Short Communication

A person-centered view of prejudice: The Big Five, Dark Triad, and prejudice

Monica A. Koehn[a,*], Peter K. Jonason[a], Mark D. Davis[b]

[a] *Western Sydney University, Australia*
[b] *University of West Alabama, United States of America*

ARTICLE INFO	ABSTRACT
	While contextual factors are important in understanding prejudice, person-centered factors matter as well. In a sample of American students and MTurk workers (*N* = 473), we assessed the correlations between personality traits and two forms of prejudice; cognitive and affective prejudice. People who were low in agreeableness and openness, and high in neuroticism, psychopathy, Machiavellianism, and narcissism held more overall prejudicial attitudes. The Dark Triad traits accounted for 2% additional variance towards explaining individual differences in prejudice above that associated with the Big Five traits for cognitive prejudice, but the same cannot be said for individual differences in affective prejudice. This highlights the importance of both discerning the type of discrimination and of the Dark Triad traits to be used in parallel with the Big Five traits when understanding prejudice. Adopting a person-centered approach to prejudice provides inference of the within-person factors that affect social attitudes.

1. Introduction

Race-based prejudice has been a topic of interest in social and personality psychology for decades (Sherif, 1966). Social psychologists tend to focus on context-centered effects whereas personality psychologists tend to focus on person-centered effects. In particular, person-centered effects reveal the importance of the Big Five (i.e., openness, conscientiousness, extraversion, agreeableness, and neuroticism) and the Dark Triad (i.e., narcissism, psychopathy, and Machiavellianism) traits in accounting for variance in prejudicial attitudes (Hodson & Dhont, 2015). However, far less work has examined the role of the Dark Triad traits. Here we examine the contribution of both taxonomies to understand prejudice and determine how much incremental variance the Dark Triad traits have over the Big Five traits in explaining prejudice.

There is already evidence that the Dark Triad traits predict prejudicial attitudes. For example, Jones (2013) showed that psychopathy and Machiavellianism predict membership in white supremacy groups. Alternatively, Jonason (2015) found that the Dark Triad traits predicted prejudice towards people of middle-eastern ethnicity among those from a European ancestry in an Australian context. And last, Hodson, Hogg, and MacInnis (2009) found that the Dark Triad traits were associated with prejudice, measured with inter-group threat (Avery, Bird, Johnstone, Sullivan, & Thalhammer, 1992) and the modern racism scale (McConahay, Hardee, & Batts, 1981). While examining the

incremental validity of the Dark Triad traits above the Big Five has been undertaken previously, residual components of the traits are often overlooked (c.f. Hodson et al., 2009). In this study, we use the Quick Discrimination Index (Ponterotto et al., 1995) to capture individual differences in prejudice in the form of both cognitive and affective components. The cognitive subscale measures beliefs and attitudes towards multicultural issues, whereas the affect subscale measures emotional feelings about intimate interactions with others of a different race.

In this study, we extend what is known about individual differences in prejudice by an analysis of the independent and combined role of eight personality traits using the aforementioned scale to assess individual differences in cognitive and affective prejudice. It is essential to separate the distinct kinds of prejudice as they may have discrete underlying correlates. In relation to the Big Five traits, we expect low openness and agreeableness to predict prejudicial attitudes because the former is related to a political conservatism (Jonason, 2014) which may be related to holding such attitudes (Sibley & Duckitt, 2008) and the latter may orient people towards holding negative views of others including race-based discrimination (Ekehammar & Akrami, 2003). In relation to the Dark Triad traits, we expect all three traits to be related to prejudicial attitudes given their antisocial nature (Paulhus & Williams, 2002). We expect to replicate Hodson et al. (2009) that the Dark Triad traits will account for a significant amount of additional variance above the Big Five traits in individual differences in cognitive

* Corresponding author at: School of Social Sciences and Psychology, Western Sydney University, Penrith, NSW 2751, Australia.
E-mail address: m.koehn@westernsydney.edu.au (M.A. Koehn).

prejudice (Hodson et al., 2009). And last, as the Dark Triad traits facilitate a short-term mating strategy (Jonason, Valentine, Li, & Harbeson, 2011), possessing relaxed interpersonal sentiments implies those individuals will be unlikely to rebuff others. Therefore, we expect the Dark Triad traits to add little variance above the Big Five traits in individual differences in affective prejudice.

2. Method

2.1. Participants and procedure

Americans ($N = 473$; 261 women), aged 18–71 years ($M = 28.45$, $SD = 12.08$) were recruited via MTurk ($n = 262$; US$0.75; 55%) and a public university in Alabama ($n = 211$; course credit; 45%). Participants identified themselves as White (66%), Black (24%), Asian (4%), Hispanic or Latino (4%), Native American (1%), or Pacific Islander (1%). Participants were informed of the nature of the study, completed self-report measures, provided demographic details, and were debriefed. We aimed to recruit about 250 participants from each site to reduce estimation error with the average effect in social-personality psychology over the last 100 years (i.e., $r = 0.20$).

2.2. Measures

The Short Dark Triad (Jones & Paulhus, 2014) was used to measure individual differences in the Dark Triad traits. Participants were asked to rate their agreement (1 = Strongly Disagree; 5 = Strongly Agree) with 27 items such as "It's not wise to tell your secrets" (i.e., Machiavellianism), "I like to get acquainted with important people" (i.e., narcissism), and "People who mess with me always regret it" (i.e., psychopathy). Items were averaged to create indexes of Machiavellianism (Cronbach's $\alpha = 0.78$), narcissism ($\alpha = 0.80$), and psychopathy ($\alpha = 0.74$).

We used the 20-item short International Personality Item Pool (Donnellan, Oswald, Baird, & Lucas, 2006) to measure the Big Five personality dimensions. Participants were asked the degree to which they agreed (1 = Strongly disagree; 5 = Strongly agree) with statements such as: "Have a vivid imagination" (i.e., Openness), "Get chores done right away" (i.e., Conscientiousness), "Talk to a lot of different people at parties" (i.e., Extraversion), "Sympathize with others' feelings" (i.e., Agreeableness), and "Have frequent mood swings" (i.e., Neuroticism). Items were averaged to create composites of Openness ($\alpha = 0.74$), Conscientiousness ($\alpha = 0.64$), Extraversion ($\alpha = 0.78$), Agreeableness ($\alpha = 0.78$), and Neuroticism ($\alpha = 0.67$).

Attitudes about racial diversity were measured using eight items from the Quick Discrimination Index[1] (Ponterotto et al., 1995) to reduce participant fatigue.[2] Items were selected on the basis of their strongest factor loadings (i.e., centrality) on the cognitive and affective attitude subscales of the index. Participants were asked to report their agreement (1 = Strongly Disagree; 5 = Strongly Agree) with statements such as "I think white people's racism toward racial minority groups still constitutes a major problem" (i.e., cognitive; $\alpha = 0.80$), and "I feel I could develop an intimate relationship with someone from a different racial group" (i.e., affective; $\alpha = 0.79$).[3]

---

[1] The scale demonstrates both validity, convergent, discriminant, and criterion validity (Ponterotto et al., 1995; Ponterotto, Potere, & Johansen, 2002).

[2] We omitted questions in relation to the attitudinal gender subscale as these questions did not focus on prejudice.

[3] In a principal components analysis, items loaded well on two factors reflecting cognitive prejudice (loadings > 0.50, Eigen 3.70) and affective prejudice (loadings > 0.62, Eigen 1.42) that accounted for a total of 63.97% of the variance among the items (Kaiser-Meyer-Olkin = 0.82). A confirmatory factor analysis confirmed that a two-factor solution (RMSEA = 0.10, CFI = 0.94, TLI = 0.91) performed better (ΔCFI = 0.32) than a one-factor solution (RMSEA = 0.22, CFI = 0.71, TLI = 0.59), consistent with results by Ponterotto

3. Results

As seen in Table 1, men scored higher than women did in psychopathy ($t(471) = 5.86$, $p < .001$, Cohen's $d = 0.55$), whereas, women scored higher than men in extraversion ($t(471) = -2.02$, $p < .05$, $d = 0.19$), neuroticism ($t(471) = -4.49$, $p < .001$, $d = 0.41$), and agreeableness ($t(471) = -5.74$, $p < .001$, $d = 0.54$). There were no sex differences in either form of prejudice. Overall, cognitive prejudice was associated with Machiavellianism, narcissism, psychopathy, less openness, and less agreeableness. Affective prejudice was associated with Machiavellianism, psychopathy, neuroticism, less openness, and less agreeableness. These effects were robust to the removal of variance associated with participant's sex and sample location.

To control for the shared variance in the Dark Triad traits, we used standard multiple regression,[4] firstly controlling for participant's sex and sample location (see Table 2). For affective prejudice, the linear combination of the Dark Triad traits explained 4.3% ($R^2 = 0.05$, $\Delta R^2 = 0.04$, $F[3, 467] = 4.66$, $p < .01$) of prejudiced attitudes, with psychopathy being the only unique predictor. For cognitive prejudice, the linear combination of the traits explained 5% ($R^2 = 0.08$, $\Delta R^2 = 0.05$ $F[3, 467] = 7.82$, $p < .01$) of prejudiced attitudes, with Machiavellianism and sex being the only unique predictors. We then used standard multiple regression, controlling for participant's sex and location, to test for incremental validity over the Big Five by the Dark Triad. Sex and source were entered at Step 1, Big Five Step 2, and the Dark Triad traits at Step 3. For affective prejudice, sex and source accounted for 1% of variance ($R^2 = 0.01$, $F[2, 470] = 1.14$, $p = .32$). In Step 2 of a hierarchical multiple regression, the added Big Five accounted for 17.8% of variance ($\Delta R^2 = 0.18$, $F[7, 465] = 14.82$, $p < .01$, Cohen's $f^2 = 0.22$). In the final step, the addition of the Dark Triad traits did not account for any additional variance above the Big Five, ($\Delta R^2 = 0.01$, $F[3, 462] = 0.86$, $p = .46$, Cohen's $f^2 = 0.01$). For cognitive prejudice, sex and source accounted for 2.7% of variance ($R^2 = 0.03$, $F[2, 470] = 6.48$, $p < .01$). In Step 2 of a hierarchical multiple regression, the Big Five accounted for 12.4% of variance ($\Delta R^2 = 0.13$, $F[7, 465] = 11.80$, $p < .01$, Cohen's $f^2 = 0.15$). In the final step, the addition of the Dark Triad traits accounted for an additional 2% of variance above the Big Five, ($\Delta R^2 = 0.02$, $F[10, 462] = 9.29$, $p < .01$, Cohen's $f^2 = 0.02$), localized to Machiavellianism. Incremental validity for the Dark Triad traits above the Big Five was found for cognitive but not affective prejudice. This suggests the latter were not redundant to the former in accounting for cognitive prejudice only.

4. Discussion

Prejudice and racism are major societal issues and, therefore, understanding how and why prejudice occurs is an important task of science. In this study, we have attempted to understand individual differences in prejudice from the perspective of personality psychology. While prior studies have examined the role of the Dark Triad traits in accounting for prejudice (Hodson et al., 2009; Jonason, 2015; Jones, 2013), they were limited to specific operationalizations of prejudice, treating prejudice as a unidimensional phenomena, and did not reliably control for the Big Five traits or the residuals in the Dark Triad traits. We have addressed these limitations using measures of individual differences in cognitive and affective prejudice. The cognitive subscale measures attitudes towards multicultural issues, while the affective subscale measures feelings towards multicultural intimate interactions. Machiavellians are misanthropic and hold condescending views of

---

(footnote continued)

et al. (1995).

[4] Multiple regressions were not affected by multicollinearity (VIF = 1.15 to 2.22).

Table 1

Descriptive statistics, sex differences, and correlation analyses for prejudice in the Big Five and Dark Triad Traits.

	Mean (SD)			1	2	3	4	5	6	7	8	9	10
	Overall	Men	Women										
1. Machiavellianism	3.05 (0.65)	3.09 (0.68)	3.02 (0.62)	–									
2. Narcissism	2.82 (0.71)	2.82 (0.70)	2.83 (0.71)	0.38**	–								
3. Psychopathy	2.18 (0.62)	2.36 (0.64)	2.04 (0.56)	0.53**	0.38**	–							
4. Extraversion	2.92 (0.92)	2.82 (0.88)	2.99 (0.93)	0.04	0.53**	0.16**	–						
5. Agreeableness	3.75 (0.73)	3.54 (0.79)	3.92 (0.62)	−0.29**	−0.05	−0.31**	0.22**	–					
6. Conscientiousness	3.48 (0.73)	3.53 (0.72)	3.45 (0.73)	−0.21**	0.02	−0.33**	0.01	0.09	–				
7. Neuroticism	2.67 (0.81)	2.49 (0.82)	2.82 (0.77)	0.20**	−0.15**	0.19**	−0.26**	−0.24**	−0.25**	–			
8. Openness	3.68 (0.76)	3.71 (0.83)	3.65 (0.70)	−0.11*	0.11*	−0.17**	0.22**	0.40**	0.10*	−0.27**	–		
9. Cognitive prejudice	2.63 (0.92)	2.71 (0.92)	2.26 (0.91)	0.21**	0.10*	0.19**	0.03	−0.33**	0.03	0.06	−0.19**	–	
10. Affective prejudice	2.39 (0.92)	2.35 (0.86)	2.42 (0.96)	0.15**	0.03	0.19**	−0.06	−0.38**	−0.02	0.12**	−0.31**	0.47**	–

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

Table 2

Associations between the Big Five and Dark Triad Traits and prejudice.

	Affective prejudice		Cognitive prejudice		Affective prejudice		Cognitive prejudice	
	β	SE	β	SE	β	SE	β	SE
Sex	0.07	0.09	−0.07	0.09	0.11*	0.09	−0.03	0.09
Source	0.07	0.10	0.11*	0.09	0.07	0.09	0.14**	0.09
Extraversion					0.05	0.06	0.11	0.06
Agreeableness					−0.30**	0.07	−0.29**	0.07
Conscientiousness					0.05	0.06	0.10*	0.06
Neuroticism					0.00	0.06	−0.02	0.06
Openness					−0.19**	0.06	−0.09	0.06
Machiavellianism	0.09	0.08	0.15**	0.08	0.03	0.08	0.13*	0.08
Narcissism	−0.08	0.07	0.01	0.07	−0.03	0.08	−0.03	0.08
Psychopathy	0.17**	0.08	0.11	0.08	0.07	0.09	0.05	0.09

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

others (Rauthmann, 2012). Furthermore, Machiavellianism is associated with low agreeableness (Muris, Merckelbach, Otgaar, & Meijer, 2017) which is related to prejudicial outcomes (Sibley & Duckitt, 2008), thus, the cynical nature of Machiavellians contributes to the overall predictive power in cognitive prejudice. As predicted, the Dark Trait traits failed to reach significance when combined with the Big Five traits in the affective prejudice dimension. For individuals high in the Dark Triad traits holding relaxed and indiscriminate interpersonal attitudes confers more casual sex opportunities (Jonason et al., 2011; Koehn, Okan, & Jonason, 2018). Our results are consistent with the suggestion that the Dark Triad traits reflect three distinct traits because they predict different outcomes. This is despite debate around whether they should be conceptualized as a common core with three or two constructs and if these traits exist as three separate constructs. An additional question in the literature is whether Machiavellianism is fundamentally different to psychopathy (for a review see Koehn et al., 2018). Our results are consistent with the historical literature that Machiavellianism and psychopathy are distinct personality profiles and should continue to be treated as such. While this study was focused on determining the incremental validity of the Dark Triad traits over the Big Five traits, it would be remiss to overlook the Big Five results. Overall, low openness and low agreeableness contributed to prejudice, replicating prior results (Hodson et al., 2009; Sibley & Duckitt, 2008). Both low openness and low agreeableness predicted affective prejudice. Only low agreeableness predicted cognitive prejudice. This highlights the importance of discerning the underlying forms of prejudice, which is not unidimensional.

4.1. Limitations and conclusions

As a brief report, this study is limited in a number of expected ways. First, we used a shortened version of the Quick Discrimination Index to reduce participant fatigue, however, both our principal components analysis and confirmatory factor analysis confirmed the structure of the shortened scale. We used a shortened measure of the Big Five traits, however given this scale has been validated and extensively used, we do not see this as a major concern. Secondly, our data was correlational and self-report in nature and, thus, comes with all the limitations of such data such as lack of causal inference. That said, it might be worth adopting implicit measures of prejudice to test for the methodological robustness of our effects.

Despite these limitations, we have answered a number of important questions about the utility of personality traits in accounting for variance in two forms of prejudice. While we are certain that situational factors matter in understanding prejudice, a full account of prejudice may require an examination of all personality traits. We suggest that while the Big Five and the Dark Triad traits might matter in accounting for individual differences in prejudice, it may depend on the kind of prejudice being investigated.

References

Avery, P. G., Bird, K., Johnstone, S., Sullivan, J. L., & Thalhammer, K. (1992). Exploring political tolerance with adolescents. *Theory & Research in Social Education, 20,* 386–420.

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The Mini-IPIP Scales: Tiny-yet-effective measures of the Big Five Factors of Personality. *Psychological Assessment, 18,* 192–203.

Ekehammar, B., & Akrami, N. (2003). The relation between personality and prejudice: A variable- and a person-centred approach. *European Journal of Personality, 17,*

449–464.

Hodson, G., & Dhont, K. (2015). The person-based nature of prejudice: Individual difference predictors of intergroup negativity. *European Review of Social Psychology, 26,* 1–42.

Hodson, G., Hogg, S. M., & MacInnis, C. C. (2009). The role of "dark personalities" (narcissism, Machiavellianism, psychopathy), Big Five personality factors, and ideology in explaining prejudice. *Journal of Research in Personality, 43,* 686–690.

Jonason, P. K. (2014). Personality and politics. *Personality and Individual Differences, 71,* 181–184.

Jonason, P. K. (2015). How "dark" personality traits and perceptions come together to predict racism in Australia. *Personality and Individual Differences, 72,* 47–51.

Jonason, P. K., Valentine, K. A., Li, N. P., & Harbeson, C. L. (2011). Mate-selection and the Dark Triad: Facilitating a short-term mating strategy and creating a volatile environment. *Personality and Individual Differences, 51,* 759–763.

Jones, D. N. (2013). Psychopathy and Machiavellianism predict differences in racially motivated attitudes and their affiliations. *Journal of Applied Social Psychology, 43,* E367–E378.

Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A brief measure of dark personality traits. *Assessment, 21,* 28–41.

Koehn, M. A., Okan, C., & Jonason, P. K. (2018). A primer on the Dark Triad traits. *Australian Journal of Psychology.* https://doi.org/10.1111/ajpy.12198 Advance online publication.

McConahay, J. B., Hardee, B. B., & Batts, V. (1981). Has racism declined in America? It depends on who is asking and what is asked. *Journal of Conflict Resolution, 25,* 563–579.

Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the Dark Triad (narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science, 12,* 183–204.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality, 36,* 556–563.

Ponterotto, J. G., Burkard, A., Rieger, B. P., Grieger, I., D'Onofrio, A., Dubuisson, A., ... Sax, G. (1995). Development and initial validation of the Quick Discrimination Index (QDI). *Educational and Psychological Measurement, 55,* 1016–1031.

Ponterotto, J. G., Potere, J. C., & Johansen, S. A. (2002). The Quick Discrimination Index: Normative data and user guidelines for counseling researchers. *Journal of Multicultural Counseling and Development, 30,* 192–207.

Rauthmann, J. F. (2012). The Dark Triad and interpersonal perception: Similarities and differences in the social consequences of narcissism, Machiavellianism, and psychopathy. *Social Psychological and Personality Science, 3,* 487–496.

Sherif, M. (1966). *In common predicament: Social psychology of intergroup conflict and co-operation.* Boston, MA: Houghton, Mifflin, & Company.

Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review, 12,* 248–279.