

Moral decision-making and psychopathy:

Insights from phenotypic components

Rita Pasion¹, Andreia Teixeira¹, Andreia Geraldo¹, Fernando Barbosa¹,

and Fernando Ferreira-Santos¹

¹University of Porto

Author note

Rita Pasion, Andreia Teixeira, Andreia Geraldo, Fernando Barbosa, and Fernando Ferreira-Santos, Laboratory of Neuropsychophysiology, Faculty of Psychology and Educational Sciences, University of Porto.

The authors do not have any interests that might be interpreted as influencing the research. The study was conducted according to APA ethical standards.

Corresponding author: Rita Pasion, Faculty of Psychology and Educational Sciences, University of Porto, Rua Alfredo Allen, 4200-135 Porto, Portugal. Fax: + 351 226 079 700; Tel: + 351 226 079 725; Email: ritapasion@gmail.com.

Acknowledgements: The authors would like to acknowledge to Diana Marques and Rui Gomes for their help at the thinking aloud stage of sacredness measure.

Abstract

Seminal conceptualizations of psychopathy include terms such as “moral insanity” and “without conscience”. Deficits in psychopathy seem to be specific to moral transgressions (acts that have harmful consequences for others), as high levels of psychopathy do not impair detecting conventional transgressions (acts that violate social norms). Moral transgressions are not learned directly as social norms, demanding a sense of wrongness that seems compromised in psychopathy. Despite the accumulated knowledge providing support for this assumption, conceptual and methodological limitations are well documented in the literature. Several studies in the field are focused on moral development, moral foundations, and moral dilemmas but do not account for the heterogeneity of the psychopathic personality structure. Glenn and colleagues (2009) introduced sacredness as a relevant variable for moral behavior in psychopathy, that is, how much money would it take to commit an act that violates moral principles, assuming that no punishment or negative consequences would occur. Higher psychopathy scores predicted greater disposition to accept money to violate a moral foundation, with Factor 1 of psychopathy (manipulativeness, callousness, and lack of guilt or remorse) being the main predictor. In light of the Triarchic Model of Psychopathy, meanness and disinhibition may constitute the key phenotypic components to explain reduced sacredness. A sample of 388 participants completed the Triarchic Psychopathy Measure and a subset of Greene’s Moral Dilemmas that assess the endorsement of deontological vs. utilitarian reasons for moral judgment. After responding to the moral dilemmas, participants were asked to rate their moral choices on the degree of certainty and sacredness. Disinhibition predicted uncertainty in moral decision-making, providing further evidence for the assumption that impulsive individuals tend to act before thinking. Meanness and Disinhibition were both predictors of reduced sacredness. Callous traits, lack of empathy and emotional attachment, combined with reward seeking and difficulties in delaying gratification

may constitute the etiological path to explain a lower decision threshold that facilitates the instrumentally motivated violation of moral principles in psychopathy.

Keywords: psychopathy, impulsivity, triarchic model, dilemmas, moral decision-making.

**Psychopathy and the sacredness of moral decision-making:
insights from phenotypic components**

The conceptualization and definition of psychopathy is characterized by a longstanding and a controversial debate (Almeida et al., 2015; Skeem, Polaschek, Patrick, & Lilienfeld, 2011). From a clinical perspective, the diagnostic representation of psychopathy is captured by Antisocial Personality Disorder (ASPD; DSM-V section II). However, ASPD criteria has been recognized as inaccurate in describing psychopathy. The diagnosis of ASPD is mainly characterized by a configuration of observable behavior – externalizing and antisocial behavior – whereas underlying personality traits – the “core” features of psychopathy – are not required to meet diagnostic criteria (Venables et al., 2014). Consequently, there is an overestimation of psychopathy in criminal samples, and an underestimation in community samples. Given the limitations of categorical models, the conceptualization of psychopathy was recently redirected to dimensional models. The DSM-5 Section III, as an emerging model, departs from the current criterion-based classification system of personality disorders and instead focuses on a hybrid system that emphasizes the dimensional traits. ASPD with Psychopathic Traits is conceptualized as a personality disorder characterized by low levels of anxiousness (Negative Affect domain) and withdrawal (Detachment domain) and high levels of attention seeking (Antagonism domain), which reflect a socially potent interpersonal style coupled with high stress immunity. These psychopathy traits reflect the fearless-dominance or boldness domain of psychopathy rooted in Cleckley’s (1941) original conceptualization (Patrick, 2006; Patrick, Fowles, & Krueger, 2009; Skeem, et al., 2011).

The Triarchic Model of Psychopathy (Patrick, et al., 2009) integrates boldness traits together with meanness and disinhibition. Boldness is defined as a capacity to maintain calm and to react with fearless toward stressful events. Meanness is characterized by a lack of

empathy, which includes callousness, small average of close relationships and an egocentric attitude. Disinhibition refers to a propensity to impulsive behavior, which is marked by a lack of control, planning, and foresight. Disinhibition and meanness are associated with externalizing vulnerability, whereas low fear is the etiological pathway of meanness and boldness.

Amoral behavior is one of the principal characteristics of psychopathy (Glenn, Iyer, Graham, Koleva, & Haidt, 2009; Koenigs, Kruepke, Zeier, & Newman, 2012). “Moral insanity” and “without conscience” (Cleckley, 1941; Hare, 1999) are terms systematically used in the literature to describe psychopathy. Blair (2007) suggested that deficits in psychopathy are specific to moral transgressions (acts that have harmful consequences for others), as psychopaths are capable of detecting conventional transgressions (acts that violate social norms). Moral transgressions are not learned directly as social norms, demanding a sense of badness that seems compromised in psychopathy.

Given the critical role of emotion in moral judgment and striking social/emotional deficits observed in psychopaths, one might expect to find more utilitarian judgment in individuals with high psychopathic traits. However, the results are not consistent. Using moral dilemmas, some empirical studies have supported this assumption (Bartels & Pizarro, 2011; Gao & Tang, 2013; Landon & Delmas, 2012; Koenigs et al., 2012), whereas others have failed to find the association between psychopathy and utilitarian preferences (Cima, Tonnaer, & Houser, 2010; Pujol et al., 2011). A recent meta-analysis documented that results are significant but small in magnitude ($r = .16$; Marshall, Watts, & Lilienfeld, 2016).

Therefore, and despite the accumulated knowledge, conceptual and methodological limitations may explain controversial findings.

First, Glenn et al. (2009) proposed that differences between psychopaths and non-psychopaths may be explained by the moral context of decision, such as the presence of

nonmoral rewards to disregard moral principles. Glenn and colleagues (2009) introduced sacredness as a relevant variable for moral behavior in psychopathy, that is, how much money would it take to commit an act that violates moral principles, assuming that no punishment or negative consequences would occur. Higher psychopathy scores predicted greater disposition to accept money to violate a moral foundation, supporting the hypothesis that the impaired decision-making of psychopathic individuals may be partly a result of a motivational imbalance that involves enhanced sensitivity to reward (i.e., money) and reduced sensitivity to punishment (i.e., consequences of committing immoral acts).

Furthermore, several studies do not account for the heterogeneity of the psychopathic personality structure. The probabilistic analysis of psychopathic traits may be more accurate to unveil specific correlates with moral decision-making, while accounting for opposite-suppressive effects between distinct traits or psychopathic subtypes (Gao & Tang, 2013; Koenings et al., 2012). Indeed, the Factor 1 of psychopathy (manipulativeness, callousness, and lack of guilt or remorse) was the main predictor of reduced sacredness while assessing moral foundations (Glenn et al., 2009), which is line with the findings that low-anxious individuals show more utilitarian preferences (Koenings et al., 2012). Nevertheless, Gao and Tang (2013) reported that externalizing traits are the main predictors of utilitarian preferences.

The Triarchic Model of Psychopathy is a promising dimensional approach to the study of moral decision-making in psychopathy. However, to our knowledge, none study to data used the triarchic conceptualization of psychopathy to test moral decision-making. The main goal of the present study is to capture the differences in moral decision-making across the distinct the phenotypic expressions of psychopathy, extending previous dimensional research and providing a comprehensive model of psychopathy and morality. Given the association with emotional and behavioral disruptive features of psychopathy, meanness and

disinhibition may constitute the key phenotypic components to explain reduced sacredness and certainty underlying utilitarian preferences.

Method

Participants

Participants were recruited via e-mail and voluntarily agreed to participate in the online survey by accept the terms of the informed consent. Participants younger than 18 years and other nationality than Portuguese were excluded. A final sample of 388 participants (67% female) was included in the current study. Participants had ages between 18 and 59 ($M = 24.6$, $SD = 7.56$). The years of education ranged between 11 and 23 ($M = 15.14$, $SD = 2.75$).

Measures

Triarchic Psychopathy Measure (TriPM). Self-report measure (Patrick, 2010; adapted by Vieira et al., 2014) that operationalizes the Triarchic Model of Psychopathy, by dividing its 58 items in three subscales (Boldness, Disinhibition, and Meanness subscales). The TriPM taps psychopathic traits as continuously distributed in the general population.

Moral Dilemmas Sacredness. This measure was developed based on Greene Moral Dilemmas (Greene et al., 2001) and Moral Foundations Sacredness Scale. The impersonal set of Greene's dilemmas presents two undesirable alternatives, but the participant is not directly involved in the moral action. The decrease in emotion activation during the processing of impersonal dilemmas will allow the cognitive system to drive rational utilitarian decision making (i.e., maximizing benefits and minimizing costs). The impersonal dilemmas are, therefore, highly relevant to psychopathy as elicit higher rates of utilitarian responses. For this reason, participants were firstly asked to answer to five impersonal Greene's dilemmas and to quantify the degree of certainty while answering to each one of them (between 0, 20, 40, 60, 80, and 100% of certainty). Afterwards, participants were asked to rate a modified version of Moral Foundations Sacredness Scale (Graham, Haidt, & Nosek, 2009) that allows

to indirectly quantify how much an individual values each foundation of morality by asking how much money it would take to commit actions that violate each of the foundations. Assuming no punishment or negative consequences from decision, the previous impersonal actions were presented to assess the shift in moral decision-making in the presence of a nonmoral incentive. Participants rated the previous decision from “I’d do it for free” (coded with 1) to “Never, for any amount of money” (coded with 0).

Results

Linear Regression Models were performed to explore the relationship between the core traits of psychopathy (boldness, disinhibition, and meanness) and decision-making, certainty, and sacredness while responding to impersonal dilemmas.

Disinhibition ($\beta = .19, p = .001$) and meanness ($\beta = .13, p = .022$) were both predictors of utilitarian responses, $F(1,387) = 9.21, p = .001, R^2 = .067$.

Disinhibition ($\beta = -.19, p = .001$) significantly predicted uncertainty in moral decision-making, $F(1,387) = 6.916, p = .001, R^2 = .051$.

Both meanness ($\beta = .16, p = .004$) and disinhibition ($\beta = .22, p < .001$) were found to be significant predictors of reduced sacredness, $F(1,387) = 13.643, p < .005, R^2 = .096$. No other significant effects were found, namely regarding boldness.

Discussion

The main goal of the current study was to capture the differences in moral decision-making across the distinct the phenotypic expressions of psychopathy. We hypothesized that meanness and disinhibition, as the emotional and behavioral correlates of antisocial expressions of psychopathy, would predict reduced sacredness and certainty underlying utilitarian preferences in impersonal moral dilemmas.

Confirming our hypothesis, meanness and disinhibition were both predictors of higher rates of utilitarian preferences in response to impersonal moral dilemmas. In high-trait

meanness and disinhibition, the decrease in emotion activation during the processing of impersonal dilemmas allowed the cognitive system to drive rational utilitarian decision making. Our results support a previous study. Gao and Tang (2013) reported that externalizing features of psychopathy were the main predictor of utilitarian responses in personal and impersonal moral dilemmas. In an opposite direction, Koenings and colleagues (2012) found that the preferences for utilitarian choices involving personal harm was restricted to low-anxious psychopaths. However, the sample from Koenings et al. (2012) study was recruited from an incarcerated sample and psychopathic traits were assessed by the Psychopathy Checklist Reviewed (PCL-R; Hare, 2003). Patrick and colleagues (2009) documented that PCL-R was operationalized in line with the concept of criminal psychopathy. Subsequently, disruptive traits are captured in a great extent by PCL-R than the adaptive features of psychopathy, in general, and in criminal samples, in particular. In fact, meanness and disinhibition are better represented in the PCL-R than boldness. Boldness is a close correlate of positive adjustment in psychopathy, capturing the adaptive features described by Cleckley (1941). In line with Gao and Tang (2013), results from fearlessness dominance facet of psychopathy, boldness traits were non-significant while explaining utilitarian preferences.

Interestingly, disinhibition was associated with more uncertainty in moral decision-making, suggesting that individuals with higher levels of disinhibition are less certain when making a decision directly related with moral values, supporting the assumption that impulsive individuals tend to act before thinking. Disinhibition traits may explain impulsive reactions to dilemmatic situations and, therefore, a weaker certainty in relation to the previous decision.

Regarding sacredness, individuals scoring higher in meanness and disinhibition report that they would be willing to accept an amount of money to act in a utilitarian way and,

probably, to perform a behavior that violates their moral foundations when financially rewarded. In fact, the moral-decision making in meanness and disinhibition is utilitarian in nature, as documented by higher rates of utilitarian preferences. Our study highlights that utilitarian preferences may be instrumentally motivated. A nonmoral incentive, such as money, reinforces the utilitarian response in high meanness and disinhibition traits. Glenn and colleagues (2009) also evidenced that manipulateness, callousness, and lack of guilt or remorse traits of psychopathy (i.e., meanness) were the main predictors of reduced sacredness. Regarding disinhibition, the combination of reduced certainty and sacredness may indicate that individuals with higher levels of disinhibition are more susceptible of changing a decision directly related to moral values, once they are less certain of that decision and, simultaneously, they can have reduced sacredness, in function of environmental contingencies, namely financial rewards. These results evidence a motivational imbalance in callous-unemotional and externalizing features of psychopathy that involves enhanced sensitivity to monetary rewards or benefits (i.e, reward-seeking) and reduced sensitivity to punishment (i.e., consequences of committing immoral acts). The main findings highlight lower decision threshold in meanness and disinhibition traits that facilitates the violation of moral principles that are utilitarian in nature.

In conclusion, our results extend previous research and provide a more comprehensive model of utilitarian preferences in psychopathy. The differential relationships between boldness and meanness-disinhibition further demonstrate that it is critical to disentangle personality constructs into narrower homogeneous components to fully understand the mechanism and processes underlying moral judgments in psychopathic individuals.

References

- Almeida, P. R., Seixas, M. J., Ferreira-Santos, F., Vieira, J. B., Paiva, T. O., Moreira, P. S., & Costa, P. (2015). Empathic, moral and antisocial outcomes associated with distinct components of psychopathy in healthy individuals: a Triarchic model approach. *Personality and Individual Differences, 85*, 205-211. doi: 10.1016/j.paid.2015.05.012
- Bartels, D. M., & Pizarro, D. A. (2011). The mismeasure of morals: Antisocial personality traits predict utilitarian responses to moral dilemmas. *Cognition, 121*, 154-161.
- Blair, R. J. R. (2007). The amygdala and ventromedial prefrontal cortex in morality and psychopathy. *Trends in Cognitive Sciences, 11*(9), 387-392. doi: 10.1016/j.cognition.2011.05.010
- Cima, M., Tonnaer, F., & Hauser, M. D. (2010). Psychopaths know right from wrong but don't care. *Social cognitive and affective neuroscience, 5*(1), 59-67. doi: 10.1093/scan/nsp051
- Cleckley, H. (1941). *The mask of sanity; an attempt to reinterpret the so-called psychopathic personality*. Oxford, England: Mosby.
- Gao, Y., & Tang, S. (2013). Psychopathic personality and utilitarian moral judgment in college students. *Journal of Criminal Justice, 41*(5), 342-349. doi: 10.1016/j.jcrimjus.2013.06.012
- Glenn, A. L., Iyer, R., Graham, J., Koleva, S., & Haidt, J. (2009). Are all types of morality compromised in psychopathy?. *Journal of personality disorders, 23*(4), 384-398. doi: 10.1521/pedi.2009.23.4.384
- Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science, 293*(5537), 2105-2108. doi: 10.1126/science.1062872

- Hare, R. D. (1999). *Without conscience: The disturbing world of the psychopaths among us*. New York: Guilford Press.
- Hare, R. D. (2003). *Manual for the Revised Psychopathy Checklist* (2nd ed.). Toronto, ON, Canada: Multi-Health Systems.
- Koenigs, M., Kruepke, M., Zeier, J., & Newman, J. P. (2011). Utilitarian moral judgment in psychopathy. *Social cognitive and affective neuroscience*, 7(6), 708-714. doi: 10.1093/scan/nsr048
- Landon, R., & Delmas, K. (2012). Moral reasoning and psychopathic tendencies in the general community. In R. Langdon, & C. Mackenzie (Eds.), *Emotions, imagination, and moral reasoning: Macquarie Monographs in Cognitive Science* (pp. 91–118). New York: Psychology Press
- Marshall, J., Watts, A. L., & Lilienfeld, S. O. (2016). Do psychopathic individuals possess a misaligned moral compass? A meta-analytic examination of psychopathy's relations with moral judgment. *Personality Disorders: Theory, Research, and Treatment*. . doi: 10.1037/per0000226
- Patrick, C. J. (2006). Back to the Future: Cleckley as a guide to the next generation of psychopathy research. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 605-617). New York: Guilford Press.
- Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and Psychopathology*, 21(3), 913-938. doi: 10.1017/S0954579409000492
- Pujol, J., Batalla, I., Contreras-Rodríguez, O., Harrison, B. J., Pera, V., Hernández-Ribas, R., et al. (2011). Breakdown in the brain network subserving moral judgment in

criminal psychopathy. *Social Cognitive and Affective Neuroscience*, 7(8), 917–923.

doi: 10.1093/scan/nsr075

Skeem, J. L., Polaschek, D. L., Patrick, C. J., & Lilienfeld, S. O. (2011). Psychopathic personality: Bridging the gap between scientific evidence and public policy.

Psychological Science in the Public Interest, 12(3), 95-162. doi:

10.1177/1529100611426706

Venables, N. C., Hall, J. R., & Patrick, C. J. (2014). Differentiating psychopathy from antisocial personality disorder: A triarchic model perspective. *Psychological*

Medicine, 44(5), 1005-1013. doi: 10.1017/S003329171300161X