Can there be an immoral morality? Dark personality traits as predictors of Moral foundations

Janko Međedović[1,2] & Boban Petrović[1]

[1]*Institute of criminological and sociological research, Belgrade, Serbia*
[2]*Faculty of media and communication, Belgrade, Serbia*

Previous researches have shown that some aspects of Moral foundations do not correlate with indicators of immoral behavior, or even have positive correlations with them. The aim of this study was to explore the relations of Moral foundations with general (HEXACO personality model) and "dark" personality traits (psychopathy, Machiavellianism, narcissism and sadism). Data was gathered via on-line survey (N=402; 70% females). The results have shown that Openness is the best predictor from the set of basic personality traits: It has positive relations with Harm/Care and Fairness/Reciprocity and negative with the other three moral foundations. Psychopathy was negatively associated with Harm/Care and positively with Ingroup/Loyalty foundation. Machiavellianism was a positive predictor of Ingroup/Loyalty and Authority/ Respect. Results confirmed the existence of fundamental differences between moral foundations. Ingroup/Loyalty and Authority/Respect are partly based on immoral personal dispositions, which bring into question their conceptual status as human moral foundations.

Keywords: Moral Foundations, Dark Tetrad, Machiavellianism, Narcissism, Psychopathy, Sadism, HEXACO

The issue of morality is one of the crucial psychological topics (and not only psychological), and individual differences in morality are very important for understanding human behavior. However, although the empirical research of morality is ongoing for almost a hundred years (Piaget, 1932), it is still not clear what morality is (Giammarco, 2016). Probably the most influential theory of morality is Kohlberg's theory of moral development (1958), and this theory has represented a dominant paradigm in the study of morality until today.

During the last few years, researchers have invested considerable effort to understand morally-relevant behavior in the broadest sense. On one hand, there were a number of researches aimed at the "dark traits", which are associated

with immoral and antisocial behavior. They represent the negative pole of the broad Honesty-Humility trait from the HEXACO model of personality, the trait which is mainly responsible for morally-relevant, pro-social behaviour (Ashton & Lee, 2007; Hilbig, Moshagen, & Zettler, 2015). On the other hand, the Moral Foundations Theory (Graham et al., 2013) has been developed, with the aim to ensure a broad framework for understanding human morality. A number of researches have shown that Moral foundations could be important for understanding political ideology and psychological dispositions toward political behavior (Graham, Haidt, & Nosek, 2009). Although the position of Moral foundations on the positive pole of Honesty-Humility domain could be expected, only a small amount of research was aimed to investigate associations between Moral foundations, Honesty-Humility and other basic personality traits, as well as specific dispositions toward immoral behavior, such as the "dark traits".

This study represents a contribution to a deeper understanding of Moral foundations, through exploration of the associations between Moral foundations and personality traits, both general personality dimensions and the specific dispositions toward immoral behavior, known as the "dark traits".

The Dark Tetrad

In several past decades researchers tried to conceptualize various traits that can predict immoral and criminal behavior. The first of them is psychopathy, a multidimensional construct consisted of emotional shallowness, manipulative interpersonal style, disinhibited lifestyle and antisocial behavior (Hare, 2003). The second one, narcissism, includes such personality traits as grandiosity, the need for admiration, lack of empathy, a sense of entitlement, self-admiration, dominance and superiority, and is characterized by arrogance, a disposition for exploiting others and seeing them as means for achieving personal goals (Jonason, Webster, Schmitt, Li, & Crysel, 2012). The third one is Machiavellianism: manipulativeness, a tendency to exploit others, and a standpoint that the end justifies the means, as well as low empathy (Furnham, Richards, & Paulhus, 2013). These three traits are labeled as the Dark Triad (Paulhus & Williams, 2002) and until recently they were considered as the broadest set of immoral and antisocial personality traits.

However, research had shown that there is another trait that can be added to this set of dispositions, a trait that is correlated with the Dark Triad, but that cannot be reduced to them: subclinical sadism (Međedović & Petrović, 2015). This trait represents behavioral tendencies towards inflicting physical or psychological pain to others (Reidy, Zeichner, & Seibert, 2011), including punishment, control or humiliation of others (Myers, Burket, & Husted, 2006). Earlier studies have shown that sadism can predict criminal behaviour even when the variance of other three traits is controlled for in the analysis (Chabrol, Van Leeuwen, Rodgers, & Séjourné, 2009). This broadened model of antisocial dispositions is called the Dark Tetrad (Paulhus, 2014).

There is empirical evidence that the Dark Tetrad traits are related to various forms of immoral decision making and behavior, especially the psychopathic traits, which were explored for the longest time. Research had shown that a psychopathic individual cannot even distinguish moral from social-conventional transgressions and they are prone to more frequent transgressions of both kinds (Djeriouat & Trémolière, 2014; Dolan & Fullam, 2010). Psychopathy and Machiavellianism are related to moral disengagement, which makes persons with high levels of these traits more likely to engage in self-serving behaviors and violate moral code without experiencing shame, guilt or remorse (DeLisi et al., 2014; Egan, Hughes, & Palmer, 2015). These two traits are positively correlated with an endorsement of utilitarian responses on moral dilemmas (Bartels & Pizarro, 2011). All of the Dark Triad traits are correlated with self-reported cheating and plagiarism, with psychopathy as the best predictor of these immoral behaviors (Williams, Nathanson, & Paulhus, 2010). Finally, all of the Dark Tetrad traits are related to antisocial behavior, which can also be considered as a type of behavior that violates the moral code (Chabrol et al., 2009).

Moral foundations

Recently suggested taxonomy of morally-relevant decision making and behavior assumes that morality can be understood in terms of five psychological systems, which represent the base of the human moral judgement (Graham et al., 2011). Those are: (1) Harm/Care – prevent harm to others, (2) Fairness/Reciprocity – preserve fairness, equal rights, and justice, (3) Ingroup/Loyalty – practice loyalty toward one's ingroup, relative to treatment towards outgroup members, (4) Authority/Respect – respect authority within hierarchical relationships, and (5) Purity/Sanctity – practice purity or sanctity of body, mind, and soul. Empirical data has shown that these five foundations group in two latent factors: Harm and Fairness constitute individualizing, while Ingroup, Authority and Sanctity form binding moral foundations, oriented towards the group (Graham et al., 2013). Findings have shown that people that endorse liberal political ideology primarily use Harm and Fairness foundations in their moral judgment, while political conservatives use all of the five aspects more equally (Graham et al., 2009). Authors interpret this result by stating that liberals and conservatives have different but equally valid moral norms which they use to judge morally-relevant intentions and behavior.

However, the differences between these two higher order factors of moral foundations were not found only in the context of political ideologies. Individual and binding foundations have different relations with dispositions toward immoral behavior. Several findings have shown that psychopathy correlates negatively with Harm and Faireness, however there were no correlations with other foundations (Aharoni, Antonenko, & Kiehl, 2011; Glenn, Iyer, Graham, Koleva, & Haidt, 2009). Spitefulness, defined as the willingness of an individual to incur a cost to someone, in order to inflict harm on another even in the absence

of any direct benefits for doing so, is also correlated negatively with individual, but it had no connection with binding foundations (Zeigler-Hill, Noser, Roof, Vonk, & Marcus, 2015). Furthermore, using the different operationalization of the moral judgements, Arvan found that the Dark Triad traits correlate positively with several statements that represent moral views held by conservatives (Arvan, 2011). Recently, Jonason and his colleagues provided data from three studies about the relations of the Dark Triad traits and moral foundations; however their findings were not consistent (Jonason, Strosser, Kroll, Duineveld, & Baruffi, 2015). In one study they obtained negative correlations between the dark traits and moral judgments, however other studies resulted with non-significant correlations between Machiavellianism, narcissism and binding foundations, even with positive correlations between narcissism and binding foundations.

Could some dispositions be considered as moral in their nature, if they are not related to empirically proven immoral personal characteristics, or even have positive correlations with them? A conceptual critic of the moral foundation theory was recently published, that is in line with previously described findings. The critic is aimed to the binding foundations and it states that they are not moral in their nature: they represent characteristics of authoritarian personality (Kugler, Jost, & Noorbaloochi, 2014). In fact, binding moral foundations have positive relations with intergroup hostility and support for discrimination (with individual foundations showing the opposite pattern), so the authors think that they should be considered amoral or even immoral personal dispositions.

Goals of the present study

While taking into consideration the importance of morally-relevant behavior and the psychological dispositions toward it, the present study aimed to offer other empirical evidence of the connections between moral foundations and personality traits that could be linked with moral behavior. The most important link that will be explored in this study is the one between moral foundations and the Dark Tetrad traits, with the hypothesis that "dark traits" can improve our understanding of moral foundations. Basic personality traits are included in the study, mainly for two reasons: 1) we wanted to explore if the Dark Tetrad traits can predict moral foundations above and beyond general personality; 2) by including broad and comprehensive personality traits we hoped that we can obtain more detailed and precise personal predictors of moral foundations. The HEXACO personality traits are used for the exploration of the basic personality space (Ashton et al., 2004). The reason for this decision is that in this personality model there is a trait that is very important for the examination of morally-relevant behavior: Honesty-Humility (Međedović, 2012). Previous data had also shown that HEXACO had better predictive validity than ad hoc composite of Big Five and Dark triad traits (Lee & Ashton, 2014; Lee et al., 2013). In fact, previous research has shown that the Honesty-Humility trait correlates positively with individual foundations but it is not related to binding moral foundations (Zeigler-Hill et al., 2015).

Method

Participants and procedure

Data gathering was accomplished via online survey. The total number of participants was 402. The mean age of participants was 28.3 years (SD=6.95), with a mean education of 15.6 years of formal education (SD=3.31). Female participants constituted 70% of the sample. Participants were recruited mainly by administering the online questionnaire via social networks. Subjects were motivated to participate in the survey by providing the feedback about their basic personality traits.

Measures

Machiavellianism. MACH-IV (Christie & Geis, 1970) is a 20-item measure of Machiavellianism. The items reflect an endorsement of manipulative tactics (Machiavellian tactics), a cynical attitude towards human nature (Machiavellian views) and a pragmatic morality (Machiavellian morality). Participants rate items on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*), for each of the three subscales: Tactics, Morality, and Views. Only the total score was used in the analysis (M=2.44; SD=.55; α=.74).

Narcissism. Narcissistic Personality Inventory – 13 (NPI-13; Gentile et al., 2013), very short measure derived from the original NPI-40 on the basis of an analysis by Ackerman et al. (2011), was used in this research. The NPI-13 is a measure of 3 facets of narcissism: leadership/authority, grandiose exhibitionism and entitlement/exploitativeness. It encompasses 13 items consisting of pairs of attitudes, such as "(A) When people compliment me I sometimes get embarrassed" and "(B) I know that I am good because everybody keeps telling me so". The total narcissism score was used in the present research (M=.56; SD=.18; α=.62).

Psychopathy. Psychopathy was measured by Self-Report Psychopathy Scale (SRP-3; Paulhus, Neumann, & Hare, in press). The SRP-3 is a self-report inventory designed to assess four facets of psychopathy: Interpersonal Manipulation, Callous Affect, Erratic Lifestyle, and Antisocial Tendencies. It consists of 64 items to which participants respond on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The total psychopathy score was analysed (M=2.14; SD=.37; α=.87).

Sadism. Varieties of Sadistic Tendencies inventory (VAST; Paulhus & Jones, 2015) is a 17-item measure of different manifestations of sadism. It contains items that assess Core sadism (item example is "I enjoy hurting people") and Vicarious sadistic interests ("In video games, I like the realistic blood sports"). Participants rate items on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). The mean score on all items was used in the analysis (M=2.06; SD=.55; α=.78).

HEXACO model of personality. HEXACO-PI-R (Lee & Ashton, 2004) operationalizes the HEXACO model using the following six personality dimensions: Honesty–Humility (M=3.33; SD=.43; α=.80), Emotionality (M=3.24; SD=.37; α=.77), Extraversion (M=3.38; SD=.59; α=.87), Agreeableness (M=2.80; SD=.61; α=.80), Conscientiousness (M=3.06; SD=.60; α=.84), and Openness to Experience (M=3.95; SD=.56; α=.80). The standard version of the HEXACO-PI-R includes 100 items that measure 25 facet scales, which are subsumed within the six higher-order factors. Participants were asked for their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with the statements.

Moral Foundations. Moral foundations were assessed using the 30-item Moral Foundations Questionnaire (MFQ; Graham, et al., 2011). This scale consists of two 15-item parts. Each of the five moral foundations (Harm/Care, Fairness/Reciprocity, Ingroup/Loyalty, Authority/Respect and Purity/Sanctity) was assessed using self-report items that asked

participants to (1) evaluate the extent to which each statement is "relevant to their thinking" when making decisions about right and wrong (e.g. "Whether or not someone was cruel") and (2) indicate their agreement or disagreement with normative declarations such as "One of the worst things a person could do is hurt a defenceless animal." Responses in these two sections have been shown to be positively correlated (Graham et al., 2011) and thus were analysed in combination, yielding six items per foundation. In this research, participants rated items on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

Results

Characteristics of moral foundations scales

The first analysis that was conducted was aimed to present reliabilities, descriptive statistics and correlations between moral foundations scales. These statistics are shown in Table 1.

Table 1
Moral foundations: bivariate correlations and descriptive statistics

	Harm	Fairness	Ingroup	Authority	Purity	*M*	*SD*	*α*
Harm	1					4.04	0.59	.56
Fairness	.55**	1				4.31	0.52	.61
Ingroup	.14**	.17**	1			3.26	0.75	.70
Authority	.09	.14**	.66**	1		3.03	0.77	.71
Purity	.26**	.21**	.60**	.64**	1	3.27	0.73	.65

Abbreviations. M – Mean; SD – Standard Deviation; α – coefficient of reliability
Notes. ** p<.01

In line with previous research, moral foundations are mostly positively intercorrelated. However, there are especially high correlations between individual (Care and Fairness) foundations and between the binding foundations (Ingroup, Authority and Purity).

Prediction of the moral foundations by basic and dark personality traits

In order to explain the variance of scores on the moral foundation scales, five hierarchical regression models were set. Participant's sex (female=0, male=1), age, education and the scores on HEXACO personality scales were entered on the first level. The scores on the Dark Tetrad traits were entered on the second level of regression analysis. Only few multivariate outliers were found per regression function and they are removed as possible careless responders (Meade & Craig, 2012). The results of the analysis are shown in Table 2.

Table 2

Demographic variables, basic personality traits and the Dark Tetrad as predictors of moral foundations

	Harm			Fairness			Ingroup			Authority			Purity		
	β1	β2	r	β1	β2	r	β1	β2	r	β1	β2	r	β1	β2	r
sex	**-.14**	-.09	**-.23**	-.02	-.00	-.08	.08	.07	.03	-.04	-.08	-.06	-.02	-.00	-.10
age	.00	.01	.01	.05	.05	.06	.03	.02	.02	.04	.03	.04	.07	.07	.08
education	.01	-.02	.03	.06	.05	.09	-.13	-.10	-.14	-.07	-.06	-.08	-.11	-.10	-.10
Honesty-Humility	**.21**	**.14**	**.30**	.03	.01	.09	.02	.05	.00	**-.13**	**-.14**	-.11	**.12**	.09	.13
Emotionality	**.15**	.09	**.20**	**.10**	**.08**	.12	**.10**	**.15**	.07	.07	.06	.08	**.17**	**.17**	**.18**
eXtraversion	.13	.01	.17	.02	.01	.06	**.18**	**.18**	**.15**	**.12**	**.16**	.13	**.14**	**.14**	.13
Agreeableness	.09	.03	.16	-.07	-.09	-.05	-.05	-.01	-.02	.04	.04	-.01	-.04	-.06	.00
Conscientiousness	-.04	-.08	.09	.11	.09	.16	.07	.10	.09	**.16**	**.16**	.12	**.14**	**.13**	**.16**
Openness	**.23**	**.22**	**.29**	**.17**	**.17**	**.20**	**-.15**	**-.12**	-.13	**-.23**	**-.21**	**-.22**	**-.17**	**-.16**	-.10
R²		23%			6%			8%			10%			13%	
Narcissism		.04	.08		.01	.02		-.08	-.05		-.08	.01		-.08	-.00
Machiavelianism		-.09	-.33		-.00	-.10		**.12**	.11		**.15**	.12		.02	-.10
Psychopathy		-.15	**-.36**		-.07	**-.15**		**.16**	.04		-.04	-.01		-.02	**-.18**
Sadism		-.03	**-.28**		-.01	-.09		**-.16**	-.10		.02	-.03		-.07	**-.17**
ΔR²		2%			1%			4%			2%			0.6%	

Notes. β1-standarized regression coefficient on the first level of analysis; β2-standarized regression coefficient on the second level of analysis; r-zero order correlation between predictor and criterion; R²-percentage of criterion's explained variance; ΔR²-increment in the percentage of criterion's explained variance after adding the variables on the second level; all significant statistics are bolded.

Regression models have shown that personality is an important predictor of moral foundations: all five regression functions containing demographic variables and personality are statistically significant. The best predictor is Openness: it predicts individual foundations positively and binding foundations negatively. Honesty-Humility has positive relations with Harm and Purity and negative with Authority. Emotionality has positive independent contribution to the prediction of Fairness, Ingroup and Purity. Extraversion has positive relations with binding foundations while Conscientiousness predicts Authority and Purity.

The Dark Tetrad traits provide additional information about the moral foundation in three of five traits: Harm, Ingroup and Authority. Psychopathy predicts Harm with negative and Ingroup with positive β coefficients. Machiavellianism has positive relations with Ingroup and Authority foundations. Sadism predicts Ingroup judgments and it's β has a negative sign.

Discussion

Personality and moral foundations

Regression models have shown that personality traits can significantly predict moral foundations, explaining 6%-23% in moral judgment. Significant effects of demographic variables were not registered; also, relatively small amount of explained variance of moral foundations by basic personality traits suggested

that moral foundations, except the Harm/Care, were not rooted within personality space, but rather represent a specific social phenomenon. Surprisingly, however, is the finding that the best predictor from the personality space is Openness to experience: it predicts all five foundations, having positive relations to individual and negative relations to binding moral foundations. We are surprised by this finding because Openness is not one of the personality traits that has been linked with morally-relevant behavior. For instance, Openness is not related to various immoral dispositions like vengefulness (Lee & Ashton, 2012), egoism (De Vries, De Vries, De Hoogh, & Feij, 2009) or immorality (De Vries & Kampen, 2010). However, there is a way to interpret this finding in the context of the characteristics of moral foundations relation to political ideology. Openness is not related to morally-relevant behavior, however it represents the best personality predictor of political behavior: it correlates positively with liberal-leftist ideology (Roets, Cornelis, & Van Hiel, 2014), and it is negatively linked with political conservatism (Jost & Amodio, 2012). These findings suggest that Openness distincts individual and binding foundations, not by their moral characteristics, but by their ideological depictions: positive correlation of Openness with individual foundations is in line with the evidence showing that they are more pronounced in people that endorse liberal ideology (Graham et al., 2009).

The role of the Conscientiousness factor in the regression models should be interpreted in a similar manner. Same as Openness, this personal disposition is not frequently linked to moral judgments and behavior, except that low Conscientiousness is a predictor of delinquency as a specific type of immoral behavior (Ashton & Lee, 2008). However, this does not mean that low Conscientiousness is a disposition towards immoral behavior per se, because this link can most probably be attributed to impulsivity, which depicts the negative pole of Conscientiousness (MacCann, Duckworth, & Roberts, 2009). On the other hand, Conscientiousness is, together with low Openness, the best personality predictor of conservative political attitudes (Sibley, Osborne, & Duckitt, 2012), conservative values (Lee, Ashton, Ogunfowora, Bourdage, & Shin, 2010) and voting for right-wing parties or coalitions (Chirumbolo & Leone, 2010). These findings suggest that the role of Conscientiousness as a predictor of Authority and Purity obtained in the present data is similar to low Openness: it depicts these foundations as a part of conservative political ideology which is in accordance with the data of Kugler et al. (2014).

Extraversion cannot be easily linked to morally-relevant behavior, nor to political ideology. The role of extraversion in the prediction of binding foundations, which are oriented toward the group instead of the individual, can probably be linked to general attributes of Extraversion as a disposition towards enhanced social interaction and gratification in social experience (Lee & Ashton, 2006).

On the other hand, the two remaining personality traits that predicted moral foundations could be viewed as the dispositions toward morally-relevant behavior. Honesty-Humility can be understood as proneness towards reciprocity characterized by a lack of exploitation of other people, while Emotionality is partially based on emotional empathy that could be linked to kin altruism

(Ashton, Lee, & de Vries, 2014). This is why the positive relation of Honesty-Humility with Harm is expected, however, the negative association of Honesty-Humility and Authority should not be expected if Authority represents the basis of moral behavior. Previous studies have not resulted in consistent findings regarding the relation of Honesty-Humility and Right-Wing Authoritarianism (RWA), however, some researchers did find a negative correlation (Leone, Chirumbolo, & Desimoni, 2012) which is consistent with the present data. This means that the RWA, as well as Authority as one of moral foundations, can be associated with a potential exploitation of others in social interactions, which brings in question the Authority as moral foundation. The role of Emotionality in the prediction is more equivocal: this personality trait has positive relations with four of five foundations (except Authority), a result that implies the importance of emotional empathy and kin altruism (Ashton & Lee, 2007) in understanding moral judgment.

The Dark Tetrad and moral foundations

The results of this research have shown low incremental validity of the Dark Tetrad traits, which suggested that general personality traits have enough possibilities to explain variance of the moral foundations. But, it must be noticed that Dark Tetrad traits also showed interpretable and replicable associations with the moral foundations. Expected relations were detected between the Dark Tetrad traits and three of five moral foundations: Harm, Fairness and Purity have systematic negative associations with the dark traits. Persons with high scores on these foundations are especially low in psychopathy. This trait has independent contribution in the explanation of Harm and zero order correlations with Fairness and Purity. These findings are in line with previous research where negative correlations of psychopathy and individual foundations were found (Aharoni et al., 2011; Glenn et al., 2009). The present data adds Purity, as well, to this pattern of relations.

However, Ingroup and Authority have shown a different pattern of associations with the Dark Tetrad. Machiavellianism and psychopathy predicted Ingroup with a positive contribution to the regression function, while Machiavellianism had the same role in the prediction of Authority. This result implies that Ingroup and Authority are partially based on manipulation, exploitation of others, selfishness and the lack of empathy. This finding is in accordance with the previous data which had found that the binding foundations are associated not with dispositions towards moral, but immoral behavior (Arvan, 2011; Jonason et al., 2015). Kugler and collaborators also warned that moral behavior oriented only towards members of one's own group together with authoritarian tendencies led towards immoral behavior like intergroup hostility and tendencies to discriminate outgroup members (Kugler et al., 2014). The present data also suggests that pro-social behavior that is limited toward one's own group together with authoritarian tendencies is associated with some immoral aspects of human personality.

Concluding remarks

Present data empirically confirmed distinction between individual and binding moral foundations: correlations between the foundations have shown that Harm and Fairness are more strongly related to each other (individual foundations), than to the remaining foundations; the same can be said for Ingroup, Authority and Purity (binding foundations). This distinction is also present in the relations between the foundations and personality traits. First of all, the contributions of the Openness and Conscientiousness factors in the regression functions confirmed that individual foundations are more related to liberal-leftist political ideology, while binding foundations are closer to the conservative-right political preferences (Graham et al., 2009). The difference is visible in their relations with the dispositions toward morally-relevant behavior, as well. Individual foundations, together with Purity, appeared to be a part of human moral dispositions. They associate positively with personality factors that generate moral and pro-social behavior (Honesty-Humility and Emotionality) and negatively with dispositions toward immoral and antisocial behavior (the Dark Tetrad). However, two of the binding foundations have shown not only the lack of these associations, but the opposite pattern: Ingroup have positive relations with psychopathy and Machiavellianism, while Authority has shown positive relations with Machiavellianism and negative with the Honesty-Humility personality factor. This result is unexpected from the viewpoint of the Moral Foundations theory, because foundations should describe the tendencies toward moral, not immoral behavior.

Morality based on care and fairness is well described in existing psychological literature (Killen & Smetana, 2006; Noddings, 2002). However, present findings, together with growing empirical data suggest that the inclusion of at least two of the three binding foundations in the space of the dispositions toward moral behavior is highly questionable. Existing data suggest that those foundations are at least amoral (they do not belong to the morally-relevant psychological phenomena) or that they can even be linked to immoral tendencies. Our data supports the second hypothesis. This is the reason why we join the authors who advise that the moral foundations theory should be reconsidered and revised.

Personality dispositions toward moral behavior are important in the analysis of morally-relevant characteristics of a certain psychological construct. But more important is the behavior itself. The main limitation of this study is reflected in the fact that only the personal dispositions related to morally-relevant behavior were analysed. They represent a useful, but certainly not a sufficient conceptual framework for the understanding human morality. Future research should be more oriented towards exploring the associations between the foundations and moral behavior. Behavioral evidence supporting the distinction between individual and binding foundations could be very important evidence against labelling authoritarian tendencies and ingroup preferences as human moral foundations.

References

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the narcissistic personality inventory really measure? *Assessment, 18*, 67–87. doi:10.1177/1073191110382845

Aharoni, E., Antonenko, O., & Kiehl, K. A. (2011). Disparities in the moral intuitions of criminal offenders: The role of psychopathy. *Journal of research in personality*, *45*, 322–327. doi:10.1016/j.jrp.2011.02.005

Arvan, M. (2011). Bad news for conservatives? Moral judgments and the Dark Triad personality traits: A correlational study. *Neuroethics, 6,* 307–318. doi:10.1007/s12152–011–9140–6

Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review*, *11*, 150–166. doi:10.1177/1088868306294907

Ashton, M. C., & Lee, K. (2008). The prediction of Honesty–Humility-related criteria by the HEXACO and Five-Factor Models of personality. *Journal of Research in Personality*, *42*, 1216–1228. doi:10.1016/j.jrp.2008.03.006

Ashton, M. C., Lee, K., & de Vries, R. E. (2014). The HEXACO Honesty-Humility, Agreeableness, and Emotionality Factors A Review of Research and Theory. *Personality and Social Psychology Review*, *18*, 139–152. doi:10.1177/1088868314523838

Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., ... De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86,* 356–366. doi:10.1037/0022–3514.86.2.356

Bartels, D. M., & Pizarro, D. A. (2011). The mismeasure of morals: Antisocial personality traits predict utilitarian responses to moral dilemmas. *Cognition*, *121*, 154–161. doi: 10.1016/j.cognition.2011.05.010

Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, *47*, 734–739. doi:10.1016/j.paid.2009.06.020

Chirumbolo, A., & Leone, L. (2010). Personality and politics: The role of the HEXACO model of personality in predicting ideology and voting. *Personality and Individual Differences*, *49*, 43–48. doi:10.1016/j.paid.2010.03.004

Christie, R. C., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic press.

DeLisi, M., Peters, D. J., Dansby, T., Vaughn, M. G., Shook, J. J., & Hochstetler, A. (2014). Dynamics of psychopathy and moral disengagement in the etiology of crime. *Youth Violence and Juvenile Justice, 12,* 295–314. doi:10.1177/1541204013506919

De Vries, R. E., De Vries, A., De Hoogh, A., & Feij, J. (2009). More than the Big Five: Egoism and the HEXACO model of personality. *European Journal of Personality*, *23*, 635–654. doi:10.1002/per.733

De Vries, R. E., & Kampen, D. V. (2010). The HEXACO and 5DPT models of personality: a comparison and their relationships with psychopathy, egoism, pretentiousness, immorality, and Machiavellianism. *Journal of Personality Disorders, 24,* 244–257. doi: 10.1521/pedi.2010.24.2.244

Djeriouat, H., & Trémolière, B. (2014). The Dark Triad of personality and utilitarian moral judgment: the mediating role of Honesty/Humility and Harm/Care. *Personality and Individual Differences*, *67*, 11–16. doi:10.1016/j.paid.2013.12.026

Dolan, M. C., & Fullam, R. S. (2010). Moral/conventional transgression distinction and psychopathy in conduct disordered adolescent offenders. *Personality and Individual Differences, 49,* 995–1000. doi:10.1016/j.paid.2010.08.011

Egan, V., Hughes, N., & Palmer, E. J. (2015). Moral disengagement, the dark triad, and unethical consumer attitudes. *Personality and Individual Differences*, *76*, 123–128. doi:10.1016/j.paid.2014.11.054

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad: A 10 year review. *Social & Personality Psychology Compass, 7,* 199–216. doi:10.1111/spc3.12018

Gentile, B., Miller, J. D., Hoffman, B. J., Reidy, D. E., Zeichner, A., & Campbell, W. K. (2013). A Test of Two Brief Measures of Grandiose Narcissism: The Narcissistic Personality Inventory–13 and the Narcissistic Personality Inventory–16. *Psychological Assessment, 25,* 1120–1136. doi:10.1037/a0033192

Giammarco, E. A. (2016). The measurement of individual differences in morality. *Personality and Individual Differences, 88*, 26–34. doi:10.1016/j.paid.2015.08.039

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*, 384–398. doi:10.1521/pedi.2009.23.4.384

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S., & Ditto, P. H. (2013). Moral Foundations Theory: The pragmatic validity of moral pluralism. *Advances in Experimental Social Psychology, 47,* 55–130. doi:10.1016/B987–0–12–407236–7.00002–4

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of personality and social psychology*, *96*, 1029–1046. doi:10.1037/a0015141

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of personality and social psychology*, *101*, 366–385. doi:10.1037/a0021847

Hare, R. D. (2003). *The Hare Psychopathy Checklist—Revised, 2nd edition.* Toronto, ON, Canada: Multi-Health Systems.

Hilbig, B. E., Moshagen, M., & Zettler, I. (2015). Truth Will Out Linking Personality, Morality, and Honesty Through Indirect Questioning. *Social Psychological and Personality Science*, *6*, 140–147. doi:10.1177/1948550614553640

Jonason, P. K., Strosser, G. L., Kroll, C. H., Duineveld, J. J., & Baruffi, S. A. (2015). Valuing myself over others: The Dark Triad traits and moral and social values. *Personality and Individual Differences, 81, 102–106.* doi:10.1016/j.paid.2014.10.045

Jonason, P. K., Webster, G. D., Schmitt, D. P., Li, N. P., & Crysel, L. (2012). The antihero in popular culture: Life history theory and the dark triad personality traits. *Review of General Psychology*, *16*, 192–199. doi:10.1037/a0027914

Jost, J. T., & Amodio, D. M. (2012). Political ideology as motivated social cognition: Behavioral and neuroscientific evidence. *Motivation and Emotion*, *36*, 55–64. doi:10.1007/s11031-011–9260–7

Killen, M., & Smetana, J.G. (2006). *Handbook of moral development.* Mahwah, NJ: Erlbaum.

Kohlberg, L. (1958). *The development of modes of moral thinking and choice in the years 10 to 16*. Chicago: University of Chicago.

Kugler, M., Jost, J. T., & Noorbaloochi, S. (2014). Another Look at Moral Foundations Theory: Do Authoritarianism and Social Dominance Orientation Explain Liberal-Conservative Differences in "Moral" Intuitions? *Social Justice Research*, *27*, 413–431. doi:10.1007/s11211-014–0223–5

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research,* *39*, 329–358. doi:10.1207/s15327906mbr3902_8

Lee, K., & Ashton, M. C. (2006). Further assessment of the HEXACO Personality Inventory: two new facet scales and an observer report form. *Psychological assessment*, *18*, 182–191. doi:10.1037/1040–3590.18.2.182

Lee, K., & Ashton, M. C. (2012). Getting mad and getting even: Agreeableness and Honesty-Humility as predictors of revenge intentions. *Personality and Individual Differences*, *52*, 596–600. doi:10.1016/j.paid.2011.12.004

Lee, K., & Ashton, M. C. (2014). The dark triad, the big five, and the HEXACO model. *Personality and Individual Differences*, *67*, 2–5. doi:10.1016/j.paid.2014.01.048

Lee, K., Ashton, M. C., Ogunfowora, B., Bourdage, J. S., & Shin, K. H. (2010). The personality bases of socio-political attitudes: The role of Honesty–Humility and Openness to Experience. *Journal of Research in Personality*, *44*, 115–119. doi:10.1016/j.jrp.2009.08.007

Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty-Humility. *European Journal of Personality, 27*, 169–184. doi: 10.1002/per.1860

Leone, L., Chirumbolo, A., & Desimoni, M. (2012). The impact of the HEXACO personality model in predicting socio-political attitudes: The moderating role of interest in politics. *Personality and Individual Differences, 52,* 416–421. doi:10.1016/j.paid.2011.10.049

MacCann, C., Duckworth, A. L., & Roberts, R. D. (2009). Empirical identification of the major facets of conscientiousness. *Learning and Individual Differences*, *19*, 451–458. doi:10.1016/j.lindif.2009.03.007

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological methods*, *17*, 437–455. doi:10.1037/a0028085

Međedović, J. (2012). Topography of dishonesty: Mapping the opposite pole of Honesty-Humility personality domain. *Primenjena psihologija, 5*, 115–135.

Međedović, J. & Petrović, B. (2015). The Dark Tetrad: Structural properties and location in the personality space. *Journal of Individual Differences, 36*, 228-236. doi: 10.1027/1614-0001/a000179

Myers, W. C., Burket, R. C., & Husted, D. S. (2006). Sadistic personality disorder and comorbid mental illness in adolescent psychiatric inpatients. *Journal of the American Academy of Psychiatry and the Law Online*, *34*, 61–71.

Noddings, N. (2002). *Educating moral people: A caring alternative to character education*. Teachers College Press: Williston.

Paulhus, D. L. (2014). Toward a Taxonomy of Dark Personalities. *Current Directions in Psychological Science*, *23*, 421–42. doi:10.1177/0963721414547737

Paulhus, D. L., & Jones, D. N. (2015). Measures of dark personalities. In G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of personality and social psychological constructs* (pp. 562–594). San Diego: Academic Press.

Paulhus, D. L., Neumann, C. S., & Hare, R.D. (in press). *Manual for the Self-report Psychopathy scale*. Toronto: Multi-Health Systems.

Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality, 36,* 556–563. doi:10.1016/S0092–6566(02)00505–6

Piaget, J. (1932). *The moral judgment of the child*. New York: The Free Press.

Reidy, D. E., Zeichner, A., & Seibert, L. A. (2011). Unprovoked aggression: effects of psychopathic traits and sadism. *Journal of personality*, *79*, 75–100. doi:10.1111/j.1467–6494.2010.00691.x

Roets, A., Cornelis, I., & Van Hiel, A. (2014). Openness as a predictor of political orientation and conventional and unconventional political activism in Western and Eastern Europe. *Journal of personality assessment*, *96*, 53–63. doi:10.1080/00223891.2013.809354

Sibley, C. G., Osborne, D., & Duckitt, J. (2012). Personality and political orientation: Meta-analysis and test of a threat-constraint model. *Journal of Research in Personality*, *46*(6), 664–677. doi:10.1016/j.jrp.2012.08.002

Williams, K. M., Nathanson, C., & Paulhus, D. L. (2010). Identifying and profiling scholastic cheaters: their personality, cognitive ability, and motivation. *Journal of Experimental Psychology: Applied*, *16*, 293–307. doi:10.1037/a0020773

Zeigler-Hill, V., Noser, A. E., Roof, C., Vonk, J., & Marcus, D. K. (2015). Spitefulness and moral values. *Personality and Individual Differences*, *77*, 86–90. doi:10.1016/j.paid.2014.12.050