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Psychopathy and Moral Decision-Making

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Psychopathic Personality and Moral Decision-Making

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Abstract
Psychopathy and Moral Decision-Making
By Erica L. Frankel

This study examined the relationship between psychopathic personality traits and moral decision-making. Psychopathy was assessed through the administration of the PPI-R and LSRP self report measures of psychopathy, while moral decision making was assessed through a questionnaire presenting 48 moral dilemma task vignettes. In addition, the FrSBe and the Shipley-Hartford Scale were administered to control for frontal lobe function and verbal intelligence. Psychopathic personality traits were separated into two largely orthogonal factors: Factor I (Fearless Dominance) and Factor II (Impulsive Antisociality). Moral decision-making was operationalized as either utilitarian or deontological modes of judgment. Participants (N = 46) were recruited from Emory University's undergraduate introductory psychology classes. Consistent with our hypotheses, higher scores on PPI-R Factor I subscale predicted significantly higher levels of utilitarian (as opposed to deontological) moral decision-making, while higher scores on PPI-R Factor II subscale and LSRP secondary scale predicted no relationship to deontological/utilitarian moral decision-making. Contrary to prediction, higher scores LSRP Primary subscale were unrelated to utilitarian/deontological moral decision-making. These results suggest the interpersonal deficits associated with the Factor I subscale of psychopathy (i.e. negative emotionality and deficient trait anxiety), may predispose these individuals to significantly less deontological decisions when presented with a moral dilemma. In addition, these results propose that the PPI-R may have more construct validity than the LSRP when measuring Factor I manifestations of psychopathy.

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Psychopathic Personality and Moral Decision-Making

Research on moral reasoning and decision-making has fascinated scientists, philosophers, and researchers for centuries. This interest has stemmed from the belief that how we think and make decisions directly influences our behaviors, which in turn affects the lives of everyone around us. Many philosophers hypothesize that most people act according to a universal moral code that pervades every culture and society. This widespread moral principle may be driven by an innate humanistic ability to take moral issues into consideration. Moral reasoning involves judgments of the rightness or wrongness of actions that knowingly cause harm to others (Blair, 2007). Moral decisions are different than other types of decisions because they depend on a concern for other people and focus more on misery and suffering than happiness and pleasure (Borg, 2006).

Individuals who have trouble taking another person's wellbeing into consideration often show deficits in moral decision-making. One population of individuals who show this deficit is psychopaths. People with psychopathic personality transgress established moral boundaries by causing harm to others with minimal expression of guilt, remorse, or sadness. This study aims to investigate the relationship between psychopathy and moral decision-making, as well as what type of moral reasoning, if any, people with marked psychopathic personality traits engage in.

Moral Judgment

For centuries, a rationalist model of moral judgment has dominated psychology. Plato, the first pioneer in this field, stressed the notion of reason over emotion. This idea was later supported by philosophers, such as Descartes and Kant, during the Scientific Revolution and

Enlightenment periods (Haidt, 2000). These philosophers emphasized reason without emotion as the sole path towards truth and that “men only need reason to discover morality” (Borg, 2006; p. 803). From their perspective, emotion was associated with irrationality, impulsivity, and transgression, and viewed as a human weakness.

In the 1950's, Lawrence Kohlberg initiated the study of psychological morality and advocated the belief held by Plato, Kant, and others that moral judgment is derived from reasoning alone (Haidt, 2000; Greene & Haidt, 2002). His theory was based on the notion that moral development passes through six identifiable moral stages, and progression through these stages results largely from life experiences. During the first stage of moral development, an individual makes decisions based on his or her wants/likes and is egocentrically oriented. Later, the individual bases his or her judgments on beliefs about consequences and rewards. Then, the individual progresses to judgments that conform to the norms of society to please others. During the next stage, the person makes decisions based on the laws of society, which he or she accepts as the definition of right or wrong. In the final stage of moral development, moral judgment is dependent on human rights and justice, whether or not the laws of society approve or condemn the decision (Kohlberg, 1971). Kohlberg believed psychopathy was associated with a low stage of moral development (Glenn, Iyer, Graham, Koleva, & Haidt, 2009).

An alternative to the standard rational model of morality is the affective model of morality. During the 18th century, David Hume developed the affective model, which proposed that morality is a result of automatic emotions and feelings (Nado, Kelly, & Stich, 2009). In contrast to Kohlberg, who believed that morality is a developmental process, Hume believed that morality is an innate, automatic, emotional response. His belief was based on the idea that individuals may be able to understand the consequences of an action, but without empathy, they

will not refrain from committing an offense. In addition, Hume argues that reason is a post-hoc argument used to explain an individual's intuitive (automatic) judgment (Hume, 1965). The rationalist approach stresses the necessity of a priori reasoning to understand moral truths; the affective model stresses that moral truths result from automatic perceptions (Haidt, 2000).

Beginning in the 19th century and continuing until the Cognitive Revolution in the 1960's, dominant psychological views were similar to Hume's emphasis on emotion.

A major proponent of emotion-based morality was Sigmund Freud, who based his theory on the belief that people are driven by unconscious motives, desires, and affect (Haidt, 2000). Although Freud emphasized development (similar to Kohlberg), his structural theory concerning the Id, Ego, and Super-ego underscore his belief that emotion, especially negative emotion, is the primary force underlying human moral behavior; indeed Freud referred to guilt as "moral anxiety."

In the 1980's, in reaction to the Cognitive Revolution, the research on emotion grew steadily and resulted in the "affective revolution" (Haidt, 2007). Robert Zajonc, an important figure during this time, contributed to advancing the affective model of morality. His underlying argument was that "brains are always automatically evaluating everything they perceive, and that higher level human thinking is preceded, permeated, and influenced by affective reactions which push us toward approach or avoidance" (Haidt, 2007; p. 998). He believed that moral intuition is instinctive and precedes moral reasoning, which is a delayed cognitive response. Elaborating on this concept, Damasio (1996) emphasized the role of human intuition when making moral decisions. He developed the somatic marker hypothesis, which states that a stimulus signals a bioregulatory response in the body, and emotions express themselves through these bodily changes. The somatic state represents an emotional reaction to the stimulus. This reaction

appears in consciousness without any awareness of mental activity. Damasio argues that although some types of reasoning are cognitive, other types of reasoning stem from changes in body-state, which are made evident as emotions. The somatic marker hypothesis, like those of Freud and Hume, claims that morality is not confined strictly to reason or cognition alone.

Psychopathy

Evidence to corroborate the belief that emotion is a strong influence on moral judgments stems from the condition of psychopathic personality disorder (psychopathy). Psychopathy, as defined by Cleckley (1976), is marked by deficits in affective and interpersonal functioning, which often predisposes an individual to antisocial behavior. Individuals with high levels of psychopathic traits tend to lack empathy, guilt, and other social emotions. In addition, these individuals tend to be more impulsive and pleasure-seeking (Edens, Poythress, Lilienfeld, Patrick, & Test, 2006).

Although Cleckley's psychopaths show major deficits in affective functioning, their general intelligence is adequate or even superior to that of nonpsychopaths. They generally perform normally on conventional IQ tests, logic tests, language assessments, and working memory tasks; however, they often display deficits during social/interpersonal tasks (Damasio, 1996). This evidence supports the idea that psychopaths rationally understand the consequences of their behavior (because reason is intact), but they lack the empathy to care about how their behaviors affect others (Blair, 2007; Haidt, 2000.). Blair (2007) conceptualized psychopathy as a deficit in care-based morality. As a result, psychopaths often defy moral norms and cause harm to others.

Cleckley defined psychopathy as a disorder characterized by interpersonal deficits (manipulative, egocentric, superficial charm), in addition to antisocial tendencies (lack of motivation, impulsive, aggressive). Moreover, he argued that psychopaths have good psychological adjustment characterized by high intelligence and social dominance, but also exhibit poorly motivated antisocial behavior. These two sets of traits superficially seem to contradict each other. Cleckley's definition of psychopathy was not operationalized until Hare (1991) developed the Psychopathic Checklist (PCL), now the PCL-R (Revised). This well validated measure of psychopathy was tailored to forensic/clinical populations, which excluded the assessment of the "successful" psychopath that Cleckley mentioned. In fact, items on the PCL were chosen to have maximum power in discriminating individuals who were very high versus very low on the psychopathic personality spectrum. Therefore, the PCL was developed to focus on assessing antisocial behavior (Patrick, Poythress, Edens, Lilienfeld, & Benning, 2006).

The lack of valid assessment measures of psychopathy in the general population was a major barrier in the study of psychopathic personality (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; Forth, Brown, Hart, & Hare, 1999). Levenson et al. (1995) argued that it is important to study psychopathy in the general population because the psychopathic interpersonal style, even if relatively mild, might be activated in certain situations (i.e. opportunities for monetary gain or a temptation to cheat). In addition, Lilienfeld et al. (1994) maintained that the study of non-institutionalized psychopaths could help to identify specific factors that prevent some psychopaths from developing criminal lifestyles. Therefore, there was a need for a new device to identify individuals with both antisocial deviance and interpersonal/affective deficits of psychopathy in the general population (Benning, Patrick, & Iacono, 2005).

A relatively new measure, the Psychopathic Personality Inventory Revised (PPI-R), was developed by Lilienfeld and Andrews (1996; see also Lilienfeld & Widows, 2005) to examine psychopathic personality in non-clinical samples. This measure was successful in differentiating between the two facets of psychopathy that Cleckley mentioned; the successful psychopath and the antisocial psychopath. Results from the administration of the PPI-R suggest that psychopathy manifests through two distinct subtypes similar to the original description by Cleckley (Benning, et al., 2003). The PPI-R divides psychopathy into 8 subscales that organize into two largely orthogonal factors, “Fearless Dominance” and “Impulsive Antisociality.”

The PPI-R (Lilienfeld & Widows, 2005) yields a total score of psychopathy and 8-factor analytically derived subscales that assess specific traits of the disorder. This measure facilitates the assessment of psychopathy as two distinct higher order factors. PPI-I, or “Fearless Dominance”, is characterized by Fearlessness, Low Anxiety, and Social Dominance. PPI-II, or “Impulsive Antisociality”, is characterized by Carefree Nonplanfulness, Impulsive Nonconformity, Machiavellian Egocentricity, and Blame Externalization. The eighth subscale, Coldheartedness, which measures a tendency towards guiltlessness, insensitivity, and cruelty, does not load highly on either of the two higher order factors (Edens et al., 2008, Patrick et al., 2008).

High scores on PPI-I are associated with a high level of verbal intelligence, a high social economic status, and a high achievement level. In contrast, PPI-II is negatively associated with these variables, and positively associated with antisocial behavior (criminal activity), drug abuse, and lower intellectual ability (Patrick et al., 2008). Edens et al. (2008) found that the PPI-II was a stronger predictor of greater problems adjusting to prison life as a result of more aggression and maladjustment.

Overall, separating psychopathy into the two-factor model bears important implications for the manifestation of the disorder, and is therefore necessary to clarify the relationship between moral decision-making and psychopathy. Glenn et al. (2009) found that Factor I, which is associated with affective interpersonal deficits, was more strongly associated with approving acts that defy moral laws. In contrast, Factor II was more strongly associated with approving of an immoral act only when an external reward was present. To explain these results, Glenn et al. proposed that individuals scoring higher on Factor II have an enhanced sensitivity to reward, so when reward is present, there is a greater discrepancy in moral decision-making. In conclusion, individual differences in psychopathy may influence which moral boundaries are transgressed, and the reasoning behind their defiance.

Dual-Process Theory of Morality

Recently, psychologists have conducted research to integrate the two competing theories of morality; the rational theory of moral development (determined by reason) and the affective theory of morality (determined by emotion). Research for this theory has been initiated by Joshua Greene and his colleagues, who developed the “dual-process” theory of moral reasoning. Their assumption is that emotion and reason both contribute to moral decision-making, but the utilization of emotion or reason depends on the situation presented (Greene & Haidt, 2002). A more personal moral dilemma (including physical conduct or a direct action) engages the activation of deontological moral judgments. *Deontological* moral judgments rely on an automatic emotional response and are concerned with human rights and justice (Greene, 2009). A more impersonal moral dilemma (indirect action without physical contact) engages the activation of utilitarian moral judgments. *Utilitarian* judgments rely on a controlled cognitive

response, which takes into account the outcomes of actions by weighing the cost vs. the benefit. Utilitarian responses are concerned with promoting the greater good, sometimes at the expense of causing harm to a minority (Koenigs, Young, Adolphs, Tranel, Cushman, Hauser, & Damasio, 2008). Greene et al., hypothesize that the two processes result from distinct neurological structures in the brain.

Neurological Correlates

In support of the “dual-process” theory of moral reasoning, researchers have identified two distinct neurological systems. Emotional processing of stimuli involves the activation of the amygdala. The amygdala pairs an unconditioned stimulus with a conditioned stimulus to create long-term potentiation (LTP) (LeDoux, 1998). LTP is necessary for learning, especially emotional learning (Blair, 2003). After the conditioned stimulus (CS) has been linked with the unconditioned stimulus (US), the conditioned stimulus alone will yield an aversive response. This process teaches the individual that some behaviors are harmful and should be inhibited (Blair, 2007).

The amygdala sends projections to the ventromedial prefrontal cortex (VMPFC), located in the frontal lobe. The VMPFC is responsible for the representation of reinforcement outcomes (memories of an event). The VMPFC is necessary for providing the link between the memory of a situation and the somatic (emotional) state associated with the experience (Damasio, 1996). The VMPFC links the two components because it projects to the basal forebrain and brainstem areas that “execute bodily components of emotional responses, and neurons within the VMPFC encode the emotional value of sensory stimuli” (Koenigs et al., 2007, p. 2) Based on the

memory of how a previous behavior was received by others, the VMPFC is able to alter an existing behavior that was once harmful or threatening to others (Blair, 2007).

fMRI research has shown that together, the amygdala and VMPFC are activated during a moral as opposed to a neutral dilemma (Koenigs et al., 2007). These areas are needed for individuals to learn that a behavior is harmful, and to be able to prevent themselves from engaging in that behavior. Psychopaths have been shown to have deficits in the amygdala as well as the VMPFC. They may learn that a behavior is harmful, but often fail to prevent that behavior from being performed repeatedly (lack of inhibition).

The dorsolateral prefrontal cortex (DLPFC) is responsible for more controlled cognitive reactions/decisions. Cognitive control is the ability to utilize higher cognitive processes called executive functions, which include processes like planning and reasoning (Koechlin, Ody, & Kouneiher, 2003). This area is more active during impersonal moral dilemmas, where less emotion is involved (Greene, Nystrom, Engell, Darley, & Cohen, 2004). This results in a more controlled (less affective) response (Greene, 2007). The DLPFC is used to engage in cost vs. benefit analysis. Therefore, this area is related to reason and abstract thinking, which leads to a more delayed response.

Psychopathic Deficits

fMRI research has shown that psychopaths have deficits in the amygdala and VMPFC, but have an intact DLPFC (Haidt, 2000). These data corroborate the notion that psychopaths have difficulty with emotional processing, but have the ability to reason. Cleckley (1955) characterized psychopaths as people in whom reasoning has become dissociated from emotion (affect is not integrated into decision-making). Birbaumer, Veit, Lotze, Erb, Hermannn, Grodd,

and Flor (2005) found that psychopaths lack the ability to foresee impending imminent harm from a CS (previously paired with an US) and thus show weak fear conditioning.

One theory is that psychopaths may be able to process the connection between the conditioned and unconditioned stimuli, but are unable to process the emotional significance of this association (i.e., how they affect other people and how they affect themselves). This lack of emotional conditioning prevents psychopaths from engaging in passive avoidance – inhibiting a harmful or threatening behavior that has previously been punished. Bechara, Damasio, Damasio, & Anderson (1994) have shown that people with lesions to the ventromedial frontal lobe display behaviors comparable to psychopathic individuals. They have general knowledge and understanding about a situation, but presumably lack the somatic signal to guide their decisions. Like psychopaths, patients with lesions in these areas show emotional deficits and cannot make advantageous social and interpersonal decisions (Damasio, 1996; Greene & Haidt, 2002). This finding lends support to the research showing that psychopaths have deficits in the ventro- and medial- portions of the frontal lobe, because they show identical deficits to ventral and medial frontal lobe patients.

Trolley Problem

Much interest in the general subject of moral decision-making stems from the familiar “Trolley Problem.” The “Trolley Problem” is as follows: A runaway trolley is accelerating down a train track, and headed towards five people. In the switch dilemma, a person can save the five people by hitting a switch that will divert the trolley onto a side-track, where it will kill only one person. In the footbridge dilemma a person can save the five people by pushing a large man off of a footbridge and into the trolley’s path, killing the man, but preventing the trolley from killing the five people. Research has found that most people approve of the five-for-one

tradeoff in the switch dilemma, but disapprove of the five-for-one trade off in the footbridge dilemma (Greene, Cushman, Stewart, Lowenberg, Nystrom, & Cohen, 2009).

Philosophers have been interested in this problem because of the curious pattern of decisions made in response to this question. The majority of people say that it is acceptable to divert the track to kill one person and save five; however, the majority of people find it unacceptable to push someone to his or her death to save five people. Although psychopathy has not been directly studied by Greene, he has speculated that psychopaths may not show a distinction between the two situations (Greene, 2000). In contrast to non-psychopathic individuals, he hypothesizes that psychopaths approve equally of both situations. Nevertheless, this question has not been examined in published research.

fMRI research has detected a discrepancy in responses when participants respond to the “switch” and “footbridge” dilemmas (Koenings, Young, Adolphs, Tranel, Cushman, Hauser, & Damasio, 2007). The “footbridge” dilemma produces a stronger negative emotional response, whereas the “switch” dilemma produces a controlled rational response. The reason for this difference stems from the fact that the footbridge dilemma requires the agent to use direct physical force, causing harm to the victim, making the situation more personal. Therefore, more emotional systems are engaged and deontological decision-making prevails. According to Greene’s interpretation, the switch dilemma requires indirect force, and may be viewed as an unintended side effect of a good action. This situation is more impersonal and utilitarian decision-making prevails (Greene et al., 2009).

Dilemmas that elicit a more emotional (deontological) response activate the VMPFC, whereas dilemmas that elicit a more cognitive (utilitarian) response activate the DLPFC. Individuals with damage to the VMPFC, such as the psychopath, show deficits in emotional

responding (Damasio, 1996), and therefore, cannot discriminate between the two different situations presented in the trolley problem (Greene & Haidt, 2002). They more readily approve of pushing the man in front of the trolley in the footbridge dilemma. Damage to the VMPFC does not affect general intelligence or reasoning, as these are controlled by other areas including the DLPFC. Therefore, psychopathic individuals are capable of general intelligence and reasoning, and have an adequately functioning DLPFC (Koenings, et al., 2007).

Current Study

Current research on moral judgment as well as research on psychopathy is controversial. As previously noted, discrepancies exist concerning whether moral judgments derive from reason or emotion. This study on psychopathy and moral decision-making is one of the first to integrate reason and emotion as contributing factors that influence moral judgments, synthesized in the “dual-process” theory of morality. Previously, the dual-process model has had little impact on moral decision-making research (Haidt, 2000), because most researches have focused on only understanding the reasoning process. This study is unique because it divides moral reasoning into two categories: deontological and utilitarian. In addition, this study conceptualizes psychopathy as two distinct factors characterized by either “Fearless Dominance” or “Antisocial Impulsivity.

Previous findings on psychopathy may have been inconsistent due to the fact that the scales implemented to assess the disorder have ignored the evidence that psychopathy is in fact a heterogeneous disorder. The recognition of the two distinct subtypes of psychopathy might help to clarify the contradictory findings in the literature (Hicks, Markon, Patrick, Krueger, & Newman, 2004), due to the divergent correlations between the Factor I and Factor II and external

criterion measures. These discrepancies are necessary to ascertain the true relationship between moral judgments and psychopathy.

Hypotheses

Based on the findings described earlier we hypothesized that:

- 1) Individuals who score higher on the Factor I subscale of psychopathy (“Fearless Dominance”) will make significantly more utilitarian moral decisions due to severe interpersonal deficits, whereas individuals with lower levels of psychopathic traits will make deontological and utilitarian decisions based on the level of emotional involvement.
- 2) Individuals who score higher on the Factor 2 subscale of psychopathy (“Antisocial Impulsivity”) should not be significantly related to utilitarian or deontological methods of decision-making.
- 3) Individuals who score higher on the subscale of Coldheartedness will be most highly correlated with utilitarian moral judgment, reflecting their denial of social emotions.

Method

Participants

Forty-six students at Emory University participated in this study (9 males, 37 females). The sample was primarily White (41%) and Asian (35%) with a mean age of 19. The participants were recruited from Emory University’s 110 and 111 introductory psychology classes. They each received 2 credits towards their introductory psychology research requirement (see Table 1)

All participants completed a battery of measures to assess personality, cognitive ability, and moral decision-making. The measures included:

(1). *Moral Dilemma Task Vignettes*, a 48 presentations of dilemmas that have been used in the literature on moral reasoning. The first 24 dilemmas are control situations, and the last 24 dilemmas are moral dilemmas. A participant is presented with a picture and a paragraph describing a situation and is asked to make a yes or no decision based on the information given (e.g., a situation in which a person must decide if killing one person to save 5 is a justifiable act). Internal Consistency for the Moral Dilemma Task Vignettes was measured by Cronbach's alpha yielding a score of .69. These vignettes can be seen in Appendix I.

(2). *Psychopathic Personality Inventory Revised (PPI-R)*, a 154-item True-False self report measure of psychopathic personality features (e.g. lack of guilt, lack of empathy, dishonesty, fearlessness), measuring a continuum of psychopathic personality traits to detect mild to severe forms of the disorder. The PPI-R is well validated for use for men and women ages 18-86, and is useful in a variety of samples, including forensic, clinical, and non-clinical samples. This measure provides a total score (reflecting a global index of psychopathy traits) as well as eight separate scores for each of the eight subscales of psychopathy.

The 8 subscales were derived after a careful analysis of the pre-existing theoretical and empirical literature on psychopathy. Lilienfeld et al. examined the constructs of psychopathy mentioned in the literature using a Likert scale. Factor analysis revealed that there were eight sub-factors of psychopathy to delineate. The eight subscales were then grouped together into two orthogonal higher order subscales. PPI-I, labeled "Fearless Dominance," is defined by Social Potency, Stress Immunity, and Fearlessness. PPI-II is labeled "Impulsive Antisociality"

and is defined by Machiavellian Egocentricity, Carefree Nonplanfulness, Impulsive Nonconformity, and Blame Externalization. The last subscale, Coldheartedness, does not correlate to either of the two higher order subscales (Edens et al., 2008).

Internal consistency for the PPI was measured using Cronbach's Alpha yielding a total score of .91. Alpha values for PPI subscale ranged from .89 to .75. PPI-I scores were created by totaling three sub-scores: Social Potency scores (24 items), Fearlessness (19 items) and Stress Immunity (11 items). PPI-II scores were created by totaling four sub-scores: Machiavellian Egocentricity (30 items) Carefree Nonplanfulness (20 items), Blame Externalization (18 items), and Impulsive Nonconformity (17 items). Lastly, the PPI subscale of Coldheartedness (21 items) does not correlate strongly with either PPI-I or PPI-II subscale, and is therefore calculated alone (Edens et al., 2008).

(3). *Levenson Self Report Psychopathy Scale (LSRP)*, a 26-item measure designed to assess psychopathy using a Likert scale ranging from (1) Disagree Strongly (2) Disagree Somewhat (3) Agree Somewhat (4) Agree Strongly. Consistent with the factor analytical research on the PPI, the LSRP factor analysis provided evidence for the two-factor theory of psychopathy; primary psychopathy (i.e. callousness) and secondary psychopathy (i.e. impulsivity) (Walters, Brinkley, Magaletta, & Diamond, 2008). After dividing the sample by gender, race, and security level, Walters et al. (2008) found that dimensional results persisted. This finding provides support for the continuous view of psychopathy measured by the primary and secondary psychopathy scales of the LSRP.

The LSRP was validated in a sample of 487 undergraduates by Levenson et al., (1995). Levenson et al. found that disinhibition, boredom susceptibility, and anti-social action more

significantly correlated with Primary Psychopathy, but less strongly associated with Secondary psychopathy. In addition, Secondary psychopathy was significantly positively correlated with trait anxiety, whereas primary psychopathy was only weakly correlated with trait anxiety. Levenson et al. interpret this finding as support for a dual manifestation of psychopathic personality; psychopaths who are emotionally stable (primary) and emotionally unstable (secondary). LSRP primary and secondary scale was further validated by Lynam et al. (1999) in a sample of 1,958 college students. Together, these studies provided reliability and validity for the LSRP (Glenn et al., 2009). Internal consistency for the LSRP was measured using Cronbach's alpha. Alpha value was .81. LSRP Primary Psychopathy was calculated by totaling 16 items (i.e. "I enjoy manipulating other people's feelings) and Secondary Psychopathy was calculated by totaling 10 remaining items (i.e. "I find myself in the same kind of trouble time after time").

(4). *Shipley-Hartford Scale*, a widely used 40 item measure of verbal intelligence. Each of the 40 vocabulary words was presented with a list of four potential definitions. Participants are asked to choose the word that most closely defines the bolded vocabulary word. We administered this measure to rule out the possibility that participants' responses to the moral dilemmas are due solely to verbal ability.

(5). *Self Report Frontal Systems Behavior Scale (FrSBe)*, a 46-item, paper and pencil behavioral ratings scale designed to assess frontal lobe systems related to executive function, apathy, and disinhibition in non-clinical samples. The measure yields a total score as well as three subscale scores; apathy (14 items), disinhibition (15 items) and executive function (17 items). Each item

is rated on a 5 point Likert-type scale. This measure has a high internal consistency reliability and validity to evaluate behavioral changes in people with damage to their frontal lobe (Stout, Ready, Grace, Malloy, & Paulson, 2003). Because individuals with damage to certain frontal lobe areas tend to reason in a largely or entirely utilitarian fashion, we examined whether variations in frontal lobe functioning predicted a propensity towards utilitarian moral reasoning.

Results

Table 1 presents descriptive statistics on the 46 participants.

Zero Order Correlations

Consistent with the literature, PPI-I and PPI-II scores were minimally correlated ($r = .23$, $p < .05$), providing further evidence that psychopathy manifests as two orthogonal factors.

Pearson's r correlations were calculated for the Moral Dilemma Task Vignette and PPI-R and LSRP. To examine the hypothesis that individuals who score higher on PPI-I subscale would make significantly more utilitarian moral decisions Pearson's r was calculated comparing PPI-I and moral dilemma scores ($r = -.31$, $p < .05$). This correlation was significant and in the predicted negative direction, viz., higher psychopathy scores being associated with lower use of deontological and greater use of utilitarian decisions. Therefore, high scores on PPI-I are negatively correlated with deontological decisions on the Moral Dilemma Tasks Vignettes. Pearson's r correlation for PPI-II and moral dilemma scores was ($r = -.06$, $p > .05$). This correlation was not significant. Together, these findings corroborate the hypothesis that individuals scoring higher on PPI-I would make significantly more utilitarian decisions. In contrast to our second hypothesis, Pearson's r correlations for PPI-I subscale Coldheartedness

and moral decision-making were not significant, although they were in the predicted direction ($r = -.18, p > .05$). Furthermore, contrary to our prediction, LSRP primary scores ($r = -.06, p > .05$), and secondary scores ($r = .15, p > .05$) were not significantly correlated with deontological/utilitarian moral decision making.

Partial Correlations

To control for confounding variables, partial correlations were calculated. When controlling for PPI-II scores, the correlation between PPI-I and moral decision-making remained significant ($r = -.30, p < .05$). In contrast, controlling for PPI-I eliminated the correlation between PPI-II and moral decision-making ($r = .01, p > .05$), indicating that the association between the PPI-R and moral decision-making is selective to PPI-I. Controlling for verbal intelligence had no influence on relationship between PPI subscales and moral decision-making; PPI-I and moral decision-making ($r = -.31, p < .05$), PPI-II and moral decision-making ($r = -.06, p > .05$). In addition, controlling for each subscale of the FsRBe (apathy, inhibition, and executive function) did not influence the previous results.

Exploratory Analyses

Analyses were conducted to examine the correlation between each PPI-R subscale and deontological vs. utilitarian moral decision making (see Table 2). Significant Pearson's r correlations for deontological moral decision-making and PPI-R subscales were found between Social Influence ($r = -.31, p < .05$), and Machiavellian Egocentricity ($r = -.31, p < .05$). In addition, analyses were conducted to examine whether the inclusion of males in this primarily female sample was responsible for driving the major findings. Excluding men ($n = 9$)

correlational analyses did not significantly alter the previous findings for PPI-I and moral decision making ($r = -.30, p < .05$), PPI-II and moral decision-making ($r = -.08, p > .05$) or PPI subscale Coldheartedness and moral decision-making ($r = -.20, p > .05$). We also examined whether the order of administration of the measures affected the findings. Order 1 (psychopathy measures presented before moral dilemma) and Order 2 (moral dilemma measures presented before psychopathy measures) did not produce any differences in the pattern of results.

Discussion

The main aim of this study was to test the hypothesis that individuals higher on Factor I psychopathic personality traits would make significantly more utilitarian (as opposed to deontological) decisions when presented with a moral dilemma. The present results provide mixed support for this hypothesis. Pearson correlations revealed that individuals scoring higher on PPI-R Factor I traits of psychopathy made significantly more utilitarian as opposed to deontological moral decisions.

This result may be explained by evidence that PPI-R higher order factors correlate with different dimensions of personality. Benning et al. (2003) demonstrated differential correlations between the PPI-R and the normal-range personality trait index of the Multidimensional Personality Questionnaire (MPQ). The MPQ measures personality based on 11 primary trait scales that divide into three higher order factors of personality: positive emotionality, negative emotionality, and behavioral constraint. Benning et al. found that Factor I was negatively correlated with negative emotionality, whereas Factor II was positively correlated with negative emotionality.

Furthermore, Hicks et al. (2004) studied the personality differences (measured by the MPQ) between psychopathy subtypes. In accord with Benning et al., Hicks et al. found divergent correlations between Factor I and negative emotionality and Factor II and negative emotionality. Specifically, they found that Factor I most strongly negatively correlated with Stress Reaction, substantiating its negative association with negative emotionality. In contrast, they found that Factor II most strongly positively correlated with hostility and irritability, confirming its positive association with negative emotionality. Together, these findings bear important implications for the behavioral responses of the two subtypes. Although both types of psychopaths are likely to engage in antisocial behavior, the antisocial behavior of the Factor I psychopaths are unlikely to be accompanied by emotional arousal. In contrast, the Factor II psychopath, who has a normal ability to experience emotional arousal, will often experience emotional distress due to the consequences of his or her behavior (Hicks et al., 2004).

Blackburn (1996) found that both Factor I and II subscales of psychopathy were characterized by impulsivity, aggression, and under socialization, but Factor I psychopaths scored low on anxiety and guilt, whereas Factor II psychopaths scored high on anxiety, guilt, and depression. The difference in personality characteristics may help to explain why participants scoring higher on Factor I levels of psychopathy make significantly more utilitarian decisions. Unlike Factor II psychopaths, Factor I psychopaths demonstrate an aberrant lack of emotional reactivity to the consequences of their actions. Their deficient affect may predispose Factor I psychopaths to continuously make decisions based on utilitarian instead of deontological methods of decisions.

To further corroborate this finding, the physiology of psychopathy has recently been studied by Benning et al. (2008). They examined fear-potentiated startle to measure emotional

reactivity. The potentiation of startle is regulated by the activation of the amygdala, where an unconditioned stimulus is paired with a conditioned stimulus to create a learned fear. Therefore, potentiated startle can be considered an indicator of fear.

Benning et al. found that only participants high on “Fearless Dominance” (PPI-I) showed deficient fear-potentiated startle. Participants high on “Impulsive Antisociality” (PPI-II) did not demonstrate significant deficits in fear-potentiated startle. These results indicate a specific physiological deficit in trait anxiety and fearlessness in Factor I psychopaths, which may be associated with more severe lesions in the amygdala. Additionally, Lykken (1957) found that Cleckley psychopaths, presumably high in Factor I, exhibited lower skin conductance responses to anxiety-provoking situations. The difference in fear-potentiated startle and trait anxiety may relate to the discrepancy between Factor 1 and Factor 2 scales of psychopathy and approaches to moral decision-making. Factor I psychopaths’ exhibit significantly weaker reactions to fear-inducing stimuli, allowing them to engage in and approve of situations and actions from which most other people withdraw (Benning et al., 2005). When Factor I psychopaths are presented with a moral dilemma in which someone is put at harm’s way, they may be largely unaffected by the emotionally arousing situation and therefore make significantly more utilitarian decisions.

In contrast to our hypothesis, the LSRP primary scale of psychopathy did not correlate with utilitarian/deontological moral decision-making. One explanation for this finding is that there may be lower construct validity for the LSRP, particularly for the LSRP primary scale of psychopathy (Lilienfeld & Fowler, 2006). Initially, Levenson et al. hypothesized that the LSRP primary and secondary scales would be negatively correlated, providing evidence for the orthogonal 2-factor theory of psychopathy; nevertheless, he found the two scales to be moderately correlated ($r = .40$; see also Lynam, Jones, & Whiteside, 1999). Together, these

findings challenge the discriminant validity of the LSRP primary and secondary scales, because if they are distinct factors, they should be uncorrelated (Levenson & Fowler, 2006).

In addition, Levenson et al. predicted that the LSRP scales could be discriminated on the basis of trait anxiety. They predicted that in contrast to baseline trait anxiety, higher scores on the primary scale would be correlated with lower scores on trait anxiety, whereas secondary psychopathy would be correlated with higher scores on trait anxiety. Yet Levenson et al. (1995) reported that both primary and secondary scales were significantly positively correlated with trait anxiety. Additionally, Epstein, Poythress, and Brandon, (2006) measured psychopathy in a forensic sample using the LSRP and found that both the primary ($r = .41$) and secondary scales ($r = .67$) correlated positively with trait anxiety. These findings call into question the construct validity of the LSRP because primary psychopathy would be expected to correlate negatively with trait anxiety.

Pertinent to our study, Lilienfeld, Skeem, and Poythress (2004) compared the PPI-R with the LSRP in a sample of 661 prison and substance abuse participants. Lilienfeld et al. reported LSRP primary scale of psychopathy to be much more highly correlated ($r = .62$) with PPI-II scale, than with PPI-I ($r = .16$). In addition, Falkenbach, Poythress, Falki, and Manchak (2007) compared the PPI-R and the LSRP, and found that the LSRP primary scale failed to demonstrate a positive association with corresponding factors on the PPI-I, which assess the interpersonal/affective features of psychopathy. Falkenbach et al. found a stronger positive correlation between the primary scale of the LSRP and the PPI-II ($r = .49, p < .01$) vs. the PPI-I ($r = .14, p > .05$). In contrast, when Falkenbach et al. compared the PPI-R and MPQ, they found a positive correlation between the subscale of Stress Immunity and the three subscales of the PPI-I, and a negative correlation between Stress Immunity and the four subscales of the PPI-II.

Thus, the PPI-R may have more construct validity than the LSRP when measuring Factor I manifestations of psychopathy.

The classification of Factor I psychopaths as unaffected by negative events, socially dominant, lacking in social relationships, manipulative, and prone to engage in risky behavior is also known as “classic psychopathy” and dovetails with what Cleckley described in the “Mask of Sanity” (Hicks, et al., 2004). The classic psychopath may be more likely to engage in utilitarian moral decision-making due to a lack of anxiety, stress reaction, or guilt following their actions. As noted by Hicks et al. (2006) Factor II psychopaths would engage in more impulsive, aggressive acts of violence, whereas Factor I psychopaths would engage in more instrumental violence utilizing utilitarian methods. This study suggests that it might be possible to identify “successful psychopaths” (loading higher on Factor I) by assessing their ability to and methods of making moral decisions.

Limitations and Future Directions

Several limitations to the current study should be acknowledged. First, the small sample size (N= 46) yielded low statistical power, increasing the risk for Type II errors, such as a failure to identify significant correlations between several PPI-R subscales and moral decision-making. Second, the small number of male participants limits the generalizability of the study across gender. Because psychopathy is more prevalent in males than in females (Cale & Lilienfeld, 2002; Forth, Brown, Hart, & Hare, 1999), examination of moral decision making in males with psychopathic traits will be essential.

Third, our reliance on self-report measures is questionable when attempting to detect individuals with high levels of psychopathic traits, as they are known for deception, as well as

for a lack of insight into their emotions and behavior (Edens et al., 2001). Future studies should include interview-based measures such as Hare's (1991) Psychopathic Checklist Revised (PCL-R), as well as recently developed observer-based measures of psychopathy (see Lilienfeld & Fowler, 2006). In addition, it would be important to look at the divergent neurological abnormalities of Factor I and Factor II psychopaths in relation to moral decision-making.

Fourth, psychopathy was only measured among college students, who may be preselected for low levels of this trait. Future studies should include forensic and clinical samples to assess more severe forms of the disorder. Fifth and finally, future studies should include measures of other DSM-IV Axis II disorders to compare patterns of psychopathic decision-making to the judgments made by individuals with other personality disorders that overlap with psychopathy, including Narcissistic Personality Disorder, Antisocial Personality Disorder, and Histrionic Personality Disorder.

Although this study generated mixed findings, it yielded the predicted significant negative correlation between PPI-I subscales of psychopathy and deontological decision-making. This finding provides a preliminary understanding of the relationship between psychopathy and decision-making, in that individuals with higher level of interpersonal/affective psychopathic traits tend to make more utilitarian decisions. Future studies should be conducted to further elucidate the relationship between Factor I and Factor II traits of psychopathy and deontological vs. utilitarian moral decision-making, and to further examine the potential reasons for these differences.

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Table 1

Descriptive Statistics

Measure	Mean	Standard Deviation
Age	19	1.0
Sex	1.8	.40
Race	2.4	.86
Year in School	1.5	.76
Language	1.3	.44
Religion	3.7	2.1

Table 2

Correlation of PPI Subscale and Moral Decision Making

PPI Subscale	Pearson's <i>r</i> Correlation	P Value
Fearlessness	-.16	.28
Social Influence	-.31*	.04
Stress Immunity	-.22	.14
Machiavellian Egocentricity	-.31*	.04
Carefree Nonplanfulness	.20	.18
Behavior Externalization	.02	.87
Impulsive Nonconformity	.05	.72
Deviant Responding	-.19	.20
Coldheartedness	-.18	.22
Virtuous Responding	-.20	.18

* $p < .05$

Appendix I

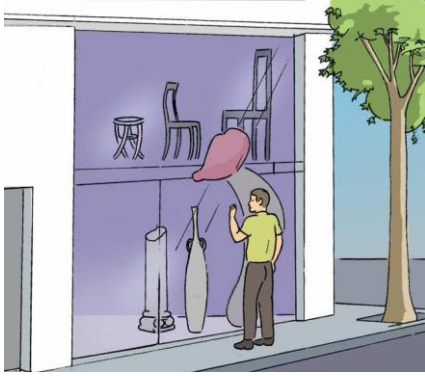
MORAL DILEMMA TASK VIGNETTES

Control Task Vignettes

1. Mr. Jones is practicing his three-point throw on the basketball court behind his house. He hasn't managed to score a basket during the whole morning, despite all the practice. He concentrates hard and throws the ball one more time. This time his aim is more accurate, the ball curves through the air and falls cleanly into the basket. Mr. Jones has managed to score a basket for the first time.



2. This morning Mr. Jones is walking along the main shopping street in the city center. He has stopped in front of a furniture shop. In the shop window there is a chair, which would fit perfectly in his living room. The chair is expensive and Mr. Jones hadn't planned to spend so much money. Eventually, after thinking for a while, he decides to look for a cheaper piece of furniture. He doesn't buy the chair.



3. Mr. Jones is going away for the weekend. He is driving his car and comes to a fork in the road. The right turn leads to a seaside town, with a superb beach. The left turn leads to a mountain town, with beautiful views. After thinking for a moment, he decides to take the right way and spend a couple of days by the sea.



4. Mrs. Jones is jogging as she does every morning. After running for an hour she reaches home. She enters the building feeling quite tired and wonders whether to take the elevator or to continue her exercise and climb the stairs to the 5th floor where she lives. After thinking for a few seconds, she decides to continue her exercise for a little longer and to climb the stairs.



5. Mr. Jones is practicing his dart throwing, trying to improve his technique and hit the center of the board. He has not hit the center of the dartboard once during the whole morning, despite practicing nonstop. He concentrates hard and throws the dart once again. The dart flies through the air and hits the dartboard, unfortunately, far from the center.



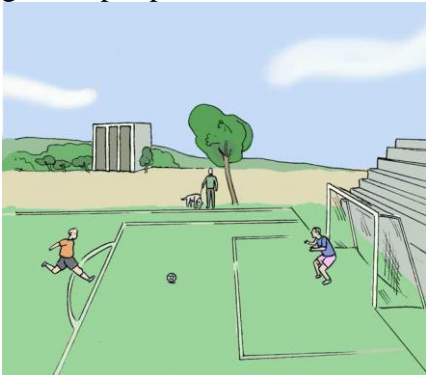
6. Mr. Jones is practicing one of his favorite sports, horse racing. He is riding a very fast thoroughbred mare, dressed with a yellow hood. Mr. Jones's mare is fighting for the first position from the beginning of the race. In the last stretch she goes nose-to-nose with the brown horse. Finally, after a long sprint, the yellow mare wins the race, beating the brown horse by more than two lengths.



7. Mr. Jones is out in the main shopping street downtown. He enters a clothes store where he tries on several garments. After thinking for a long while he makes up his mind and selects the red t-shirt.



8. Mr. Jones is playing soccer with his friends as he does every Wednesday. During the middle of the game the referee awards a penalty shot in favor of Mr. Jones's team. Mr. Jones is going to shoot the ball against one of the best goalkeepers in the league. He prepares and kicks the ball but the goalkeeper predicts his shot and saves it.



9. Mr. Jones has gone running as he does almost every morning. When he has almost made it to the corner of the street, he

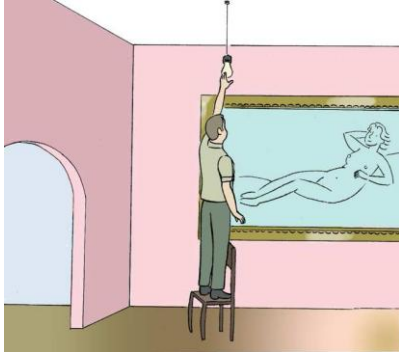
encounters a woman taking her dog for a walk. Mr. Jones loves dogs and cannot avoid stopping there to give it a pat.



10. Mr. Jones is on vacation for a few days visiting different towns in the mountains. He is an avid photographer. One day he is walking around the church plaza of a village and feels suddenly inspired to take a picture of this peaceful scene. After trying to focus-in on the perfect shot, he abandons the idea and decides not to take the picture.



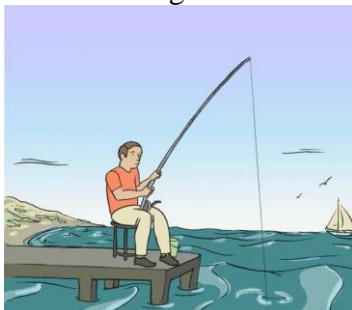
11. Mr. Jones has seen that one of the light bulbs in his living room has blown. He grabs a chair to help him reach the bulb, which is proving quite difficult to steady. He tiptoes and stretches his arm and finally he is able to steady it. This takes several minutes, but finally he replaces the bulb for a new one.



12. Mr. Jones has gone for a drink in the centre of the city. He sits down in a very popular cafe, where they make incredible milk shakes. Although he feels like tasting them, he will stick to his routine and order a white coffee as he usually does each afternoon. Without having a coffee after lunch he cannot manage to continue working.



13. Mr. Jones is taking a break for a few days in a small town by the coast. One day he decides to spend the day fishing, which is one of his favorite hobbies. Although he arrives at the crack of dawn and spends almost the whole day there, he returns home without a single fish.



14. Mr. Jones has gone to a famous restaurant in the city, where he is a good friend of the owner. He has been invited to choose whatever meals he wants. He can't decide whether to choose a meat dish, his favorite meal, or to choose fish. Finally, he orders the fish because it is the specialty of the place.



15. Mr. Jones has a work meeting and needs to leave home. The weather is overcast and it looks as though it is going to rain. Mr. Jones sticks his hand out of the window to check. He decides that the chances of rain are small and leaves the house. However, after a few minutes and before he reaches the meeting point, it begins to rain heavily.



16. Mr. and Mrs. Jones need to buy some new electrical appliances for their kitchen. They go to a nearby store where some discounts are on offer, particularly for fridges and washing machines. Despite the good offers, they decide just to buy the

washing machine, as the both items together are too expensive for them.



17. Mr. and Mrs. Jones decide to go out for the night. They are in the middle of the city where there is plenty to do. They agree on two options; going to the theatre or watching a movie, but they can't decide. After a few minutes of thinking, they finally choose the theatre because the show has only a few days left.



18. Mr. Jones is going to hang a painting on his living room wall. It is a painting of his first beloved dog, a little terrier that used to play with him when he was a boy. Mr. Jones is not much of a handy man and has to make a huge effort to avoid bending the nail. He concentrates hard and finally is able to hang it perfectly.



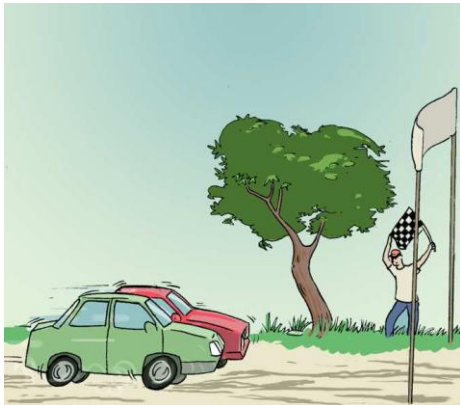
19. Mr. Jones is walking down the street thinking peacefully to himself. Suddenly he passes a boy that looks familiar, but he doesn't recognize his face immediately. He turns to look the boy one more time, and realizes that it is an old neighbor. They both stop to say hello.



20. Mr. Jones has not been cycling for a very long time. On this day, he is riding up a steep slope that leads to a little town. Despite all his determination and effort, his legs begin to weaken and he has to get off the bike and walk.



21. Mr. Jones has taken up amateur rally car driving and he is competing against one of his friends in a race. Mr. Jones is driving a red car while his friend drives a green one. They are almost at the finishing post, when Mr. Jones accelerates and overtakes the green car, maintaining first position until the end.



22. Mr. and Mrs. Jones have taken their daughter to the park. The girl is playing in the sand, but would like to get on the red wooden horse. She hesitates for a second, but then leaves her bucket and spade and hops on rocking horse.



23. Mr. Jones and his son are playing baseball at a friend's property, which is an old mansion estate. Mr. Jones pitches the ball and his son is to take a swing. The boy has never played baseball before and is not sure about his abilities. In the end, he strikes the ball perfectly, which flies up into the sky.



24. After a hard working day, Mr. Jones is not sure whether to go home and to relax or to go and visit an old friend that has not seen for a long time. He feels like catching up with his friend but he is also quite tired. Because he can't make up his mind he decides to flip a coin. If it lands on heads, he will go home, but if it lands on tails, he will visit his friend. He flips the coin and it lands on tails, so finally he visits his friend.



Moral Dilemma Task Vignettes

1. Mr. Jones and his only son are held in a concentration camp. His son tries to escape but he is caught. The guard watching them tells Mr. Jones that his son is going to be hanged and that it will be him (Mr. Jones) who has to push the chair. If he does not do it, not only will his son die but also five more people held in the concentration camp.



2. Mr. Jones and his group are trapped in a cave by the sea. As they are trying to get out, the first man, who is obese, gets stuck in the escape hole and cannot move. Meanwhile, the tide is coming in and water is flooding the cave. Mr. Jones finds some dynamite. If he uses it to make the hole larger, the obese man will die, but if he does not, the man will survive but the rest of the group will die.



3. Mr. Jones is negotiating with a terrorist who is about to set off a bomb in the city. The terrorist refuses to tell them where the bomb is. Mr. Jones has the terrorist's teenage daughter in his custody and thinks about a possible solution. He can contact the terrorist over a video link and in front of the camera break the girl's arm and continue hurting her until he reveals the bomb's location. If he does not, the girl will be fine but many people will die.



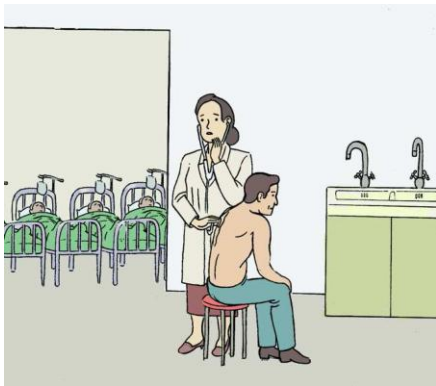
4. Mr. Jones has a childhood friend. This friend explains to Mr. Jones that he has committed a crime and asks him to promise that he will never tell anybody. One day Mr. Jones discovers that an innocent man has been accused of the crime, and asks his friend to confess. His friend refuses to do so and reminds Mr. Jones of his promise. If Mr. Jones says nothing to the police, the innocent man will be imprisoned, but if he speaks, he will break his promise and his friend will go to jail.



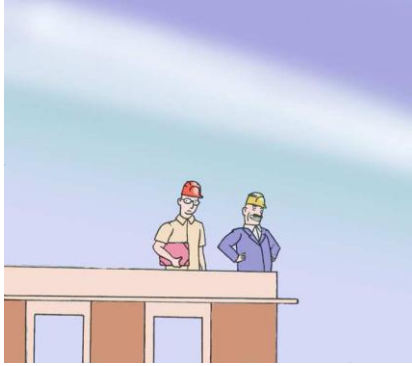
5. Mr. Jones and his wife despise each other to the point that he brought some poison to kill her. He has not decided yet whether to use it. One day, by accident, Mr. Jones's wife has put the poison in her coffee thinking it was milk. He is the only one who has the antidote. If he gives her the antidote, she will know that he has brought the poison and will report him to the police. If he does not, she will die.



6. Dr. Jones has five patients, each of whom is close to dying from organ failures. She also has another patient who is mostly healthy. The only way that she can save the five others is to transplant this man's organs into their bodies but against his will. If she does this, the healthy man will die, but the other five patients will live.



7. Mr. Jones is a young architect who is visiting one of his construction sites with his boss. His boss is a despicable man who makes everyone miserable, including Mr. Jones. If Mr. Jones pushes him off the building he will die and Mr. Jones will be interviewed by the police, but if he does not his boss will continue ruining other people's lives.



8. Mr. Jones sees a trolley car that is moving at high speed towards five workmen on the rail track. Mr. Jones is standing on a footbridge above the tracks. Next to him there is a very large and tall man. If Mr. Jones pushes the man off the bridge, he will die but his body will stop the trolley and the workmen will be saved. If he does not, all the workmen will die.



9. Mr. Jones lives with his family in a very poor area. His crops have been very scarce and he cannot feed his three children, two boys and a girl that may not survive the winter. In his small town there is a man involved the businesses of sexual exploitation. This man proposes to Mr. Jones that if he hands over his daughter for some days he will receive enough money to feed his family for the winter. If Mr. Jones accepts his proposal, his daughter will be sexually exploited. If he does not, his three children will die.



10. Mr. Jones is fishing by the sea. He sees a group of tourists sailing for a nearby island. Soon after their departure, Mr. Jones hears over the radio that there is a violent storm approaching that will hit the tourists' boat. The only way he can warn them is by stealing a nearby speedboat. The boat belongs to a spiteful old man from the town. If Mr. Jones does not steal the boat, the storm will catch the tourists and their boat could sink. If he steals it, the boat owner will bring charges against him.



11. Mr. Jones goes to the hospital to visit a sick friend. There he meets a young man who explains to Mr. Jones that his father has been admitted to the hospital and only has one more week to live. He explains that his father has a substantial life insurance policy that will expire at midnight and offers Mr. Jones \$12,000 to kill him. If Mr. Jones accepts the offer, he will have to kill the old man but he will receive the money.

If he does not, the insurance will expire and neither of them will receive a cent.



12. Mr. Jones is a war veteran who has lost his eyes on the battleground. Due to recent medical advances, it is now possible to perform eye transplants, but there are no willing donors. A black-market surgeon offers help to Mr. Jones, and tells him of a contact who can get the eyes for him. If Mr. Jones does not accept the proposal, he will continue to be blind. If he accepts, an innocent person will lose their eyes.



13. Mr. Jones's plane has crashed in the Himalayas. The only survivors are one other man, a young boy and himself. To live they must find their way to a small town on the other side of the mountain. They trek for three days in the extreme cold. The young boy falls and breaks his leg, critically reducing his chances of survival. The other man suggests to Mr. Jones to sacrifice the boy and eat his

remains in order to survive. If Mr. Jones accepts the proposal they will have enough strength to make it to the small town. If he does not, the boy will eventually die and they will too.



14. During the Second World War in Poland Mrs. Jones and her children, a girl and a boy, are imprisoned in a concentration camp. Once they are there, a guard tells Mrs. Jones that she must choose one of her children to live. The other will die in the gas chambers. If she does not choose either of them, both will be killed.



15. Mr. Jones lives in a war zone. Enemy soldiers have taken over his town and have orders to kill all remaining civilians. Mr. Jones, his six-month baby and some of his neighbours have sought refuge in the cellar of a large house. Outside, Mr. Jones hears the voices of soldiers who have come to search for civilians. His baby begins to cry

loudly. He covers the baby's mouth to dull the noise. If he does not remove his hand, the baby will be suffocated to death. If he removes it, the crying will attract the attention of the soldiers who will murder them all.



16. Mr. Jones is walking down the street when he finds across a wallet lying on the ground. He opens the wallet to see that it contains \$900 in cash as well as the owner's driver's license and credit cards. From the contents, Mr. Jones can see that the owner has been hit by hard times. He considers mailing the wallet back to the owner with all its contents from the address on the driver's license, or keeping the \$900 and sending back just the credit card and license.



17. Mr. Jones is on a cruise ship when

there is a fire on board and the ship must be abandoned. The lifeboats are carrying too many people. The ocean starts to get rough and the boat begins to fill with water. On board is an injured man that will probably not survive. If Mr. Jones throws this man overboard he will certainly die but the boat will stay afloat and the others may survive. If he does not do so, the boat will probably sink and all of them will die.



18. Mr. Jones is working on a section of the rail track where two separate tracks converge. A runaway trolley is heading towards Mr. Jones's position. On the tracks travelling to the left there is a group of five railway workmen. On the tracks to the right there is a single workman. If Mr. Jones does nothing, the trolley will proceed to the left and kill the group of five men. If he changes the trolley's direction, the trolley will divert to the right killing only the one workman.



19. Mr. Jones is part of a group of ecologists who are living in the jungle. The entire group, which includes eight children, has been taken hostage by rebel forces. One of the rebels takes a liking to Mr. Jones and tells him that his leader plans to kill them all the following morning. The rebel is willing to help Mr. Jones and the children escape, but to guarantee his trust, he wants Mr. Jones to kill one of the fellow hostages. If he accepts to kill a hostage while being filmed, he and all the children will be set free. If he refuses to do it, all of them will die the next morning.



20. Mr. Jones is the night watchman in a hospital. Due to an accident in the building next door, there are deadly fumes rising up through the ventilation system. In one room of the hospital there are three patients and in another there is only one. If Mr. Jones does nothing, the fumes will go into the room of the three patients causing their death. If he turns the ventilation system's lever, the fumes will go into the single patient's room who will die.



21. Mr. Jones is a waiter. He overhears one of his customers saying that he is about to go to jail and that in his last 48 hours of freedom he plans to infect as many people as possible with HIV. Mr. Jones knows that the man has a severe allergy to peanuts. If he puts smashed peanuts in his drink, he will die from an allergic reaction. If he does not, lots of innocent people will be infected.



22. Mr. Jones is the leader of a small army consisting of warriors from two tribes, the hill tribe and the river tribe. He does not belong to either of them. One of the hill tribesmen has murdered a river tribesman. The river tribe demands revenge but the hill tribe refuses to kill one of its own warriors. If Mr. Jones does not take part in the conflict, a war will erupt and lead to the death of hundreds. If he executes the murderer by cutting off this head, the war will be avoided.



23. A viral epidemic is killing millions of people across the world. Dr. Jones has developed two substances in his home laboratory. He knows that one of them is a vaccine and the other is a fatal poison but he is not sure which one. He also knows that the other agent is deadly. Dr. Jones has two patients with him under his care, and the only way to identify the vaccine is to inject each one with a different substance. If Dr. Jones injects the substances, one of his patients will die but he will save millions of lives with the vaccine. If he does not, the epidemic will continue spreading, and people will die.



24. Mr. Jones is an ex-convict that has escaped from justice. He has been a fugitive for a long time because of a robbery he committed. He now uses a false identity but is a good man and is well integrated in society. One day, Mr. Jones discovers that a homeless man has been arrested because the police have falsely identified him as Mr. Jones. If he does not reveal his true identity, the man will be punished for the robbery. If he confesses, he will be sent to prison and lose all the time he has spent becoming a good citizen.

