

	Volume 54, Issue 5, April 2013	ISSN 0191-8869
<b>PERSONALITY AND INDIVIDUAL DIFFERENCES</b>		
AN INTERNATIONAL JOURNAL OF RESEARCH INTO THE STRUCTURE AND DEVELOPMENT OF PERSONALITY, AND THE CAUSATION OF INDIVIDUAL DIFFERENCES		
Editors-in-Chief Dr T. VERNON, Canada Dr S. B. G. EYSENCK, London		Founding Editor Professor H. J. EYSENCK*
<b>Contents:</b>		
<i>General Articles</i>		
P.Y. Martin and R. Martin	549	The International Society for the Study of Individual Differences (ISSID)
M.J.W. McLarnon and J.J. Carswell	551	Morningness-eveningness orientation and attitude change: Evidence for greater systematic processing and attitude change at optimal time-of-day
S. Stieger and A. Hergovich	557	The personality differentiation by intelligence hypothesis: A measurement invariance investigation
C. Dewberry, M. Juanchich and S. Narendran	562	Together we are strong: Explicit and implicit paranormal beliefs predict performance in a knowledge test of paranormal phenomena better than explicit beliefs alone
P.K. Jonason, M. Lyons, E.J. Bethell and R. Ross	566	The latent structure of decision styles
J. Zhao, F. Kong and Y. Wang	572	Different routes to limited empathy in the sexes: Examining the links between the Dark Triad and empathy
J.F. Rauthmann and G.P. Kolar	577	The role of social support and self-esteem in the relationship between shyness and loneliness
J.L. Perry, P.J. Clough, L. Crust, K. Earle and A.R. Nicholls	582	The perceived attractiveness and traits of the Dark Triad: Narcissists are perceived as hot, Machiavellians and psychopaths not
M.T. Buelow and J.A. Suhr	587	Factorial validity of the Mental Toughness Questionnaire-48
B.E. Hilbig, I. Zettler, F. Leist and T. Heydasch	593	Personality characteristics and state mood influence individual deck selections on the Iowa Gambling Task
	598	It takes two: Honesty-Humility and Agreeableness differentially predict active versus reactive cooperation
<i>[Continued on outside back cover]</i>		
<small>Person. Individ. Diff. is indexed/abstracted in: ASSA, Curr. Cont. Soc. &amp; Behav. Sci., PASCAL-CNRS Data, Psychol. Abstr., PsycINFO, PsycLIT, Res. Alert, Soc. Sci. Cit. Indx. Also covered in the abstract and citation database SciVerse SCOPUS®. Full text available on SciVerse ScienceDirect®.</small>		
<small>ISSN 0191-8869 54(5) 549-672 (2013)</small>		
OFFICIAL JOURNAL OF THE INTERNATIONAL SOCIETY FOR THE STUDY OF INDIVIDUAL DIFFERENCES (ISSID)		

This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



Contents lists available at SciVerse ScienceDirect

# Personality and Individual Differences

journal homepage: [www.elsevier.com/locate/paid](http://www.elsevier.com/locate/paid)

## Different routes to limited empathy in the sexes: Examining the links between the Dark Triad and empathy

Peter K. Jonason<sup>a,\*</sup>, Minna Lyons<sup>b</sup>, Emily J. Bethell<sup>c</sup>, Rahael Ross<sup>b</sup><sup>a</sup> School of Social Sciences and Psychology, University of Western Sydney, NSW, Australia<sup>b</sup> Psychology Department, Liverpool Hope University, Liverpool, England, United Kingdom<sup>c</sup> School of Natural Sciences and Psychology, Liverpool John Moores University, Liverpool, England, United Kingdom

### ARTICLE INFO

#### Article history:

Received 6 September 2012  
 Received in revised form 30 October 2012  
 Accepted 3 November 2012  
 Available online 25 December 2012

#### Keywords:

Dark Triad  
 Empathy  
 Psychopathy  
 Machiavellianism  
 Narcissism

### ABSTRACT

A fundamental observation regarding the Dark Triad traits (i.e., narcissism, psychopathy, and Machiavellianism) is that they are all associated with limited empathy. However, little is known about these relationships beyond some basics. In this study ( $N = 352$ ), we asked three questions. What is the nature of the relationship between the Dark Triad traits and empathy? Does limited empathy account for sex differences in the Dark Triad? Are men and women low on empathy through different personality traits? The Dark Triad traits were all related to low levels of empathy even when controlling for the shared variance among the traits. Empathy rates mediated sex differences in different aspects of the Dark Triad but not others. Low empathy rates were related to narcissism in women but psychopathy in men, suggesting different routes to limited empathy for men and women high on the Dark Triad.

© 2012 Elsevier Ltd. All rights reserved.

### 1. Introduction

The Dark Triad traits (i.e., psychopathy, narcissism, and Machiavellianism) are linked to numerous undesirable interpersonal outcomes like aggression (Jones & Paulhus, 2010) and limited self-control (Jonason & Tost, 2010). One particular disposition thought to link the Dark Triad traits is limited empathy (Paulhus & Williams, 2002). However, the research on the link between empathy and the Dark Triad tends to not account for the shared variance among the three, to not always assess all three traits, and fails to examine the manner by which empathy might interact with the sex of the participant to predict Dark Triad scores (Ali, Amorim, & Chamorro-Premuzic, 2009; Austin, Farrelly, Black, & Moore, 2007). In this study, we attempt to address these three issues.

Although early work on the Dark Triad traits failed to account for the shared variance among the three when examining links to personality (Paulhus & Williams, 2002) and mating (Jonason, Li, Webster, & Schmitt, 2009), the consensus now is rather clear. When trying to understand any one of the three, one must control for the shared variance with the other three. This allows for the correlations that correspond to any one of the traits to not be

contaminated by variance associated with the other two. For instance, such an analysis revealed that those high on psychopathy prefer to engage in booty-call relationships, those who are narcissistic liked to engage in a variety of relationships, and Machiavellianism was not associated with a particular relationship style (Jonason, Luévano, & Adams, 2012). However, if the Dark Triad traits all share at their core a sense of limited empathy, even after accounting for shared variance, each should be associated with it in their own right.

One characteristic limitation of much of the work on the Dark Triad is that it tends to consider overall scores on the traits (but see, McDonald, Donnellan, & Navarrete, 2011). Although Machiavellianism (as measured by the MACH IV; Christie & Geis, 1970) appears to be one-dimensional (Hunter, Gerbing, & Boster, 1982), both narcissism (as measured with the NPI; Raskin & Terry, 1988) and psychopathy (as measured with the SRP III; Paulhus, Neumann, & Hare, in press) are multidimensional (Ackerman et al., 2011; Falkenbach, Poythress, Falki, & Manchak, 2007; Hicks, Markon, Patrick, Krueger, & Newman, 2004; Raskin & Terry, 1988). Therefore, we present analyses using these dimensions along with the three primary Dark Triad traits.

Generally, researchers believe there are two factors of psychopathy (see Falkenbach et al., 2007; Hicks et al., 2004). The first factor is called primary or instrumental psychopathy. This factor contains the shallow affect, low empathy, and interpersonal coldness facets of psychopathy, and individuals with profound levels of these traits are sometimes referred to as “emotionally stable” psychopaths.

\* Corresponding author. Address: School of Social Sciences and Psychology, University of Western Sydney, Milperra, NSW 2214, Australia. Tel.: +61 0434104710.

E-mail address: [p.jonason@uws.edu.au](mailto:p.jonason@uws.edu.au) (P.K. Jonason).

The second factor is secondary or hostile/reactive psychopathy. This factor is composed of the socially manipulative and deviant facets of psychopathy and has been variously referred to as aggressive, impulsive, and neurotic psychopathy. As such we would predict that the avenue through which the Dark Triad is linked to limited empathy is through primary not secondary psychopathy.

The study of narcissism as a personality trait has a long history that predates even Freud. Today, the term narcissism often refers to a psychological personality disorder in the DSM-IV or a subclinical version of the trait, which is often studied by personality and social psychologists (e.g., Paulhus, 2001) and is comprised of grandiosity, need for admiration, lack of empathy, a sense of entitlement, and self-admiration. A great deal of research has been done on narcissism (see Campbell & Miller, 2011). A number of solutions exist to the items of the NPI; the most psychometrically robust appears to be the 3-dimensional model composed of Leadership/Authority, Grandiose Exhibitionism, and Entitlement/Exploitativeness (Ackerman et al., 2011). In order to be on top of dominance hierarchies, those high on the Leadership/Authority dimension of narcissism, may be assisted by having limited empathy. We predict that narcissism will be linked to limited empathy through the Leadership/Authority dimension.

Machiavellianism is characterized by a manipulative social style, one that tends to lack interpersonal understanding and is characterized by a “whatever it takes attitude” (Christie & Geis, 1970; Gunnthorsdottir, McCabe, & Smith, 2002; Jonason & Webster, 2012; Rauthmann, 2012). For instance, whether in work contexts (Jonason, Slomski, & Partyka, 2012) or life in general (Jonason & Webster, 2012), those high on Machiavellianism (and the Dark Triad in general) appear to deploy a large number of tactics of social influence or manipulation; a range characterized by both “soft” and “hard” tactics. In order to pursue their manipulative social strategy, those high on Machiavellianism may be low on empathy in as much as high empathy would inhibit the successful exploitation of conspecifics. We predict that Machiavellianism will be negatively correlated with limited empathy.

Men reliably score higher on the Dark Triad than women do (Jonason & Webster, 2010; Jonason et al., 2009) and women reliably score higher on empathy than men do (Baron-Cohen & Wheelwright, 2004); differences we replicate here. However, this might mean that the nature of the correlations between these two traits might differ as a function of the sex of the participant as shown in other research (Jonason & Schmitt, 2012). We propose that there might be two different routes to limited empathy in the sexes. Psychopathy, which might tap a male-specific approach to life (Jonason, Slomski et al., 2012), might facilitate limited empathy in men more than in women. In contrast, because narcissism may not tap the same approach to life (Jonason, Luévano et al., 2012; Jonason & Tost, 2010), it might be freed up to facilitate limited empathy in women more than in men. Indeed, narcissism may represent a “lighter” personality trait than the other two in as much as those with narcissistic traits are rated less undesirable than those characterized by psychopathy and Machiavellianism (Rauthmann, 2012).

In addition, we examined the manner by which limited empathy might facilitate (i.e., statistically mediate) different aspects of the Dark Triad. Prior research has examined the manner by which the Dark Triad mediated different interpersonal behavior (Jonason & Kavanagh, 2010; Jonason et al., 2009). Instead, we examine how empathy scores might be a mediating factor accounting for sex differences in Dark Triad. That is, it is not exactly that men and women differ on Dark Triad scores but, instead, it is because men have less empathy than women do that they are equipped to pursue the approach to life as seen in the Dark Triad.

A number of findings converge, leading us to believe that (1) the sex of the participant might moderate the relationship between the

Dark Triad and empathy and (2) the Dark Triad might mediate the sex difference in empathy in so much as low scores on the Dark Triad facilitate an empathic style in women more than men. In this report, we examine these possibilities. We also examine the correlations between the Dark Triad, its components, and the subscales of the components and empathy.

## 2. Methods

### 2.1. Participants

Three hundred and fifty-two volunteers (60 males;  $M_{Age} = 25.10$ ,  $SD_{Age} = 9.80$ ) participated in a larger online study entitled: “The Personality and Childhood Experiences Survey”. The survey was advertised to students in two universities in northwest England ( $n = 153$ ) and through snowball sampling via email ( $n = 199$ ).<sup>1</sup> The front page of the survey provided information on the nature of the study, as well as relevant ethical issues.

### 2.2. Measures

Narcissism was assessed with the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988). For each item, participants chose one of two statements that they felt applied to them more. One statement reflected a narcissistic attitude (e.g., “I have a natural talent for influencing people”), whereas the other did not (e.g., “I am not good at influencing people”). In the present study, we used the three-factor structure (Ackerman et al., 2011), where the NPI is split into Grandiose Exhibitionism (Cronbach’s  $\alpha = .80$ ), Entitlement/Exploitativeness ( $\alpha = .40$ ), and Leadership/Authority ( $\alpha = .83$ ). As the Entitlement/Exploitativeness facet had poor internal consistency, we decided to omit the subscale from further analyses, but details are available upon request. The remaining two NPI subscales were significantly correlated ( $r(352) = .77$ ,  $p < .01$ ).

The 64-item Self-Report Psychopathy Scale-III (Paulhus et al., in press) was used to assess subclinical psychopathy. Participants rated how much they agreed (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as: “I enjoy driving at high speeds” and “I think I could beat a lie detector.” The items were averaged to create indices of secondary ( $\alpha = .83$ ), primary ( $\alpha = .85$ ), and general psychopathy ( $\alpha = .90$ ). Primary and secondary were significantly correlated to each other ( $r(352) = .62$ ,  $p < .01$ ).

Machiavellianism was measured with the 20-item MACH-IV (Christie & Geis, 1970). Participants were asked how much they agreed (1 = *strongly disagree*; 7 = *strongly agree*) with statements such as: “It is hard to get ahead without cutting corners here and there” and “People suffering from incurable diseases should have the choice of being put painlessly to death.” The items were averaged to create a Machiavellianism index ( $\alpha = .77$ ).<sup>2</sup>

Empathy Quotient (EQ; Baron-Cohen & Wheelwright, 2004) was used to measure empathy. It is composed of 40 items. For instance participants were asked their agreement on statements like “Other people tell me I am good at understanding how they are feeling and what they are thinking” or “I can easily tell if someone else wants to enter a conversation” (1 = *strongly disagree*; 4 = *strongly agree*). All of the questions are added together to form the participant’s EQ index ( $\alpha = .90$ ).

<sup>1</sup> No differences were detected across sample type and thus results are collapsed across that distinction.

<sup>2</sup> We were unable to use a Dark Triad composite (Jonason et al., 2009). Psychopathy was correlated with Machiavellianism and narcissism ( $r$ 's = .15 and .58,  $p$ 's < .01), but Machiavellianism and narcissism were not correlated ( $r = -.01$ ). This problem has occurred before (Jonason, Li, & Buss, 2010) and was one reason the Dirty Dozen was created (Jonason & Webster, 2010).

### 3. Results

In Table 1, we report descriptive statistics and sex difference tests that adjust for the imbalanced sex ratio. Women were more empathic than men were. Men scored higher on all of the Dark Triad variables than women did.

All three of the Dark Triad traits, as well as the subscales of the psychopathy and narcissism instruments, were correlated with low rates of empathy ( $r$ 's =  $-.16$  to  $-.43$ ,  $p$ 's < .01). Partial correlation between empathy and primary psychopathy (controlling for secondary psychopathy) was significant ( $r(352) = -.28$ ,  $p < .01$ ), whereas the relationship between empathy and secondary psychopathy (controlling for primary psychopathy) was not significant ( $r = -.02$ ). When controlling for Grandiose Exhibitionism, empathy was correlated with Leadership/Authority facet of the NPI ( $r(352) = -.23$ ,  $p < .01$ ), and the partial correlation between Grandiose Exhibitionism and empathy (controlling for Leadership/Authority) approached significance ( $r(352) = -.10$ ,  $p < .06$ ). When shared variance between the traits of Dark Triad was controlled in multiple regression, Machiavellianism ( $\beta = -.18$ ,  $t = -3.00$ ,  $p < .05$ ), Leadership/Authority ( $\beta = -.27$ ,  $t = -3.81$ ,  $p < .01$ ), and Grandiose Exhibitionism ( $\beta = -.22$ ,  $t = -3.18$ ,  $p < .01$ ) facets of the NPI, as well as primary psychopathy ( $\beta = -.30$ ,  $t = -4.38$ ,  $p < .01$ ), predicted empathy.

Mediation was tested, where sex was entered as the independent variable at Step 1, empathy as another independent variable at Step 2, and all the Dark Triad variables as the outcome variables (see Fig. 1). Empathy explained a further 16% of variability between sex and Leadership/Authority (Step 1  $R^2 = .03$ , Step 2  $R^2 = .19$ ,  $F(1,349) = 68.56$ ,  $p < .01$ ), a further 12% of variability between sex and Grandiose Exhibitionism (Step 1  $R^2 = .05$ , Step 2  $R^2 = .17$ ,  $F(1,349) = 50.37$ ,  $p < .01$ ). Adding empathy as a predictor predicted another 10.3% variability in primary psychopathy scores (Step 1  $R^2 = .04$ , Step 2  $R^2 = .19$ ,  $F(1,349) = 41.83$ ,  $p < .01$ ), 4.1% secondary psychopathy scores (Step 1  $R^2 = .02$ , Step 2  $R^2 = .06$ ,  $F(1,349) = 15.1$ ,  $p < .01$ ), and 5.9% variability in Machiavellianism scores (Step 1  $R^2 = .03$ , Step 2  $R^2 = .09$ ,  $F(1,349) = 22.70$ ,  $p < .01$ ). Thus, empathy explained more variability in the Leadership/Authority, Grandiose Exhibitionism, primary psychopathy, and Machiavellianism scores than sex alone did.

We tested whether the sex of the participant moderated the links between the Dark Triad and empathy. The relationship between low empathy and the Leadership/Authority facet of the NPI was more substantial (Fisher's  $z = 1.76$ ,  $p < .05$ ) for women ( $r(292) = -.43$ ,  $p < .01$ ) than it was for men ( $r(60) = -.29$ ,  $p < .01$ ). The same moderation was observed for the Grandiose Exhibitionism facet of the NPI ( $z = -1.96$ ,  $p < .05$ ), demonstrating that the negative correlation was stronger for women ( $r(292) = -.39$ ,  $p < .01$ ) than for men ( $r(60) = -.13$ ,  $p < .01$ ). Sex also moderated the relationship between low empathy and high scores in primary

psychopathy, where the negative correlations were stronger ( $z = 1.75$ ,  $p < .05$ ) for men ( $r(60) = -.51$ ,  $p < .01$ ) than for women ( $r(292) = -.30$ ,  $p < .01$ ).

### 4. Discussion

Empathy is instrumental to facilitating long-term mutualistic relationships (de Waal, 2008). However, those who are high on the Dark Triad traits appear to enact antagonistic, agentic short-term relationships (Jonason & Schmitt, 2012; Jonason et al., 2009). One might ask: How can one engage in such an approach to life? This question reveals a fundamental misunderstanding about people. It assumes that people are innately good. This Rousseauian mindset may blind researchers from the truth that at times, it can be good to be bad, adaptively speaking. That is, short-term mating and social strategies may afford individuals with adaptive gains like increased mating success and access to resources (Jonason, Webster, Schmitt, Li, & Crysel, 2012). It has previously been shown that one adaptive way of engaging in this approach to life is to have a protean or intentionally variable manipulation style (Jonason & Webster, 2012). An additional way may be to have limited empathy. That is, if one is high on empathy, they may emotionally connect with their "prey" or "victims" which will interfere with their ability to benefit from their characteristically exploitive social-sexual style. Therefore, one would expect, as we found, that the Dark Triad traits are negatively associated with empathy scores. A fundamental feature of each trait, in as much as it is part of the cluster of the Dark Triad, is limited empathy.

We present a complex pattern of moderation and mediation. Moderation tests suggest the link between the Dark Triad and limited empathy might primarily be through narcissism in women but psychopathy in men. These alternative routes may have different implications for the development of both the Dark Triad and limited empathy in the sexes. Moreover, it presents the possibility that there might be different outcomes associated with limited empathy in men and women. For instance, men who are high on psychopathy and thus have limited empathy may enact a risky lifestyle (Jonason, Slomski et al., 2012) whereas women who are high on narcissism may enact parasitic relationship styles (Jonason & Schmitt, 2012).

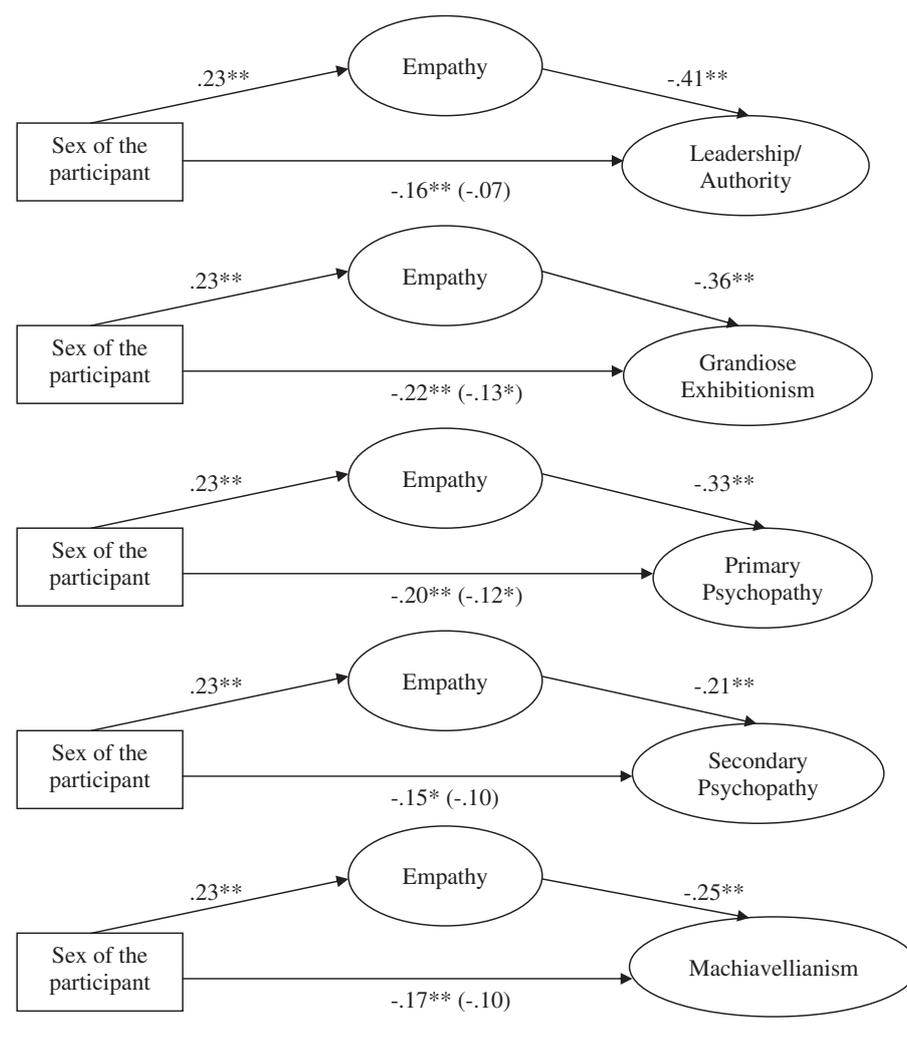
Despite this sex-differentiation in terms of moderation, we found that empathy facilitated different aspects of the Dark Triad in men. As has been shown before, men score lower on empathy (Baron-Cohen & Wheelwright, 2004) and higher on the Dark Triad (Jonason et al., 2009) than women do. Theoretically speaking, having limited empathy might facilitate the antagonistic approach to life that is more characteristic of men. Not caring about the feelings of others might enable one to pursue their selfish, competitive, and aggressive approach to social and sexual relationships (Jonason,

**Table 1**  
Descriptive statistics and sex differences for the Dark Triad and empathy.

	Mean (SD)			t	g
	Overall	Women	Men		
Empathy Quotient	37.51 (12.87)	38.88 (9.01)	30.87 (9.01)	-5.71**	0.62
Machiavellianism	3.76 (0.69)	3.70 (0.70)	4.01 (0.59)	3.54**	0.48
Narcissism	0.47 (0.25)	0.44 (0.29)	0.56 (0.28)	3.53**	0.66
Leadership/Authority	0.57 (0.39)	0.55 (0.38)	0.72 (0.41)	2.96**	0.43
Grandiose Exhibitionism	0.46 (0.35)	0.42 (0.34)	0.63 (0.38)	3.88**	0.58
Psychopathy	2.34 (0.46)	2.30 (0.45)	2.54 (0.45)	3.70**	0.50
Primary Psychopathy	2.37 (0.51)	2.32 (0.50)	2.59 (0.47)	3.91**	0.39
Secondary Psychopathy	2.32 (0.52)	2.29 (0.51)	2.49 (0.54)	2.77**	0.38

\* $p < .05$ .

\*\* $p < .01$ .



1 = male, 2 = female \*  $p < .05$ , \*\*  $p < .01$

**Fig. 1.** Mediation models where empathy mediates the sex differences in the Dark Triad Traits with mediated association in parentheses. 1 = male, 2 = female \*  $p < .05$ , \*\*  $p < .01$ .

Luévano et al., 2012; Jonason, Slomski et al., 2012). Practically speaking, this suggests that while these traits may be more characteristically male than female, when they are present in women, they function uniquely as has been shown with motivations to engage in friendship (Jonason & Schmitt, 2012). In some ways, this might be a case of convergent evolution (McGhee, 2011) with men and women coming to the same solution – limited empathy – but coming to it through different routes. The route for women may be one of parasitism and strategic-manipulation (viz., social exploitiveness) as evidenced in the range of tactics used to minimize unwanted commitments (Jonason & Buss, 2012) and reasons to engage in casual sex relationships (Greiling & Buss, 2000). In contrast, the route for men may be through opportunism (viz., agency) as found in men's mating strategy (Clark & Hatfield, 1989).

This study had a number of limitations. First, our sample had a grossly imbalanced sex ratio. We attempted to address this by using tests that do not assume equal variance. Despite this imbalanced ratio, we were able to use simple moderation tests because the variance (i.e., standard deviation) at each level of the moderator was near parity (Baron & Kenny, 1986). Second, we used only one measure of empathy. There are other measures of the empathy

construct that might be useful (e.g., emotional intelligence) to better understand these relationships. We opted to use what we saw as the “gold-standard” measure of empathy. Third, when doing mediation analyses we did not use Sobel's test. Sobel is a conservative test for mediation and we failed to find significance using this test. This may be the result of the aforementioned imbalanced sex ratio. However, we did find significant partial and full mediation when examining change in  $R^2$ . Last, we were only able to include two dimensions of the NPI because of questionable psychometric properties. Although the 3-factor solution appears to be best for this measure (Ackerman et al., 2011), we were unable to replicate it here (including a Confirmatory Factor Analysis we did as part of our preparation for analyses). This may be because all solutions of the NPI are emergent and inductive which mean they are each influenced by idiosyncrasies in each dataset. Despite these limitations, this study provided some unique insights regarding the empathy-core of the Dark Triad.

Traditionally speaking, limited empathy and the Dark Triad are seen by researchers and society as a pathology to be treated. In contrast, by adopting an evolutionary perspective on these two aspects of personality we have formulated an alternative conceptualization.

That is, despite the costs of limited empathy for societies and individuals, it may actually be beneficial for those engaged in an antagonistic and exploitive social strategy. It may be that limited empathy may be instrumental in the successful deployment of the socially aversive strategy found in those high on the Dark Triad. Characters like James Bond, Gregory House, M.D., Bender (from *Futurama*), and their real-life counterparts (see Jonason, Webster et al., 2012) would be hard-pressed to be the way they are without their limited empathy.

## References

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trseniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the narcissistic personality inventory really measure? *Assessment*, 18, 67–87.
- Ali, F., Amorim, I. S., & Chamorro-Premuzic, T. (2009). Empathy deficits and trait emotional intelligence in psychopathy and Machiavellianism. *Personality and Individual Differences*, 47, 758–762.
- Austin, E. J., Farrelly, D., Black, C., & Moore, H. (2007). Emotional intelligence, Machiavellianism and emotional manipulation: Does EI have a dark side? *Personality and Individual Differences*, 43, 179–189.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An investigation of adults with Asperger Syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34, 163–175.
- Campbell, W. K., & Miller, J. D. (Eds.). (2011). *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments*. New York: Wiley.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Clark, R. D., & Hatfield, E. (1989). Gender difference in receptivity to sexual offers. *Psychology and Human Sexuality*, 2, 39–55.
- de Waal, F. B. (2008). Putting the altruism back into altruism: The evolution of empathy. *Annual Review of Psychology*, 59, 279–300.
- Falkenbach, D., Poythress, N., Falki, M., & Manchak, S. (2007). Reliability and validity of two self-report measures of psychopathy. *Assessment*, 14, 341–350.
- Greiling, H., & Buss, D. M. (2000). Women's sexual strategies: The hidden dimension of extra-pair mating. *Personality and Individual Differences*, 28, 929–963.
- Gunnthorsdottir, A., McCabe, K., & Smith, V. (2002). Using the Machiavellianism instrument to predict trustworthiness in a bargaining game. *Journal of Economic Psychology*, 23, 49–66.
- Hicks, B. M., Markon, K. E., Patrick, C. J., Krueger, R. F., & Newman, J. P. (2004). Identifying psychopathy subtypes on the basis of personality structure. *Psychological Assessment*, 16, 276–288.
- Hunter, J. E., Gerbing, D. W., & Boster, F. J. (1982). Machiavellianism beliefs and personality: Construct invalidity of the Machiavellianism dimensions. *Journal of Personality and Social Psychology*, 43, 1293–1305.
- Jonason, P. K., & Buss, D. M. (2012). Avoiding entangling commitments: Tactics for implementing a short-term mating strategy. *Personality and Individual Differences*, 52, 606–610.
- Jonason, P. K., & Kavanagh, P. (2010). The dark side of love: The Dark Triad and love styles. *Personality and Individual Differences*, 49, 606–610.
- Jonason, P. K., Li, N. P., & Buss, D. M. (2010). The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences*, 48, 373–378.
- Jonason, P. K., Li, N. P., Webster, G. W., & Schmitt, D. P. (2009). The Dark Triad: Facilitating short-term mating in men. *European Journal of Personality*, 23, 5–18.
- Jonason, P. K., Luévano, V. X., & Adams, H. M. (2012). How the Dark Triad traits predict relationship choices. *Personality and Individual Differences*, 53, 180–184.
- Jonason, P. K., & Schmitt, D. P. (2012). What have you done for me lately? Friendship-selection in the shadows of Dark Triad traits. *Evolutionary Psychology*, 10, 400–421.
- Jonason, P. K., Slomski, S., & Partyka, J. (2012). The Dark Triad at work: How toxic employees get their way. *Personality and Individual Differences*, 52, 449–453.
- Jonason, P. K., & Tost, J. (2010). I just cannot control myself: The Dark Triad and self-control. *Personality and Individual Differences*, 49, 611–615.
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psychological Assessment*, 22, 420–432.
- Jonason, P. K., & Webster, G. D. (2012). A protean approach to social influence: Dark Triad personalities and social influence tactics. *Personality and Individual Differences*, 52, 521–526.
- Jonason, P. K., Webster, G. W., Schmitt, D. P., Li, N. P., & Crysel, L. (2012). The antihero in popular culture: A life history theory of the Dark Triad. *Review of General Psychology*, 16, 192–199.
- Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, 1, 12–18.
- McDonald, M. M., Donnellan, M. B., & Navarrete, C. D. (2011). A life history approach to understanding the Dark Triad. *Personality and Individual Differences*, 52, 601–605.
- McGhee, G. R. (2011). Convergent evolution: Limited forms most beautiful. In *Vienna series in theoretical biology*. Cambridge, MA: Massachusetts Institute of Technology Press.
- Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry*, 12, 228–230.
- Paulhus, D. L., Neumann, C. S., & Hare, R. (in press). *Manual for the self-report psychopathy scale (SRP)*. 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.
- Raskin, R. N., & Terry, H. (1988). A principal components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890–902.
- 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.