



Pathology, pseudopathology, and the Dark Triad of personality



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ABSTRACT

The Dark Triad traits (i.e., psychopathy, Machiavellianism, and narcissism) have traditionally been viewed as undesirable and pathological. In contrast, an evolutionary perspective suggests that traits like these might be pseudopathologies; traits that society actively dislikes in that they pose a threat to the collective good. We examined ($N = 290$) how the Dark Triad traits related to intrapersonal (i.e., behavioral dysfunction), quasibehavioral (i.e., reactive and proactive aggression), and interpersonal (i.e., communal and exchange orientation) factors. Psychopathy predicted high rates of behavioral dysregulation and both forms of aggression. Psychopathy and Machiavellianism showed an aversion towards communalism but an exchange orientation to social relationships. Lastly, individual differences in the Dark Triad traits accounted for part (5–22%) of the sex differences in social strategies and aggression. The theoretical implications of these findings are discussed in, and in support of, an evolutionary paradigm.

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1. Introduction

The Dark Triad traits (i.e., psychopathy, narcissism, and Machiavellianism) are traditionally viewed as undesirable and pathological traits (Campbell & Miller, 2011; Kowalski, 2001). In contrast, an evolutionary perspective (Jonason, Li, Webster, & Schmitt, 2009; Jonason, Lyons, Bethell, & Ross, 2013) suggests the Dark Triad traits might be pseudopathologies where they confer benefits to the person at the cost of the group (Crawford & Anderson, 1989). In this study we adopt the latter position in understanding the relationships between the Dark Triad traits and behavioral dysregulation, aggression, and social strategies. Importantly, we advance a model whereby the Dark Triad traits are characterized by a social strategy that devalues others over oneself (Jonason, Strosser, Kroll, Duineveld, & Baruffi, 2015) which then facilitates aggression and limited self-control.

Most—implicitly or explicitly—treat behavioral dysregulation (e.g., Roth, Lance, Isquith, Fischer, & Giancola, 2013; Slick, Lautzenhiser, Sherman, & Eyril, 2006) and aggression (Baumeister, Bushman, & Campbell, 2000; Bushman & Baumeister, 1998; Lykken, 1995) as pathologies. The Dark Triad traits are associated with both of these through limited executive functioning (Gioia, Isquith, Guy, & Kenworthy, 2000) and limited self-control and impulsivity (Jonason & Tost, 2010; Jones & Paulhus, 2011). These

links have been observed repeatedly in various ways. The Dark Triad traits have been linked to various forms of aggression (Jonason & Webster, 2010; Jones & Paulhus, 2010), future discounting and drug abuse (Jonason, Koenig, & Tost, 2010), criminal tendencies (Hare, 1985), an exploitive mating strategy (Jonason et al., 2009), and lying (Baughman, Jonason, Vernon, & Lyons, 2014).

Unsurprisingly these traits tend to be thought of as pathologies by most people.¹ One way to disentangle the pathological and pseudopathological aspects of these traits is to examine each trait independently (Rauthmann & Kolar, 2012). For instance, psychopathy evidences the most socially undesirable value system: Machiavellianism evidences a moral flexibility; narcissism evidences a socially desirable value system (Jonason et al., 2015). Much of the undesirable aspects of the Dark Triad traits tend to load up on psychopathy. For instance, we expect psychopathy to be related to behavioral dysregulation. While it might be possible this is evidence of some personality disorder, it is also possible they might be part of the suite of tactics and traits that come together to form a fast life history strategy (Glenn & Raine, 2009). Behavioral dysregulation might facilitate the immediate extraction of resources from one's environment (Jonason & Tost, 2010).

We also expect this to be the case when examining the aggression that characterizes these traits. Unlike prior work we examine it in relation to reactive and proactive aggression (Bobadilla,

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¹ We use a liberal definition of word “pathology” in this study because we (1) are measuring sub-clinical levels of these traits and (2) we feel social perceptions define what is considered a pathology or not (i.e., community standards).

Wampler, & Taylor, 2012; Dodge & Coie, 1987). This is an important distinction in understanding aggression. Each evidences different estimates of genetic and environmental influence (Tuvblad, Raine, Zheng, & Baker, 2009) and different correlates (Bobadilla et al., 2012; Raine et al., 2006). For instance, reactive but not proactive aggression, might be linked to self-regulation problems (White, Jarrett, & Ollendick, 2013; Winstok, 2009). Psychopathy is associated with self-control problems (Jonason & Tost, 2010) and neurological antecedents that may relate to the associated aggression (Glenn & Raine, 2009). Aggression might be one of the standard tactics of influence used by those who score high in psychopathy (Jonason & Webster, 2012). Proactive and reactive aggression may serve different functional, adaptive purposes (Raine et al., 2006), but as those characterized by psychopathy adopt aggression as a global approach to getting what they want, we expect psychopathy to be correlated with reactive and proactive aggression.

An evolutionary perspective on these traits suggests the Dark Triad traits are not pathologies but are, instead, “alternative” social strategies (Jonason & Webster, 2012). These social strategies often manifest themselves in socially undesirable ways (e.g., behavioral dysregulation and aggression) and, thus, they are deemed as pathologies (Jonason et al., 2015; Kurt & Paulhus, 2008). Our perspective may translate into associations with the distinction of communalism (i.e., implicit reciprocity) and exchange (i.e., explicit reciprocity) social strategies (Clark & Mills, 1993, 2011; Clark, Ouellette, Powell, & Milberg, 1987; Trapnell & Paulhus, 2012). We expect psychopathy and Machiavellianism to be characterized by low scores on communalism and high scores on exchange (i.e., pseudopathologies) whereas narcissism may only be correlated with high scores on communalism. In reference to the former, those high in these “darker” aspects of personality may be out for themselves and, thus, might be against the group and only interact with others if they are overtly getting something in exchange. In reference to the latter, narcissism may be “lighter” and more socially desirable than the other two (Rauthmann & Kolar, 2012) which may manifest in socially desirable approaches to the group (Jonason et al., 2015). And finally, we present a Structural Equation Model that tests our contention that the “undesirable” outcomes associated with the Dark Triad traits are manifestations of the social strategies that characterize each, with psychopathy retaining direct links as it is the most “pathological” trait.

Objectively speaking, men are better characterized by the Dark Triad traits than women are (Jonason et al., 2009). The pathological perspective has little to say as to why this might be the case as most of it is not theory driven. In contrast, the pseudopathological perspective—an evolutionary perspective—suggests this pattern might be a function of the asymmetrical costs between the sexes in engaging in social and sexual strategies that place immediate outcomes over delayed ones (Buss & Schmitt, 1993; Jonason, Valentine & Li, 2012) and the Dark Triad trait may facilitate this in men more than in women (Jonason, Koenig, et al., 2010). Therefore, we expect to replicate these sex differences for the Dark Triad traits, but also expect these differences to mediate sex differences in social strategies and behaviors (both external manifestations of internal qualities). For instance, men may be more aggressive in general (Bettencourt & Miller, 1996; Eagly & Steffen, 1986) and less communal (Buhrke & Fuqua, 1987; Jonason, Webster, & Lindsey, 2008) than women are. Sex differences in aggression and social strategies may be facilitated by individual differences in the Dark Triad traits.

In this study we try to describe a position that the Dark Triad traits are pseudopathologies characterized by a non-communal social strategy, behavioral dysregulation, and aggression. We then posit a model whereby personality traits lead to the adoption of

particular social strategies, which then predict behavioral outcomes. Last, we test whether individual differences in the Dark Triad traits can account for part of the sex differences in social strategies, aggression, and behavioral dysregulation.

2. Method

2.1. Participants and procedure

Two hundred and ninety volunteers (35% male) aged 17–65 ($M = 31.16$, $SD = 10.34$) predominantly (89%) from the United States were recruited via social networking websites to partake in a larger online study. Participants were informed about the nature of the study, then proceeded to complete a series of measures as described below. Upon completion, participants were thanked and debriefed.

2.2. Measures

The Dark Triad traits were assessed using the 27-item Short Dark Triad (Jones & Paulhus, 2014). Participants indicated their agreement with (1 = *Strongly disagree*; 5 = *Strongly agree*) on items such as: “It’s not wise to tell your secrets” for Machiavellianism, “People see me as a natural leader” for narcissism, and “I like to get revenge on Authority” for psychopathy. The relevant items were summed to create indexes of narcissism (Cronbach’s $\alpha = .81$), Machiavellianism ($\alpha = .80$), and psychopathy ($\alpha = .81$).²

Participants completed the Behavioral Regulation Scale (Roth, Isquith, & Gioia, 2005). It is composed of 30 items asking participants how often (1 = *Never*; 7 = *Almost always*) within the last month they acted with/without self-control such as: “Being impulsive”, and “After having a problem, not getting over it easily”. Items were summed to create a measure of individual differences in behavioral dysregulation abilities ($\alpha = .96$).

Participants completed the Communal Orientation Scale (Clark et al., 1987) and Exchange Orientation Scale (Clark, Taraban, Ho, & Wesner, 1989) combined. On the Communal Orientation Scale participants reported how much each item sounded like them (1 = *Definitely does not sound like me*; 5 = *Definitely sounds like me*). It is composed of 14 items that assess one’s orientation to the group (i.e., communalism) with items such as: “When I have a need that others ignore I am hurt”. The Exchange Orientation Scale is composed of nine items that assess one’s orientation towards self-interest (i.e., exchange) with items like: “I usually only give gifts to those who have given me gifts in the past”. Items on each scale were summed to create indexes for communalism ($\alpha = .84$) and exchange ($\alpha = .67$).^{3,4}

Participants completed the Reactive-Proactive Aggression Survey (Raine et al., 2006). It is composed of 30 items that assess individual differences in one’s tendency to react in an aggressive way (e.g., “Yelled at others when they have annoyed you”) or a tendency to seek out aggressive exchanges (e.g., “Had fights with others to show who was on top”). Participants reported how often they have used such behavior (1 = *Never*; 5 = *Always*). Items were summed to create indexes of reactive ($\alpha = .89$) and proactive ($\alpha = .91$) aggression.⁵

² Machiavellianism correlated with psychopathy ($r(289) = .56$, $p < .01$) and narcissism ($r(289) = .31$, $p < .01$), whereas narcissism correlated with psychopathy ($r(289) = .39$, $p < .01$).

³ While we could have improved Cronbach’s alpha to .72 by eliminating items 5, 17, and 22, we felt it best to retain the established factor structure.

⁴ These two scales were correlated, but effectively orthogonal ($r(289) = -.15$, $p < .01$).

⁵ These two scales were correlated ($r(289) = .64$, $p < .01$).

3. Results

Table 1 contains descriptive statistics and sex difference tests with Hedge's *g*, to adjust for the unbalanced sex ratio, for the Dark Triad traits, social strategies, behavioral regulation, and aggression. Men scored higher than women did on all the Dark Triad variables. Men also scored higher than women did on proactive aggression. On the other hand, women scored higher than men did on the communal orientation social strategy.

Table 2 contains the correlations and standardized regression coefficients from multiple regression (to control for the shared variance among the Dark Triad traits) between the Dark Triad traits and social strategies, behavioral regulation, and aggression types. Behavioral dysregulation, proactive, and reactive aggression were uniquely (in regression) associated with scores on psychopathy. All three of the Dark Triad traits explained unique and significant variance in communalism. Psychopathy and Machiavellianism were uniquely associated with an exchange orientation. After controlling for the shared variance in the Dark Triad traits, narcissism was associated with low rates of behavioral dysregulation.

In Fig. 1 we present a Structural Equation Model that allows us to control for shared variance within measures and to present our primary theoretical contention. This was a good fitting model ($\chi^2(9) = 13.59$, $p > .05$, CFI = 1.00, TLI = 0.98, RMSEA = .04 [90%CI = .00, .09], p -closeness of fit = .56) and shows how social strategies partially mediate the relationships between the Dark Triad traits and behavioral outcomes. Psychopathy had direct and indirect links to the outcomes of aggression and behavioral dysregulation. Machiavellianism and narcissism were only associated with the outcomes through their orientation towards communalism.

Based on results in Tables 1 and 2 we tested whether the Dark Triad traits mediated sex differences in communal orientation and proactive aggression. Psychopathy partially mediated sex differences in communal orientation ($\Delta R^2 = .06$, $F(1, 289) = 16.77$, $p < .01$) and proactive aggression ($\Delta R^2 = .22$, $F(1, 289) = 83.95$, $p < .01$), where the sex difference (β) decreased from $-.23$ ($p < .01$) to $-.16$ ($p < .05$) in the former, and from $.27$ ($p < .01$) to $.13$ ($p < .01$) in the latter. Machiavellianism partially mediated communal orientation ($\Delta R^2 = .08$, $F(1, 289) = 24.16$, $p < .01$) and proactive aggression ($\Delta R^2 = .08$, $F(1, 289) = 25.67$, $p < .01$) such that the direct effect (β) decreased from $-.23$ ($p < .01$) to $-.18$ ($p < .01$) and $.27$ ($p < .01$) to $.22$ ($p < .01$) respectively. Narcissism partially mediated proactive aggression ($\Delta R^2 = .05$, $F(1, 289) = 15.36$, $p < .01$) where the sex difference (β) decreased from $.27$ ($p < .01$) to $.22$ ($p < .01$). This suggests that high scores on communal orientation for women may be in part facilitated by low scores on psychopathy, and psychopathy and Machiavellianism may account for sex differences in proactive aggression.

Table 1

Overall descriptive statistics and sex differences for the Dark Triad traits, social strategies, behavioral regulation, and aggression.

	Mean (SD)			<i>t</i>	<i>g</i>
	Overall	Men	Women		
Psychopathy	18.61 (6.23)	20.78 (5.94)	17.19 (5.98)	-4.73**	-0.60
Machiavellianism	29.73 (6.38)	31.09 (6.53)	29.03 (6.24)	-2.55*	-0.32
Narcissism	24.11 (6.23)	25.61 (6.27)	23.14 (6.10)	-3.16**	-0.40
Communal orientation	50.17 (7.95)	47.93 (7.48)	51.67 (7.94)	3.78**	0.48
Exchange orientation	25.82 (4.79)	26.38 (4.56)	25.49 (4.98)	-1.45	-0.18
Behavioral regulation	81.01 (35.07)	80.27 (33.45)	80.45 (35.37)	0.04	0.01
Proactive aggression	14.43 (4.18)	15.46 (4.69)	13.42 (2.71)	-3.94**	-0.50
Reactive aggression	21.91 (6.48)	22.40 (6.18)	21.34 (6.36)	-1.33	-0.17

Note: *g* is Hedge's *g* for effect size.

* $p < .05$.

** $p < .01$.

Table 2

Zero-order and standardized regression weights using the Dark Triad traits to predict social strategies, behavioral dysregulation, and aggression.

	<i>r</i> (β)		
	Psychopathy	Machiavellianism	Narcissism
Communal orientation	-.32** (-.26**)	-.33** (-.23**)	.01 (.18**)
Exchange orientation	.31** (.17)	.36** (.28**)	.11 (-.05)
Behavioral dysregulation	.44** (.44**)	.30** (.08)	.08 (-.12*)
Proactive aggression	.54** (.51**)	.33** (.01)	.27** (.06)
Reactive aggression	.56** (.59**)	.32** (-.01)	.19** (-.04)

Note: Correlations did not differ as a function of participant's sex when $p < .001$.

* $p < .05$.

** $p < .01$.

4. Discussion

Are the Dark Triad traits pathologies or pseudopathologies? We contend the answer to this question depends on one's perspective. Adopting the traditional view (Campbell & Miller, 2011; Kowalski, 2001) would lead one to conclude these are pathologies. However, we would contend the traditional view is biased towards emphasizing group level outcomes (i.e., liberal socialism) over individual level ones (i.e., liberal humanism). To us this is only one way of seeing personality traits. From an evolutionary perspective, even the most undesirable personality traits can be adaptive if they confer benefits to the individual even at the cost of the group. Such traits are called pseudopathologies (Crawford & Anderson, 1989) and may align with the communalism and agency distinction (Kurt & Paulhus, 2008; Trapnell & Paulhus, 2012).

The evidence is clear that psychopathy is the most socially undesirable of the three. It is linked to global aggression, behavioral dysregulation, and is rather against the group with its low scores on communalism. Even in the Structural Equation Model, it maintained direct links in the presence of indirect links to proactive aggression. As people have something of a "groupish" nature, individuals who violate group norms or what might be best for the group and are out for themselves are often vilified. An evolutionary perspective would temper this in that these tendencies might not be good for the group but they could be good for the individual and that is what natural selection acts upon. While most would consider behavioral dysregulation deleterious and maladaptive, an evolutionary perspective suggests it might actually be dispositions instrumental for capitalizing on immediate opportunities in one's environment (Crone, Vendel, & van der Molen, 2003; Jonason & Tost, 2010). As long as this conferred some positive reproductive fitness over evolutionary time, the two would have been paired as a coherent suite of dispositions. The same argument

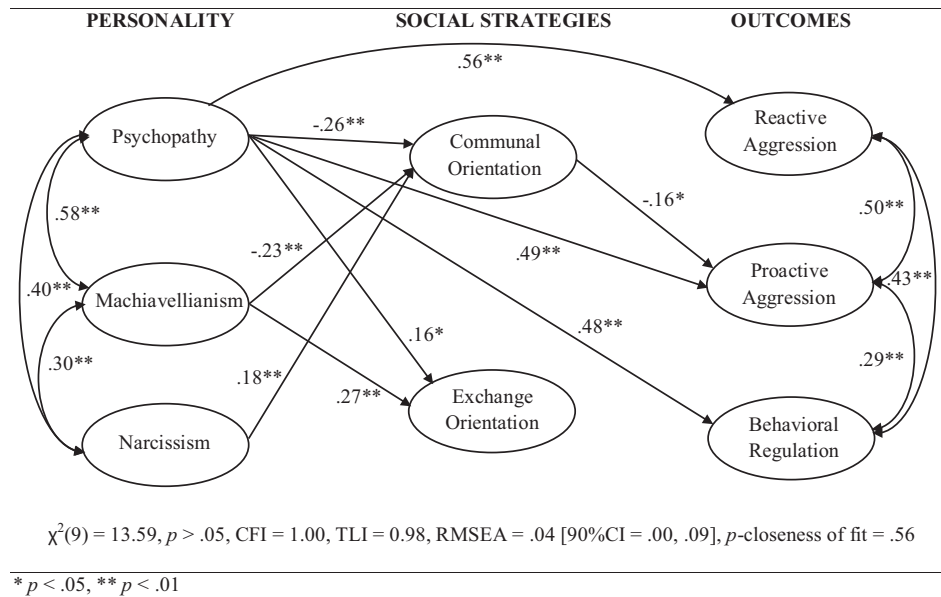


Fig. 1. Structural equation model of the significant relationships between the Dark Triad traits, social strategies, and aggression and behavioral regulation.

could be made about aggression. For instance, defending one's group—broadly defined—would have allowed reactive aggression to be adaptive whereas preempting the attacks of others or using aggression to “take” things from others (Jonason & Webster, 2012; Raine et al., 2006) may have also been adaptive, especially when coupled with limited empathy (Jonason, Lyons, et al., 2013).

In contrast to psychopathy, behavioral dysregulation and aggression were not directly correlated with Machiavellianism and narcissism. Both were correlated with social strategies only and have some indirect association to reactive aggression through individual differences in communalism; reactive aggression being probably the most essential form of aggression, evolutionarily-speaking. Importantly, consistent with the pseudopathology framework, Machiavellianism, like psychopathy, was associated with a non-communal and an exchange social orientation. These traits may orient people against the group in the selfish pursuit of their agendas (Jonason, Li, & Teicher, 2010; Jonason et al., 2015). Unlike most people who adopt more mutualistic relationships, those characterized by these traits may adopt a competitive or even parasitic approach to social relationships. In this way, individuals do not invest into relationships but, instead, do things in hopes of getting something in return. This may evidence mistrust or cynicism in the reliability of others and an unwillingness to invest in others which is essential to understand psychopathy and Machiavellianism (Christie & Geis, 1970). In contrast, narcissism revealed a communal social strategy when variance with the other traits was controlled (i.e., suppression) thus, it requires further testing. Nevertheless, it is possible the social strategy in narcissism might rely on others sufficiently that it orients people to have at least a nominal/superficial amount of communal orientation.

Consistent with prior work (Jonason et al., 2009; Jonason, Lyons, et al., 2013), men scored higher on the Dark Triad traits than women did. Men were less communal and more proactive in their aggression than women were. These latter two sex differences were mediated by individual differences in the Dark Triad traits. The Dark Triad traits might act as the psychological systems that generate apparent sex differences in various features of our lives. For instance, it might not be that men are necessarily more aggressive than women are. Men appear to be more proactively aggressive than women are and this is, in part, facilitated by men's tendency to be better characterized by the Dark Triad traits.

As our study was about whether the Dark Triad traits are pathologies or pseudopathologies, it might be worth commenting on where our data comes down on this question. Behavioral dysregulation could be seen as a pathology or a pseudopathology; it is all a matter of perspective. This is the same for aggression of either the proactive or reactive kind. That is, it is hard to say whether the Dark Triad traits are necessarily pseudopathologies because aggression and dysregulation are themselves stigmatized behaviors and aspects of people's personality. However, in the case of social strategies the answer might be clearer. As each social strategy is value-neutral—objectively speaking—the results more strongly suggest psychopathy and Machiavellianism, in particular, are pseudopathologies that adopt an approach to life and others that runs counter to the interests of the collective good. Aggression and behavioral dysregulation may be part of the latent suite of traits that facilitates just such an approach, especially for those high on psychopathy (Jonason & Tost, 2010; Jonason & Webster, 2012).

5. Limitations and conclusions

This study had a number of limitations. First, it had an imbalanced sex ratio. We tried to adjust for this by using a sample size sensitive measure of effect size. Second, our measure of the Dark Triad traits does not allow the nuance of its longer, parent measures. Facet-level analyses are useful in understanding the Dark Triad traits (Jonason, Jones, & Lyons, 2013), but we were not interested in such associations in this study; focusing on higher-order relationships. Third, our sample was W.E.I.R.D. (i.e., western, educated, industrialized, rich, and democratic; Henrich, Heine, & Norenzayan, 2010). Future research should examine more outcomes that result from the “selfish” approach to life characterized by the Dark Triad traits.

In conclusion, we have examined how the Dark Triad traits might be pseudopathologies. We showed the pseudopathology of psychopathy may be characterized by an aggressive behavioral profile and an uninhibited intrapersonal psychology. Psychopathy and Machiavellianism were associated with an aversion towards communal relationships and an exchange orientation to social relationships. Pseudopathologies are traits that society actively

does not like in that they pose a cost for the collective good. Collectivistic and socialistic thinking—something humans may have as a function of the selection pressures for group-living (Dunbar, 2003)—may bias individuals towards thinking the world is (or should be) one where all can prosper (i.e., a positive-sum game). But life may instead be a zero-sum game; a competitive game of winners and losers in life's great struggles (e.g., reproduction, resource acquisition). Indeed, this might have been and continues to be one of the most uncomfortable implications of evolutionary theory; that we are not all equal and are not all able to be equally successful in life. In this competition, individuals—perhaps characterized by the Dark Triad traits—who are able to take from the group to their own advantage may have successfully fulfilled various adaptive tasks in the past, and may continue to do so today.

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