



Short Communication

The role of impulsivity in the Dark Triad of personality

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ABSTRACT

Among the Dark Triad of personality, both narcissism and psychopathy have been linked to impulsivity. What remains unclear is the pattern of associations that the Dark Triad have with functional and dysfunctional types of impulsivity. Using both student ($N = 142$) and adult samples ($N = 329$), we investigated the association of the Dark Triad variables with Dickman's measures of functional and dysfunctional impulsivity. Based on regression analyses, psychopathy was most closely associated with dysfunctional impulsivity whereas narcissism was associated with functional impulsivity. It appears that narcissistic impulsivity involves venturesome social engagement whereas psychopathic impulsivity stems from poor self-regulation. As expected, Machiavellianism had no consistent association with either type of impulsivity. In short, the Dark Triad members show a coherent pattern of relations with impulsivity.

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1. Introduction

Some research suggests that impulsivity is maladaptive: higher levels have been linked to personality disorders, substance abuse and criminality (e.g., Barratt, Stanford, Kent, & Felthous, 1997; DeWit, 2008; Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). An apparently contradictory body of research has tied impulsivity to *positive* outcomes such as fast information processing, spontaneity, and venturesomeness (e.g., Dickman & Meyer, 1988; Gerbing, Ahadi, & Patton, 1987; Miller, Joseph, & Tudway, 2004; Vigil-Colet & Morales-Vives, 2005).

The goal of the present research is to show how this adaptive-maladaptive distinction in impulsivity may explain differences among the Dark Triad of personality (Paulhus & Williams, 2002).

1.1. Dickman's distinction

Dickman (1990) attempted to reconcile these adaptive and maladaptive correlates by differentiating two forms of impulsivity. He labeled them *functional impulsivity* vs. *dysfunctional impulsivity* and created subscales to measure them separately. Their intercorrelations have ranged from zero to small and positive.

His measure of functional impulsivity has been shown to predict idea generation (Brunas-Wagstaff, Bergquist, Morgan, & Wagstaff, 1996), enthusiasm, adventurousness, and the ability to make quick decisions (e.g., Dickman, 1990). Functional impulsivity

is especially relevant to situations where the benefits of speed outweigh the benefits of accuracy (Brunas-Wagstaff, Bergquist, Richardson, & Connor, 1995). In many social interactions, for example, reasonably quick responses are required or the engagement is aborted. The functional subscale overlaps conceptually and empirically with Eysenck's Venturesome impulsivity (Eysenck & Eysenck, 1977).

Dickman's concept of dysfunctional impulsivity, on the other hand, entails an erratic disorderliness. Behavioral correlates of this subscale include distraction and inaccurate decision making (Brunas-Wagstaff et al., 1995; Dickman, 1990) as well as suicide ideation (Dear, 2000). Conceptually, dysfunctional impulsivity overlaps with Eysenck's Narrow Impulsivity (Eysenck & Eysenck, 1977).

1.2. Personality factors and impulsivity

Instead of appearing as a distinct member of the Big Five, impulsivity plays a role in two of them, namely, high extraversion and low conscientiousness. Extraversion, for example, is associated with confidence, sociability, adventurousness, enthusiastic attitudes, active lifestyles, proneness to boredom, and risk taking (for a review, see Eysenck, 1990).

Low conscientiousness, on the other hand, is associated with a poor self control, recklessness, and deficits in avoidance orientation (Brunas-Wagstaff et al., 1995). Eysenck's P-scale, which subsamples low agreeableness and low conscientiousness, taps this same impulsivity (Brunas-Wagstaff et al., 1995). In sum, individuals low in conscientiousness are disorganized and erratic.

Given these theoretical parallels, it is not surprising that direct empirical comparisons have confirmed that extraversion is more

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closely associated with *functional* impulsivity, and (low) conscientiousness is more closely associated with *dysfunctional* impulsivity (Dickman, 1985).

1.3. The Dark Triad and impulsivity

Two negativistic personality traits with links to impulsivity are narcissism (Vazire & Funder, 2006) and psychopathy¹ (Jones & Paulhus, 2011). Of the two, narcissism is more consistently associated with extraversion whereas psychopathy is more consistently linked with (low) conscientiousness (Paulhus & Williams, 2002). Given this differential pattern of associations with the Big Five, it is likely that narcissism and psychopathy will relate to functional and dysfunctional impulsivity, respectively.

There are also conceptual reasons to predict that impulsivity will show a distinct pattern of associations with narcissism and psychopathy. Along with Machiavellianism, both narcissism and psychopathy belong to a cluster of malevolent traits referred to as the *Dark Triad* of personality (Paulhus & Williams, 2002).² Their overlap can be traced to a common disagreeableness (Jakobwitz & Egan, 2006), especially callous treatment of others (Jonason, Li, Webster, & Schmitt, 2008; Jones & Paulhus, 2011). All three show a substantial genetic component (Vernon, Villani, Vickers, & Harris, 2008). Nonetheless, the important differences among the Dark Triad led us to make differential predictions.

Machiavellians are manipulators who possess (at least) a modicum of self control. Therefore, we expected little association with either impulsivity measure. By contrast, narcissists engage quickly with others, thereby creating positive first impressions (Friedman, Oltmanns, Gleason, & Turkheimer, 2006; Paulhus, 1998). Both eager and uninhibited (Foster & Trimm, 2008), their impulsivity is a mixed blessing in the long-run (Paulhus, 1998; Vazire & Funder, 2006). On the whole, the extraversion and short-term venture-omeness of narcissists are consistent with functional impulsivity.

The construct of psychopathy is more compatible with dysfunctional impulsivity. A substantial body of research indicates that psychopathy is associated with low conscientiousness, deficits in self-control, and antisocial behavior (e.g., Hare, 1991). Even among non-offender samples, the consequences of psychopathic impulsivity are uniformly negative for both themselves and others (e.g., Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010; Williams & Paulhus, 2004).

2. Study 1. A student sample

2.1. Participants

Participants were 142 undergraduates recruited for a web study (72% female; Mean age = 20.35, SD = 3.10; 40% East Asian, 43% Caucasian, 17% other ethnicities).

2.2. Materials

2.2.1. Psychopathy

To measure subclinical psychopathy, we used the Self-Report Psychopathy scale (Paulhus, Neumann, & Hare, *in press*). This 64-item instrument includes four traits related to psychopathy: these are erratic lifestyle (e.g., I am a rebellious person), interpersonal

¹ Because we are investigating non-forensic samples, our use of the term 'psychopath' refers to subclinical, rather than clinical levels (Paulhus & Williams, 2002).

² As Paulhus and Williams (2002) have pointed out, examining the Dark Triad traits in isolation can be misleading due to the overlap of their standard measures. The overlap among these dark personalities must be accounted for (using multiple regression) before their independent contributions can be determined.

manipulation (e.g., I would get a kick out of 'scamming' someone), callous affect (e.g., Most people are wimps), and antisocial behavior (e.g., I have tricked someone into giving me money). In this sample, the overall scale alpha was impressive ($\alpha = .91$).

2.2.2. Machiavellianism

Machiavellianism was measured with the standard Mach-IV (Christie & Geis, 1970). The Mach-IV is a 20-item Likert style questionnaire. Sample items include, "Anyone who completely trusts anyone else is asking for trouble," "It is wise to flatter important people." The alpha reliability in this sample was acceptable ($\alpha = .76$). Not unlike previous research, Machiavellianism was positively correlated with psychopathy ($r = .49$) and narcissism ($r = .14$).

2.2.3. Narcissism

We assessed subclinical narcissism using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI is a 40-item forced-choice questionnaire that measures narcissism via self-report. Sample statements include, "I like to be the center of attention," "I am going to be a great person". The reliability was solid in this sample ($\alpha = .87$). The correlation between narcissism and psychopathy ($r = .32$) was similar to values in previous research (e.g., Jones & Paulhus, 2010; Paulhus & Williams, 2002).

2.2.4. Impulsivity

We scored both the functional and dysfunctional impulsivity subscales of Dickman's (1990) inventory. Sample functional items include: "Most of the time, I can put my thoughts into words very rapidly," "I would enjoy working at a job that required me to make a lot of split-second decisions." Sample dysfunctional items include: "I will often say whatever comes into my head without thinking first" and "I often get into trouble because I do not think before I act." In the Study 1 sample, both functional and dysfunctional subscales demonstrated solid reliabilities ($\alpha = .80$ and $.86$, respectively). Their intercorrelation was positive but modest ($r = .18$).

As a proxy for global impulsivity scales, we also computed the mean of the subscales. Despite the pooling of disparate types of items, this overall impulsivity index showed a reasonable alpha of $.76$.

2.3. Results and discussion

We computed correlations of the impulsivity subscales with each of the Dark Triad members. To evaluate the unique contributions of the Dark Triad members, we conducted a series of regression analyses. These included separate regressions for men and women in the prediction of each type of impulsivity.

Table 1 contains the correlations and standardized betas. Although the three predictors show similar patterns of correlations with impulsivity, the regression coefficients reveal a distinctive pattern that holds across male and female students.³ Both psychopathy and narcissism are associated with overall impulsivity. However, psychopathy alone was (independently) associated with dysfunctional impulsivity whereas narcissism alone was (independently) associated with functional impulsivity. Machiavellianism had no unique association with any type of impulsivity. Overall, our hypotheses were supported in the student data.

³ Because of the substantial sex differences in mean levels of the Dark Triad (Jonason et al., 2008), we avoided pooling across gender. The results of a pooled analysis would confound personality and group differences.

Table 1
Associations of the Dark Triad with impulsivity.

	Dysfunctional impulsivity				Functional impulsivity				Overall impulsivity			
	Men		Women		Men		Women		Men		Women	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β
<i>Study 1 (N = 51 men; 91 women)</i>												
Psychopathy	.36**	.42*	.37**	.28*	.19	.08	.07	-.04	.36**	.33*	.32**	.18
Narcissism	.06	-.13	.28**	.16	.51**	.49**	.34**	.36**	.33*	.19	.43**	.36**
Machiavellianism	.17	.01	.22*	.06	-.28*	-.21	-.05	-.09	.00	-.15	.14	-.01
<i>Study 2 (N = 125 men; 204 women)</i>												
Psychopathy	.58**	.59*	.50**	.48**	.14	-.12	.26**	.17*	.48**	.30**	.52**	.49**
Narcissism	.35**	.08	.10	-.13*	.46**	.52**	.29**	.26**	.55**	.42**	.22**	.02
Machiavellianism	.32**	-.08	.39**	.11	.10	.01	.15*	-.06	.27**	-.05	.35**	.03

Note: All tests are two-tailed.

* $p < .05$.

** $p < .01$.

3. Study 2. A community sample

In Study 2, we investigated whether our findings would generalize from students to broader samples. Therefore we turned to Amazon's online site, "Mechanical Turk" (www.mechanical-turk.com). On this site, English-speaking participants from around the world can complete brief questionnaires in return for a small fee. Although most are from North America, there are non-trivial proportions of participants from Europe, India, Pakistan, and Hong Kong. Recent comparison have shown that Mechanical Turk is as reliable and valid as student samples (Buhrmester, Kwang, & Gosling, 2011): it has a clear advantage in terms of diversity in cultural background and social class.

3.1. Participants

Participants were 329 adults recruited from Mechanical Turk. Because we restricted the ages to those over 21, we will apply the term 'adult'. Of these, 62% were female. Mean age was 29.68, $SD = 10.28$. Ethnicities included 60% Caucasian, 21% South Asian, 9% East Asian, and 10% other ethnicities.

3.2. Materials

3.2.1. Dark Triad

The same measures were used for the Dark Triad. The reliabilities were acceptable in the present sample: NPI ($\alpha = .79$), SRP ($\alpha = .92$), and Mach-IV ($\alpha = .83$). The intercorrelations among the Dark Triad were all positive and significant ($p < .01$). Based on Cohen's (1988) criteria, the correlation of SRP with the Mach-IV (.62) was large, as was that with the NPI (.48). Finally, the correlation of Mach-IV with NPI (.32) was moderate in size.

3.2.2. Dickman impulsivity inventory

We used the same measures as in Study 1 to assess functional ($\alpha = .86$) and dysfunctional impulsivity ($\alpha = .87$), as well as impulsivity overall ($\alpha = .85$). The intercorrelation of the subscales was positive, but small and non-significant ($r = .13$).

3.3. Results and discussion

Note from Table 1, that the pattern of associations with overall impulsivity is similar across the Dark Triad members. After separating the functional dysfunctional subscales, however, the regression results were similar to those of Study 1. In males, psychopathy was the only independent predictor of dysfunctional impulsivity whereas narcissism was the only independent predictor of functional impulsivity. Machiavellianism had no association with impulsivity of any kind.

The results for women were slightly more complex. In addition to the expected predictors, psychopathy made a unique contribution to functional impulsivity and narcissism made a (small) contribution to dysfunctional impulsivity. Again, Machiavellianism had no association with impulsivity.

In neither study did we find significant interactions among the Dark Triad predictors. Nor was there evidence in either study of interactions between gender and any of the Dark Triad members. Only one of 24 possible interactions was significant – no better than chance. Despite the increased sample size (and therefore, power), the results of Study 2 were consistent with those of Study 1.

4. General discussion

The results obtained with an overall measure of impulsivity replicated previous findings indicating that both narcissistic and psychopathic individuals tend to be impulsive. After separating functional from dysfunctional forms of impulsivity, however, our results revealed distinct patterns of associations with the Dark Triad. Psychopathy is primarily associated with dysfunctional impulsivity, narcissism is primarily associated with functional impulsivity, and Machiavellianism is unrelated to either type of impulsivity.

These findings help explain why narcissism is a mixed blessing (e.g., Paulhus, 1998). The functional impulsivity of narcissists facilitates success when accuracy is less important than eager and speedy responses. In particular, narcissists should thrive in situations involving short-term social interactions (Vazire & Funder, 2006). Because most social interactions are automatized, the rapid social engagement of narcissists creates a charming initial impression (Friedman et al., 2006; Paulhus, 1998). Over time, however, even functional impulsivity is bound to wear on interpersonal relationships⁴ (Vazire & Funder, 2006).

Our demonstration of an association between psychopathy and dysfunctional impulsivity is consistent with previous theory and research. Psychopaths lack the ability to inhibit antisocial impulses (Foster & Trimm, 2008). At clinical levels, this impulsivity promotes criminal behavior (Hare, 1991). Even at subclinical levels, the life trajectory of psychopaths is self-destructive (Fite et al., 2010; Williams & Paulhus, 2004).

By contrast, neither form of impulsivity plays a role among Machiavellians. The lack of associations indicates that, although Machiavellians have no *better* impulse control than non-Machiavellians, they certainly have the advantage over narcissists and psychopaths. Their moderate impulse control allows Machiavellians to

⁴ We agree with Eysenck and Eysenck (1977) that, because of possible long-term negative consequences, the label 'functional' is not ideal: Their label 'venturesome' may be preferable.

refrain from counterproductive behaviors despite their selfish intentions (Jones & Paulhus, 2010).

Taken together, our two studies add to the accumulating evidence that the Dark Triad members have unique personality styles favoring different life outcomes. Each member has a unique social engagement style that might prove adaptive in some situations but maladaptive in others.

Note that the inter-correlations among the Dark Triad members were higher in the community than in the student sample. Nonetheless, the overall pattern of associations with impulsivity remained consistent across these diverse sources of data.

References

- Barratt, E. S., Stanford, M. S., Kent, T. A., & Felthous, A. (1997). Neuropsychological and cognitive psychophysiological substrates of impulsive aggression. *Biological Psychiatry*, *41*, 1045–1061.
- Brunas-Wagstaff, J., Bergquist, A., Morgan, K., & Wagstaff, G. F. (1996). Impulsivity, interference on perceptual tasks and hypothesis testing. *Personality and Individual Differences*, *20*, 471–482.
- Brunas-Wagstaff, J., Bergquist, A., Richardson, P., & Connor, A. (1995). The relationships between functional and dysfunctional impulsivity and the Eysenck personality questionnaire. *Personality and Individual Differences*, *18*, 681–683.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*, 3–5.
- Christie, R., & Geis, F. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Dear, G. E. (2000). Functional and dysfunctional impulsivity, depression, and suicidal ideation in a prison population. *Journal of Psychology*, *134*, 77–80.
- DeWit, H. (2008). Impulsivity as a determinant and consequence of drug use: A review of underlying processes. *Addiction Biology*, *14*, 22–31.
- Dickman, S. (1985). Impulsivity and perception: Individual differences in processing local and global dimensions of stimuli. *Journal of Personality and Social Psychology*, *48*, 133–149.
- Dickman, S. (1990). Functional and dysfunctional impulsivity: Personality and cognitive correlates. *Journal of Personality and Social Psychology*, *58*, 95–102.
- Dickman, S. J., & Meyer, D. E. (1988). Impulsivity and speed-accuracy tradeoffs in information processing. *Journal of Personality and Social Psychology*, *54*, 274–290.
- Eysenck, H. J. (1990). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research*. New York: Guilford Press.
- Eysenck, S. B. G., & Eysenck, H. J. (1977). The place of impulsiveness in a dimensional system of personality description. *British Journal of Social and Clinical Psychology*, *16*, 57–68.
- Fite, P. J., Raine, A., Stouthamer-Loeber, M., Loeber, R., & Pardini, D. A. (2010). Reactive and proactive aggression in adolescent males: Examining differential outcomes 10 years later in early adulthood. *Criminal Justice and Behavior*, *37*, 141–157.
- Foster, J. D., & Trimm, R. F. (2008). On being eager and uninhibited: Narcissism and approach-avoidance motivation. *Personality and Social Psychology Bulletin*, *34*, 1004–1017.
- Friedman, J. N. W., Oltmanns, T. F., Gleason, M. E. J., & Turkheimer, E. (2006). Mixed impressions: Reactions of strangers to people with pathological personality traits. *Journal of Research in Personality*, *40*, 395–410.
- Gerbing, D. W., Ahadi, S. A., & Patton, J. H. (1987). Toward a conceptualization of impulsivity: Components across the behavioral and self-report domains. *Multivariate Behavioral Research*, *22*, 357–379.
- Hare, R. D. (1991). *Psychopathy check list – Revised* (2nd ed.). Toronto: Multi-Health Systems.
- Jakobwitz, S., & Egan, V. (2006). The Dark Triad and normal personality traits. *Personality and Individual Differences*, *40*, 331–339.
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2008). The Dark Triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, *23*, 5–18.
- Jones, D. N., & Paulhus, D. L. (2010). Different provocations provoke aggression in psychopaths and narcissists. *Social Psychological and Personality Science*, *1*, 12–18.
- Jones, D. N., & Paulhus, D. L. (2011). Differentiating the Dark Triad within the interpersonal circumplex. In L. M. Horowitz & S. Strack (Eds.), *Handbook of interpersonal psychology* (pp. 249–269). New York: Guilford.
- Miller, E., Joseph, S., & Tudway, J. (2004). Assessing the component structure of four self-report measures of impulsivity. *Personality and Individual Differences*, *37*, 349–358.
- Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M., & Swann, A. C. (2001). Psychiatric aspects of impulsivity. *American Journal of Psychiatry*, *158*, 1783–1793.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, *74*, 1197–1208.
- Paulhus, D. L., Neumann, C. S., & Hare, R. D. (in press). *Self Report Psychopathy (SRP) scale*. Toronto: Multi-Health Systems.
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*, 556–563.
- Raskin, R., & Hall, C. S. (1979). A Narcissistic Personality Inventory. *Psychological Reports*, *45*, 590.
- Vazire, S., & Funder, D. C. (2006). Impulsivity and the self-defeating behavior of narcissists. *Personality and Social Psychology Review*, *10*, 154–165.
- Vernon, P. A., Villani, V. C., Vickers, L. C., & Harris, J. A. (2008). A behavioural genetic investigation of the Dark Triad and the Big 5. *Personality and Individual Differences*, *44*, 445–452.
- Vigil-Colet, A., & Morales-Vives, F. (2005). How impulsivity is related to intelligence and academic achievement. *Journal of Spanish Psychology*, *8*, 199–204.
- Williams, K. M., & Paulhus, D. L. (2004). Factor structure of the Self-Report Psychopathy Scale (SRP-II) in non-forensic samples. *Personality and Individual Differences*, *37*, 765–778.