



Psychopathy, Machiavellianism, and Narcissism in the Five-Factor Model and the HEXACO model of personality structure ☆

Kibeom Lee ^{a,*}, Michael C. Ashton ^b

^a Department of Psychology, University of Calgary, 2500 University Drive NW, Calgary, AB, Canada T2N 1N4

^b Department of Psychology, Brock University, St. Catharines, ON, Canada L2S 3A1

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Abstract

We investigated the relations of the “Dark Triad” personality traits—Psychopathy, Machiavellianism, and Narcissism—with the variables of the Five-Factor Model and the HEXACO model of personality structure. Results ($N = 164$) indicated that all three Dark Triad traits were strongly negatively correlated ($r_s = -0.72$, -0.57 , and -0.53 , respectively) with the HEXACO Honesty–Humility factor. Psychopathy and Machiavellianism showed moderate negative correlations with Big Five Agreeableness ($r_s = -0.39$ and -0.44 , respectively), but Narcissism did not ($r = -0.04$). However, Narcissism correlated positively with Big Five Extraversion ($r = 0.46$) and HEXACO Extraversion ($r = 0.49$). Correlations among the Dark Triad variables were explained satisfactorily by the HEXACO variables, but not by the Five-Factor Model variables.

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* Corresponding author. Tel.: +1 403 210 9469; fax: +1 403 282 8249.

E-mail addresses: kibeom@ucalgary.ca (K. Lee), mashton@brocku.ca (M.C. Ashton).

1. Introduction

Socially aversive personality traits such as Psychopathy, Machiavellianism, and Narcissism have been studied intensively in clinical and social psychology. Psychopathy refers to a pattern of callous, remorseless manipulation and exploitation of others, and has been investigated as a psychological cause of antisocial and criminal behaviours (Hare, 1991). Narcissism, which has been widely studied as a personality disorder (American Psychiatric Association, 1994), has been conceptualized as a “normal” personality variable characterized by dominance, exhibitionism, and exploitation as well as feelings of superiority and entitlement (Raskin & Terry, 1988). Machiavellianism refers to individual differences in manipulativeness, insincerity, and callousness (Christie & Geis, 1970), and has been widely studied in social psychological investigations involving persuasion, leadership, and ethical behaviours. Although each of these three constructs may have some unique features not shared by the other two, they do appear to share some common elements such as exploitation, manipulativeness, and a grandiose sense of self-importance. Accordingly, Paulhus and Williams (2002) have called these three constructs the “Dark Triad” of personality, and we will use the same term here to refer collectively to the three traits.

Despite the voluminous literature on each of the Dark Triad constructs, they have not yet been fully understood in terms of a general framework of personality structure such as the Big Five or Five-Factor Model (e.g., Goldberg, 1993; McCrae, 1989; despite some minor differences between the Big Five and the Five-Factor Model, we will use the two names interchangeably). Thus far, global factor-level measures of the Big Five factors—known as Extraversion, Agreeableness, Conscientiousness, Neuroticism (versus Emotional Stability), and Openness to Experience (or Intellect/Imagination)—have typically shown only moderate correlations with the Dark Triad traits (see Paulhus & Williams, 2002). The purpose of the present study is to delineate the Dark Triad constructs within two competing structural models of personality variation: the Five-Factor Model and a newly proposed framework known as the HEXACO model (Ashton et al., 2004; Lee & Ashton, 2004).

1.1. *The Dark Triad of personality and the Big Five Model*

Paulhus and Williams (2002) recently conducted a study to investigate the similarities and differences among the Dark Triad traits. In this study, self-report measures of the three variables were moderately intercorrelated ($r = 0.50$ for Psychopathy/Narcissism, $r = 0.31$ for Psychopathy/Machiavellianism, and $r = 0.25$ for Narcissism/Machiavellianism). The three constructs were further delineated in terms of their relations with the Big Five personality traits, intelligence, and some indices of self-enhancement. With respect to personality variables, results showed that only one Big Five factor—Agreeableness—was consistently correlated with all three of the Dark Triad personality traits. The sizes of the correlations, however, were modest ($r = -0.25$ for Psychopathy, $r = -0.47$ for Machiavellianism, and $r = -0.36$ for Narcissism).

The sizes of the correlations of the Dark Triad traits found with Agreeableness in Paulhus and Williams (2002) are too small to account for the observed correlations among the three variables. In other words, the pattern of covariation among the Dark Triad traits cannot be explained in terms of their correlations with the Big Five variables, and this fact might be considered a shortcoming of the Five-Factor Model. However, a new model of personality structure has recently

been proposed, and this model contains a sixth independent dimension that bears a strong conceptual similarity to—and likely a strong empirical overlap with—the Dark Triad traits. Interestingly, this new six-dimensional model was derived on the basis of cross-cultural findings from lexical studies of personality structure.

2. A new model of personality structure: the HEXACO model

Lexical studies of personality structure involve factor analyses of ratings on a comprehensive set of personality descriptive terms. Several investigations of the structure of the English personality lexicon have been conducted in the past, and have repeatedly produced a similar set of five factors now known as the Big Five. Since the late 1980s, lexical studies of personality structure have been conducted using several other European and Asian languages. Interestingly, however, the findings from these studies do not provide uniform support for a structure containing only five factors (Ashton & Lee, 2001). (See Eysenck, 1992; for a critique of the Five-Factor Model from a non-lexical perspective, and for his alternative three-dimensional structure.)

A recent review of these non-English lexical studies (Ashton et al., 2004) suggested that there has been a similar set of six, not just five, factors obtained in eight independent lexical studies of personality structure conducted in seven languages: Dutch, French, German, Hungarian, Italian, Korean, and Polish. Ashton et al. noted that these replicated sets of six factors represent variants of the Big Five factors plus an additional factor named Honesty–Humility (see also Ashton & Lee, 2001). Until recently, these factors had not emerged in analyses of the English personality lexicon (e.g., Saucier & Goldberg, 1996). However, a recent investigation of the English personality lexicon, based on a very large set of personality-descriptive adjectives ($k = 1710$), recovered a set of six factors that are very similar to those observed in the other languages listed above (Ashton, Lee, & Goldberg, 2004).

Based on the replicated cross-language findings summarized by Ashton et al. (2004), a new structural model of personality has recently been operationalized (Lee & Ashton, 2004). This framework, now known as the HEXACO model, subsumes six dimensions known as Honesty–Humility (H), Emotionality (E), eXtraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O). The Emotionality and Agreeableness factors of this model correspond roughly to rotated variants of the Big Five Agreeableness and Emotional Stability dimensions, and the Extraversion, Conscientiousness, and Openness to Experience factors are very similar to their Five-Factor Model counterparts. The remaining HEXACO factor, Honesty–Humility, has no clear counterpart among the Big Five factors, and hence constitutes the most salient feature of the newer model.

3. Hypotheses

3.1. Hypotheses regarding the Big Five and HEXACO Models

The new factor named Honesty–Humility has typically been defined by traits such as sincerity, fairness, and modesty versus slyness, pretentiousness, and greed (see Ashton et al., 2004). The range of content captured by this factor is thus largely the same as that subsumed by the Dark

Triad variables, and suggests strong empirical relations between Honesty–Humility and all three of the Dark Triad. In contrast, the Big Five model has no direct counterpart of Honesty–Humility, and only a fraction of this factor is represented within the Big Five Agreeableness factor (and to a lesser degree the Conscientiousness factor). We therefore generated the following hypotheses:

Hypothesis 1. Within the HEXACO model, Honesty–Humility will show strong negative correlations with the Dark Triad variables, but none of the other five factors will correlate substantially with all three of those variables.

Hypothesis 2. Within the Big Five model, Agreeableness will show modest negative correlations with the Dark Triad variables, but none of the other four factors will correlate substantially with all three of those variables.

As noted above, Narcissism includes some traits that are not subsumed within Psychopathy and Machiavellianism. These traits include dominance, leadership, assertiveness, and a tendency to seek social attention, all of which are relevant to Extraversion (see, e.g., Ashton, Lee, & Pausonon, 2002). We therefore postulated our third hypothesis, below.

Hypothesis 3. Extraversion, as operationalized within both the HEXACO and Big Five frameworks, will show substantial positive correlations with Narcissism, but not with Psychopathy or Machiavellianism.

Our aim in this study was not only to describe the relations between the major dimensions of personality and the Dark Triad traits, but also to explain the covariation among the Dark Triad traits using the proposed major dimensions of personality. Specifically, we attempted to reproduce the correlations among the Dark Triad traits based on their correlations with the dimensions of the two competing models of personality. As noted above, the conceptual similarities among the various constructs suggest that the Dark Triad traits will be better accommodated by the HEXACO model than by the Big Five model. We therefore postulated our fourth hypothesis, below.

Hypothesis 4. The observed correlations among the Dark Triad traits will be closely approximated by the predicted correlations among those traits based on their correlations with the dimensions of the HEXACO model, but not by the predicted correlations among those traits based on their correlations as approximated by the dimensions of the Big Five model.

3.2. Research questions regarding facet scales in Honesty–Humility

As is true of the dimensions of the Five-Factor Model, the Honesty–Humility factor can be conceptualized as a broad personality dimension that includes several correlated, but distinct, narrow traits. In the HEXACO model, Lee and Ashton (2004) operationalized Honesty–Humility in terms of four narrow traits or facets that are represented among the high-loading adjectives on the lexical Honesty–Humility factors observed in many different language (see Table 5 in Ashton et al., 2004). These facets include Fairness (a tendency to avoid committing acts of fraud or corruption), Sincerity (a tendency to be genuine in interpersonal relations), Greed Avoidance (a tendency to be uninterested in possessing lavish wealth, luxury goods, and signs of high social status), and Modesty (a tendency to be modest and unassuming).

Lee and Ashton (2004) showed that the four facet scales are moderately intercorrelated, with each facet possessing unique non-error variance that distinguishes it from the others. Therefore, the empirical as well as conceptual differences among these four facets suggest the possibility that the Dark Triad traits will be differentially related to these narrower traits within Honesty–Humility, which can thus provide a more fine-grained understanding of the Dark Triad traits. For this purpose, we examined relations between the four facets of Honesty–Humility and the Dark Triad traits. We planned to analyze the facet-level data in an exploratory fashion, and did not submit any specific hypotheses.

4. Method

4.1. Participants

One hundred and sixty four undergraduate students participated for either course credits or cash payments. Women constituted 56% of the sample, and the mean age of participants was 23.9 years (s.d. = 7.3).

4.2. Measures

Responses on the personality measures described below were made on a five-point scale (1 = *strongly disagree*; 5 = *strongly agree*). Items from all personality scales were interspersed in quasi-random fashion throughout a single personality questionnaire booklet. Internal-consistency reliabilities of the scales described below are shown in Table 1. For all variables, descriptive statistics were similar to normative values.

4.2.1. The Five-Factor Model

The Big Five Inventory (BFI) consisting of 44 items was used to measure the Big Five variables (John, Donahue, & Kentle, 1991; see John & Srivastava, 1999, for psychometric properties of the BFI).

4.2.2. The HEXACO Model

The HEXACO variables were measured using the HEXACO Personality Inventory (HEXACO-PI, Lee & Ashton, 2004). The standard version of the HEXACO-PI includes 192 items that measure 24 facet scales, which are subsumed within the six higher-order factors.

For the purpose of the present research, we selected HEXACO-PI a set of 60 items to provide brief global measures of the six higher-order HEXACO dimensions (i.e., 10 items per dimension). These items were selected prior to the present study on the basis of their item-total correlations in the normative samples, and also with the aim of ensuring breadth of item content on each factor. Within Lee and Ashton's (2004) data set, the convergent correlations of the 10-item scales with the corresponding full-length scales all exceeded 0.93.

The four facet-level scales within the HEXACO-PI Honesty–Humility factor were also included. Each of these scales contains eight items.

Table 1

Correlations of Dark Triad personality traits with Big Five Inventory and HEXACO Personality Inventory scales

	Primary Psychopathy	Machiavellianism	Narcissism
<i>“Dark Triad” variables</i>			
Primary Psychopathy (0.88)			
Machiavellianism (0.78)	0.66		
Narcissism (0.89)	0.37	0.17	
<i>BFI variables</i>			
Extraversion (0.86)	−0.05	−0.11	0.46
Agreeableness (0.75)	− 0.39	− 0.44	−0.04
Conscientiousness (0.80)	−0.19	− 0.34	0.10
Emotional Stability (0.85)	0.01	−0.13	0.21
Openness to Experience (0.78)	−0.15	−0.07	0.24
<i>HEXACO-PI domains (short version)</i>			
Extraversion (0.83)	−0.06	−0.07	0.49
Agreeableness (0.76)	−0.15	−0.16	−0.10
Conscientiousness (0.76)	−0.18	−0.27	−0.03
Emotionality (0.77)	−0.29	−0.23	−0.14
Openness to Experience (0.72)	−0.19	−0.20	0.10
Honesty–Humility (0.71)	− 0.72	− 0.57	− 0.53
<i>Honesty–Humility facets</i>			
Fairness (0.80)	− 0.75	− 0.61	− 0.32
Sincerity (0.72)	− 0.57	− 0.44	−0.22
Greed Avoidance (0.82)	− 0.49	− 0.31	− 0.48
Modesty (0.78)	− 0.62	− 0.50	− 0.62

Note: $N = 164$. Absolute values greater than 0.30 are typed in bold. Values in parentheses are internal-consistency reliabilities (coefficient alpha). See text for descriptions of variables.

4.2.3. The Dark Triad traits

To assess Psychopathy, we used the 16-item Primary Psychopathy scale, which was developed by Levenson, Kiehl, and Fitzpatrick (1995) as a self-report scale to measure the first factor of Hare’s (1991) Psychopathy Checklist—Revised (PCL-R). We assessed only primary psychopathy because it represents the constellation of personality traits that are generally viewed as the core of the psychopathy construct (Harpur, Hare, & Hakstian, 1989).

Machiavellianism was measured by the 20-item Mach-IV scale (Christie & Geis, 1970) and Narcissism was assessed using the 40-item Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988, Table 1).

4.3. Analysis

As mentioned in the Introduction, we planned to compute the correlations among the Dark Triad personality traits and to compare those values with the estimated correlations as reproduced based on the correlations of the Dark Triad traits with the BFI variables and with the HEXACO-PI variables, respectively. Reproduced correlation matrices were obtained by applying the following formula:

Reproduced Correlation Matrix = $\mathbf{P} \times \mathbf{C} \times \mathbf{P}'$

where \mathbf{P} refers to the pattern (regression) coefficient matrix (i.e., Dark Triad variables \times model variables), and \mathbf{C} refers to the correlation matrix among model variables (e.g., model variables \times model variables). For example, if we reproduce the correlation matrix of the Dark Triad variables using the Big Five model, the first row of the \mathbf{P} matrix includes standardized regression coefficients associated with each of the Big Five variables for the first Dark Triad trait, and so on for the other two rows for the remaining Dark Triad traits. In addition, the \mathbf{C} matrix will include 5×5 intercorrelations among the Big Five traits.

5. Results

Before examining the correlations among the study variables, we investigated sex differences in mean levels of the Dark Triad traits, because previous studies indicated that high scores on these variables are more prevalent among men. As expected, men scored higher than women did on the Dark Triad traits (Cohen's d values equalled 0.70 for Primary Psychopathy, 0.64 for Narcissism, and 0.40 for Machiavellianism). A series of moderated multiple regression analyses indicated that there are no noticeable sex differences in the *relations* between the Dark Triad traits and personality variables in the present study, and hence we reported correlations obtained from the full sample combining males and females.

Table 1 shows the correlations among the Dark Triad personality traits, as well as the correlations with the variables from the Big Five and HEXACO models. First, as found by Paulhus and Williams (2002), the extent to which the Dark Triad traits correlated with each other varied to some degree. Specifically, Narcissism and Machiavellianism were rather weakly correlated ($r = 0.17$). Primary Psychopathy correlated significantly with both Machiavellianism and Narcissism, but unlike the findings of Paulhus and Williams, the correlation with Machiavellianism was substantially larger ($r = 0.66$) than the correlation with Narcissism ($r = 0.37$). The present findings are consistent with the observation, above, that Narcissism as measured by the NPI contains some traits that are not represented within the other two Dark Triad variables.

To examine more closely the constructs measured by the NPI, we found correlations separately for the seven subscales of the NPI (see Raskin & Terry, 1988). Two NPI subscales, namely Entitlement and Exploiteness, were the only ones that significantly and consistently correlated with *both* Machiavellianism and Primary Psychopathy. When the Entitlement and Exploiteness subscales alone were aggregated to form a single measure, this new scale score correlated more strongly with Primary Psychopathy ($r = 0.49$) and Machiavellianism ($r = 0.36$) than did the total NPI scores. This result reflects the fact that the NPI contains several subscales that are weakly related to the remaining two Dark Triad personality traits.

5.1. Relations with the Big Five and HEXACO Models

Table 1 also shows the correlations of the Dark Triad traits with personality variables from the BFI and from the HEXACO-PI. With respect to the HEXACO model, all three of the Dark Triad traits correlated substantially and negatively with Honesty–Humility: $r = -0.72$ with Primary

Table 2
Observed and reproduced correlations among the Dark Triad personality traits

	Primary Psychopathy	Machiavellianism
<i>Observed correlations</i>		
Machiavellianism	0.66	
Narcissism	0.37	0.17
<i>Reproduced by the 5 BFI dimensions</i>		
Machiavellianism	0.21	
Narcissism	0.03	0.01
<i>Reproduced by the 6 HEXACO dimensions</i>		
Machiavellianism	0.47	
Narcissism	0.32	0.23
<i>Reproduced by the 4 Honesty–Humility facets and the remaining 5 HEXACO dimensions</i>		
Machiavellianism	0.56	
Narcissism	0.36	0.25

Psychopathy, $r = -0.57$ with Machiavellianism, and $r = -0.53$ with Narcissism. Therefore, Hypothesis 1 received unambiguous support.

Within the Five-Factor Model, by contrast, there was no variable that showed consistent relations with all three Dark Triad traits. Specifically, Big Five Agreeableness showed moderate negative correlations with Primary Psychopathy ($r = -0.39$) and Machiavellianism ($r = -0.44$), but was uncorrelated with Narcissism ($r = -0.04$). These results are somewhat inconsistent with Hypothesis 2, which predicted negative correlations between Big Five Agreeableness and all of the Dark Triad traits. However, the size of the correlations of Big Five Agreeableness with Primary Psychopathy and Machiavellianism is consistent with Hypothesis 2, as these Dark Triad correlations were substantially smaller than those involving HEXACO-PI Honesty–Humility.

Finally, Narcissism was strongly correlated with Extraversion both in the Big Five ($r = 0.46$) and in the HEXACO model ($r = 0.49$), whereas the other Dark Triad traits were uncorrelated with both measures of Extraversion. These results therefore supported Hypothesis 3.

To examine how well the two models of personality can describe the pattern of covariation among the Dark Triad traits, we estimated the correlations among the three variables from their correlations with the Big Five and HEXACO scales, respectively (see Section 4). The Five-Factor Model clearly failed to reproduce a correlation matrix that is close to the observed one (see the second matrix in Table 2). None of the reproduced correlations were even close to the correlations actually observed. In contrast, when the same correlation matrix was reproduced from the HEXACO model, it approximated the observed correlated matrix much more closely (see the third matrix in Table 2). Therefore, Hypothesis 4 received strong support.

5.2. Relations with the Honesty–Humility facet scales

As mentioned in the Introduction, we planned to investigate the Dark Triad traits in terms of their correlations with the narrow traits within Honesty–Humility. As seen in the last matrix of

Table 1, the Dark Triad traits did show some differential patterns of correlations with the four narrow facet scales of Honesty–Humility. Primary Psychopathy correlated strongly with all of the Honesty–Humility facets, with values ranging from -0.49 for Greed Avoidance to -0.75 for Fairness. Machiavellianism showed a similar pattern of results, although the values were somewhat weaker, ranging from -0.31 for Greed Avoidance to -0.61 for Fairness. Narcissism, however, showed its highest correlation with Modesty ($r = -0.62$), followed by Greed Avoidance ($r = -0.48$), but was quite modestly correlated with Fairness and Sincerity ($r_s = -0.32$ and -0.22 , respectively). Thus, it appears that Narcissism is more highly saturated with the low humility (i.e., entitlement) aspect of low Honesty–Humility, rather than the low honesty (i.e., exploitation) aspect.

The fourth matrix in Table 2 shows the reproduced correlations among the Dark Triad traits as estimated from the four facet scales within Honesty–Humility and the five remaining dimensions of the HEXACO model. In general, this reproduced correlation matrix is even closer to the observed correlation matrix than is the correlation matrix that was reproduced from the correlations of the Dark Triad variables with the six higher-order dimensions. In particular, the reproduced correlation between Primary Psychopathy and Machiavellianism ($r = 0.56$) became closer to the observed correlation ($r = 0.66$) than was the reproduced correlation as estimated from the six HEXACO domains alone. This finding illustrates the explanatory value that can be derived from the measurement of lower-level traits in the personality hierarchy (e.g., Paunonen & Ashton, 2001).

To summarize, all of the Dark Triad variables were found to correlate strongly and negatively with the Honesty–Humility dimension of the HEXACO model, thus indicating clearly that there is a common personality denominator of the Dark Triad traits. In contrast, none of the Big Five factors was strongly correlated with the Dark Triad traits, presumably because none of the Big Five corresponds directly to the exploitation and entitlement that underlie the Dark Triad variables.

6. Discussion

Although the Dark Triad traits were found to show strong associations with Honesty–Humility, these three constructs are not identical. In particular, Narcissism appears to be distinct in several ways from Machiavellianism and Primary Psychopathy. First, Narcissism did not correlate with Primary Psychopathy and Machiavellianism as strongly as those two correlated with each other (see also McHoskey, Worzel, & Szyarto, 1998, Table 4). Second, Narcissism was strongly correlated with Extraversion, whereas Primary Psychopathy and Machiavellianism showed near-zero correlations with that factor. Finally, within the Honesty–Humility domain, Narcissism correlated strongly with the Modesty and Greed Avoidance facets, but relatively weakly with the Fairness and Sincerity facets.

In contrast to the case involving Narcissism, the results of this study suggest that Primary Psychopathy and Machiavellianism are very similar variables. These two traits were strongly correlated with each other (see also McHoskey et al., 1998) and they did not show any noteworthy differential relations either with the higher-order dimensions of personality or with the narrow facet traits within Honesty–Humility. These results support McHoskey et al.'s (1998, p. 192)

conclusion that Machiavellianism “is a global measure of Psychopathy in non-institutionalized populations.”

6.1. *Factors and facets of the Big Five*

The finding of this and previous investigations that the Dark Triad variables are poorly accommodated by the Big Five might seem surprising in light of the clear conceptual links between the Dark Triad constructs and some facets of the Agreeableness factor of the Five-Factor Model as operationalized by [Costa and McCrae \(1992\)](#), particularly the Straightforwardness and Modesty facets. To understand this apparent contradiction, it is worthwhile to discuss the nature of [Costa and McCrae's \(1992\)](#) NEO Personality Inventory—Revised. Although this operationalization of the Five-Factor Model was ultimately derived, both directly and indirectly, on the basis of lexical findings involving the English language (see summary by [McCrae, 1989](#)), its version of the Agreeableness domain differs somewhat from operationalizations of (English) Big Five Agreeableness as derived more directly from lexical results (e.g., [Goldberg, 1999](#)). Specifically, whereas the classic English Big Five Agreeableness domain has modest conceptual or empirical overlap with Honesty–Humility, the Agreeableness domain of the NEO Personality Inventory—Revised (NEO-PI-R; [Costa & McCrae, 1992](#)) contains two facet scales, Straightforwardness and Modesty, that are strongly related to Honesty–Humility ([Ashton & Lee, in press](#)).

As a result of the inclusion of the Honesty–Humility-related facets within the NEO-PI-R measure of Agreeableness, the Dark Triad traits would likely be better accommodated by the NEO-PI-R than by other measures of the Big Five model. However, even the NEO-PI-R will likely be less than optimal in accommodating these variables at the factor level, because the elements of Honesty–Humility that are assessed by Straightforwardness and Modesty are diluted by the other Agreeableness facets (see [Ashton & Lee, in press](#)).

6.2. *Limitations and future research*

There are some issues to be considered in generalizing the present findings. First, the participants in this study largely consisted of university students, and only 44% were men. These sample characteristics may suggest that the high ends of the distributions of the Dark Triad variables were slightly underrepresented. Future research can determine the extent to which the present findings hold when samples characterized by high levels of the Dark Triad variables (e.g., male-dominated, forensic, and/or clinical samples) are considered.

Second, the constructs examined in the present research can be measured by different scales and methods, and therefore the strengths of the relations among the constructs may vary somewhat depending on the ways in which the constructs are operationalized. For example, the most widely used measure in the Psychopathy literature has been [Hare's \(1991\)](#) Psychopathy Checklist—Revised (PCL-R), which is based on a structured interview format suitable for use in forensic settings. (See [Hare, 1991](#), for correlations of the PCL-R with the NPI and Mach-IV scales; see [Harpur, Hart, & Hare, 2002](#); for correlations of the PCL-R with the Big Five.) Self-report measures of Psychopathy, including the one used in the present research, may not show a strong correspondence to the PCL-R. Future research might examine the relations among the Dark Triad con-

structs and the major dimensions of personality when interview-based methods are used to assess all of these constructs.

7. Conclusion

Despite the conceptual overlap of Primary Psychopathy, Machiavellianism, and Narcissism, studies investigating the personality correlates of these constructs have not located a personality dimension that underlies all three of these constructs. The present research has demonstrated the strong negative relations of this Dark Triad of personality with the new sixth factor of personality, Honesty–Humility.

References

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality*, *15*, 327–353.
- Ashton, M.C., & Lee, K. (in press). Honesty–Humility and the Five-Factor Model of personality structure. *Journal of Personality*.
- Ashton, M. C., Lee, K., & Goldberg, L. R. (2004). A hierarchical analysis of 1,710 English personality-descriptive adjectives. *Journal of Personality and Social Psychology*, *87*, 707–721.
- Ashton, M. C., Lee, K., & Paunonen, S. V. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality and Social Psychology*, *83*, 245–252.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology*, *86*, 356–366.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO Personality Inventory—Revised (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Eysenck, H. J. (1992). Four ways five factors are not basic. *Personality and Individual Differences*, *13*, 667–673.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*, 26–34.
- Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe* (vol. 7, pp. 7–28). Tilburg, The Netherlands: Tilburg University Press.
- Hare, R. D. (1991). *The Hare Psychopathy Checklist—Revised*. North Tonawanda, NY: Multi-Health Systems.
- Harpur, T. J., Hare, R. D., & Hakstian, A. R. (1989). Two-factor conceptualization of psychopathy: construct validity and assessment implications. *Psychological Assessment*, *1*, 6–17.
- Harpur, T. J., Hart, S. D., & Hare, R. D. (2002). Personality of the psychopath. In P. T. Costa, Jr. & T. A. Widiger (Eds.), *Personality disorders and the Five-Factor Model of personality*. Washington, DC: American Psychological Association.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory—Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and Research* (2nd ed., pp. 102–138). New York: Guilford.
- Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, *39*, 329–358.

- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*, 151–158.
- McCrae, R. R. (1989). Why I advocate the five-factor model: joint analyses of the NEO-PI with other instruments. In D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 237–245). New York: Springer-Verlag.
- McHoskey, J. W., Worzel, W., & Szyarto, C. (1998). Machiavellianism and psychopathy. *Journal of Personality and Social Psychology*, *74*, 192–210.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*, 556–563.
- Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology*, *81*, 524–539.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*, 890–902.
- Saucier, G., & Goldberg, L. R. (1996). Evidence for the Big Five in analyses of familiar English personality adjectives. *European Journal of Personality*, *10*, 61–77.