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A Multidimensional View of the Relationship Between Empathy and the Dark Triad

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Abstract. The Dark Triad traits (i.e., narcissism, psychopathy, and Machiavellianism) are linked to individual differences in empathy, but what we know about these connections is limited to unidimensional or bidimensional conceptualizations of empathy and to English-speaking samples. Hence, we replicated and extended previous research by applying a multidimensional measure of empathy to the study of how empathy is linked to the Dark Triad in a German sample ($N = 516$). By doing so, we provided more detail about the way the Dark Triad traits are linked to individual differences in empathy in a unique sample. Narcissism was linked to empathy skills whereas psychopathy was linked to empathy deficits. The Dark Triad traits were stronger in men than in women, while women showed more empathic abilities. The sex differences in the Dark Triad traits were mediated by empathy. We also showed that the paths to empathy in the sexes differ in terms of quantity and quality. We discuss our results from an evolutionary perspective.

Keywords: dark triad, narcissism, psychopathy, Machiavellianism, sex differences, empathy

There is a proverbial new kid on the block in personality psychology to rival the Big Five model. Recent years have seen an exponential increase (Jonason, Webster, Schmitt, Li, & Crysel, 2012) in the attention drawn to the understanding of the darker side of human nature, in particular the Dark Triad traits (i.e., psychopathy, narcissism, and Machiavellianism). These traits are associated with a number of important interpersonal outcomes like future discounting (Jonason, Koenig, & Tost, 2010), limited self-control (Jonason & Tost, 2010; Jones & Paulhus, 2011), and, of focus here, limited empathy (Ali, Amorim, & Chamorro-Premuzic, 2009; Giammarco & Vernon, 2014; Jonason & Krause, 2013; Jonason, Lyons, Bethell, & Ross, 2013; Wai & Tiliopoulos, 2012). However, research on empathy and the Dark Triad traits has (1) generally been confined to English-speaking samples, (2) used one- or two-dimensional assessments of empathy, and (3) failed to present a particularly compelling case for a moderation effect. In this study we address these limitations to extend what we know about the links between empathy and the Dark Triad traits.

Empathy may be a multidimensional construct (Davis, 1980, 1983) composed of *Empathy Fantasies* (i.e., tendencies to identify with characters in fictional situations), *Empathic Concern* (i.e., feelings of warmth, compassion, and concern for others), *Personal Distress* (i.e., feelings of anxiety and discomfort while observing another's negative experiences), and *Perspective Taking* (i.e., spontaneous

attempts to adopt the perspectives of other people and to see things from their point of view) facets. Failures in the past to assess the multidimensional nature of empathy may have created a lack of nuance in the understanding of the empathy “deficits” linked to the Dark Triad traits. Therefore, we assess the links between the Dark Triad traits and (the first) three aspects of affective empathy and (the last) one facet of cognitive empathy as detailed above.¹ We expect this multidimensional assessment to provide further evidence of an apparent, fundamental distinction within the Dark Triad traits. There appears to be a divide within the cluster suggesting narcissism may be different than psychopathy. For instance, social perceptions of individuals (described in vignette studies) suggest psychopathy (and to a lesser degree, Machiavellianism) might be quite “dark” whereas narcissism is (relatively) “light” (Rauthmann, 2012). Narcissism is linked to various socially desirable outcomes like extraversion whereas psychopathy is more strongly tied to disagreeableness and dishonesty than the other traits are (Jonason & McCain, 2012).

In terms of empathy, while all three traits appear to have empathy deficits (Jonason, Lyons, et al., 2013), the nature of those deficits is both unclear and poorly elucidated in prior research. Indeed, prior research using a two-dimensional measure of empathy failed to find the same deficits in all three traits (Jonason & Krause, 2013), further reinforcing the need to better detail the links between empathy and the Dark Triad traits. We contend that for those high

¹ However, we remain agnostic about the links between particular kinds of empathy.

on narcissism (when the variance for the other traits is controlled for), it might be advantageous to be high on empathy. Being empathetic may actually facilitate access to the external validation those high on narcissism need (Raskin & Terry, 1988). This is not to say they are “nice” people but, instead, they use their empathy to (selfishly) serve their ego-needs. By understanding the needs and feelings of others, one might better get what one wants/needs from them. For instance, understanding what one likes and what causes them distress may actually be facultatively useful for the narcissistic social strategy. Therefore, we expect narcissism to be linked to empathy skills.

In contrast, psychopathy is linked to all types of socially undesirable outcomes like aggression (Jonason & Webster, 2010), limited self-control (Jonason & Tost, 2010), and an exploitive interpersonal/sexual style (Jonason, Li, Webster, & Schmitt, 2009; Jonason & Schmitt, 2012). While links exist between these behaviors and narcissism, most of those associations could have been contaminated by shared variance with psychopathy. An evolutionary argument has been made for how limited empathy might facilitate the active exploitation of others (Jonason & Krause, 2013; Jonason, Lyons, et al., 2013). In order to exploit others one must not empathize with them. The exploitation characterized by psychopathy reflects a brutality and forcefulness not found in narcissist's tactics of manipulation (Jonason & Webster, 2012). In order for psychopathy to be an adaptive social strategy when correlated with this style of social interaction, those who are characterized by psychopathy must be unencumbered by empathy to extract resources from the socioecology; empathy would literally get in the way. As such, we expect psychopathy to be the true berth of where the empathy deficits are localized to in the Dark Triad traits.

Beyond better disentangling the links between the Dark Triad traits and empathy, we examine (1) how sex differences in the Dark Triad traits might be in part a function (i.e., mediation) of individual differences in empathy and (2) how the links between the Dark Triad traits and empathy scores might differ between the sexes (i.e., moderation). As to the question of mediation, the preconditions for mediation already exist to test such a prediction. Reliably, men score higher on the Dark Triad traits (Jonason et al., 2009, Jonason, Lyons, et al., 2013; Jonason & Webster, 2010)² and lower on empathy (Davis, 1980) than women do. The approach to life characterized by the Dark Triad traits is more characteristically “male” than “female” but what underlies that difference is important. It is insufficient (in our eyes) to say the sexes differ without asking the follow-up questions of *how* and *why* they differ. There are asymmetrical costs and benefits for engaging in the life history strategies that characterize the Dark Triad traits (Buss, 2009; Jonason et al., 2010). Women pay more of the costs and reap fewer rewards than men do. For instance, a man can benefit more (in evolutionary terms) from engaging

in casual sex (Buss & Schmitt, 1993). Not surprisingly, the Dark Triad traits facilitate an exploitive, short-term mating strategy in men (Jonason et al., 2009). We contend, in concert with previous work, that having limited empathy may be part of the suite of underlying psychological systems that facilitate this characteristically male approach to life embodied in the Dark Triad traits.

As to the question of moderation, we expect a somewhat counterintuitive finding overall. We expect the quality (i.e., the kinds) and quantity (i.e., the number and magnitude) of the correlations (i.e., path coefficients) to be different in women than in men. Past research relied too heavily on psychometrically simplistic empathy measures and moderation tests (i.e., univariate Fisher's z) to fully explore this idea. We predict that women's Dark Triad tendencies might underlie more links to empathy systems than in men that might be a function of the relative “lightness” or “darkness” of the traits. As noted above, women are characteristically more empathetic than men are. It takes more empathy “handicapping” for women to get to the point of engaging in social exploitation and parasitism than it does for men, given women's nativistic tendency to be more nurturing on average than men. In contrast, women may use their better empathy to facilitate their narcissistic tendencies more than men do. Indeed, women are more likely than men are to shift their behavior in response to environmental contingencies (Gangestad & Buss, 1993). This should translate into (1) more associations between the “darker” aspects of the Dark Triad and limited empathy in women than in men and (2) more associations between the “lighter” aspects of the Dark Triad and enhanced empathy.

In concert with other work (Jonason & Krause, 2013; Jonason, Lyons, et al., 2013), we assess the links between the Dark Triad traits and empathy from an adaptationist perspective (Buss, 2009). We do not conceptualize the purported empathy deficits linked to the Dark Triad to be deficits *per se*, but instead, part of the suite of traits that would be essential for someone pursuing a cheater life history strategy (Jonason & Webster, 2012; Mealey, 1995). In this report, we replicate and extend what is known about the empathy-Dark Triad links in a unique sample using more sophisticated tests than previously presented, testing some hypothesis that have hitherto been neglected (most likely as a function of relatively sample sizes). In particular, we contend that the social strategy of those high on narcissism is characterized by moderate rates of empathy but the social strategy characterized by psychopathy should be linked to moderate rates of empathy deficits. Given the considerable overlap between the traits, we control for the shared variance among the traits to isolate the unique associations. We further examine how individual differences in empathy may mediate sex differences in the Dark Triad traits and how the links between these two psychological constructs might be moderated by the sex of the participant using Structural Equation Modeling.

² As far as we know, there has only been one assessment of the sex differences in the Dark Triad traits in non-Western countries (i.e., Singapore and Poland), and the sex differences were robust to these country-level differences (Jonason, Li, & Czarna, 2013).

Table 1. Zero-order correlations and standardized regression coefficients using the Dark Triad to predict four dimensions of empathy

Empathy	$r(\beta)$		
	Psychopathy	Machiavellianism	Narcissism
Fantasy	-.16** (-.20**)	.04 (.07)	.12** (.11*)
Empathic concern	-.38** (-.38**)	-.14** (-.00)	.01 (.05)
Personal distress	.04 (.05)	.07 (-.07)	.23** (.26**)
Perspective taking	-.19** (-.22**)	-.05 (.06)	-.04 (-.05)

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

Method

Participants and Procedure

Five hundred sixteen (64.9% female) Germans (99.2%), aged 17–48 years ($M = 23.99$; $SD = 3.82$),³ participated in an online study hosted through *unipark.de* in exchange for different incentives.⁴ Participants were primarily solicited via e-mail and in small proportion via social networking sites. Upon completion, participants were thanked, debriefed, and got their incentive payout if necessary.

Measures

To measure the Dark Triad traits, the German translation (Küfner, Küfner, Dufner, & Back, 2014) of the Dark Triad Dirty Dozen (Jonason & Webster, 2010) was used. Participants were asked how much they agreed (1 = *completely disagree*; 5 = *completely agree*) with statements such as: “I tend to lack remorse” (i.e., psychopathy), “I tend to want others to admire me” (i.e., narcissism), and “I have used deceit or lied to get my way” (i.e., Machiavellianism). Items were averaged together to create indexes of narcissism (Cronbach's $\alpha = .74$), Machiavellianism ($\alpha = .74$), and psychopathy ($\alpha = .56$).^{5,6}

Empathy was assessed by the Saarbrücken personality questionnaire (Paulus, 2009), which is a modified German translation of the Interpersonal Reactivity Index (Davis, 1980, 1983). Participants reported the extent they agreed (1 = *strongly disagree*; 5 = *strongly agree*) with 16 statements (e.g., “I often have tender, concerned feelings for people less fortunate than me.”). Corresponding items were averaged to create indexes of empathic fantasy ($\alpha = .73$), empathic concern ($\alpha = .66$), personal distress ($\alpha = .71$), and perspective taking ($\alpha = .75$).

Results

We replicated some but not all of the sex differences in the Dark Triad traits and empathy. Men scored higher than women did in psychopathy ($t(514) = 5.60$, $p < .01$, Hedge's $g = 0.52$) and Machiavellianism ($t(514) = 2.09$, $p < .05$, $g = 0.19$), but not narcissism. Men scored lower than women did on empathic fantasies ($t(514) = -5.41$, $p < .01$, $g = -0.50$), empathic concern ($t(514) = -7.50$, $p < .01$, $g = -0.69$), and personal distress ($t(514) = -4.42$, $p < .01$, $g = -0.41$), but not the perspective-taking aspect of empathy. We used the Hedge's g instead of the Cohen's d because of the grossly unequal number of men and women in the sample. However, the interpretation is the same.

Next, we correlated the Dark Triad traits with the four measures of empathy (Table 1). We also controlled for the shared variance among the traits through multiple regression. This allows us to isolate the effects of each trait in their links with empathy. Psychopathy was negatively correlated to perspective taking (i.e., a measure of cognitive empathy) as well as to fantasy and empathic concern (i.e., two measures of affective empathy), narcissism was positively correlated with fantasy and personal distress, and Machiavellianism correlated negatively with empathic concern, but this association disappeared in regression analysis.

Next, we present three Structural Equation Models to describe the relationship between the various dimensions of empathy and the Dark Triad traits while controlling for the shared variance within each construct overall and for each sex. Each model contains the latent measure, in ovals, of each construct created above by averaging the indicators. In Figure 1A ($\chi^2(7) = 7.93$, $p = .34$, $\chi^2/df = 1.13$, CFI = 1.00, NFI = .99, RMSEA = .02 [90%CI .00, .06], p -closeness of fit = .89) empathic concern and personal distress were negatively and (weakly) positively (respectively)

³ Results were robust to partialing age variance.

⁴ Across these different sampling techniques, we did not find systematic or coherent differences in our results. Therefore, our results are reported across sampling type.

⁵ Psychopathy was correlated with Machiavellianism ($r(514) = .42$, $p < .01$) and narcissism ($r(514) = .11$, $p < .05$) which was correlated with Machiavellianism ($r(514) = .46$, $p < .01$).

⁶ This alpha is low but not unacceptably so (Schmitt, 1996). Given the correlation between the number of items on a scale and Cronbach's Alpha, such low rates might be expected. Indeed, the psychopathy measure of the Dirty Dozen consistently returns the lowest relative estimate of internal consistency (Jonason & Webster, 2010, 2012).

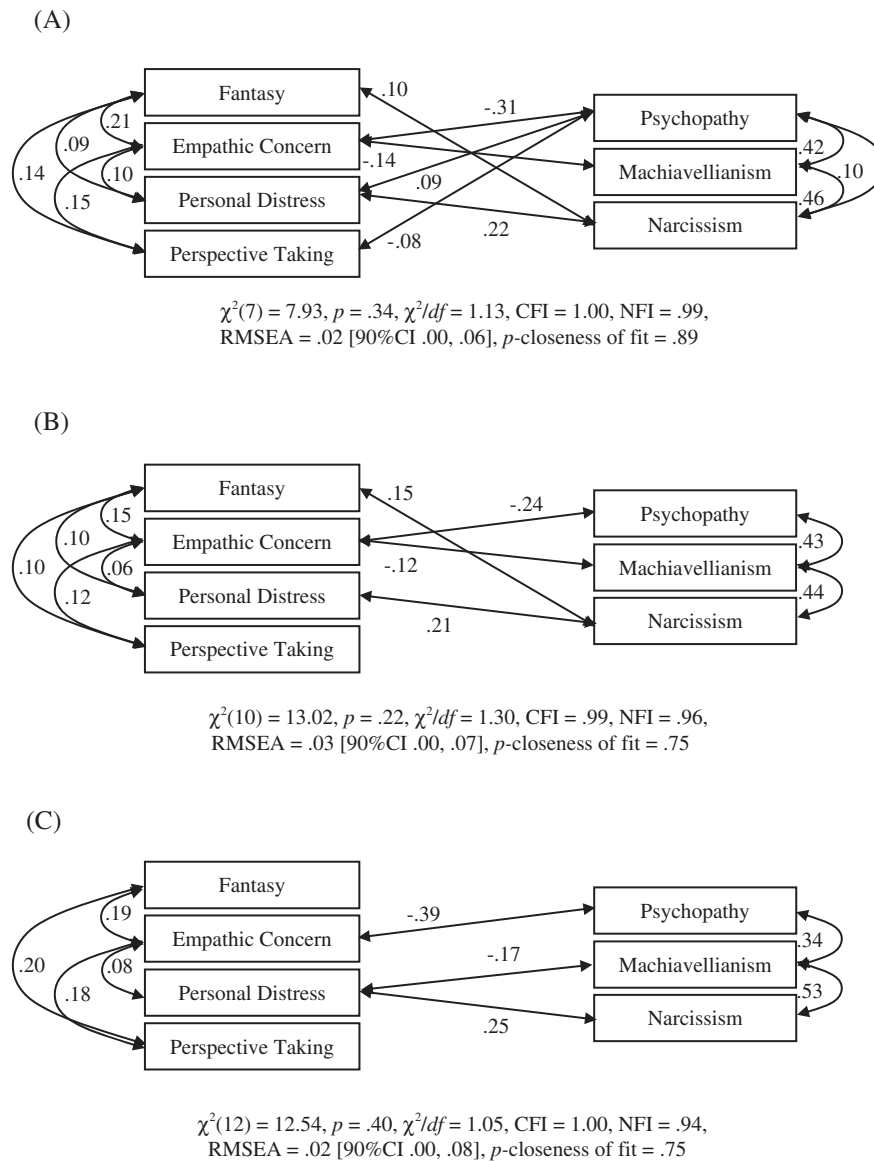


Figure 1. Structural Equation Models representing the relationship between the Dark Triad traits and four dimensions of empathy, overall and in men and women separately. (A) Overall model independent of sex of participant. (B) Model for women. (C) Model for men.

Note. All links significant less than .05 (two-tailed).

linked to psychopathy, Machiavellianism was negatively linked to empathic concern, and narcissism was positively linked to Fantasy and personal distress. When we examined this model in men (Figure 1B: $\chi^2(12) = 12.54, p = .40, \chi^2/df = 1.05, CFI = 1.00, NFI = .94, RMSEA = .02$ [90%CI .00, .08], *p*-closeness of fit = .75) and women (Figure 1A: $\chi^2(10) = 13.02, p = .22, \chi^2/df = 1.30, CFI = .99, NFI = .96, RMSEA = .03$ [90%CI .00, .07], *p*-closeness of fit = .75) there were more links in women than in men. The Dark Triad traits were linked to empathic fantasy and empathic concern in women, but personal distress in men.

In order to test for mediation, we used hierarchical multiple regression, where Step 1 contained the sex of the participant and Step 2 contained the three empathy dimensions (i.e., affective empathy) that had significant sex differences above as independent variables (Table 2), the three empathy dimensions explained a further 12% of the variability between sex and psychopathy ($\Delta R^2 = .12, F(5, 510) = 22.57, p < .001$). When we examined Machiavellianism, we also found significant mediation ($\Delta R^2 = .03, F(5, 510) = 4.60, p < .001$). Given our failure to find a sex difference in narcissism, we did not test it for mediation but included it in the Table to be thorough.

Table 2. Mediation model where the three dimensions of empathy mediate the sex differences in the Dark Triad traits with the mediated association in parentheses

Mediation model	β		
	Psychopathy	Machiavellianism	Narcissism
Sex of participant	-.24** (-.16**)	-.09* (-.08)	-.04 (-.10*)
Fantasy	.01	.12*	.14**
Empathic concern	-.32**	-.17**	-.04
Personal distress	.12**	.10*	.24**

Notes. 0 = male, 1 = female. * $p < .05$. ** $p < .01$ (two-tailed).

Discussion

A number of studies have documented the relationships between empathy and the Dark Triad traits (Ali, Amorim, & Chamorro-Premuzic, 2009; Giammarco & Vernon, 2014; Jonason & Krause, 2013; Jonason, Lyons, et al., 2013; Wai & Tiliopoulos, 2012). The studies have relied on English-speaking samples, psychometrically simple measures of individual differences in empathy, provided relatively weak tests of moderation by the sex of the participant, and reported limited information on how sex differences in the Dark Triad traits might be driven, in part, by individual differences in empathy. In this study, we have attempted to address these limitations while adopting an adaptationist paradigm (Buss, 2009).

One important contribution in this study to our understanding of the Dark Triad traits is it drives a further wedge between the “darker” and the “lighter” aspects of the cluster. Consistent with prior studies (Jonason & Krause, 2013; Rauthmann, 2012), we have highlighted the “darker” nature of psychopathy and Machiavellianism and the “lighter” nature of narcissism. While both traits might be part of an exploitive social strategy (Jonason & Webster, 2012; Mealey, 1995), our study suggests the manner by which those high on each trait might take a different tack when attempting to take advantage of others. As a function of different goals, each trait may orient display qualitatively different forms of empathy. Narcissism is characterized by a need to have one's ego-needs validated (Raskin & Terry, 1988). It might be the best way to do this is to feign caring about others and a moderate degree of empathy might be essential toward this task. In the present study, we found narcissism was associated with the empathy component of personal distress. Being able to understand others' pain might better help the narcissist relate to and even take advantage of others. However, it is possible that this is an artifact of the vulnerable/pathological form of narcissism the Dirty Dozen taps as opposed to measure of healthier, grandiose narcissism (Maples, Lampkin, & Miller, 2014). In contrast, those high on psychopathy appear to have a rather rough social style with aggression and coercion (Jonason & Webster, 2010, 2012) and doing so might be facilitated by limited empathy. In short, we have highlighted a nuanced understanding of the Dark Triad traits that highlights the various social styles that are comingled in this cluster of aversive personality traits (Jonason et al., 2012; McDonald, Donnellan, & Navarrete, 2011).

In addition, we have tested both mediation and moderation hypotheses. In reference to the former, we have replicated some but not all of the sex differences in the Dark Triad traits (Jonason et al., 2009; Jonason, Li, et al., 2013). Our failure to find a sex difference in narcissism is consistent with some recent work (Giammarco & Vernon, 2014) whose authors contend that it might be diagnostic of an increase in narcissism in women. While this is an interesting conjecture, we urge caution in this interpretation in that single-shot, cross-sectional studies cannot show genuine change and are subject to sampling error. Nevertheless, we have provided support for the idea that underlying sex differences in the Dark Triad traits may be individual differences in empathy (Jonason & Krause, 2013; Jonason, Lyons, et al., 2013). Limited empathy may be a requisite part of the complex suite of psychological adaptations required to be successful in an exploitive social or sexual strategy (Jonason et al., 2009; Jonason & Schmitt, 2012). If men can benefit more than women can from engaging in “antisocial” ways of life (Jonason et al., 2010), natural selection may have coupled high rates of psychopathy and limited empathy in men more than in women.

We have offered a unique perspective on potential moderation effects. While this is the first data to suggest such an effect, we find it compelling given the relatively large sample size and the robustness of Structural Equation Modeling as opposed to less sophisticated analyses reported previously (Jonason, Lyons, et al., 2013). In women, their latent greater empathic abilities were linked to narcissism. Women's tendency to fantasize about others' feelings and to be alert to the personal distress of others predicted their narcissism. In contrast, only personal distress predicted men's narcissism scores. It is possible that in order to be narcissistic one needs to be sensitive to information about others' emotional state and because women come equipped to be better at this than men are, there may be more to women's than men's narcissism, in terms of empathy. In contrast, women's empathic deficits were linked to more antisocial personality traits than men's was. In women, limited empathic concern drove both psychopathy and Machiavellianism but only drove psychopathy scores in men. We conjecture that this might have to do with where the sexes start when it comes to adopting the lifestyle embodied in the Dark Triad traits. Because men are already more inclined to adopt a “darker” way of life than women are, it may take men fewer empathy deficits to get there than in women. In contrast, because women are more inclined to

an empathic way of life, they may be more likely to adopt a socially sensitive life history strategy, as embodied in narcissism. Future research should examine the psychological (e.g., Jonason, Lyons, & Bethell, 2014), biological, and sociological factors that are associated with engaging in the Dark Triad way of life and the costs of those social strategies in each sex.

Despite some advances provided in this study to our understanding of the Dark Triad-empathy links, this study is characterized by a number of limitations. First, we adopted a recently translated version of the Dirty Dozen measure of the Dark Triad trait. The Dirty Dozen measure has come under attack for being too brief (Miller et al., 2012, but see Jonason & Luévano, 2013; Jonason & McCain, 2012; Webster & Jonason, 2013) but there were no foreign language, let alone German translations of alternative short measures of the Dark Triad traits, when we collected our data. Second, our measures of psychopathy and empathic concern had internal consistencies below the common standard of .70 (Nunnally, 1978) but it still conformed to more liberal standards (Schmitt, 1996). Nevertheless, both measures may suffer from the limitations imposed by small numbers of items and the way Cronbach's alpha assumes unidimensionality when multidimensionality may more accurately describe these two individual differences. Third, we assessed multidimensional empathy by a German version (Paulus, 2009) of the Interpersonal Reactivity Index (Davis, 1980, 1983). While this is a widely applied empathy instrument it may have some weaknesses. For instance, it fails to consider situational influences on empathic tendencies (Eisenberg & Fabes, 1990) and is a self-report measure (Leslie, Johnson-Frey, & Grafton, 2004; Steins, 1998). While more recent measures exist (Baron-Cohen & Wheelwright, 2004; Spreng, McKinnon, Mar, & Levine, 2009), we felt the present conceptualization was the most well established (Hall & Bernieri, 2001). Fourth, despite our sample being composed of Germans, it could still be described as WEIRD (i.e., Western, Educated, Industrialized, Rich, and Democratic; see Henrich, Heine, & Norenzayan, 2010). Fifth, while we had a good sized sample, there were more women than men in our sample. We tried to adjust for this when we examined effect sizes in sex differences. Despite these limitations, we have provided unique details about the empathy deficits linked to the Dark Triad traits in a previously unexamined population.

The most important limitation of this study and nearly all work in personality psychology, let alone the Dark Triad traits, is the reliance on correlational data. This severely constrains our ability to draw causal conclusions or make bold statements about which factor causes which. We have taken considerable caution to avoid making any such statements. However, one virtue of an evolutionary model of either of these constructs is that it provides *a priori* assumptions about the way variables should relate to one another and what are the most likely causal agents (Confer et al., 2010). Here we conjecture about the causal relationships that might account for the relationships we found and why we designed our SEMs the way we did. We contend that empathy is a more primitive system (de Waal, 1996)

that informs – along with other factors like hormonal and neurological conditions – the generation of personality traits. That is, instead of seeing all personality traits as existing on the same theoretical level, we envision a hierarchical, temporal, and casually ordered system with intrapersonal factors being part of the conditions that create personality traits and those personality traits act as the mediating forces between intrapersonal factors and interpersonal behaviors.

In conclusion, we have replicated and extended previous research on the connections between empathy and Dark Triad traits. We have shown how psychopathy and narcissism may be different in how they relate to individual differences in empathy. We have replicated sex differences in empathy and the Dark Triad traits and shown how individual differences in empathy might mediate sex differences in the Dark Triad traits. We revealed that the links between empathy and the Dark Triad traits differ across the sexes. And, theoretically-speaking, we affirm an evolutionary model of the Dark Triad traits that suggests empathy systems may be part of the suite of psychological adaptations that operate as underlying psychological systems to enable the social strategies characteristic of those high in the Dark Triad.

Acknowledgments

Thanks to Georg Wernicke for encouraging international research cooperation and Emma Richardson and James P. Middleton for reviewing this manuscript prior to submission.

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Date of acceptance: November 10, 2014

Published online: July 1, 2015

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