

Journal of Individual Differences

4/15

www.hogrefe.com/journals/jid

Editor-in-Chief

André Beauducel

Associate Editors

Philip J. Corr · Sam Gosling

Jürgen Hennig · Philipp Y. Herzberg

Aljoscha Neubauer · Thomas Rammsayer

Willibald Ruch · Stefan Schmukle

Astrid Schütz · Andrzej Sekowski

Jutta Stahl

HOGREFE



Contents

| | | |
|---------------------------|--|-----|
| Original Articles | A Multifactorial Conceptualization of Impulsivity: Implications for Research and Clinical Practice <i>Bojana Knezevic-Budisin, Vanessa Pedden, Andrew White, Carlin J. Miller, and Peter N. S. Hoaken</i> | 191 |
| | A Big Five Facet Analysis of a Paranoid Personality Disorder: The Validity of the HDS Sceptical Scale of Subclinical Paranoia <i>Adrian Furnham and John Crump</i> | 199 |
| | Grit: Distinguishing Effortful Persistence From Conscientiousness <i>Abedrahman Abuhassan and Timothy C. Bates</i> | 205 |
| | Dark Triad, Tramps, and Thieves: Psychopathy Predicts a Diverse Range of Theft-Related Attitudes and Behaviors <i>Minna Lyons and Peter K. Jonason</i> | 215 |
| | Gender Difference in Timing of Nocturnal Rise of Subjective Sleepiness <i>Arcady A. Putilov</i> | 221 |
| | The Dark Tetrad: Structural Properties and Location in the Personality Space <i>Janko Međedović and Boban Petrović</i> | 228 |
| | Beyond An Informal Everyday Concept of Self-Esteem: A Latent State-Trait Model <i>Petra Hank</i> | 237 |
| Review Article | The Hierarchical Model of Exercise Dependence: The Development of the Problematic Practice of Physical Exercise Scale <i>Gayatri Kotbagi, Laurence Kern, Lucia Romo, and Ramesh Pathare</i> | 247 |
| Erratum | Correction to Benny & Banks, 2015 | 258 |
| Volume Information | Reviewers 2015 | 259 |

Journal of Individual Differences

Your article has appeared in a journal published by Hogrefe Publishing.

This e-offprint is provided exclusively for the personal use of the authors. It may not be posted on a personal or institutional website or to an institutional or disciplinary repository.

If you wish to post the article to your personal or institutional website or to archive it in an institutional or disciplinary repository, please use either a pre-print or a post-print of your manuscript in accordance with the publication release for your article and our “Online Rights for Journal Articles” (www.hogrefe.com/journals).

Dark Triad, Tramps, and Thieves

Psychopathy Predicts a Diverse Range of Theft-Related Attitudes and Behaviors

Minna Lyons¹ and Peter K. Jonason²

¹University of Liverpool, UK, ²University of Western Sydney, Australia

Abstract. Although previous research has demonstrated a link between personality and thieving, research has not yet considered individual differences in impulsivity and the Dark Triad (i.e., narcissism, psychopathy, and Machiavellianism) and commonplace, low-level thefts. In this on-line questionnaire study ($N = 254$) we examined how the Dark Triad traits and dysfunctional and functional impulsivity provide insights into individual differences in petty theft. Those who admitted having stolen something in their lifetime were higher on primary and secondary psychopathy, Machiavellianism, and dysfunctional impulsivity than those who had not stolen anything. In addition, secondary psychopathy predicted stealing from a wider range of targets than primary psychopathy, narcissism, and Machiavellianism. We discussed the results in relation to how psychopathy may be part of an adaptive suite of traits that enable a “cheater” strategy.

Keywords: impulsivity, machiavellianism, narcissism, psychopathy, dark triad, thefts

Despite the obvious importance of individual differences in understanding offending behavior (e.g., Miller & Lynam, 2001; Wilcox, Sullivan, Jones, & van Gelder, 2014), there has been relatively little research exploring the relationships between personality and petty thefts in non-incarcerated adults. Low-level offending, such as small thefts, is common within families and the workplace, and is often not reported to the police (Felson & Boba, 2010). This highlights the importance of investigating thefts and personality within non-forensic samples in the contexts of everyday life (e.g., work and family). While petty crime may only be a minor transgression when compared to major crimes like murder, unreported small crimes may skew official crime statistics, and contribute to an underestimation of true crime rates (Buonanno, Drago, & Galbiati, 2014). As such, we examine the relationship between two sets of personality traits (i.e., impulsivity and the Dark Triad) and individual differences in the commission of minor crimes.

As is the case with much of the work in personality psychology, the majority investigating relationships with crime has been done with the Big Five model. Evidence suggests that low conscientiousness and agreeableness predict higher acceptance of shoplifting (Egan & Taylor, 2010), higher frequency of thefts (Jolliffe, 2013; Wilcox et al., 2014), and higher likelihood of opportunistic offending (Wilcox et al., 2014). As interesting as these effects are, it is surprising that these socially undesirable behaviors and attitudes have not been studied in relation to personality traits that better capture the “darker” side of human nature. Research has not yet considered personality traits such as the Dark Triad that may be a driving force behind petty thefts. Since

its conception over 10 years ago (Paulhus & Williams, 2002), the Dark Triad has been a popular area of research. The Dark Triad consists of narcissism (i.e., grandiose self-view, entitlement, and superiority), Machiavellianism (i.e., manipulateness and cynical view of human nature), and psychopathy (i.e., primary psychopathy; callousness and exploitiveness, and secondary psychopathy; antisocial behavior and risk-taking). Although each trait is distinctive from the others, they share antisocial behavioral patterns such as substance abuse (Jonason, Koenig, & Tost, 2010), limited empathy (Jonason, Lyons, Bethell, & Ross, 2013), lying (Jonason, Lyons, Baughman, & Vernon, 2014), and aggression (Jonason & Webster, 2010). The Dark Triad traits are related to low agreeableness and low conscientiousness (Paulhus & Williams, 2002; Ross, Lutz, & Bailey, 2004), warranting the investigation of these traits in relation to small thefts.

Thievery is an act with potential benefits to the individual despite its costs to society, making it a “cheater” strategy (Mealey, 1995). Stealing from family, friends, and work may provide immediate benefits but is not a solution that can be maintained for long. There is likely to be an exponentially increasing risk of detection over time. Indeed, those high on the Dark Triad traits may have developed a “protean” style of social influence to help avoid detection (Jonason & Webster, 2012). However, each trait is unique. Machiavellianism stands apart with long-term planning potential and less impulsive approach to life (Jones & Paulhus, 2011). Indeed, if Machiavellianism is linked to theft, it should evidence some sensitivity to risk. Narcissism is the most socially desirable trait in the Dark Triad,

characterized by a more sensitive approach to dealing with the world (Rauthmann & Kolar, 2013), and thus, may not be that strongly associated with petty crimes. Psychopathy provides the most likely candidate to account for individual differences in petty theft. Psychopathy is related to limited self-control (Jonason & Tost, 2010; Jones & Paulhus, 2011) and low empathy (Jonason, Lyons, et al., 2013). This trait may operate to actively exploit others with little concern for future consequences. From an evolutionary perspective, psychopathy may best embody a “fast” history strategy that orients the person toward immediate gains in mating and status (Jonason et al., 2010).

Psychopathy is a multidimensional system of traits. Primary psychopathy is the callous and unemotional facet, potentially useful as a tool for achieving career success (Chiaburu, Muñoz, & Gardner, 2013). Secondary psychopathy is associated with anti-social deviance (Williams, Paulhus, & Hare, 2007) and risky decision-making (Dean et al., 2013; Lyons, 2015), and relates to prolific, chronic criminal careers (McCuish, Corrado, Lussier, & Hart, 2014). However, a recent study found that in a non-incarcerated community sample, both psychopathy subtypes related to criminality (Driscoll et al., 2014). Thus, we expect that in a non-prison sample, both psychopathy subtypes will be associated with petty thefts but the effects should be stronger in the case of secondary psychopathy. Further, we expect that secondary psychopathy will relate to more diverse thieving behavior than primary psychopathy, further evidencing its “cheater” strategy.

But what mechanisms might account for this psychopathy effect? The most likely candidates are impulse control problems. Psychopathy is linked to limited self-control and impulsivity (Jonason & Tost, 2010; Jones & Paulhus, 2011). Thieving is partially driven by the inability to control impulses (Grant, Chamberlain, Schreiber, & O’Laug, 2012), and low impulse control could be one of the key features of the fast Life History strategy embodied in psychopathy (Del Giudice, 2014; Lyons & Rice, 2014). Impulsivity comes in at least two forms: functional and dysfunctional (Dickman, 1990). Functional impulsivity is the tendency to act in an impulsive way in situations where this is optimal, whereas dysfunctional impulsivity is acting on an impulse when more deliberation would be optimal. It is possible that dysfunctional impulsivity is related to the tendency to steal opportunistically, facilitating the immediate extraction of resources in one’s environment. We expect dysfunctional but not functional impulsivity to be correlated with petty theft.

In the present study, we aim to address a gap in the research, and investigate low-level, petty crime in a non-prison sample. We assess various aspects of thieving and how they relate to the Dark Triad traits and impulsivity. We examine the targets (e.g., who is stolen from), the motivations for theft, frequency of various types of petty thefts individuals commit, and perceptions of the likelihood of getting caught.

Method

Participants and Procedure

Participants were 254 volunteers ($M_{Age} = 24.27$, $SD_{Age} = 10.05$; 88 men) who completed an on-line survey on “personality and stealing.” Participants were recruited via an on-line participation website and social media advertising. After reading the information page and giving consent, all of the participants completed the Dark Triad measures, followed by a question on whether they had ever stolen anything. Those who answered “no” ($n = 130$, $M_{Age} = 23.34$, $SD_{Age} = 10.06$; 43 men) were directed to a debrief page, and thanked for their participation. Those who answered “yes” ($n = 124$, $M_{Age} = 25.22$, $SD_{Age} = 9.96$; 45 men) filled in the rest of the survey, asking more specific details about their thieving behavior. On average, the survey took about 30 min to complete.

Measures

Narcissism was measured 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”). Items were averaged to create an index of narcissism (Cronbach’s $\alpha = .87$).

Psychopathy was assessed with the 64-item Self-Report Psychopathy Scale-III (Paulhus, Hemphill, & Hare, 2009). Participants rated how much they agreed (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as: “I enjoy driving at high speeds” (secondary psychopathy) and “I think I could beat a lie detector” (primary psychopathy). The 32 items were summed to create an index of secondary psychopathy, and 32 items formed an index of primary psychopathy.

We used the 20-item MACH-IV (Christie & Geis, 1970) for measuring Machiavellianism. 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 summed to create a Machiavellianism index ($\alpha = .79$).

We measured impulsivity with Dickman’s Impulsivity Inventory (Dickman, 1990), asking participants to indicate whether 23 statements were true or false to them. Twelve items measured dysfunctional, (i.e., “I often do and say things without considering the consequences”) and eleven items functional (i.e., “I would enjoy working at a job that required me to make a lot of split-second decisions”) impulsivity. Participants scored a point for each response indicating higher impulsivity, and the scores were summed to create an index of functional ($\alpha = .81$) and dysfunctional ($\alpha = .80$) impulsivity.

In order to assess different aspects of thieving, we used the Stealing Behavior Questionnaire (Vandereycken & Van Houdenhove, 1996) as a base for some of the questions (e.g., where and who was stolen from, frequency of thieving, goods that were stolen), and developed more questions (e.g., risk appeal and the extent of planning) to suit the present study. The thieving questionnaire contained questions asking about the number of lifetime thefts, age at first theft, the frequency of thefts (1 = *never*; 5 = *very often*) from nine people/institutions, which were collapsed into four variables: (i) Family and Friends (i.e., parents, partner, other family members, friends; $\alpha = .77$), (ii) Strangers, (iii) Work, and (iv) Stores and government agencies (i.e., large store, small store, government agency; $\alpha = .60$; M 's = 1.55–1.92, SD 's = 0.70–1.14). We also asked the participants about the frequency of thefts in the past year regarding the following actions: shoplifting, stealing money, stealing cheap goods, stealing expensive goods, stealing clothes. This was summed and averaged together to form an index of frequency of thefts ($\alpha = .88$; $M = 1.55$, $SD = 0.84$). The frequency of motivation for stealing (1 = *never*, 5 = *very often*) was assessed with six questions (i.e., to give it to someone as a gift, $M = 1.61$, $SD = 1.02$; to keep to yourself, $M = 3.04$, $SD = 1.50$; lack of money, $M = 2.90$, $SD = 1.61$; to get food, $M = 1.90$, $SD = 1.30$; anger or revenge, $M = 1.59$, $SD = 1.08$; for fun, $M = 1.77$, $SD = 1.21$), and the perception of risk (1 = *never*, 5 = *very often*) was assessed with two questions (i.e., “does the risk of getting caught make stealing appealing, $M = 1.51$, $SD = 0.97$ ”, and “if there was no risk of getting caught, how often would you steal, $M = 2.47$, $SD = 1.45$ ”). Finally, we asked about the amount of planning that goes in when stealing (1 = *never*, 5 = *very often*) with three items that were summed and averaged (i.e., “plan ahead,” “case the place before stealing,” and “put thought into the thieving”; $\alpha = .89$; $M = 1.93$, $SD = 1.13$).

Results

Table 1 shows cross-correlations for the Dark Triad and impulsivity measures. All the other measures but dysfunctional and functional impulsivity were significantly, positively correlated with each other. We conducted a

Table 1. Cross-correlations between the Dark Triad and impulsivity measures

| Measure | 1 | 2 | 3 | 4 | 5 |
|------------------------------|------|------|------|------|-----|
| 1. Narcissism | – | | | | |
| 2. Machiavellianism | .27* | – | | | |
| 3. Primary Psychopathy | .50* | .72* | – | | |
| 4. Secondary Psychopathy | .43* | .52* | .72* | – | |
| 5. Functional Impulsivity | .45* | .27* | .27* | .28* | – |
| 6. Dysfunctional Impulsivity | .22* | .29* | .29* | .43* | .10 |

Note. * $p < .01$ (one-tailed).

2 (participant's sex) \times 2 (have/have not stolen) MANCOVA with four dependent variables (i.e., Machiavellianism, narcissism, primary and secondary psychopathy), controlling for functional and dysfunctional impulsivity. The model revealed a significant multivariate effect between those who had and had not stolen (Wilk's $\Lambda = .85$, $F(5, 246) = 12.08$, $p = .001$, $\eta_p^2 = .13$) in both psychopathy subtypes and Machiavellianism, but not in narcissism (see Table 2 for univariate results). There was also a significant, multivariate main effect of sex (Wilk's $\Lambda = .81$, $F(5, 246) = 22.56$, $p = .001$, $\eta_p^2 = .22$), such that men scored higher than women did on all of the dependent variables (all univariate F 's > 7.40 , all p 's $< .001$). There were no interactions between sex and having/having not stolen.

In order to control for shared variance between the Dark Triad and impulsivity, we run a series of simultaneous linear regressions, entering age, sex, the Dark Triad, and impulsivity as predictors, and different indicators of thefts as the outcome variables. Secondary psychopathy ($\beta = .41$, $t = 3.18$, $p < .01$) and narcissism ($\beta = -.23$, $t = -1.96$, $p < .05$) emerged as significant predictors of lifetime thefts (an interested reader can contact the first author to obtain full results for these variables).

Next, we conducted linear multiple regressions to investigate how the Dark Triad traits, impulsivity, and sex predicted frequency of thefts from different targets, and frequency of various kinds of thefts in the past 12 months, motivations to steal, and the extent of planning involved in the theft (see Tables 3 and 4 for correlation coefficients and beta values). After controlling for shared variance,

Table 2. Descriptive statistics, F -ratios, and effect sizes for the Dark Triad traits, and functional and dysfunctional impulsivity in people who have and have not committed a theft

| | Mean (SD) | | | F | η_p^2 |
|---------------------------|-----------------------|---------------------|------------------------|-------|------------|
| | Overall ($N = 254$) | Theft ($n = 124$) | No theft ($n = 130$) | | |
| Narcissism | 14.19 (7.42) | 14.33 (7.20) | 14.06 (7.67) | 0.01 | .01 |
| Machiavellianism | 73.56 (14.01) | 76.00 (14.90) | 71.20 (12.70) | 7.42* | .03 |
| Primary psychopathy | 80.26 (18.11) | 84.89 (18.10) | 75.76 (17.01) | 4.14* | .06 |
| Secondary psychopathy | 70.10 (17.47) | 76.26 (17.99) | 64.14 (14.73) | 5.82* | .12 |
| Functional impulsivity | 5.42 (3.11) | 5.51 (3.08) | 5.33 (3.20) | 0.81 | .03 |
| Dysfunctional impulsivity | 3.24 (2.93) | 3.70 (3.20) | 2.80 (2.62) | 5.39* | .02 |

Note. * $p < .01$ (two-tailed).

Table 3. Relationship between the Dark Triad and impulsivity variables, extent of planning thefts, and frequency of thefts from different targets

| Measures | <i>r</i> (β) | | | | | |
|---------------------------|----------------------|---------------|-------------|---------------------|-----------------------|--------------|
| | Family and friends | Strangers | Work | Stores and agencies | Frequency (12 months) | Planning |
| Narcissism | .18* (.05) | .40** (.02) | .07 (-.12) | .19* (.11) | .13 (.02) | .25* (.01) |
| Machiavellianism | .24* (.26) | .40 (-.05) | .19* (.01) | .15 (.04) | .24** (.07) | .19* (.03) |
| Primary psychopathy | .20 (-.32) | .54** (.18) | .23* (.23) | .15 (-.28) | .23* (-.15) | .23* (.04) |
| Secondary psychopathy | .31* (.16) | .64** (.46**) | .21* (.20) | .36** (.49**) | .23* (.49**) | .40** (.26*) |
| Functional impulsivity | .22* (.12) | .44** (.17) | .07 (-.01) | .13 (-.05) | .06 (-.13) | .07 (.00) |
| Dysfunctional impulsivity | .17 (.10) | .26** (.03) | -.05 (-.17) | .09 (-.06) | .08 (-.07) | -.05 (-.06) |

Notes. * $p < .05$, ** $p < .01$ (one-tailed).

Table 4. Relationship between the Dark Triad and impulsivity variables and motivations for thefts

| Measures | <i>r</i> (β) | | | | | |
|---------------------------|----------------------|---------------|---------------|--------------|---------------|-------------|
| | Give as a gift | Keep for self | Lack of money | To get food | Anger/revenge | For fun |
| Narcissism | .21* (.05) | .04 (-.09) | .18* (.12) | -.04 (-.11) | .19* (.01) | .28* (-.01) |
| Machiavellianism | .22* (.02) | .34** (.28) | .24** (.25) | -.01 (.02) | .29** (.18) | .33** (.06) |
| Primary psychopathy | .26* (-.04) | .27** (.21) | .19 (-.47*) | -.03 (-.36*) | .29** (-.11) | .43** (.32) |
| Secondary psychopathy | .36** (.37*) | .13 (-.06) | .42** (.62**) | .19* (.43**) | .32** (.10) | .32** (.03) |
| Functional impulsivity | .17 (-.02) | -.06 (-.10) | .10 (-.05) | .09 (.05) | .19* (-.04) | .27** (.14) |
| Dysfunctional impulsivity | .02 (-.12) | .02 (-.07) | .12 (-.09) | -.04 (-.11) | .18 (.12) | .11 (-.03) |

Notes. * $p < .05$, ** $p < .01$ (one-tailed).

secondary psychopathy predicted stealing from strangers, stores, and agencies, as well as higher frequency of thefts in the past 12 months. In terms of motivations to steal, secondary psychopathy predicted stealing for gift-giving, to get money, and to get food. Interestingly, the relationships were in the other direction for primary psychopathy. Individuals who scored higher in primary psychopathy were less likely to steal to get money, and more likely to steal just for fun. Secondary psychopathy was the only significant predictor for the extent of planning the thefts.

Last, we analyzed the relative importance of the Dark Triad traits, impulsivity, and sex in relation to the risk appeal (again, full results can be obtained from the first author). For the risk-appeal measures, secondary psychopathy had a positive, near-significant association with the question “does the risk of getting caught make stealing appealing” ($\beta = .29$, $t = 2.22$, $p < .05$). Interestingly, for the question “if there was no risk of getting caught, how often would you steal,” Machiavellianism ($\beta = .33$, $t = 2.64$, $p < .01$) and primary psychopathy ($\beta = .32$, $t = 2.11$, $p = .04$) were positive predictors. This indicates that people high in Machiavellianism and primary psychopathy may be willing to steal, but are deterred by the possible consequences.

Discussion

To our knowledge, this is the first study to investigate the Dark Triad of personality, and the frequency of petty thefts

in a non-incarcerated adult sample. Together with dysfunctional impulsivity, the “darker” aspects of the Dark Triad (i.e., both psychopathy subtypes and Machiavellianism) are associated with admitting to having stolen something. Albeit the relatively small effect sizes, these results were significant, and provide tentative support for the idea that psychopathy and Machiavellianism are part of an evolutionary cheater strategy (Jonason & Webster, 2012), sharing the core features of dysfunctional impulsivity (Jones & Paulhus, 2011), an evening chronotype (Jonason, Jones, & Lyons, 2013), and a hostile interpersonal style (Rauthmann & Kolar, 2013). Thefts may be part of the same package, adaptive when the behavior is not too conspicuous, allowing the avoidance of punishment.

When we controlled for shared variance between the Dark Triad and impulsivity, secondary psychopathy alone emerged as a significant predictor of diverse thieving behavior, such as stealing from strangers, stores, and agencies, higher number of lifetime thefts, and higher frequency of stealing various items in the past 12 months. It has been proposed that psychopathy, as an antisocial phenotype, can explain various arrays of offending above and beyond theories on impulsivity (DeLisi, 2009), and our results suggest that this phenotype is embodied especially in secondary psychopathy. Rather than impulsivity or primary psychopathy, secondary psychopathy may be a good predictor of small thefts. This makes sense as secondary psychopathy is characterized by high intensity of criminal behavior (McCuish et al., 2014) and anti-social deviance (Williams et al., 2007). It may be a more general personality trait than impulsivity, thereby capturing a wider range of variance.

Interestingly, secondary psychopathy also related to greater planning of the thefts, which could be a feature of a proclivity toward a criminal career (McCuish et al., 2014).

The differences between primary and secondary psychopathy are interesting, and partially support the idea that primary psychopathy is the more "successful" of the two (Akhtar, Ahmetoglu, & Chamorro-Premuzic, 2013; Lyons, Healy, & Bruno, 2013; Skeem, Polaschek, Patrick, & Lilienfeld, 2011). For example, individuals high in primary psychopathy reported a higher likelihood of stealing if they knew they would not get caught. This fits in with other characteristics such as low guilt (Lyons, 2014), low empathy (Jonason, Lyons, et al., 2013), and strategic behaviors such as defection on individuals who one does not interact with in the future (Gervais et al., 2013). Primary psychopathy may relate to getting a kick out of disingenuous behaviors which are only acted on if the risk of getting caught is low. These behaviors are likely to be facilitated by callous and unemotional predisposition, and may lead to career success (see Akhtar et al., 2013). Secondary psychopathy, in turn, was associated with thrill-seeking thefts, as well as thieving to get money or food, rather than just for fun. It is possible that individuals high in secondary psychopathy are more likely to engage in petty thefts without caring too much about the consequences of getting caught. Our findings suggest that secondary psychopathy may relate to a career path as a petty criminal. There certainly is scope for further research on the psychopathy subtypes and crime in non-incarcerated populations.

This study had a number of limitations. First, we relied on self-reported crime. This is in stark contrast to most work on criminality which uses verifiable criminal data, focusing on those who have already been caught. However, those who have been caught may evidence pathological manifestations of psychopathy in contrast to those in our sample who may have been able to "fly below the radar." Although research has found that on-line data collection can reduce self-report biases on sensitive topics (Kreuter, Presser, & Tourangeau, 2008), we cannot fully rule out any suppression in the reports of crime. However, what this means simply is that we have underestimates of the links if such suppression truly exists. Second, we had a relatively small sample of individuals who were "opportunistically" sampled. Nevertheless, we may have capitalized on volunteers who may, by their very nature, be low on the Dark Triad traits which will further suppress our correlations. Third, we did not report on associations for lower-order factors for the Narcissistic Personality Inventory (e.g., Jonason, Jones, et al., 2013) but we had no theoretical reason to do so and exploratory tests revealed nothing particularly compelling. Importantly, including Machiavellianism and narcissism was done to increase precision by allowing us to partial shared variance in the Dark Triad traits; providing a purer estimate of the relationship between psychopathy and petty theft. Fourth, we were unable to analyze men and women separately due to the small number of male participants in the study. Previous studies have found that especially the two psychopathy subtypes have different effects on behavior depending on sex (e.g., Jonason, Lyons, et al., 2013; Lyons et al., 2013). It would be useful to take

sex into consideration in future studies with larger, more balanced sample sizes. That said we have provided new detail about how psychopathy may be linked – albeit as an underestimate – to petty theft and other aspects of non-violent, low-level crime.

Future research should include more observational and experimental work, as it may be that verbal reports of thieving do not correspond with actual behavior (Farrington, Knapp, Erickson, & Knight, 1980). It would be interesting to investigate the Dark Triad in relation to actual opportunistic thieving in a laboratory experiment, varying the probability of detection as well as opportunities for social interaction (Falk & Fischbacher, 2002). It would be expected that individuals high in trait psychopathy are less sensitive to indicators of being detected and punished for thefts than individuals lower in this trait.

With these limitations noted, we have still provided a unique study for both forensic and personality psychologists using adaptations framework. We emphasize the importance of personality traits in understanding people's proclivities toward crime. If one can look beyond their moral objections to crime, important theoretical contributions about the aetiology of crime can be gleaned from evolutionary psychology; something we hope to have done here.

References

- Akhtar, R., Ahmetoglu, G., & Chamorro-Premuzic, T. (2013). Greed is good? Assessing the relationship between entrepreneurship and subclinical psychopathy. *Personality and Individual Differences, 54*, 420–425.
- Buonanno, P., Drago, F., & Galbiati, R. (2014). How much should we trust crime statistics? A comparison between UE and US. *LIEPP Working Paper, 19*, 1–38.
- Chiaburu, D. S., Muñoz, G. J., & Gardner, R. G. (2013). How to spot a careerist early on: Psychopathy and exchange ideology as predictors of careerism. *Journal of Business Ethics, 118*, 473–486.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York, NY: Academic Press.
- Dean, A. C., Altstein, L. L., Berman, M. E., Constans, J. I., Sugar, C. A., & McCloskey, M. S. (2013). Secondary psychopathy, but not primary psychopathy, is associated with risky decision-making in noninstitutionalized young adults. *Personality and Individual Differences, 4*, 272–277.
- Del Giudice, M. (2014). Self-regulation in an evolutionary perspective. In G. H. E. Gendolla, M. Tops, & S. L. Coole (Eds.), *Handbook of biobehavioral approaches to self-regulation* (pp. 25–41). New York, NY: Springer.
- DeLisi, M. (2009). Psychopathy is the unified theory of crime. *Youth Violence and Juvenile Justice, 7*, 256–273.
- Dickman, S. J. (1990). Functional and dysfunctional impulsivity: Personality and cognitive correlates. *Journal of Personality and Social Psychology, 58*, 95–102.
- Drislane, L. E., Patrick, C. J., Sourander, A., Sillanmäki, L., Aggen, S. H., Elonheimo, H., ... Kendler, K. S. (2014). Distinct variants of extreme psychopathic individuals in society at large: Evidence from a population-based sample. *Personality Disorders: Theory, Research, and Treatment, 5*, 154–163.
- Egan, V., & Taylor, D. (2010). Shoplifting, unethical consumer behaviour, and personality. *Personality and Individual Differences, 48*, 878–883.

- Falk, A., & Fischbacher, U. (2002). "Crime" in the lab-detecting social interaction. *European Economic Review*, 46, 859–869.
- Farrington, D. P., Knapp, W. S., Erickson, B. E., & Knight, B. J. (1980). Words and deeds in the study of stealing. *Journal of Adolescence*, 3, 35–49.
- Felson, M., & Boba, R. L. (Eds.). (2010). *Crime and everyday life* (4th ed.). Thousand Oaks, CA: Sage.
- Gervais, M. M., Kline, M., Ludmer, M., George, R., & Manson, J. H. (2013). The strategy of psychopathy: primary psychopathic traits predict defection on low-value relationships. *Proceedings of the Royal Society B: Biological Sciences*, 280, 20122773.
- Grant, J. E., Chamberlain, S. R., Schreiber, L., & Odlaug, B. L. (2012). Neurocognitive deficits associated with shoplifting in young adults. *Comprehensive Psychiatry*, 53, 1049–1055.
- Jolliffe, D. (2013). Exploring the relationship between the Five-Factor Model of personality, social factors and self-reported delinquency. *Personality and Individual Differences*, 55, 47–52.
- Jonason, P. K., Jones, A., & Lyons, M. (2013). Creatures of the night: Chronotypes and the Dark Triad traits. *Personality and Individual Differences*, 55, 538–541.
- Jonason, P. K., Koenig, B. L., & Tost, J. (2010). Living a fast life: The Dark Triad and Life History Theory. *Human Nature*, 21, 428–442.
- Jonason, P. K., Lyons, M., Baughman, H. M., & Vernon, P. A. (2014). What a tangled web we weave: The Dark Triad traits and deception. *Personality and Individual Differences*, 70, 117–119.
- 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., & 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.
- Jones, D. N., & Paulhus, D. L. (2011). The role of impulsivity in the Dark Triad of personality. *Personality and Individual Differences*, 51, 679–682.
- Kreuter, F., Presser, S., & Tourangeau, R. (2008). Social desirability bias in CATI, IVR, and Web surveys the effects of mode and question sensitivity. *Public Opinion Quarterly*, 72, 847–865.
- Lyons, M., Healy, N., & Bruno, D. (2013). It takes one to know one: Relationship between lie detection and psychopathy. *Personality and Individual Differences*, 55, 676–679.
- Lyons, M. T. (2014). Evidence for an evolutionary cheater strategy – relationships between primary and secondary psychopathy, parenting, and shame and guilt. *The Journal of Psychology*. Advance online publication. doi: 10.1080/00223980.2014.925845
- Lyons, M. T. (2015). Risk anything! Secondary, rather than primary psychopathy, is associated with diverse risk-taking in evolutionarily relevant domains. *Evolutionary Behavioral Sciences*. Advance online publication. doi: 10.1037/ebs0000039
- Lyons, M. T., & Rice, H. (2014). Thieves of time? Procrastination and the Dark Triad of personality. *Personality and Individual Differences*, 61–62, 34–37.
- McCuish, E. C., Corrado, R., Lussier, P., & Hart, S. D. (2014). Psychopathic traits and offending trajectories from early adolescence to adulthood. *Journal of Criminal Justice*, 42, 66–76.
- Mealey, L. (1995). The sociobiology of sociopathy: An integrated evolutionary model. *Behavioral and Brain Sciences*, 18, 523–599.
- Miller, J. D., & Lynam, D. (2001). Structural models of personality and their relation to antisocial behaviour: A meta-analytic review. *Criminology*, 39, 765–798.
- Paulhus, D. L., Hemphill, J. D., & Hare, R. D. (2009). *Manual for the self-report psychopathy scale*. Toronto, Ontario: 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., & Terry, H. (1988). A principle 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., & Kolar, G. P. (2013). Positioning the Dark Triad in the interpersonal circumplex: The friendly-dominant narcissist, hostile-submissive Machiavellian, and hostile-dominant psychopath? *Personality and Individual Differences*, 54, 622–627.
- Ross, S. R., Lutz, C. J., & Bailey, S. E. (2004). Psychopathy and the five factor model in a noninstitutionalized sample: A domain and facet level analysis. *Journal of Psychopathology and Behavioral Assessment*, 26, 213–223.
- Skeem, J. L., Polaschek, D. L., Patrick, C. J., & Lilienfeld, S. O. (2011). Psychopathic personality: Bridging the gap between scientific evidence and public policy. *Psychological Science in the Public Interest*, 12, 95–162.
- Vandereycken, W., & Houdenhove, V. V. (1996). Stealing behavior in eating disorders: Characteristics and associated psychopathology. *Comprehensive Psychiatry*, 37, 316–321.
- Wilcox, P., Sullivan, C. J., Jones, S., & van Gelder, J. L. (2014). Personality and opportunity: An integrated approach to offending and victimization. *Criminal Justice and Behavior*, 41, 880–901.
- Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the four-factor structure of psychopathy in college students via self-report. *Journal of Personality Assessment*, 88, 205–219.

Date of acceptance: February 2, 2015

Published online: November 18, 2015

Minna Lyons

School of Psychology
The University of Liverpool
Eleanor Rathbone Building
Bedford Street South
Liverpool L69 7ZA
UK
Tel. +44 151 794-2950
Fax +44 151 794-2957
E-mail m.lyons@liv.ac.uk
