

The Nomological Net of Scott Lilienfeld's Psychopathic Personality Inventory Scales



Lee Anna Clark, Lilian Dindo, Elizabeth McDade-Montez, Krista Kohl, Alex Casillas, Rob Lutzman, and David Watson

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Scott Lilienfeld was not one to shy away from controversy. At the same time, he always sought to reconcile conflicting views, to find their similarities and to explain their differences from a scientific perspective. This was the spirit that he brought to his work in the highly contentious field of psychopathy. In Lilienfeld et al. (2015), he and colleagues examined the major points of debate in the field and concluded that they reflect two broad conceptualizations of psychopathy. To oversimplify, one conceptualization views psychopathy as a distinct entity in nature, whereas the other conceptualizes it as a combination of characteristics that reflect a diverse array

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L. A. Clark (✉)

Department of Psychology, University of Notre Dame, Notre Dame, IN, USA

e-mail: la.clark@nd.edu

L. Dindo

University of Houston, Houston, TX, USA

E. McDade-Montez

Capitola, CA, USA

K. Kohl · A. Casillas

University of Iowa, Iowa City, IA, USA

R. Lutzman

Georgia State University, Atlanta, GA, USA

D. Watson

University of Notre Dame, Notre Dame, IN, USA

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of higher and lower order personality dimensions each of which is continuous across an adaptive–maladaptive spectrum. Lilienfeld et al. (2015) hypothesized that this bifurcation of views reflected the historic split between basic personality research and psychopathology research, which widened in the mid-1960s when the *Journal of Abnormal and Social Psychology* split into the *Journal of Abnormal Psychology* and a new *Journal of Personality and Social Psychology* (see Watson & Clark, 1994, for a fuller description of these changes in the field). In the mid-1990s, however, both Lilienfeld (e.g., Lilienfeld & Andrews, 1996) and we (e.g., Watson et al., 1994) sought to close this gap by demonstrating the close connections between basic dimensions of personality and various forms of psychopathology and, over the past few decades, relations between personality and psychopathology increasingly have been the focus of research.

This research has indicated that personality disorders (PD), as defined by the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5, Section II [DSM-5-II]; APA, 2013)*, as well as personality pathology not explicitly defined by *DSM*, such as psychopathy, may be understood to a large extent as extreme variants of common personality traits (e.g., Clark, 2007; Livesley & Jang, 2000; Widiger & Simonsen, 2005). As such, as stated earlier, Lilienfeld, Lynam, Widiger, and others have proposed that psychopathy is best viewed as a constellation of maladaptive personality characteristics rather than as a qualitatively distinct disorder (e.g., Krueger, 2006; Lilienfeld et al., 2015; Lynam & Derfinko, 2006; Marcus et al., 2013; Miller & Lynam, 2012; Widiger, 1998).

Psychopathy was described originally in extensive detail by Cleckley in *The Mask of Sanity* and, although the criminal consequences of this form of pathology are often the most visible, personality features are at the core of this classic definition (Cleckley, 1941/1976). Cleckley's criteria for identifying psychopathy included descriptions of deficient emotional reactivity (e.g., absence of nervousness, poverty of affect) and interpersonal functioning (e.g., pathological egocentricity and incapacity for love, unresponsiveness in interpersonal situations, superficial charm; impersonal sexuality), as well as the disinhibited/antisocial tendencies (e.g., unreliability, poorly motivated antisocial behaviors) that are characteristic of the disorder. He attributed these problems to a congenital peculiarity or deficit that contributes strongly to the etiology of psychopathy. Hare's Psychopathy Checklist (PCL; Hare, 1991), now revised (PCL-R; Hare, 2003), was developed to assess Cleckley's psychopathy (although it does not follow Cleckley's conceptualization in every respect), and quickly became the gold standard for diagnosing psychopathy. However, it was designed to assess psychopathy in forensic samples and involves a lengthy procedure including an interview and data from prison files, so numerous self-report measures of psychopathy were subsequently developed, both to simplify assessment and to be more appropriate for use with non-incarcerated as well as forensic samples.

The focus of this chapter, the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996), was one such measure. It consists of eight basic scales, but not long after its publication, factor analyses of its scales were found to yield two dominant factors: One, labeled Fearless Dominance (FD), was marked by the Stress Immunity, Fearlessness, and Social Influence scales, and the other, self-centered

impulsivity (SCI), by the Rebellious Nonconformity, Alienation, Blame Externalization, and Carefree Nonplanfulness scales.¹ The Coldheartedness scale did not load on either factor (Benning et al., 2003, 2005; Patrick et al., 2006). Although most of the ensuing PPI research focused on its higher order factors, some researchers questioned whether they accurately reflect the PPI's structure, especially their replicability across sample type. For example, Neumann et al. (2008) criticized use of the factors based on the low-to-moderate intercorrelations of their component scales, reporting an average of .36 for the FD scales and .22 for the SCI scales in a large offender sample. Lilienfeld and Andrews (1996) had reported similar values of .30 and .25, respectively, in their seminal article. Together with the moderate percentage of the PPI's common variance accounted for by the two factors (e.g., Benning et al., 2003 reported a value just over 50%, and Neumann et al., 2008, 43%), these data indicate that there is a great deal of specificity in the basic scales that may be valuable to consider in terms of the nomological net of psychopathic personality traits, beyond what can be gleaned from use of higher order factors. Elucidating that network is a primary purpose of the current chapter.

Relations Between Higher Order Factors of Psychopathy and Personality

Notably, early factor analyses of the PCL-R also yielded two factors (e.g., Hare, 1991, 1998; Harpur et al., 1989). Factor 1 reflects psychopathy's core interpersonal and affective features (e.g., lack of remorse or guilt, manipulativeness), whereas Factor 2 taps an impulsive, antisocial lifestyle (e.g., lack of realistic, long-term goals; irresponsibility). Whether the PCL-R and PPI factors reflect the same construct has been the subject of much debate. Some researchers (e.g., Edens et al., 2008; Miller & Lynam, 2012) have noted that the PCL-R factors are moderately strongly correlated (e.g., around .50; Hare, 1991), whereas the PPI factors are essentially orthogonal (e.g., $r = .12$ per Marcus et al.'s, 2013 meta-analysis). Moreover, correlations between the two measures' respective factors tend to be rather low (e.g., Marcus et al., 2013, reported meta-analytic correlations of .21 and .15 for the two sets of factors, respectively).

However, other researchers (e.g., Benning et al., 2003) linked the PPI FD and SCI with PCL-R Factors 1 and 2, respectively, on the basis of their patterns of correlations with external validators. There are now two meta-analyses of both the PCL-R and PPI factors' correlations with the higher order factors of personality, so considerable data are available to adjudicate this debate. Examining first the PCL-R, Lynam and Derefinko (2006) and Lilienfeld et al. (2015) both reported meta-analytic

¹The scale names of the PPI and its revision, the PPI-R, are slightly different. We use the latter's scale names throughout this chapter, given their now more common use and very high degree of similarity between the two scale sets.

results between psychopathy and personality, focused primarily on Hare's (1991) Psychopathy Check List-Revised (PCL-R) and the Big-Five of personality. They found that Factor 1—psychopathy's core interpersonal and affective features—and Factor 2—an impulsive, antisocial lifestyle—both relate to low A. They also found that Factor 2 related to low C and to N, although in both cases, Lynam and Derefinko (2006) found stronger relations ($-.45$ vs. $-.27$ for C and $.34$ vs. $.18$ for N). Neither PCL-R factor related to Extraversion in either analysis. Finally, only Lynam and Derefinko (2006) found that Factor 1 related mildly to low C ($r = -.22$).

Turning to the PPI, Miller and Lynam (2012) conducted meta-analyses of relations between the PPI factors and higher order scales of both the Big-Five and Big-Three (e.g., Eysenck & Eysenck, 1975; Tellegen & Waller, 2008) models of personality. They found that FD was primarily related to low N ($r_s = -.50$) and high E (mean $r = .48$) of the Big-Five and Big-Three models, whereas SCI was related to low A ($r = -.49$) and low C ($r = .51$) of the Big Five, low Constraint ($r = -.54$) of the Big Three, and also moderately to N in both models (mean $r = .33$).² The meta-analysis of Marcus et al. (2013), examining the PPI with Big-Three-model traits, yielded similar—but generally weaker—results, perhaps because they co-analyzed psychopathology and personality measures (e.g., they considered anxiety and depression measures both to assess N, along with more purely personality trait measures).

Comparing across the two pairs of analyses (i.e., PCL-R and PPI, respectively, with personality), there were three “universals,” all involving Factor 2 and SCI: Both correlated moderately strongly with low A and low C (r_s for A = $-.35$ to $-.49$; $M = -.43$; r_s for C = $-.27$ to $-.51$; $M = -.42$) and moderately with N ($r_s = .15$ to $.34$; $M = .27$). These results provide strong support for the contention that PCL-R Factor 2 and PPI SCI reflect highly similar constructs, whereas PCL-R Factor 1 and PPI FD are quite distinct. The purpose of our study was thus twofold: First, we sought to probe the nature of the higher order PPI factors in relation to not only higher order, but also lower order personality traits, as well as measures of “real world behavior.” Second, as mentioned previously, we aimed to elucidate the nomological net of the lower order psychopathic personality traits themselves, outside of the context of these higher order factors.

²Currently, the usual terms for the first two Big-Three dimensions are Negative Emotionality (NEM) and Positive Emotionality (PEM), but for simplicity, we use the Big-Five terms Neuroticism and Extraversion.

Method

Procedures

We conducted three studies, all with undergraduates enrolled in introductory psychology classes at a large midwestern public university. Participants in all three samples completed the PPI and one or more other personality and/or behavioral paper-and-pencil questionnaires in a large group setting after giving written informed consent. All study procedures were approved the University's Institutional Review Board.

Participants

The first sample included 578 students (70% reported being female, 94% white), of whom 547 (71% female, 95% white) completed the PPI. Mean age was 19.4 years in both the total sample and PPI completers. The second sample included 399 students (63% of whom reported being female), of whom 388 (63% female) completed the PPI. Other demographic data were not collected in this sample, but the population from which they were drawn was primarily White and ranged in age between 18 and 23 years.³ The third sample included 332 male (92% white) students, collected explicitly to correct the gender imbalance of the other two samples, all of whom completed the PPI. We report here only on the subsets of participants who completed the PPI.

Measures⁴

Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) The PPI is a 187-item self-report measure designed to assess psychopathic personality characteristics in a non-incarcerated population. Responders use a 4-point Likert-type scale: false, mostly false, mostly true, true. The measure has eight factor analytically derived scales that assess various traits relevant to the broad construct of psychopathy: Machiavellian Egocentricity, Blame Externalization, Carefree Nonplanfulness, Rebellious Nonconformity, Fearlessness, Social Influence, Stress Immunity, and Coldheartedness. Internal consistency reliabilities (Cronbach's

³Participants' exact age and ethnicity was not recorded. However, age and ethnicity estimates are based from the enrollment statistics of the Elementary Psychology course from which participants were drawn.

⁴Descriptive statistics for all measures are provided in Supplemental Table 1.

alpha) in the current study ranged from .77 to .87; average interitem correlations (AICs) from .14 to .87 (see Table 1).

DIS-I (Dindo et al., 2009) The DIS-I is a 65-item, factor analytically derived measure of five correlated, content-distinct traits related to disinhibition that measure both high and low levels of the dimension: Manipulativeness (e.g., “It is easy for me to take advantage of others”), Prosociality (which has two subscales, Considerateness and Goal Orientation; e.g., “I am attentive to other people’s feelings,” and “I have high standards of achievement for myself,” respectively), Distractibility (e.g., “I have a hard time staying focused for long periods of time”), Risk Taking (e.g., “I enjoy taking risks”), and Orderliness (e.g., “I am bothered by messiness and clutter”). Respondents rate each item on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree.” All scales had strong internal consistency reliabilities in the current sample (coefficient alpha range = .80–.88; AICs = .29–.38). The DIS-I was collected in Sample 1.

Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) The NEO PI-R is a 240-item measure that assesses the domains of the Big-Five of personality—Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C)—each of which is composed of six lower order facets.

Table 1 Intercorrelations of the psychopathic personality inventory scales

Scales (Number of items)	1	2	3	4	5	6	7	8
1. Machiavellian Egocentrism (30)	<i>.86 (.17)</i>							
2. Blame Externalization (18)	.53	<i>.85 (.24)</i>						
3. Carefree Nonplanfulness (20)	.41	.35	<i>.82 (.19)</i>					
4. Rebellious Nonconformity (17)	.46	.35	.42	<i>.80 (.19)</i>				
5. Fearlessness (19)	.41	.14	.19	.56	<i>.86 (.24)</i>			
6. Social Influence (24)	.20	-.08	-.05	.26	.39	<i>.87 (.22)</i>		
7. Stress Immunity (11)	-.04	-.34	-.09	.16	.38	.44	<i>.79 (.23)</i>	
8. Coldheartedness (21)	.32	.06	.32	.10	.10	.01	.21	<i>.77 (.14)</i>
Average Interscale Correlations	.34	.17	.16	.32	.34	.16	.23	.11
Fearless Dominance	.25	-.11	.03	.43	.78	.76	.79	.14
Self-centered Impulsivity	.79	.76	.71	.75	.44	.11	-.11	.25

Note: $N = 1267$. Correlations $\leq .35$ are in **bold** (61%; 17 of 28) for the scales. For the factors, the stronger of each scale’s two correlations is in bold. Correlations in red denote the correlation between two scales each of which correlates most strongly with the other. Alpha coefficients (average interitem correlations; AIC) are shown in italics in the diagonal. If considered as an eight-item scale, the alpha coefficient (AIC) of the PPI would be *.70 (.23)*. Average interscale correlation for scales 1 through 5 (typically termed “Self-Centered Impulsivity”) was .42 (alpha = .73); that for scales 5 through 7 (Fearless Dominance) was .40 (alpha = .63). The average discriminant correlation was .12 without and .13 with Coldheartedness.

Respondents rated each item on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree.” In the current sample, the scales’ internal consistency reliabilities (alphas) were very high for the domain scales (alpha range = .86–.91; AICs = .17–.25) and moderate to high for the facet scales (alpha range = .49–.82; median = .71; AICs = .11–.36; median = .23). The NEO PI-R was collected in Sample 1.

Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993) and General Temperament Survey (GTS; Clark & Watson, 1990) The SNAP is a 375-item, true-false format, self-report questionnaire designed to assess personality characteristics relevant to both the normal and abnormal range. The SNAP yields scores on three scales—Negative Temperament (NT), Positive Temperament (PT), and Disinhibition (DIS)—that are largely unrelated to one another (r ls = .07–.27) and that measure the core of the Big Three dimensions of personality, plus 12 more specific trait scales each primarily associated with one of the Big Three core scales. For example, mistrust and self-harm are associated with NT, exhibitionism and entitlement with PT, and impulsivity and (low) workaholicism with DIS (see Table 2 for a complete scale list). In addition, DIS has two subscales—Antisocial Behavior and Carefree Orientation—that correlate .40–.50 with each other and that are strongly negatively related to Big-Five Agreeableness and Conscientiousness, respectively. The SNAP was collected in Sample 2; a subset of Sample 3 participants ($n = 182$) also completed the SNAP.⁵

The GTS is a 90-item derivative of the SNAP that includes only NT, PT, and DIS (and their subscales). It was collected in Sample 1 and its scales were merged with the parallel SNAP scales in the other two samples in all relevant analyses. Across all three samples, internal consistency reliabilities (Cronbach’s alpha) for the Big Three core scales were high (.83–.89); those for the DIS subscales were .71. Alphas for the other scales (collected in Samples 2 and 3) ranged from .77 to .85; median = .81.

Personal Lifestyles Questionnaire (PLQ; Muhlenkamp & Brown, 1983; cited in Mahon et al., 2002) The PLQ is a 24-item questionnaire designed to assess health-related behaviors. Participants are asked to indicate the extent to which they engage in various behaviors. Items are endorsed on a 4-point Likert-type scale from “almost always” to “never.” We used factor analysis to group the items into three scales: A 7-item Healthful Habits scale (e.g., getting adequate sleep, exercising regularly, limiting caffeine; alpha = .68, AIC = .23); a 7-item Hazardous Behaviors scale (e.g., not wearing a seatbelt, driving after drinking, heavy smoking; alpha = .66, AIC = .22); and a 6-item Self-Care scale (e.g., getting together with friends, confiding concerns, reserving time for relaxation, annual health-care appointments; alpha = .60, AIC = .20).⁶ The PLQ was collected in Sample 1.

⁵The SNAP is now in its 2nd edition (SNAP-2; Clark et al., 2014), but the scales completed by our participants are identical to those in the SNAP-2.

⁶The factor loading matrix for the three-factor solution is available in Supplemental Table 2.

Table 2 Correlations of the two higher order psychopathic personality inventory scales with personality traits and related behavior

Scale	Sample size	Fearless Dominance	Self-Centered Impulsivity
<i>Five Factor Model Domains – SNAP scales, All Samples; NEO scales, Sample 1^a</i>			
<i>Miller and Lynam (2012) N</i>	2561	-.50	.30
<i>Marcus et al. (2013) NEM</i>	8571	-.35	.30
NEO PI-R Neuroticism	538	-.57*	.23
SNAP Negative Temperament	1112	-.49	.24
<i>Miller and Lynam (2012) E</i>	2561	.48	-.11
<i>Marcus et al. (2013) PEM</i>	5715	.39	-.02
NEO PI-R Extraversion	538	.37	-.20
SNAP Positive Temperament	1112	.37	-.22
<i>Miller and Lynam (2012) A</i>	2561	-.10	-.49
NEO PI-R Agreeableness	538	-.12	-.58
<i>Marcus et al. (2013) SS</i>	1441	.51	.50
SNAP Disinhibition	1112	.37	.71*
SNAP Antisocial Behavior	1112	.33	.61
<i>Miller and Lynam (2012) C</i>	2561	-.25	-.51
<i>Miller and Lynam (2012) CON</i>	2561	-.25	-.51
<i>Marcus et al. (2013) CON</i>	5280	-.04	-.44
NEO PI-R Conscientiousness	538	.02	-.56
SNAP Carefree Behavior	1112	.22	.57
<i>Miller and Lynam (2012) O</i>	2298	-.25	.04
NEO PI-R Openness	538	.18	-.14
<i>Disinhibition Inventory – Sample 1</i>			
Manipulativeness	536	.11	.66*
Prosociality	536	.08	-.54
Goal Orientation	536	.13	-.49
Considerateness	536	.01	-.46
Risk-taking	536	.61*	.27
Distractibility	536	-.18	.38
Orderliness	536	-.14	-.20
<i>SNAP-2 Lower Order Traits – Samples 2 and 3</i>			
Manipulativeness	570	.24	.68*
Mistrust	570	-.09	.47
Aggression	570	.18	.49
Self-harm	570	-.15	.37
Impulsivity	570	.40	.61
Propriety	570	-.25	-.34
Workaholism	570	.01	-.17
Exhibitionism	570	.44	.13
Energy	1112	.31	-.13
Positive Affect	1112	.41	-.11
Detachment	570	-.24	.22

(continued)

Table 2 (continued)

Scale	Sample size	Fearless Dominance	Self-Centered Impulsivity
Entitlement	570	.25	.11
Dependency	570	<u>-.42</u>	.05
Eccentric Perceptions	570	.09	<u>.41</u>
<i>Five Factor Model Facets – Sample 1</i>			
N Anxiety	538	-.55*	-.03
N Depression	538	<u>-.43</u>	.17
N Hostility	538	-.20	<u>.37</u>
N Self-consciousness	538	-.55*	.02
N Vulnerability	538	-.54*	.23
E Gregariousness	538	.22	-.14
E Assertiveness	538	<u>.46</u>	-.03
E Trust	538	.16	<u>-.39</u>
E Straightforwardness	538	-.21	-.53*
A Altruism	538	.04	<u>-.45</u>
A Compliance	538	-.15	<u>-.41</u>
A Modesty	538	-.24	-.33
A Tender-Mindedness	538	-.16	-.28
C Competence	538	.15	<u>-.42</u>
C Dutifulness	538	.06	<u>-.47</u>
C Achievement Striving	538	.07	<u>-.41</u>
C Self-Discipline	538	.09	<u>-.48</u>
C Deliberation	538	-.18	<u>-.46</u>
O Aesthetics	538	.07	-.13
O Feelings	538	-.01	-.28
<i>Personal Lifestyle Questionnaire – Sample 1</i>			
Hazardous Behaviors	539	.18	<u>.47*</u>
Healthful Habits	539	-.22	.22
Self-Care	539	-.16	.15
<i>Behaviors Questionnaire – Sample 2</i>			
Antisocial Behaviors	389	.14	.52*
Irresponsible Behaviors	389	.21	<u>.44</u>

Note. *N* Neuroticism, *NEM* Negative Emotionality, *NEO PI-R* NEO Personality Inventory Revised, *SNAP* Schedule for Nonadaptive and Adaptive Personality, *E* Extraversion, *A* Agreeableness, *SS* Sensation Seeking, *C* Conscientiousness, *O* Openness. Each scale’s stronger correlation, regardless of sign, is noted as follows: those $\geq .35$ and $< .50$ are underlined; those $\geq .50$ are bolded.

*The strongest correlation of each factor (within $\pm .01$) in each section.

^aPlus Miller and Lynam’s (2012) and Marcus et al. (2013)’s meta-analyses for comparison; these are shown in italics.

Behaviors Questionnaire (BQ) The BQ is a 50-item questionnaire developed for this study to assess the frequency with which an individual has engaged in a range of externalizing behaviors during the previous week, month, or year. Participants respond using a 1 (zero times) to 4 (more than five times) Likert-type scale. We used factor analysis to develop two scales: A 21-item Antisocial Behaviors scale (e.g., vandalism, ticketed for public intoxication, leaving a restaurant without paying, starting physical fights; $\alpha = .83$; AIC = .19) and a 15-item Irresponsible Behaviors scale (e.g., multiple one-night stands; unplanned/unprotected sex; frequent drug and alcohol use, regularly skipping class, going out the night before an important test; $\alpha = .81$, AIC = .22).⁷ The BQ was collected in Sample 2.

Results

Two-Factor Structure of the Psychopathic Personality Inventory

We first assessed whether the typical two-factor structure (i.e., that of Benning et al., 2003) was seen in our data, and found that it was.⁸ Fearless Dominance was marked by Stress Immunity, Social Influence, and Fearlessness (loadings .55–.73), and SCI was marked by Machiavellian Egocentrism, Blame Externalization, Rebellious Nonconformity and Carefree Nonplanfulness (loadings .60–.74). Blame Externalization and Rebellious Nonconformity cross-loaded $-.31$ and $.30$, respectively, on FD, and Fearlessness cross-loaded $.39$ on SCI; all other cross-loadings were $<.30$. The two factors correlated negligibly ($r = .15$), and accounted for 38% (24% and 14%, respectively) of the common variance. We created unit-weighted factor-based scales using each factor's primary markers after standardizing the scales to weight them equally within factor. The interscale correlations within factors were somewhat higher than those typically found in the literature—means were $.40$ and $.42$ among the FD and SCI scales, respectively—but still low enough to indicate there is potentially valuable information in the nomological net of the basic scales. Nonetheless, given that considerable research has examined the correlates of the PPI factors (indeed, more than those of its basic scales), we first present our findings involving FD and SCI.

Relations with Higher Order Personality Traits As shown in the top portion of Table 2, our results largely replicated Miller and Lynam's stronger findings (vs. the weaker ones of Marcus et al., 2013). Further, in our data, FD related more moderately to SNAP DIS (the opposite pole of Big-Three Constraint) and its Antisocial Behavior subscale ($r_s = .37$ and $.33$, respectively) compared to the $.51$ found by Marcus et al. (2013). In addition, we found a stronger relation between SCI and SNAP DIS ($r = .71$) than was found in either meta-analysis between SCI and low

⁷The factor loading matrix for the two-factor solution is available in Supplemental Table 3.

⁸The factor loading matrix for the two-factor solution is available in Supplemental Table 4.

Constraint ($-.52$ and $-.44$, respectively), most likely because DIS focuses more on the maladaptive end of the dimension, as does SCI, than do measures of Constraint in other Big-Three instruments.

Relations with Lower Order Personality Traits Given the distinctiveness of FD (compared to PCL-R Factor 1) and that the PPI's higher order factors mask a great deal of scale-level specificity, we also examined the factors' nomological net in relation to lower order personality traits (see Table 2). In relation to the DIS-I (Dindo et al., 2009), the strongest correlates were between FD and Risk-taking ($r = .61$) and between SCI and Manipulativeness ($r = .66$) and Prosociality ($r = -.54$), including both its subscales ($r_s = -.49$ and $-.46$ for Goal Orientation and Considerateness, respectively). Distractibility also correlated $.38$ with SCI, but Orderliness correlated only weakly with both factors ($|r_s| \leq .20$).

The strongest correlations of the PPI factors with the lower order SNAP scales involved SCI: $.68$ with Manipulativeness, and $.61$ with Impulsivity. Both factors also had several correlations in the $.40$ s: SCI correlated with Mistrust, Aggression, and Eccentric Perceptions ($r_s = .47, .49, \text{ and } .41$, respectively), whereas FD correlated with Impulsivity, Exhibitionism, Positive Affect, and (low) Dependency ($r_s = .40, .44, .41, \text{ and } -.42$, respectively).

With the NEO PI-R facets, FD had the stronger set of relations: Of the N facets, Anxiety, Depression, Self-consciousness and Vulnerability all had strong negative relations ($r_s = -.55, -.43, -.55, \text{ and } -.54$, respectively), plus E Assertiveness correlated $.46$. On the other hand, only A Straightforwardness correlated $>.50$ ($r = .53$) with SCI, whereas a large number of scales correlated between $.35$ and $.49$. Other than N Hostility ($r = .37$), all of these such correlations were with facets of A (three additional facets) and C (five of the six—all but Orderliness).

Relations with Health and Externalizing Behaviors Table 2 also displays correlations between the PPI factors and indices of behaviors assessed with the PLQ and BQ. The only PLQ correlation $\geq .35$ was between SCI and Hazardous Behaviors ($r = .47$). However, Healthful Habits did correlate modestly with both factors: $r = -.22$ with FD and $r = .22$ with SCI. Similarly, SCI correlated with both scales of the Behaviors Questionnaire, which assesses only externalizing behaviors: $r = .52$ with Antisocial Behaviors and $r = .44$ with Irresponsible Behaviors, which also correlated $.21$ with FD.

PPI Scale-level Correlations

In sum, our PPI results at the higher order factor level largely replicate those found in the literature, so we turn now to the heart of the chapter—explicating the nature of the basic personality traits that the PPI assesses, proceeding in the same order as before: Higher order personality traits, then lower order traits, and finally health and externalizing behaviors.

Relations with Higher Order Personality Traits In Table 3, we see that Stress Immunity is strongly negatively correlated with N/NT, and Blame Externalization has a moderate positive relation with N/NT, whereas Social Influence correlated $-.37$ with NEO PI-R N, but only $-.29$ with SNAP NT. However, Social Influence was moderately strongly correlated with both E and PT ($r_s = .50$ and $.48$, respectively); Carefree Nonplanfulness also correlated moderately ($r = -.38$) with E, but $< .20$ with SNAP PT. Thus, the correlation of the higher order factor FD with N and E reflects the largely separate contributions of Stress Immunity and Social Influence, respectively.

Not surprisingly, most of the strong correlations between the PPI basic scales and higher order personality traits were in the domains of Agreeableness and Conscientiousness. Both Machiavellian Egocentrism and Carefree Nonplanfulness correlated $\geq .35$ with all scales in these domains. NEO PI-R A correlated negatively more strongly with Machiavellian Egocentrism ($r = -.64$) and NEO PI-R C with Carefree Nonplanfulness ($r = -.67$), with cross correlations of $-.35$ and $-.37$, respectively, whereas SNAP DIS correlated strongly ($r_s > .60$) with both PPI scales, as well as correlating in the $.50$ s with both Rebellious Nonconformity and Fearlessness. All other correlations of Blame Externalization and Rebellious Nonconformity were between $-.35$ and $-.48$. Thus, two of the four scales that constitute SCI are primarily responsible for that factor's correlations with A and C. It also should be noted that Coldheartedness correlated $-.43$ with NEO PI-R A and $-.40$ with NEO PI-R O.

Relations with Lower Order Personality Traits Turning to lower order personality dimensions, shown in Table 4, the value of these examinations becomes particularly clear. First, concerning the DIS-I, there were four pairs of PPI—DIS-I scales in which each was most strongly correlated with the other: PPI Machiavellian Egocentrism with DIS-I Manipulativeness ($r = .72$), Carefree Nonplanfulness with Goal Orientation ($r = -.60$), Fearlessness with Risk-taking ($r = .65$) and Coldheartedness with Considerateness ($r = -.49$). Of the other four PPI scales, Blame Externalization correlated strongly with DIS-I Manipulativeness ($r = .52$), as well as correlating around $-.40$ with Prosociality and both its subscales, and Rebellious Nonconformity correlated $.42$ with both Manipulativeness and Risk-taking. However, Social Influence correlated moderately only with Risk-taking ($r = .43$) and Stress Immunity only with Distractibility ($r = -.36$), underscoring (as seen in Table 2) that, except for Risk-taking, the DIS-I scales are associated primarily with PPI SCI.

Similarly, there were four sets of PPI—SNAP scales in which each correlated most strongly with the other: PPI Machiavellian Egocentrism with SNAP Manipulativeness ($r = .70$) and Antisocial Behavior ($r = .68$), Blame Externalization with Mistrust ($r = .64$), Carefree Nonplanfulness with Carefree Behavior ($r = .65$) and Impulsivity ($r = .62$), and Social Influence with Exhibitionism ($r = .66$). The only other correlations $\geq |.50|$ were Rebellious Nonconformity with Impulsivity ($r = .57$) and Propriety ($r = -.50$) and Machiavellian Egocentrism with Aggression

Table 3 Correlations of the Psychopathic Personality Inventory scales with domain-level personality traits

Scales	Machvln Egoctrsm	Blame Extrnlzn	Carefree Nonplfnls	Rebellious Noncnfrm	Fearless- ness	Social Influence	Stress Immunity	Cold- hrtdnss
Neuroticism/ Negative Temperament								
NEO PI-R Neuroticism	.11	.38	.23	-.02	-.25	-.37	-.68*†	-.22
SNAP Negative Temperament	.17	<u>.44</u>	.09	.01	-.19	-.29	-.67*†	-.25
Extraversion/ Positive Temperament								
NEO PI-R Extraversion	-.08	-.28	-.19	-.07	.17	.50†	.20	-.21
SNAP Positive Temperament	-.07	-.17	-.38	-.06	.19	.48†	.21	-.20
Agreeableness/Conscientiousness vs. Disinhibition								
SNAP Disinhibition	.64*†	.35	<u>.61</u>	.58†	.51†	.25	.07	.17
NEO PI-R Agreeableness	-.64*†	-.48†	-.35	-.35	-.19	-.17	.07	-.43†
SNAP Antisocial Behavior	.67*†	.37	.36	<u>.46</u>	<u>.45</u>	.25	.07	.17
NEO PI-R Conscientiousness	-.37	-.35	-.67*†	-.36	-.18	.07	.18	-.17
SNAP Carefree Behavior	<u>.42</u>	.24	.65*†	<u>.45</u>	.34	.14	.02	.11
Openness to Experience								
NEO PI-R Openness	-.20	-.18	-.19	.13	.10	.18	.14	-.40†

Note: Sample size is 538 for NEO PI-R scales, Sample size is 1112 for SNAP scales, *NEO PI-R* Revised NEO Personality Inventory, *GTS* General Temperament Survey, *DIS-I* Disinhibition Inventory, *SNAP* Schedule for Nonadaptive and Adaptive Personality, *Machvln Egoctrsm* Machiavellian Egocentrism, *Extrnlzn* Externalization, *Nonplfnls* Nonplanfulness, *Noncnfrm* Nonconformity, *Cold-hrtdnss* Cold-heartedness. Correlations (absolute values) $\geq .50$ are **bolded**; $|r| \leq .50$ and $\geq .40$ are underlined

*Highest correlation in row within $\pm .03$; †highest correlation in column within $\pm .03$; in red when these converge

($r = .56$). Workaholism correlated only with Carefree Nonplanfulness ($r = -.46$), and Dependency only with Stress Immunity ($r = -.46$). Positive Affect, Energy, Entitlement, and Detachment all correlated moderately with Social Influence ($r_s = .50, .48, .36$, and $-.43$), again indicating that Social Influence is an Extraversion-domain scale. Coldheartedness’ strongest SNAP correlate was Dependency; r was only $-.22$.

Among the NEO PI-R facet scales, there were six pairs of direct correspondences with the PPI scales: PPI Machiavellian Egocentrism and A Straightforwardness correlated most strongly with each other ($r = -.62$); Blame Externalization and A Trust $r = -.50$; Carefree Nonplanfulness correlated $-.58$ and $-.56$ with, respectively, C Achievement Striving and Self-Discipline; Social Influence and E Assertiveness $r = .62$; Stress Immunity and N Vulnerability $r = -.63$; and Coldheartedness $-.44$ correlated with both A Tender-Mindedness and O Feelings. Both Machiavellian Egocentrism and Blame Externalization also correlated in the $.40-.55$ range with other A and C facets, respectively and, in addition, Blame Externalization, Social Influence, and Stress Immunity each had several other moderate correlations, mostly negative, with A for the first and with N for the latter two scales. However, Rebellious Nonconformity correlated only with A Straightforwardness and C Deliberation

($r_s = -.36$) and Fearlessness' strongest facet correlation was $-.34$ with C Deliberation.⁹

Relations with Health and Externalizing Behaviors Finally, at the bottom of Table 4 are correlations with participants' self-reported behaviors. Once again, Machiavellian Egocentrism and Carefree Nonplanfulness dominated the relations, with the former correlating .46 with Antisocial Behaviors and .38 with Hazardous Behaviors, and the latter correlating .44 with both Antisocial Behaviors and Irresponsible Behaviors. Only one other correlation reached the .40 level—Rebellious Nonconformity with Hazardous Behaviors, although there was a smattering of other correlations between .35 and .40 for the four SCI component scales. Fearlessness, Social Influence, Stress Immunity, and Coldheartedness, however, had no correlates $\geq .30$. Nonetheless, Healthful Habits and Self-Care had some low positive relations (.21–.28) with Social Influence and Stress Immunity, indicating that some individuals high in these psychopathic personality traits engage in positive health behaviors.

Summary of Strong Correlations of the PPI Basic Scales

We have reported a large number of correlations between the PPI scales and many other personality and behavioral measures, so it is useful to summarize the consistent patterns that have emerged from these analyses. We present these data in Table 5, arranged—to the extent possible—by the strongest correlations for each PPI scale. Machiavellian Egocentrism is clearly a marker of low A; more specifically, however, it taps manipulativeness and deceitfulness versus being truthful and straightforward. Blame Externalization is also a low-A facet that quite specifically reflects Mistrustfulness. Carefree Nonplanfulness marks low C and specifically taps whimsically impulsive behavior versus deliberate, disciplined behavior that is directed towards achieving one's goals. In fact, it might be considered a reverse-keyed marker of C, given that 80% of its items are reverse keyed (e.g., I think about long-term goals; strive to be the best). Rebellious Nonconformity is a less focused trait—it taps the same characteristics as Machiavellian Egocentrism and particularly Carefree Nonplanfulness but in a more diffuse way, at least in the array of scales that we collected.

Fearlessness is specifically focused on Risk-taking in our analyses. As such, it is not surprising that it correlated from .78 to .84 with the Boldness scale (Sellbom & Phillips, 2013) of Patrick's (2010) Triarchic Psychopathy Measure. Interestingly, it correlated with SNAP DIS, especially its Antisocial Behavior facet ($r_s = .51$ and

⁹Given correlations of these magnitudes, the question of content overlap naturally arises, so we compared the items of several of the more highly correlated scale pairs. We found that they often had key terms in common (e.g., fear and worry in Stress Immunity, Neuroticism, and Negative Temperament) but the item similarities did not go beyond that level of overlap.

Table 4 Correlations of the psychopathic personality inventory with lower order personality traits and related behaviors

Scales	Machvlln Egoctrsm	Blame Extrnlzn	Carefree Nonplnflns	Rebellious Noncmfrm	Fearless- ness	Social Influence	Stress Immunity	Cold- hrtdnss
Disinhibition inventory – Sample 1 (N = 536)								
Manipulativeness	.72*†	.52†	.41	.42†	.25	.15	-.14	.32
Prosociality	-.39	-.45	-.56*	-.29	-.06	.10	.15	-.42
Goal Orientation	-.27	-.40	-.60*†	-.28	-.01	.13	.20	-.26
Considerateness	-.42	-.39	-.39	-.23	-.08	.06	.07	-.49*†
Risk-taking	.24	-.02	.21	.42†	.65*†	.43†	.30	.02
Distractibility	.24	.31	.44*	.19	.04	-.08	-.36†	-.08
SNAP Lower Order Traits – Samples 2 and 3 (N = 581)								
Manipulativeness	.70*†	.43	.42	.47	.36	.17	.02	.14
Antisocial Behavior	.67*†	.37	.36	.46	.45	.25	.07	.17
Mistrust	.34	.64*†	.17	.21	.08	-.09	-.22	-.06
Aggression	.56*	.42	.24	.26	.32	.17	-.08	.19
Carefree Behavior	.42	.24	.65*†	.45	.34	.14	.02	.11
Impulsivity	.41	.23	.62*†	.57	.46†	.27	.18	.10
Propriety	-.11	.03	-.44	-.50*	-.25	-.09	-.23	-.16
Workaholism	-.01	.12	-.46*	-.19	-.02	.11	-.06	-.09
Exhibitionism	.24	.01	.04	.12	.26	.66*†	.15	-.05
Energy	-.01	-.05	-.37	-.05	.18	.40*	.13	-.16
Positive Affect	-.05	-.20	-.26	.00	.20	.48*	.25	-.17
Detachment	.13	.24	.11	.15	-.07	-.43*	-.10	.11
Entitlement	.31	.08	-.12	.07	.16	.36*	.08	-.04
Dependency	.02	.20	.08	-.15	-.22	-.31	-.46*	-.22
Five Factor Model Facets – Sample 1 (N = 536)								
A Straightforwardness	-.62*†	-.39	-.30	-.36†	-.25	-.24	.00	-.29
A Modesty	-.51	-.17	-.12	-.23	-.15	-.33	-.08	-.29
A Altruism	-.42	-.38	-.32	-.25	-.09	.06	.12	-.35
A Compliance	-.43	-.31	-.26	-.29	-.21	-.20	.07	-.24
A Trust	-.31	-.50*†	-.22	-.16	.02	.09	.25	-.21
N Hostility	.34	.41	.27	.14	-.03	-.06	-.36	.07
C Achievement Striving	-.24	-.24	-.58*†	-.24	-.08	.10	.14	-.15
C Self-Discipline	-.32	-.34	-.56*†	-.29	-.10	.09	.22	-.11
C Deliberation	-.34	-.22	-.52	-.36†	-.34	-.10	.03	-.08
C Competence	-.23	-.33	-.51	-.23	-.06	.16	.26	-.13
C Dutifulness	-.39	-.32	-.53	-.26	-.11	.06	.20	-.23
E Assertiveness	.08	-.09	-.15	.06	.18	.62*†	.28	.00
N Vulnerability	.09	.33	.29	-.01	-.24	-.36	-.63*†	-.11
N Depression	.00	.33	.15	.03	-.14	-.37	-.48*	-.22
N Self-consciousness	-.05	.21	-.02	-.11	-.30	-.49*	-.48*	-.24
E Gregariousness	-.02	-.22	-.05	-.13	.08	.39	.07	-.09
A Tender-Mindedness	-.33	-.18	-.21	-.14	-.15	-.11	-.09	-.44*†
O Feelings	-.25	-.26	-.23	-.14	-.09	.12	-.03	-.44*†
O Aesthetics	-.20	-.09	-.21	.07	.02	.14	.03	-.38
Personal Lifestyles Questionnaire – Sample 1 (N = 510)								
Hazardous Behaviors	.38*†	.36†	.32†	.40†	.28†	.10	.02	.14†
Healthful Habits	-.11	-.27*	-.21	-.08	.08	.21	.21†	-.06
Self-Care	-.07	-.20	-.09	-.10	.02	.28†*	.10	-.11
Behaviors Questionnaire – Sample 2 (N = 388)								
Antisocial Behaviors	.46*†	.37†	.44*†	.34	.20	.10	.01	.19†
Irresponsible Behaviors	.37	.19	.44*†	.39†	.29†	.15†	.04	.11

Note: *Machvlln Egoctrsm* Machiavellian Egocentrism, *Extrnlzn* Externalization, *Nonplnflns* Nonplanfulness, *Noncmfrm* Nonconformity, *Cold-hrtdnss* Cold-heartedness, *SNAP* Schedule for Nonadaptive and Adaptive Personality correlations (absolute values) $\geq .50$ are **bolded**; $|r| \leq .50$ and $\geq .35$ are underlined

*For each measure, highest correlation in row within $\pm .03$; †highest correlation in column within $\pm .03$, for each measure; in red when these converge.

.45, respectively), but not with either A or C, even though DIS correlated $-.57$ with C and $-.40$ with A. Social Influence acts like a facet of Extraversion, and specifically reflects Exhibitionism and Assertiveness; it also taps low N to a certain extent, but is largely unrelated to either A or C. Stress Immunity, in turn, is clearly a marker of low N as it correlates most highly with higher order measures of N (vs. specific facets) and, again, does not correlate with either A or C. Thus, it might be considered a reverse-keyed measure of N, given that 73% (8 of 11) of its items are reverse-keyed (e.g., “easily flustered under pressure” is a Stress Immunity item, reverse-keyed). The correlational patterns of the scales that are components of the FD factor has led to a debate in the literature regarding whether the factor and its components can be considered aspects of psychopathy (e.g., see Lilienfeld et al., 2012; Miller & Lynam, 2012; Lynam & Miller, 2012). We discuss later how we might understand this pattern. Finally, Coldheartedness appears to be a facet of low A, correlating most strongly with the A facet Tender-Mindedness and DIS-I Considerateness. Once again, one might say it actually measures Tender Considerateness, as 95% of its items are keyed in that direction.

It is important to take note of those scales that are named for their reverse-keyed end and to consider (1) whether they should be renamed to reflect their primary keying direction and (2) the extent to which they actually measure the construct for which they are currently named. That is, lacking or being low on a construct is not necessarily equivalent to being high on its opposite end. For example, not being sad is not the same as being happy; not being mean is not the same as being nice. It seems that there may be relatively few constructs that are truly bipolar, such that when two unipolar scales are created to replace a bipolar scale, they are often only weakly correlated. However, this statement is based more on years of experience with measure development than on established research results, because a literature search reveals that there has been little substantive work into this important question, representing a critical lacuna that should be addressed in the future.

Turning to the behavioral questionnaires, it is noteworthy that only the component scales of SCI (i.e., and not those of FD) correlated with these measures, and they correlated only with the scales tapping hazardous health behaviors and not the two scales that assess positive health habits (thus, apropos the above paragraph on bipolarity, it appears that positive and negative health habits also are not clear opposites). Machiavellian Egocentrism was the most strongly correlated scale with PLQ Hazardous Behaviors and with BQ Antisocial Behaviors, whereas Carefree Nonplanfulness was the strongest correlate of BQ Irresponsible Behaviors. Blame Externalization and Rebellious Nonconformity also had several correlations in the .35–.40 range with these scales.

For comparison, we also include in Table 5 the correlations of the various scales with the two PPI higher order factors. As can be seen, in the vast majority (83%) of cases, a specific PPI scale correlates with at least one of the various scales more strongly than either of the factors, ranging from trivial differences of .01 to as large a difference as .22 (SNAP Exhibitionism correlates .66 with Social Influence but only .44 with FD), with an overall mean difference of .10. In contrast, in the six

Table 5 Summary of strong correlations between the psychopathic personality inventory scales and other measures

Scales	Machvlln Egoctrsm	Blame Extrnlzn	Carefree Nonplnfl	Rebellious Noncmfrm	Fearless- ness	Social Influence	Stress Immunity	Cold- hrtndns	FD	SCI
Personality Traits										
DISI Manipulativeness	.72†	.52	<u>.41</u>	<u>.42</u>	.25	-.15	-.14	.32	.11	.66
SNAP Manipulativeness	.70†	<u>.43</u>	<u>.42</u>	<u>.47</u>	.36	.17	.02	.14	.24	.68
SNAP Disinhibition	.64	<u>.35</u>	.61	.58†	.51	.25	.07	-.17	<u>.37</u>	.71††
SNAP Antisocial Behavior	.67*	<u>.37</u>	<u>.36</u>	<u>.46</u>	<u>.45</u>	.25	.07	-.17	.33	.61
NEO E Straightforwardness	-.62*	<u>-.39</u>	-.30	<u>-.36</u>	-.25	-.24	.00	-.29	-.21	-.53
NEO PI-R Agreeableness	-.64*	<u>-.48</u>	<u>-.35</u>	<u>-.35</u>	-.19	-.17	.07	<u>-.43</u>	-.12	-.58
SNAP Mistrust	.34	.64†	.17	.21	.08	-.09	-.22	-.06	-.09	<u>.47</u>
NEO E Trust	-.31	-.50*	-.22	-.16	.02	.09	.25	-.21	.16	<u>-.39</u>
NEO PI-R Conscientiousness	<u>-.37</u>	<u>-.35</u>	-.67†	<u>-.36</u>	-.18	.07	.18	-.17	.02	-.56
SNAP Carefree Behavior	<u>.42</u>	.24	.65†	<u>.45</u>	.34	.14	.02	.11	.22	.57
DISI Goal Orientation	-.27	<u>-.40</u>	-.60*	-.28	-.01	.13	.20	-.26	.13	<u>-.49</u>
SNAP Impulsivity	<u>.41</u>	.23	.62*	.57†	<u>.46</u>	.27	.18	-.10	.40	.61
NEO C Achievement Striving	-.24	-.24	-.58*	-.24	-.08	.10	.14	-.15	.07	<u>-.41</u>
NEO C Self-Discipline	-.32	-.34	-.56*	-.29	-.10	.09	.22	-.11	.09	<u>-.48</u>
NEO C Competence	-.23	-.33	-.51*	-.23	-.06	.16	.26	-.13	.15	-.42
NEO C Dutifulness	<u>-.39</u>	-.32	-.53*	-.26	-.11	.06	.20	-.23	.06	<u>-.47</u>
NEO C Deliberation	-.34	-.22	-.52*	<u>-.36</u>	-.34	-.10	.03	-.08	-.18	<u>-.46</u>
DISI Risk-taking	.24	-.02	.21	<u>.42</u>	.65†	<u>.43</u>	.30	.02	.61†	.27
SNAP Exhibitionism	.24	.01	.04	.12	.26	.66†	.15	-.05	<u>.44</u>	.13
NEO E Assertiveness	.08	-.09	-.15	.06	.18	.62*	.28	.00	<u>.46</u>	-.03
NEO PI-R Extraversion	-.08	-.28	-.19	-.07	.17	.50*	.20	-.21	<u>.37</u>	-.20
SNAP Positive Temperament	-.07	-.17	<u>-.38</u>	-.06	.19	.48*	.21	-.20	<u>.37</u>	-.22
NEO PI-R Neuroticism	.11	.38	.23	-.02	-.25	<u>-.37</u>	-.68†	-.22	-.57†	.23
SNAP Negative Temperament	.17	.44	.09	.01	-.19	-.29	-.67†	-.25	-.49	.24
NEO N Vulnerability	.09	.33	.29	-.01	-.24	<u>-.36</u>	-.63*	-.11	-.54†	.23
NEO N Anxiety	-.08	.14	.01	-.18	-.36	-.29	-.59*	-.28	-.55†	-.03
NEO N Depression	.00	.33	.15	.03	-.14	<u>-.37</u>	-.48*	-.22	<u>-.43</u>	.17
NEO N Hostility	.34	.41	.27	.14	-.03	-.06	<u>-.36</u>	.07	-.20	<u>.37</u>
NEO N Self-consciousness	-.05	.21	-.02	-.11	-.30	<u>-.49</u>	<u>-.48</u>	-.24	-.55†	.02
DISI Considerateness	<u>-.42</u>	<u>-.39</u>	<u>-.39</u>	-.23	-.08	.06	.07	-.49†	.01	<u>-.46</u>
NEO A Tender-Mindedness	-.33	-.18	-.21	-.14	-.15	-.11	-.09	-.44*	-.16	-.28
NEO O Feelings	-.25	-.26	-.23	-.14	-.09	.12	-.03	-.44*	-.01	-.28
Behavioral Questionnaires										
PLQ Hazardous Behaviors	<u>.41</u>	<u>.37</u>	.34	<u>.40</u>	.28	.12	.01	.13	.18	<u>.47*</u>
BQ Antisocial Behaviors	<u>.46</u>	<u>.37</u>	<u>.44</u>	.34	.20	.10	.01	.19	.14	.52*
BQ Irresponsible Behaviors	<u>.37</u>	.19	<u>.44*</u>	<u>.39</u>	.29	.15	.04	.11	.21	<u>.44*</u>

Note: *Machvlln Egoctrsm* Machiavellian Egocentrism, *Extrnlzn* Externalization, *Nonplnfl* Nonplanfulness, *Rebellious Noncmfrm* Rebellious Nonconformity, *Cold-hrtndns* Cold-heartedness, *DISI* Disinhibition Inventory, *SNAP* Schedule for Nonadaptive and Adaptive Personality, *PI-R* Personality Inventory-Revised, *PLQ* Personal Lifestyles Questionnaire, *BQ* Behaviors Questionnaire, *N* Neuroticism, *A* Agreeableness, *O* Openness, *PLQ* Personal Lifestyle Questionnaire, *BQ* Behaviors Questionnaire. Correlations (absolute values) $\geq .50$ are **bolded**; $|r| \leq .50$ and $\geq .40$ are underlined

*Highest correlation in row within $\pm .03$; †highest correlation in column within $\pm .03$; in red when these converge

cases in which the association with a factor scale is stronger, the range of differences from the lower orders scales' correlations is from .01 to .07, with a mean difference of .05.

Further, a specific PPI scales has a direct correspondence with one of the various scales (i.e., each is the other's strongest correlate) in 10 cases, whereas there are only two such relations with the PPI factor scales: SNAP Disinhibition and SCI (both higher order scales) are each other's strongest correlates ($r = .71$), and NEO Self-consciousness and Fearless Dominance correlate most strongly with each other ($r = -.55$).

Discussion

We have presented data documenting that the four component scales of PPI higher order SCI factor reflect various aspects of low A and C, with each having a particular focus. Specifically, Machiavellian Egocentrism correlated with Manipulativeness ($r_s = .70-.72$), Blame Externalization with Mistrust ($r = .64$), and Carefree Nonplanning with the interrelated scales of Carefree Behavior ($r = .65$), Impulsivity ($r = .62$), and low Achievement Striving ($r = .60$). Rebellious Nonconformity also related to Impulsivity ($r = .57$), but related to low Propriety (.50) and five other scales in the .40–.49 range, as well, so its content was a bit more diffuse. The SCI scales also relate to various externalizing behaviors.

In contrast, the three component scales of FD by-and-large do not relate to either A or C (although FD does correlate strongly with SNAP DIS, which, turn, *is* strongly related to both A and C), nor do they correlate with externalizing behaviors. Instead, Fearlessness reflects the specific trait of Risk-taking ($r = .65$); Social Influence reflects Exhibitionism ($r = .66$) and Assertiveness ($r = .62$), both facets of E; and Stress Immunity taps low Anxiety ($r = .63$) and Vulnerability ($r = .59$), facets of N. Coldheartedness, which forms its own factor, reflects low Considerateness ($r = .49$) and the Tender-Mindedness ($r = .44$), facet of A. Thus, whether researchers should focus on the higher order factors or the lower order scales depends on the aims of their investigation, whether they are interested in discerning broad patterns, for which the simplicity of using the factor scales may be preferred, or are probing a phenomenon to understand it in greater specificity, for which the individual scales confer the clear advantage of providing more information. That said, those who choose to investigate at the factor level should be aware of the specificity that these factors mask, whereas those choosing to investigate phenomena at the scale level should be aware that their results may implicate broader patterns.

Broadening the Focus to All of Personality Pathology

In terms of the issue with which we began this chapter—namely, whether psychopathy is a unique and qualitatively distinct disorder or best viewed as a constellation of maladaptive personality characteristics—we clearly join Scott Lilienfeld in interpreting the data as more strongly supportive of latter view. Importantly, however, we do not view this debate in isolation, but rather place it in the context of the broader debate of whether personality pathology as a whole domain is best characterized (1) categorically, as it has been traditionally in the DSM and the International Classification of Diseases, Versions 6 through 10 (ICD; World Health Organization, 1949, 1992), and still is in Section II of *DSM-5*; (2) fully dimensionally as it is in the International Classification of Diseases, 11th Edition; or (3) in a hybrid dimensional-categorical fashion, as exemplified in the Alternative Model of Personality Disorder (AMPD) in Section III of *DSM-5*.

The advantage of considering psychopathy within this larger context is that the perspective of dimensional (or hybrid) models (e.g., ICD-11 and AMPD, respectively) is useful to consider in the debate about whether (1) the PPI traits that do not tap aspects of low A and C (i.e., the three component scales of the FD factor) should nonetheless be considered psychopathic traits, as Lilienfeld et al. (2012) contend, or (2) instead reflect psychologically healthful characteristics, including aspects of both low N and high E, particularly social assertiveness, which Miller and Lynam (2012) summarized as stable extraversion (Eysenck & Rachman, 1965) and argue are not central to psychopathy. The primary element that both the AMPD and ICD-11 bring to the table is that personality traits are the second of their two main criteria, the first being maladaptive personality functioning.

The theoretical basis for requiring impairment in personality functioning, as well as personality traits in the maladaptive range, to diagnose personality pathology was first introduced into the personality-disorder research literature by Livesley et al. (1994), subsequently developed by Livesley and Jang (2000, 2005), and finally adapted for inclusion in the AMPD. However, the concepts they introduced into this literature had earlier origins, including in the work of Allport (1937), who wrote that "...personality is something and personality does something..." (p. 48), and who later elaborated that personality is "the dynamic organization within the individual of those psychophysical systems that determine... characteristic behavior and thought" (1961, p. 28). Livesley and Jang also drew on work in evolutionary psychology, specifically that of Plutchik (1980), who described universal life tasks that all individuals need to achieve to function successfully in society.¹⁰ Finally, they incorporated concepts from cognitive psychology, for example, "how individuals *interpret* life tasks of work, play, intimacy, power, and health ... envisaging alternative future selves, and devising cognitive strategies to guide behavior in relevant situations" (Cantor, 1990, p. 735, emphasis added).

Livesley and Jang (2005) integrated these varied perspectives with the clinical literature on personality dysfunction and proposed that PD reflects "the failure to achieve one or more of the following: (1) stable and integrated representations of self and others; (2) the capacity for intimacy, to function adaptively as an attachment figure, and/or to establish affiliative relationships; and (3) adaptive functioning in the social group [including] prosocial behavior and/or cooperative relationships" (p. 264).

This work's influence on the AMPD can be seen in its first criterion and, subsequently, also that of ICD-11 PD model. Specifically, in the AMPD, Criterion A is "Moderate or greater impairment in personality (self/interpersonal) functioning, manifested by difficulties in two or more of the following four areas: Identity, self-direction, empathy, and intimacy" (APA, 2013, p. 770). Each of the four areas is further defined and five levels of functioning are delineated from (0) Little or no impairment to (4) Extreme impairment, with Level 2, Moderate impairment, required for diagnosis (see APA, 2013, pp. 775–778). The ICD-11 criterion is highly

¹⁰More recent work in this general area has been done by the Organisation for Economic Co-operation and Development (e.g., see [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP\(2018\)9&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2018)9&docLanguage=En))

similar and, importantly, this personality-functioning severity rating (Mild, Moderate, or Severe) is the only required PD diagnostic criterion (<https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2fcd%2fententy%2f941859884>). Thus, a major difference between the two systems is that the AMPD requires at least one pathological trait—its Criterion B (APA, 2013, p. 761), whereas the ICD-11 model's trait and pattern specifiers (<https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2fcd%2fententy%2f1128733473>) are optional, although clinicians are strongly encouraged to use them.

A second difference between the two models is that the AMPD's Criterion B is a specific list of 25 personality trait facets organized into five domains (APA, 2013, pp. 779–781), which essentially are the five-factor model domains, with Psychoticism substituted for Openness. In contrast, the ICD-11 PD model describes five trait domains—the five-factor model domains minus Openness plus Anankastia—a trait domain reflecting perfectionism and a high need for control—plus a specific Borderline pattern based directly on the *DSM-IV* PD criteria.

Finally, as mentioned earlier, the AMPD is a hybrid model, providing criteria for six specific personality disorder diagnoses, using combinations of aspects of both Criterion A and Criterion B. “Individuals who have a pattern of impairment in personality functioning and maladaptive traits that matches one of the six defined personality disorders should be diagnosed with that personality disorder. . . . Individuals whose personality functioning or trait pattern is substantially different from that of any of the six specific personality disorders should be diagnosed with Personality Disorder-Trait Specified (PD-TS)” (APA, 2013, p. 771). However, a diagnosis of PD-TS can be based on *any* specific trait facet that fits within the five domains, even if it is not in the list of 25, which brings the discussion back around to psychopathy, (or psychopathic personality disorder, if you will), because it could be diagnosed using the AMPD model.¹¹ For example, it would not be difficult to argue that a PD-TS diagnosis should be given to individuals who (a) meet the AMPD's personality impairment criterion (e.g., have few to no clear life goals, have low empathy and generally poor interpersonal relationships), (b) do not evidence pathological levels of at least six of the seven traits that define Antisocial Personality Disorder in the AMPD (viz., manipulativeness, deceitfulness, callousness, hostility, risk taking, impulsivity, and irresponsibility), and (c) have a pathologically high level of risk taking (i.e., Fearlessness) and/or dominance (i.e., Social Influence), and/or a pathologically low level of N (i.e., Stress Immunity, such that, for example, they do not become concerned even in emergency situations when circumstances warrant concern); in other words, if they were high on FD, but not SCI.

In brief, individuals with personality impairment who have one or more prominent PPI traits that are typically, but not perhaps exclusively, associated with healthy adaptivity might be diagnosed with psychopathy per either the *DSM-5* Section II or III model. This is essentially the argument that Lilienfeld et al. (2012) made when they likened such an individual to Lykken's primary psychopath. On the other hand,

¹¹Of course, it also could be diagnosed in *DSM-5*, Section II, using “Other Specified Personality Disorder” (APA, 2013, p. 684), but that is often deemed a “wastebasket category,” whereas PD-TS is meant to be an important alternative to the other six specific PDs.

Miller and Lynam (2012) opined that one should be “cautious in concluding that individuals with high scores on PPI FD alone are psychopathic” (p. 321). Taking this statement literally, then, from the perspective of the AMPD or ICD-11, we agree entirely, because personality disorder cannot be diagnosed in these systems on the basis of “statistically abnormal” traits alone, that is, without evidence of personality impairment. This, in fact, is perhaps the primary reason that Livesley has argued throughout his career that (a) a clear definition of personality disorder is imperative and (b) the *DSM* system of diagnosing personality disorders on the basis of meeting a limited set of descriptors, many (but not all) of which are specific manifestations of personality traits, is quite inadequate (see Livesley et al., 1994, for a particularly cogent critique).

If, conversely, personality impairment is present, then a diagnosis should be considered. However, we think that the debate about relations of psychopathy with the component traits of FD goes even deeper and, at its core, is back to the more fundamental question of whether distinct entities within the broad domain of personality pathology to which one can give specific diagnostic labels actually exist at all. If there is no such entity that can be labeled psychopathy, then arguments about its core characteristics can be considered scientifically irrelevant or, perhaps to overstate the point a bit, at least are no more scientific than arguments about whether unicorns have horns or Santa Claus has a beard that is as white as snow.

We acknowledge that it is extremely easy to get pulled into debates about specific types of personality pathology. One need only glance at a few issues of the *Journal of Personality Disorders* or *Personality Disorders: Theory, Research, and Treatment* to see that belief in an entity called “Borderline Personality Disorder” is alive and well. Note that we use the term “belief” deliberately, because there is virtually no scientific evidence to support the view that Borderline Personality Disorder, or any other specific type of personality pathology, including psychopathy, exists as a discrete entity in nature.

To sum up our view, we will know that the field has matured when the use of diagnostic labels, other than as convenient heuristics, disappears entirely and is replaced with deeper understanding of how personality traits—which are themselves useful constructs rather than discrete entities in nature—and personality processes arise, and how they are maintained, disrupted, or developed over the course of individuals’ lives.

We recognize that this chapter is a somewhat unusual contribution to a Festschrift in that it reads more like an empirical-research journal publication than a “traditional” chapter, but we would like to think that Scott would be pleased to see it included in volume intended to honor him, because it demonstrates how his work fits into—and can be influential in—the broader field of scientific psychology which was a particularly noteworthy hallmark of his research.

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