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## The Dark Triad, schadenfreude, and sensational interests: Dark personalities, dark emotions, and dark behaviors

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### ABSTRACT

This research examined the associations between the Dark Triad traits (i.e., narcissism, Machiavellianism, and psychopathy), sensational interests, and schadenfreude. One-hundred and eighty-six adults completed an online survey comprising the Dirty Dozen, the Sensational Interests Questionnaire Revised, and an author-generated measure of expressed schadenfreude. Higher levels of the Dark Triad were associated with higher levels of sensational interests and higher levels of schadenfreude; psychopathy was the most strongly related to both. These findings suggest a cluster of “dark” personalities, behaviors, and emotions. That is, those higher on the Dark Triad engage in more antisocial activities and experience greater satisfaction at the misfortune of others. Implications for future research are discussed.

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## 1. Introduction

A recent flurry of interest regarding the Dark Triad (i.e., narcissism, Machiavellianism, and psychopathy) has led to a significant body of knowledge regarding those attitudes and behaviors associated with this personality cluster. This cluster of dark personality traits has a shared tendency toward emotional coldness, aggressiveness, and self-promotion (Paulhus & Williams, 2002). While a number of studies have examined associated behaviors and attitudes, such as short term mating strategies (Jonason & Buss, 2012), prejudice (Hodson, Hogg, & MacInnis, 2009), and cruelty to animals (Kavanagh, Signal, & Taylor, 2013), few have investigated the associations between this cluster of dark personalities, emotional experiences, and their associated pass-times. It is conceivable that given dark personalities experience dark emotions (Porter, Bhanwer, Woodworth, & Black, 2013), they would have equally dark interests and hobbies, with associations between personality, emotional experiences, and antisocial interests.

## 2. Schadenfreude

Schadenfreude, a German term referring to the experience of pleasure at another's misfortune (Feather & Nairn, 2005), is a concept that has received limited attention. Characteristics proposed to influence schadenfreude include resentment, deservingness (Feather & Nairn, 2005), envy (van Dijk, Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006), likability (Hareli & Weiner, 2002; van Dijk et al., 2006), self-esteem (van Dijk, van Koningsbruggen, Ouwerkerk, & Wesseling, 2011), and competition (Smith, Powell, Combs, & Schurtz, 2009). Only one study has recently investigated the extent to which the Dark Triad traits are associated with the expression of this emotional response (Porter et al., 2013). Many of the behaviors characteristic of the Dark Triad are similar to those preceding schadenfreude. For example, a lack of empathy or callousness (Jonason, Lyons, Bethell, & Ross, 2013), competitiveness (Jonason, Li, & Teicher, 2010), and a tendency to dislike others (Rauthmann, 2012). Lack of empathy is shared by all three aspects of the Dark Triad and provides a strong conceptual link between these dark personalities and the experience of schadenfreude (Porter et al., 2013; Wai & Tiliopoulos, 2012). There are two possible emotional reactions in the face of another's misfortune; a negative emotional reaction presented as sympathy, or a positive emotional reaction depicting schadenfreude (Heider, 1958). Therefore, someone who lacks empathy would be more likely to experience some degree of pleasure – or schadenfreude.

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Those high on the Dark Triad traits are primarily driven to achieve their own goals (Jonason & Webster, 2012), and their emotional coldness allows them to disregard others' feelings in pursuit of those goals (Jonason et al., 2013). Given the associations between the Dark Triad and competitiveness (Jonason et al., 2010), those individuals characterized by the Dark Triad traits may view another's misfortune more favorably as it positions them closer to achieving their own goals. They are unlikely to consider the emotions of the person experiencing the misfortune, rather envisage what they can gain from the situation, with a likely gain being a social influence tactic (e.g., using the misfortune as a means of social comparison in order to influence those around them (Jonason & Webster, 2012)). Someone else's misfortune enables the use of downward social comparison, allowing one to position her/himself in a more positive light. Schadenfreude is less frequent in those with high self-esteem (van Dijk et al., 2011)—a common characteristic associated with the Dark Triad (Jonason et al., 2010)—but is associated with a fragile ego (Rhodewalt, Madrian, & Cheney, 1998); although only vulnerable narcissists require constant feedback from those around them to maintain their sense of self-worth (Miller et al., 2010). Consequently, it is plausible that vulnerable narcissists use schadenfreude as a strategy to enhance their self-esteem and that higher levels of the Dark Triad might be associated with increased schadenfreude.

### 3. Sensational interests

Research into sensational interests—an interest in violent and unusual topics such as weapons, crime, and military—has mainly focused on psychologically disordered criminal populations (Egan, Austin, Elliot, Patel, & Charlesworth, 2003) or their association with criminal offending (Charles & Egan, 2009). A few studies have explored interest in these areas by non-clinical, non-forensic populations, but the primary focus has been with the Big Five personality traits. For example, sensational interests are linked to low agreeableness and low conscientiousness (Egan et al., 2003)—traits consistently seen in the Dark Triad (Lee & Ashton, 2005). Little is known about the personality correlates of sensational interests outside of the Big Five (Egan et al., 1999).

Sensational interests and the Dark Triad have a shared tendency towards high impulsivity and thrill seeking (Egan, Charlesworth, Richardson, Blair, & McMurrin, 2001; Paulhus & Williams, 2002), valuing power over others (Egan et al., 1999), and aggression (Bushman & Baumeister, 1998). Narcissism is related to functional impulsivity (i.e., fast thinking and rapid social engagement) while psychopathy is associated with dysfunctional impulsivity (poor decision making and a lack of ability to inhibit antisocial impulses; Jones & Paulhus, 2011). This suggests that sensational interests may be particularly more common among those who score high in the psychopathy component of the Dark Triad.

### 4. The current study

The aim of the current study is to identify associations between the Dark Triad traits, schadenfreude, and sensational interests to further understand the emotional and behavioral characteristics of people with these "Dark Personalities". Specifically, we predict that people with higher levels of the Dark Triad will have increased levels of sensational interests and experience greater levels of schadenfreude. Finally, given recent controversy in the literature regarding the analysis of the Dark Triad as a latent factor versus separate unique constructs, two separate models will be tested to help determine which of these offers the best explanation for the seen associations (Jones & Figueredo, 2013).

## 5. Method

### 5.1. Participants and procedure

A snowball sampling method of recruitment was used whereby participants were asked to forward study details to people in their social network who may be interested in participating. Facebook friends and email contacts of the researchers were first contacted as an initial participant pool. Two hundred and thirty-two adults initially started the online survey; however, 46 did not complete all of the questions leaving a reduced sample of 117 females ( $M_{Age} = 23.04$ ,  $SD_{Age} = 2.15$ ) and 69 males ( $M_{Age} = 45.04$ ,  $SD_{Age} = 13.97$ ). Ninety percent of participants were Australian; 4% were American, and the remaining 6% were Algerian, Canadian, German, Iranian, New Zealander, Peruvian, Swedish, and British.

### 5.2. Measures

#### 5.2.1. The dark triad

The Dark Triad was measured using the Dirty Dozen, a 12-item short measure of the Dark Triad, with four items per subscale (Jonason & Webster, 2010). Participants were asked to indicate their level of agreement (1 = *strongly disagree*; 7 = *strongly agree*) with statements such as "I have a natural talent for influencing people," "I tend to manipulate others to get my way," and "I tend to lack remorse." The items for each subscale demonstrated good internal consistency ( $\alpha_{narcissism} = .83$ ,  $\alpha_{Machiavellianism} = .78$ ,  $\alpha_{psychopathy} = .76$ ), as did the global Dark Triad scale ( $\alpha = .85$ ) and were, therefore, averaged to create indices of narcissism, Machiavellianism, psychopathy, and an overall Dark Triad index, with higher scores indicating higher levels of these traits.

#### 5.2.2. Sensational interests

Sensational interests were measured using the Sensational Interests Questionnaire Revised (SIQ-R; Weiss, Egan, & Figueredo, 2004). Participants were asked to express their interest level in 19 topics using a Likert scale (1 = *great disinterest*; 7 = *great interest*) over 3 subscales (i.e., Militarism, Paranormal Interests, and Criminal Identity). Topics include things such as drugs, Military Special Forces, and death symbolism. Participants were also asked to rate their level of knowledge on these topics and level of importance in their lives using the same Likert scale. Participants' interest, knowledge, and importance scores were then averaged to create an overall score for each topic. Analyses revealed that the measure had excellent internal consistency for the overall scale ( $\alpha = .90$ ,  $M = 48.64$ ,  $SD = 15.70$ ), and for two of the three subscales (Militarism:  $\alpha = .90$ ,  $M = 22.9$ ,  $SD = 9.70$ ; Paranormal Interests:  $\alpha = .80$ ,  $M = 14.89$ ,  $SD = 5.60$ ); however, not for the third (Criminal Identity:  $\alpha = .55$ ,  $M = 9.04$ ,  $SD = 3.33$ ). Moderate significant associations ( $ps < .001$ ) between each of the three subscales (Paranormal Interests and Militarism:  $r = .37$ ; Militarism and Criminal Identity:  $r = .52$ ; Criminal Identity and Paranormal Interests:  $r = .50$ ) were found. Given low internal consistency of one of the subscales, the moderate associations between the subscales, and the high internal reliability of the overall scale, a decision was made to create a composite score of sensational interests with higher scores indicating higher levels of sensational interests.

#### 5.2.3. Schadenfreude

Previous studies have commonly measured schadenfreude via vignettes that instruct participants to rate their response in terms of amusement, satisfaction, pleasure/happiness, and/or sympathy (Brigham, Kelso, Jackson, & Smith, 1997; Leach, Spears, Branscombe, & Doosje, 2003; van Dijk et al., 2006). Scenarios in previous research have typically used samples such as

international soccer fans and university students. In the present study, the target sample was diverse and therefore required scenarios that would be relevant to the general population. To do this, the following three scenarios were created:

Scenario 1:

*“There is a wealthy business person driving the latest model sports car tailgating you while you are driving home. After a while, he overtakes you, zooming past you and through the traffic lights up ahead. You see the flash of a speed camera, indicating he has been caught for speeding and will be getting a fine in the mail.”*

Scenario 2:

*“You are competing in the final quarter of a knock out style competition. The main goal scorer on the other team is a loud mouth and has been gloating about their skills throughout the whole game. They go to use a fancy move and instead fall and sprain their ankle.”*

Scenario 3:

*“Your peer or co-worker is a know-it-all and constantly gloating about their abilities. You find out they recently got a bad grade/performance review.”*

After reading each of the three scenarios, participants were asked to rate (1 = *strongly disagree* to 7 = *strongly agree*) the extent to which they felt amused, satisfied, pleased, and sympathetic. Responses to each of the scenarios demonstrated adequate internal consistency (Scenario 1:  $\alpha = .74$ ,  $M = 5.50$ ,  $SD = 1.10$ ; Scenario 2:  $\alpha = .82$ ,  $M = 4.20$ ,  $SD = 1.32$ ; Scenario 3:  $\alpha = .82$ ,  $M = 4.58$ ,  $SD = 1.20$ ) and were therefore, averaged to form three indices of expressed *schadenfreude*.

As a manipulation check, variables related to *schadenfreude* in past studies were included (i.e., self-esteem, envy, competitiveness, deservingness, and dislike). If *schadenfreude* is actually being expressed as a result of the scenarios, then scores on the indices of expressed *schadenfreude* should also correlate with lower self-esteem, higher levels of envy and competitiveness, a greater valuing of people getting what they deserve and greater feelings of dislike for the target in the scenario. Self-esteem and dispositional envy were measured using pre-existing scales, and competitiveness and deservingness were measured using author-developed scales. Dislike of the target was measured by asking participants to rate the extent to which they liked the character in the scenario.

**5.2.3.1. Self-esteem.** Self-esteem was assessed using the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965). Statements, such as “On the whole, I am satisfied with myself,” are rated using a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). Analyses revealed that the scale had excellent internal consistency ( $\alpha = .90$ ,  $M = 5.31$ ,  $SD = 1.13$ ) and therefore averaged to form a composite measure of self-esteem. Higher scores indicate higher self-esteem.

**5.2.3.2. Envy.** Envy was assessed using an 8-item measure of dispositional envy (Smith, Parrott, Diener, Hoyle, & Kim, 1999). This instrument includes statements such as “I feel envy every day” rated on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). In the current study, the scale demonstrated excellent reliability ( $\alpha = .92$ ,  $M = 2.57$ ,  $SD = 1.34$ ). Items were thus averaged to form an index of dispositional envy with higher scores reflective of higher levels of envy.

**5.2.3.3. Competitiveness.** Competitiveness was assessed by using our own developed 6-item scale. Participants rated their level of

agreement (1 = *strongly disagree*; 7 = *strongly agree*) on statements such as “My friends would say I am quite competitive” and “Competition energizes me”. Initial reliability analyses revealed a low coefficient ( $\alpha = .65$ ); however, upon inspection there was a low inter-item correlation ( $-.03$ ) for one item (i.e., “My best is good enough”). After removing this item from the scale the remaining 5 items produced good internal consistency ( $\alpha = .73$ ), with these five items averaged to form a composite score of trait competitiveness ( $M = 3.93$ ,  $SD = 1.16$ ), with higher scores indicating higher levels of competitiveness.

**5.2.3.4. Deservingness.** Tendency to value justice was also measured using our own developed scale. Participants were asked to rate statements such as “I take pleasure in seeing people punished for their wrong doing” and “I believe in justice being served” on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). Initial internal consistency analyses revealed a low coefficient ( $\alpha = .61$ ); however, a low inter-item correlation (.02) was noted for one item (“Sometimes bad things happen to good people”). After removing this item from the scale the remaining 5 items showed adequate internal consistency ( $\alpha = .66$ ). The remaining 5 items were averaged to form a composite score of trait deservingness ( $M = 4.65$ ,  $SD = 1.12$ ), with higher scores indicating a greater valuing of people getting what they deserve.

## 6. Results

### 6.1. Preliminary analyses

#### 6.1.1. Sex and age

Given the large age differences between men and women, alongside the large amount of variance in age for males, a *t*-test with equal variances not assumed was conducted to determine if this difference was a statistically significant level. The results revealed that men in the sample were significantly older than women ( $t(69.9) = 12.99$ ,  $p < .001$ ,  $g = 2.53$ ). In contrast, women in the sample reported significantly higher levels of the Dark Triad composite ( $t(69.9) = 2.70$ ,  $p < .01$ ,  $g = 0.41$ ) – a sex difference in the opposite direction than typically reported in the literature. Given these results, a one-way analysis of covariance (ANCOVA) was conducted with sex as the independent variable, the Dark Triad as the dependent variable, and age as a covariate. The results revealed that after controlling for age, the significant sex difference for Dark Triad scores disappeared ( $F(1, 183) = 1.34$ , *ns*), suggesting the sex difference was a sampling artifact.<sup>1</sup>

#### 6.1.2. Expressed *schadenfreude* manipulation check

To ensure that expressed *schadenfreude* was measured, a series of correlations were conducted with the *schadenfreude* scale and self-esteem, envy, competitiveness, deservingness, and dislike at the target. Envy, competitiveness, deservingness, and dislike at the target were all significantly correlated ( $ps < .05$ ) with experiences of *schadenfreude* in response to Scenarios 2 and 3 (see [Supplementary Table](#)). For Scenario 1, envy, deservingness, and dislike at the target were associated with experience of *schadenfreude*. Competitiveness was not significantly associated with Scenario 1; however, this was expected given it did not depict a competitive situation. Self-esteem was not associated with experiences of *schadenfreude* in any of the scenarios. In sum, higher levels of competition, feelings of envy, dislike at the target, and a belief that the target deserved the misfortune were associated with higher levels of *schadenfreude* as measured on our scale,

<sup>1</sup> Including sex and age did not significantly change the results of any of the main analyses, with neither of these variables acting as significant contributors.

indicating that expressed schadenfreude was successfully manipulated and evoked by our scenarios.

## 6.2. Main analyses

### 6.2.1. The dark triad and sensational interests

Those who were higher on the Dark Triad indicated greater sensational interests (see Table 1), with the significant correlation between overall sensational interests and the Dark Triad composite seemingly driven by psychopathy – the only trait to correlate with any subscale of sensational interests individually. The strongest association was between psychopathy and Militarism, followed by Criminal Identity – consistent with the characteristic elements of psychopathy (i.e., high impulsivity, high thrill seeking, low empathy, and low anxiety).

### 6.2.2. Latent versus unique contributions

The initial goal was to use methods outlined in Jonason, Kavanagh, Webster, and Fitzgerald (2011) to test whether sensational interests were best explained by a single Dark Triad factor or a three-factor model including unique contributions from each of the traits; however in the current study, the full model could not be tested because of insufficient loadings for sensational interests. Therefore, an alternative model was used. The unique contributions (Fig. 1) of the Dark Triad traits on sensational interests were compared with the combined contribution (Fig. 2) of the latent Dark Triad construct. The results from the model comparisons indicate that the single factor Dark Triad model ( $\chi^2(9) = 4.43, p < .05, NFI = .84, CFI = .87, RMSEA = .14$ ) fits the data better than the three-factor model ( $\chi^2(8) = 15.60, p < .05, NFI = .50, CFI = .50, RMSEA = .28$ ).

### 6.2.3. The dark triad and schadenfreude

To test the hypothesis that those high on the Dark Triad would experience greater levels of schadenfreude, correlations were conducted between the Dark Triad and the three indices of expressed schadenfreude. Those higher on the Dark Triad composite expressed significantly ( $ps > .01$ ) greater levels of schadenfreude at each of the scenarios (see Table 1).

## 7. Discussion

The Dark Triad traits have been linked to numerous “dark” behaviors like short-term mating (Jonason, Li, Webster, & Schmitt, 2009) and impulsivity (Jones & Paulhus, 2011) along with undesirable interpersonal orientations like competitiveness (Jonason et al., 2010) and limited empathy (Jonason et al., 2013; Porter et al., 2013). However, less is known about whether the

“darkness” associated with the Dark Triad permeates into individual’s judgments of the suffering of others and more generally, if they have interests in “dark” pass-times. This study provided unique details regarding the dark-yet-potentially adaptive nature of the Dark Triad.

The hypothesis that higher levels of the Dark Triad would be associated with greater interest in sensational topics was supported. Additionally, the strong association between psychopathy and the Militarism and Criminal Identity subscales appears consistent given it would be expected that people who are high on impulsivity and low on empathy would enjoy dangerous activities such as weapons and combat. Furthermore, while a significant association between the Dark Triad and sensational interests was found, a larger effect may have been present had the longer version of these measures been utilized instead of the Dirty Dozen. Past research has shown this measure neglects some features of psychopathy, particularly disinhibition; theoretically one of the most important aspects of this association (Miller et al., 2012). This could be evidence of the robustness of our findings, or alternatively it may suggest that other aspects of the Dark Triad have a stronger association with sensational interests than the literature suggests. Our model testing revealed that the latent Dark Triad factor is a better predictor of sensational interests than the unique contributions of the three traits. This is perhaps consistent with the idea that callousness and manipulation are at the core of the Dark Triad traits (Jones & Figueredo, 2013). Perhaps this “dark core” is the best predictor of sensational interests.

Our hypothesis that higher levels of the Dark Triad would be associated with increased levels of schadenfreude was supported. These individuals do find more pleasure and amusement at others’ failures. This association can essentially be seen on a continuum. At the clinical end of the spectrum, psychopathy is related to Antisocial Personality Disorder (American Psychiatric Association, 2013) and our research suggests that at the subclinical level, psychopathy appears to be related to a less antisocial counterpart, schadenfreude. The differing associations between the three traits and the schadenfreude scenarios (i.e., callous enjoyment) provides further support for the theory that a dark core lies at the heart of the Dark Triad (Jones & Figueredo, 2013). While high levels of psychopathy were associated with greater levels of schadenfreude in all three scenarios, narcissism was only associated with the third scenario, which involved a work colleague receiving a bad performance review. This aligns with our conceptualization that narcissistic individuals may use schadenfreude as a form of downward social comparison. In this scenario, a co-worker performing badly may result in an individual feeling superior about their own performance at work and make others view them more favorably. Similarly, Machiavellianism was correlated with scenarios two and three, both of which include a degree of competitiveness

**Table 1**

Zero-order correlations and standardized regression coefficients predicting sensational interests and schadenfreude from the Dark Triad.

	<i>r</i> ( $\beta$ )						
	Narcissism		Machiavellianism		Psychopathy		Dark Triad
Sensational interests							
Composite	.03	(−.05)	.11	(.04)	.21**	(.21*)	.14*
Criminal Identity	.02	(−.07)	.13	(.07)	.17*	(.15)	.12
Militarism	.03	(−.06)	.12	(−.10)	.32***	(.35***)	.19**
Paranormal Interests	.02	(.01)	.03	(.04)	−.01	(−.03)	.02
Expressed schadenfreude							
Scenario 1: Speeding driver	.14	(.07)	.14	(−.03)	.29***	(.28***)	.24***
Scenario 2: Soccer player	.10	(−.03)	.20**	(.01)	.44***	(.44***)	.30***
Scenario 3: Work colleague	.21**	(.11)	.23**	(.06)	.31***	(.25**)	.31***

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$  (two tailed).

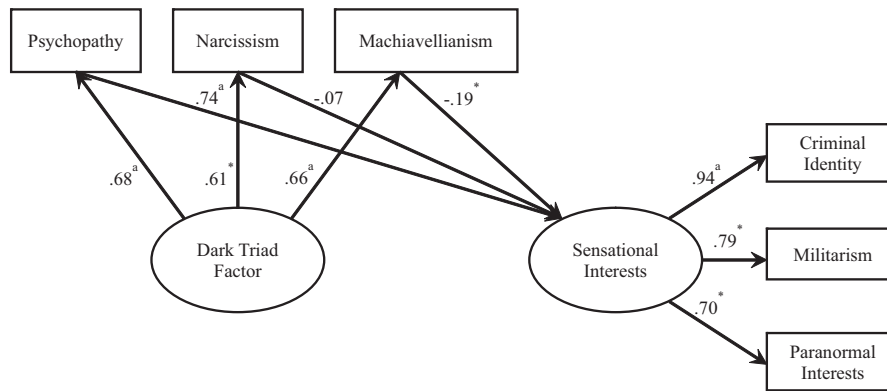


Fig. 1. Unique contributions only from the three Dark Personality traits as manifest indicators of sensational interests. <sup>a</sup>Not tested, \* $p < .01$ ,  $p$  closeness of fit = .00.

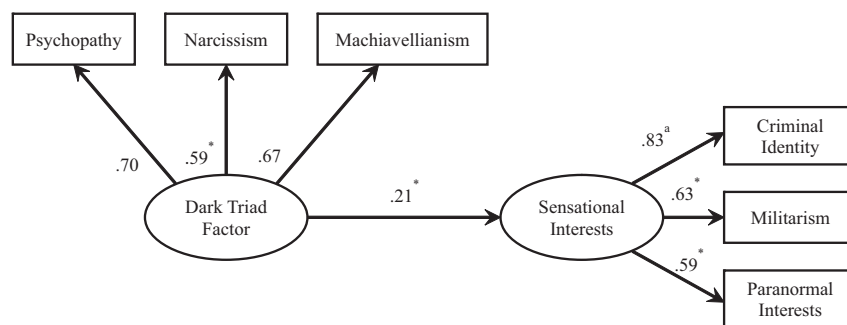


Fig. 2. Common contribution only from the Dark Triad factor of sensational interests. <sup>a</sup>Not tested, \* $p < .05$ ,  $p$  closeness of fit = .00.

and the failure of another translating to a personal gain. Conversely, a person high on Machiavellianism would have nothing to gain from someone else receiving a speeding ticket; hence this may explain the lack of association with scenario one.

### 7.1. Limitations, future directions, and conclusions

Our sample was not ideal. The snowball approach may have introduced sampling bias in terms of the age of males relative to females. Our measures could be criticized in that they may not cover the heterogeneous constructs of the Dark Triad (Miller et al., 2012) and our unvalidated, author-constructed assessments of schadenfreude. Replication of this study using the longer scales for each trait may overcome this issue. Nevertheless, the results were consistent with our predictions and recent research (i.e., Porter et al., 2013).

Given that sensational interests predicts criminal offending (Charles and Egan, 2009; Egan et al., 2001), and this research suggests those high on the Dark Triad traits have increased levels of sensational interests, the next step may be to directly examine the link between the Dark Triad and criminal offending. Future research may compare Dark Triad scores in forensic versus non-forensic samples and determine cause of the shared variance between the Dark Triad traits and sensational interests. Similarly, further research into the link between the Dark Triad traits and schadenfreude is necessary. Is it the negative view of others or their lack of empathy that drives these feelings of schadenfreude, or perhaps the benefit of downward social comparison that these individuals may gain?

It appears that “dark” individuals do have greater antisocial interests and find more pleasure in watching other people fail. Furthermore, having these antisocial interests appears to be somewhat related to enjoying the suffering of others. The current find-

ings support a Dark Triad that is driven by psychopathy with a lack of empathy (Jonason et al., 2013) and high impulsivity (Jones and Paulhus, 2011) likely to be the key aspects of these associations. Someone who is high on the Dark Triad traits, is interested in violence and dominance, while enjoying pleasure at another's misfortune suggests a “dark” individual indeed.

### Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.paid.2014.04.020>.

### References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed.). Washington, DC: American Psychiatric Association.
- Brigham, N. L., Kelso, K. A., Jackson, M. A., & Smith, R. H. (1997). The roles of invidious comparisons and deservingness in sympathy and schadenfreude. *Basic & Applied Social Psychology, 19*, 363–380.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219–229.
- Charles, K. E., & Egan, V. (2009). Sensational interests are not a simple predictor of adolescent offending: Evidence from a large normal British sample. *Personality and Individual Differences, 47*, 235–240.
- Egan, V., Austin, E., Elliot, D., Patel, D., & Charlesworth, P. (2003). Personality traits, personality disorders and sensational interests in mentally disordered offenders. *Legal and Criminological Psychology, 8*, 51.
- Egan, V., Auty, J., Miller, R., Ahmadi, S., Richardson, C., & Gargan, I. (1999). Sensational interests and general personality traits. *Journal of Forensic Psychiatry, 10*, 567–582.
- Egan, V., Charlesworth, P., Richardson, C., Blair, M., & McMurrin, M. (2001). Sensational interests and sensation seeking in mentally disordered offenders. *Personality and Individual Differences, 30*, 995–1007.
- Feather, N. T., & Nairn, K. (2005). Resentment, envy, schadenfreude, and sympathy: Effects of own and other's deserved or undeserved status. *Australian Journal of Psychology, 57*, 87–102.
- Hareli, S., & Weiner, B. (2002). Dislike and envy as antecedents of pleasure at another's misfortune. *Motivation and Emotion, 26*, 257–277.

- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- 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., & 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. S., Webster, G. D., & Fitzgerald, D. (2011). Comparing the measured and latent dark triad: Are three measures better than one? *Journal of Methods and Measurement in the Social Sciences*, *2*, 28–44.
- Jonason, P. K., Li, N. P., & Teicher, E. A. (2010). Who is James Bond?: The Dark Triad as an agentic social style. *Individual Differences Research*, *8*, 111–120.
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The Dark Triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, *23*, 5–18.
- Jonason, P. K., Lyons, M., Bethell, E. J., & Ross, R. (2013). Different routes to limited empathy in the sexes: Examining the links between the Dark Triad and empathy. *Personality and Individual Differences*, *54*, 572–576.
- 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.
- Jones, D. N., & Figueredo, A. J. (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality*, *27*, 521–531.
- Jones, D. N., & Paulhus, D. L. (2011). The role of impulsivity in the Dark Triad of personality. *Personality and Individual Differences*, *51*, 679–682.
- Kavanagh, P. S., Signal, T. D., & Taylor, N. (2013). The Dark Triad and animal cruelty: Dark personalities, dark attitudes, and dark behaviors. *Personality and Individual Differences*, *55*, 666–670.
- Leach, C. W., Spears, R., Branscombe, N. R., & Doosje, B. (2003). Malicious pleasure: Schadenfreude at the suffering of another group. *Journal of Personality and Social Psychology*, *84*, 932–943.
- Lee, K., & Ashton, M. C. (2005). Psychopathy, Machiavellianism, and narcissism in the five-factor model and the HEXACO model of personality structure. *Personality and Individual Differences*, *38*, 1571–1582.
- Miller, J. D., Dir, A., Gentile, B., Wilson, L., Pryor, L. R., & Campbell, W. K. (2010). Searching for a vulnerable Dark Triad: Comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *Journal of Personality*, *78*, 1529–1564.
- Miller, J. D., Few, L. R., Seibert, L. A., Watts, A., Zeichner, A., & Lynam, D. R. (2012). An examination of the Dirty Dozen measure of psychopathy: A cautionary tale about the costs of brief measures. *Psychological Assessment*, *24*, 1048–1053.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism and psychopathy. *Journal of Research in Personality*, *36*, 556–563.
- Porter, S., Bhanwer, A., Woodworth, M., & Black, P. J. (2013). Soldiers of misfortune: An examination of the Dark Triad and the experience of schadenfreude. *Personality and Individual Differences*. <http://dx.doi.org/10.1016/j.paid.2013.11.014>.
- 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.
- Rhodewalt, F., Madrian, J. C., & Cheney, S. (1998). Narcissism, self-knowledge organization, and emotional reactivity: The effect of daily experiences on self-esteem and affect. *Personality and Social Psychology Bulletin*, *24*, 75–87.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Smith, R. H., Parrott, W. G., Diener, E. F., Hoyle, R. H., & Kim, S. H. (1999). Dispositional envy. *Personality and Social Psychology Bulletin*, *25*, 1007–1020.
- Smith, R. H., Powell, C. A. J., Combs, D. J. Y., & Schurtz, D. R. (2009). Exploring the when and why of schadenfreude. *Social and Personality Psychology Compass*, *3*, 530–546.
- van Dijk, W. W., Ouwerkerk, J. W., Goslinga, S., Nieweg, M., & Gallucci, M. (2006). When people fall from grace: Reconsidering the role of envy in schadenfreude. *Emotion*, *6*, 156–160.
- van Dijk, W. W., van Koningsbruggen, G. M., Ouwerkerk, J. W., & Wesseling, Y. M. (2011). Self-esteem, self-affirmation, and schadenfreude. *Emotion*, *11*, 1445–1449.
- Wai, M., & Tiliopoulos, N. (2012). The affective and cognitive empathic nature of the dark triad of personality. *Personality and Individual Differences*, *52*, 794–799.
- Weiss, A., Egan, V., & Figueredo, A. J. (2004). Sensational interests as a form of intrasexual competition. *Personality and Individual Differences*, *36*, 563–573.