center (CAPS)

Direct Supervisor: Jorge Marquez, Ph.D.

Responsibilities:

- Individual, couples, and group counseling and assessment
- Crisis counseling, career and vocational counseling.
- Outreach and consultation services
- Supervision of one masters or doctoral level practicum student each semester
- Two formal case presentations
- One formal program development research project/presentation

- Weekly peer case review meetings
- Bi-monthly multicultural, assessment, and supervision seminars

PRACTICUM TRAINING

Registered Psychological Trainee

2022-2023

Meden's Health

Non-profit Mental Health Practice

Direct supervisor: Nicole Anders, Ph.D

Responsibilities:

- Provided individual therapy services utilizing Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), Acceptance and Commitment Therapy (ACT), and Skills Training in Affective and Interpersonal Regulation (STAIR) to adults with mental health concerns (e.g., OCPD, complex PTSD, GAD, MDD, grief, trauma)
- Was trained in trauma-informed care.
- Conducted 1 child ADHD evaluation, and 2 adult personality/diagnostic clarification assessments
- Attended didactic seminars on sexual trauma, couples therapy, psychopharmacology
- Caseload: Up to 12 clients per semester

Registered Psychological Trainee

2021-2022

Sandstone Psychological Practice

Private Practice

Direct supervisors: Christina Aranda, Ph.D. & Corey Kuhn, Ph.D

Responsibilities:

- Provided individual therapy services from a psychodynamic, Interpersonal Process Therapy (IPT), and CBT orientation to adults with mental health concerns (e.g., NPD, HPD, BED, and various anxiety disorders)
- Conducted 4 cognitive and personality assessments, and 2 bariatric surgery evaluations
- Attended didactic seminars on IPT, ACT, psychodynamic/psychoanalytic theory, couples/family therapy, addiction
- Caseload: Up to 16 clients per semester

Practicum Trainee

2020-2021

The PRACTICE at UNLV

Community Mental Health Clinic

Direct supervisor: Shane Kraus, Ph.D.

Responsibilities:

- Provided in-person and telehealth individual therapy services from a CBT and CPT orientation to people from the community presenting with generalist outpatient mental health concerns (e.g., PTSD, BD, OCD, pornography & gambling addictions).
- Conducted 3 cognitive and personality assessments
- Conducted bi-weekly intake interviews

- Caseload: Up to 5 clients per semester
- Presented cases to the interdisciplinary treatment team at weekly case rounds meetings

OTHER CLINICAL EXPERIENCE

Psychosocial Rehabilitation Specialist

2018-2019

Alpine Special Treatment Center (ASTC) - San Diego, CA

Responsibilities:

- Helped clients struggling with severe and persistent mental illness (psychosis) transition from acute crisis to stabilization during their residence in the in-patient rehabilitation facility
- Facilitated groups and activities that support the psychosocial rehabilitation model
- Monitored and observed clients: daily clinical check-in, contraband searches, inventory checks, medication/meal monitoring
- Worked closely with nursing staff to provide integrated care
- Documented treatment progress and symptomatology
- Crisis prevention/intervention
- Prepared admission and discharge of clients

Registered Behavior Technician (RBT)

2016 – 2017

Psychiatric Centers at San Diego, California (P.C.S.D)

Responsibilities:

- Utilized an Applied Behavior Analysis (ABA) approach to individual therapy sessions with children, adolescents, and adults affected by ASD and other comorbid disorders (e.g. ODD, ID)
- Facilitated sessions in a variety of environments including the home, school, treatment facility, or community setting
- Recorded daily data, maintained a log book, and created graphs to show quantifiable improvement over time. Achieved scores of over 80% efficacy for 4/5 clients
- Punctually billed for therapy services and carried out administrative responsibilities

Achievements:

- Was selected to organize and lead therapy groups commonly led by Lead RBTs. Was able to lead groups of 6-8 kids and their individual RBTs for 3 hours at a time.
- Received highly positive 3-month and 6-month reviews from supervisors.
- Promoted from Paraprofessional to RBT position.
- Created a new space-themed summer group and other innovative and engaging materials/activities for clients.

Behavioral Therapist

2015 – 2016

Center for Learning and Autism Support Services (C.L.A.S.S.) – San Francisco, CA

Responsibilities:

- Used ABA principles in therapy sessions with children and adolescents affected by ASD
- Maintained effective communication with the intervention team (supervisors, fellow RBTs, and parents/caregivers)
- Worked in a detail-oriented manner to create effective reinforcers specific to every client
- Multitasked by implementing clients' specific programs while recording detailed data

Achievements:

- Noticed early signs of psychosis in one of my clients and reported it to my supervisor who prompted the parents to seek an accurate diagnosis.
- Preferred trainer for new staff and preferred substitute therapist by supervisors.

TEACHING EXPERIENCE

TRAINING

- Completed a Graduate Mentorship Certification at UNLV.
- Served as a mentor at the Rebel Research and Mentorship Program at UNLV.
- Attended workshop on effective teaching at Cal State LA.
- Received training from the Center for Engagement and Student Learning at Cal State LA.

EXPERIENCE

Instructor

2021 – 2023

University of Nevada, Las Vegas- Dept. of Psychology

Courses: General Psychology (2 sections), Abnormal Psychology (2 sections)

Responsibilities

- Created course material such as lectures, assignments, term papers, and exams
- Graded assignments, exams, and term papers
- Mentored students 1:1 during office hours
- Was responsible for over 70 students at a time
- Attended a concurrent Teaching of Psychology graduate course

Achievements

- Student evaluations 4.62/5 (department mean 4.53/5)

Teaching Assistant

2019 – 2021

University of Nevada, Las Vegas- Dept. of Psychology

Courses: Cognitive Psychology, Psychology of Aging, Psychology of Learning, Introduction to Statistics, Physiological Psychology

Responsibilities

- Graded assignments, exams, and term papers and managed a large excel roster of grades.
- Assisted in creating new course material for online instruction, such as video lectures.
- Assisted in creating online statistics lab assignments.

- Was responsible for over 140 students at a time.

Teaching Assistant

2017 - 2018

California State University, Los Angeles- Dept. of Psychology

Courses: Psychology of Emotion and Motivation, Introduction to Psychology

Responsibilities

- Held office hours and privately mentored several students
- Held large study groups (20+)
- Was responsible for 80 - 140 students at a time
- Managed course material through Moodle and Canvas
- Graded quizzes, term papers, and exams and managed a large excel roster of grades
- Held review sessions before major exams and proctored exams
- Privately mentored students who were struggling. Their grades improved

Achievements:

- Independently taught two 3-hour lectures on “Emotion in Clinical psychology” and “Elicitors of emotion” chapters to 140 undergraduate students.
- Received positive feedback from students about enthusiasm for teaching.

Created interactive twists of classic games such as “Family Feud” and “Cards Against Humanity” to facilitate motivation and learning.

GRANTS & SCHOLARSHIPS

PSI CHI Regional Travel Grant

2023

University of Nevada, Las Vegas

Received \$400 and \$200 to attend and present at the 2023 SWPA convention

Received \$200 to attend and present at the 2023 WPA convention

Rebel Grad Slam

2022

University of Nevada, Las Vegas

Received \$300 award for 1st place in 3-min thesis competition.

Graduate & Professional Student Association (GPSA) Forum

2022-2023

University of Nevada, Las Vegas

Received \$500 for best podium presentation

Received \$400 award for 1st best poster, and \$200 for 2nd best poster.

Research and Mentorship Program (RAMP) scholarship

2021-2022

University of Nevada, Las Vegas

Received \$1000 award for program participation and \$1000 for conference travel expenses.

Research sponsorship

2021

University of Nevada, Las Vegas

Received \$692 grant in support of dissertation completion.

Summer Doctoral Research Fellowship

2021-2023

University of Nevada, Las Vegas

Received \$22,500 - The Summer Doctoral Research Fellowship is awarded to outstanding doctoral students who have demonstrated excellence in their fields of study and who will reduce their time to degree through summer support

Patricia Sastaunik Scholarship

2021-2023

University of Nevada, Las Vegas

Received \$7500 to aid with graduate school expenses

Esperanza Funds

2021

University of Nevada, Las Vegas

Received \$300 to aid with graduate school expenses

UNLV Access Grant

2020-2023

University of Nevada, Las Vegas

Received \$6000 to aid with graduate school expenses

UNLV Travel Grants

2020-2023

University of Nevada, Las Vegas

Received \$850 to attend and present at the 2020 American Psychology-Law Society convention

Received \$2200 to attend and present at the 2023 European Congress of Psychology convention

Cal State LA Travel Grants

2018 - 2020

California State University, Los Angeles

Received \$200 to attend and present at the 2018 APA convention

Received \$400 to attend and present at the 2018 WPA convention

Received \$200 to attend and present at the 2019 AP-LS convention

Received \$75 to attend and present at the 2019 WPA convention

Saleha Minority Scholarship

2018

California State University, Los Angeles

Received \$500 for having a reasonable chance of succeeding and playing a positive role model to other students and the younger generation.

William Hobson and Evelyn Trou Scholarship

2018

California State University, Los Angeles

Received \$2090 to aid with graduate school expenses.

Non-resident Graduate Student Fee Waiver Award

2018

California State University, Los Angeles

Received up to \$4000 (as needed) of non-resident tuition fee waivers and tuition fee reductions in evidence of scholastic ability and academic achievement

Culminating Project Fund

2018

California State University, Los Angeles

Received \$126 in support of thesis completion.

PROFESSIONAL MEMBERSHIPS

Society for the Scientific Study of Psychopathy (SSSP)	2018 – Present
American Psychology-Law Society	2019 – 2021
American Psychological Science (APS) – 2021	2018
Western Psychological Association (WPA)	2018 – Present
Psi Chi Honors Society – Present	2016

LEADERSHIP

Panelist - InterProfessional Education and Practice Day (IPEP) 2021 & 2022
University of Nevada, Las Vegas

- A workshop discussing integrated care among various health care professionals.

Guest Lecture – PSY 495 – The Science of Empathy 2020
University of Nevada, Las Vegas

- Gave lecture on psychopathy and the lack of empathy to undergraduate students

Clinical Student Committee Representative 2020-2021
University of Nevada, Las Vegas

- Attending faculty meetings and voting on statutes

Graduate Liaison – Psi Chi Honors Society 2020-2021

- Being a point of contact between Psi Chi and the Clinical Psychology graduate program.
- Sharing knowledge regarding graduate education endeavors with Psi Chi Undergraduate members.

Panel Speaker – Psi Chi Honors Society 2020

- Reviewed and answered questions from undergraduate students regarding UNLV's Clinical Psychology Ph.D. program

Conference Abstract Reviewer – American Psychology-Law Society (AP-LS) 2019-2020

- Reviewed abstract submissions for the AP-LS 2019 & 2020 conventions.

Student Research Award Reviewer – American Psychological Science (APS) 2019

- Volunteer peer reviewer of research proposals

Poster Judge – Western Psychological Association 2019

California State University, Los Angeles

- Selected to give feedback on posters presented by undergraduate students at the Western Psychological Association (WPA) convention.

Vice President – Psychology Club 2016

California State University, East Bay

- Organized educational events for club members.
- Applied and received funding to show films on clinical disorders.

Event Coordinator – Philosophy Club 2016

California State University, East Bay

- Coordinated events and held philosophical discussions with other club members.

SERVICE

APA Accreditation Self-Study Assistant 2022

Clinical Psychology Ph.D. program

University of Nevada Las Vegas

- Classified program syllabi under Discipline Specific Knowledge and Profession Wide Competencies tables.
- Created a table of program handbook changes over a four-year period, including an overhaul of the clinical area's curriculum.

Undergraduate Student Mentor

Rebel Research & Mentorship Program (RAMP)

2021-2022

University of Nevada, Las Vegas

- Provided an undergraduate student with firsthand experience with conducting research as well as personal and academic support on an individualized level.

Graduate Student Mentor

2020-2023

Clinical Psychology Ph.D. Program
University of Nevada, Las Vegas

- Mentored three first-year graduate students in navigating the Clinical Psychology Ph.D. program.

Undergraduate Student Mentor

Outreach Undergraduate Mentoring Program (OUMP)
University of Nevada, Las Vegas

2019-2021

- Mentored two undergraduate students on psychology-related interests, personal, experiences facing adversity, support in preparing for graduate school, and workforce preparation post-college.
- Received OUMP Outstanding Mentor Award for 2019-2020

Volunteer

2017

Race for Autism
San Diego, CA

- Informed families about behavioral services for children with Autism.
- Led sensory activities for children.

Volunteer

2016

Autism Speaks walk
San Mateo, CA

- Informed families about behavioral services for children with Autism.
- Led sensory activities for children.

Volunteer

2016

Discovery Day Science Festival
California State University, East Bay

- Guided children through science activities set up around campus.
- Responsible for “Psychology Station” and led memory activities based on patient H.M.

SKILLS

- **Language:** Fluent in speaking, reading, and writing Greek and English.
- **Computer:**
NeuroScan 4.5 psychophysiological acquisition software in conjuncture with SynAmps RT, SynAmps2 Quik-Cap (64 channel EEG), and Bioderm (SCL, SCR).
PsychoPy, SPSS, R, Qualtrics, Microsoft Office, G-Suite, Canvas, and Moodle.
Simple Practice, Titanium scheduling, TheraNest, Q-Global.

- **Writing skills:** Received a score in the 82nd percentile on the analytical writing portion of the Graduate Record Examination (GRE).

REFERENCES

- **Stephen D. Benning, Ph.D.**
Associate Professor at the University of Nevada, Las Vegas
Academic advisor
stephen.benning@unlv.edu
- **Shane Kraus, Ph.D.**
Assistant Professor at the University of Nevada, Las Vegas
Practicum Supervisor and Professor
shane.kraus@unlv.edu
- **Christina Aranda, Ph.D.**
Clinical Psychologist/Co-owner of Sandstone Psychological Practice
Practicum Supervisor
Christina_Aranda@outlook.com