

CONSTRUCT VALIDITY OF PSYCHOPATHY IN A COMMUNITY SAMPLE: A NOMOLOGICAL NET APPROACH

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The construct validity of psychopathy was examined within a sample of 326 male and female university students. The interpersonal circumplex served as a nomological net for the examination of convergences between psychopathy measures and convergent and discriminant validity with a measure of personality disorders was examined using a matrix approach. Measures included: (a) Antisocial scale of the Personality Assessment Inventory (Morey, 1991); (b) Self-Report Psychopathy scale (Hare, 1991); (c) Psychopathic Personality Inventory (Lilienfeld & Andrews, 1996); (d) Personality Diagnostic Questionnaire-4 (Hyler, 1994); and (e) Interpersonal Adjective Scales Revised-Big 5 (Trapnell & Wiggins, 1991). Results indicated (a) substantial convergence between psychopathy measures; (b) high convergent validity between psychopathy measures and antisocial personality disorder; and (c) high discriminant validity from other personality disorders. The prevalence of psychopathy within this non-forensic sample is also discussed.

The concept of psychopathy has received considerable attention among both the research community and the general public. A total of 60 years of research have been dedicated to this topic since Cleckley's (1941) original conceptualization of psychopathy and a wealth of knowledge has been gained, primarily through research with incarcerated male samples. However, many researchers in the area have recently emphasized the lack of psychopathy research on (nonforensic) community dwelling populations and have expressed the need to expand our understanding of the manifestations of psychopathy among the general public (Hart & Hare, 1994; Levenson, Kiehl, & Fitzpatrick, 1995; Lykken, 1995; Lynam, Whiteside, & Jones, 1999; Widiger & Lynam, 1998). In addition, despite a relatively recent proliferation of measurement tools for the assessment of psychopathy, little is known regarding the construct validity of (and convergences and divergences among) these instruments (Lynam, Whiteside, & Jones, 1999). It was therefore the goal of the present study to examine: (a) the nature of psy-

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chopathy in a normal sample (i.e., university undergraduates); and (b) the construct validity of commonly used psychopathy measures.

PSYCHOPATHY IN NONFORENSIC SAMPLES

Psychopathy research to date has focused almost exclusively on aspects of psychopathy within criminal populations and in so doing many researchers have lost sight of what was emphasized by Cleckley (1941) in his pioneering work on this topic—that psychopathy is a dysfunctional personality style that is prevalent in the general population. In addition, it is important to note that Cleckley did not see criminality as a necessary or even central component of psychopathy, although recent editions of the Diagnostic and Statistical Manual (DSM-IV; American Psychiatric Association, 1994) have focused heavily on antisocial behavioral characteristics in delineating criteria for Antisocial Personality Disorder (APD).

More recent conceptualizations of psychopathy (Hare, 1993) have also suggested that the syndrome is neither restricted to incarcerated populations nor to those who engage in criminal acts. Rather, the syndrome may be found among community groups, even high achievers, such as businessmen, politicians, doctors, lawyers, and university students who, because of core features such as good social skills, high intelligence, and high socioeconomic status, may have escaped law enforcement agencies or have taken advantage of others without formally committing illegal acts (Hare, 1993; Zagon & Jackson, 1994).

Furthermore, although the bulk of psychopathy research conducted to date has used samples of incarcerated males, nothing in Cleckley's (1941) original description of the syndrome, nor subsequent descriptions by other psychopathy experts (Hare, 1993), suggests that females would be unlikely to develop this personality style. Cleckley (1941) offered extensive clinical descriptions of the 16 hallmark features that distinguish the psychopathic personality from others in the general population, including superficial charm, grandiosity, lack of guilt, insincerity, absence of nervousness, impersonal relationships, and clarity of thought (e.g., the absence of any delusional or irrational thinking)—characteristics that may well apply to women and men. Recent research with a female forensic sample supports the notion that the disorder is not restricted to men (Salekin, Rogers, & Sewell, 1997).

Despite these broad characterizations of psychopathy, few studies have examined this syndrome within the general population, although there are a few notable exceptions. For example, the studies of Widom (1977) and Belmore and Quinsey (1994) used advertisements to recruit community dwelling individuals with characteristics suggestive of psychopathic vulnerability, and although both studies have drawbacks such as small sample sizes (psychopath *N*s equal 28 and 15, respectively) and the incidental inclusion of many individuals with a history of institutionalization (i.e., 42.8% and 93% of the samples, respectively), the studies provide some insight into differences between community and incarcerated psychopaths. In particular, in the results reported by Widom (1977), it appeared that community psychopaths were able to delay gratification when it was necessary

for continued success, in contrast to incarcerated psychopaths who tended to be impulsive and unable or unwilling to delay gratification even if failing to do so was to their detriment (Newman, Patterson, & Kosson, 1987). Similarly, the Belmore and Quinsey (1994) results suggested that psychopathic individuals were able to learn from experience during a card game to make more informed decisions on later trials of the task. This is in contrast to results found in the Newman et al. study (1987) where incarcerated psychopaths, presumably because of a deficiency in response modulation (Newman, 1998), were relatively unable to suspend approach behavior and to evaluate the adaptiveness of behavior. These findings suggest that the executive functioning of community psychopaths may allow for a level of cost-benefit evaluation that improves their decision-making beyond that of institutionalized psychopaths.

However suggestive, both of these studies included a high proportion of previously institutionalized participants and therefore failed to provide data unique to the noninstitutionalized psychopath. Within this latter realm, several relatively recent studies, all using university samples, have focused more exclusively on the noninstitutionalized psychopath (Forth, Brown, Hart, & Hare, 1996; Levenson et al., 1995; Lynam et al., 1999; Zagon & Jackson, 1994). The studies vary in the choice of assessment instruments for psychopathy (Levenson et al., [1995] developed scales of Primary and Secondary psychopathy for their study, Zagon & Jackson [1994] used the Self-Report Psychopathy - II [Hare, 1991], and Forth et al. [1996] used the Psychopathy Checklist-Revised: Screening Version [PCL-R:SV; Hart, Cox, & Hare, 1995]), but the results of all studies suggested that the instruments could be reliably used in undergraduate samples and that males demonstrated a higher level of psychopathy than did females, although prevalence estimates were not provided.

There are some potentially good reasons for using university samples in the study of psychopathy. First, many more community members pass through our universities in their search for potential life-long careers than had in the past. A substantial number of these young adults continue to pursue academic goals and many others drop to pursue other non academic goals. The larger proportion of community members that start into our universities, enroll in our undergraduate courses, and participate in our studies, provide researchers a window in which to observe a highly varied group of individuals. Second, one type of psychopath described by Cleckley, the "successful psychopath," may use formal education (business, law, medicine) as a stepping stone to higher status, and positions of greater power. It is precisely this type of psychopath who is least likely to be captured within samples of incarcerated individuals. Thus, investigating psychopathy in university samples may help to shed light on the nature of psychopathy in this particular subtype of psychopathy. Third, previously conducted research on community samples that did not use university samples (Belmore & Quinsey, 1994; Widom, 1979) were unable to avoid the pitfall of selecting a high proportion of criminals who had lengthy arrest records and previous histories of incarceration. Studies of arrested or previously incarcerated psychopaths are plentiful (Hare, 1991, 1998; Salekin et al., 1997), whereas

studies of psychopathy with university students are limited (Forth et al., 1996; Lynam et al., 1999; Widiger & Lynam, 1998).

In general, this suggests that few studies have examined the applicability of psychopathy outside of forensic and criminal institutions, although what little work has been done is suggestive of important differences between community and institutionalized psychopaths. Lilienfeld (1994) has emphasized that it is such potential differences between forensic and nonforensic psychopaths that makes the study of the noninstitutionalized psychopath so important, possibly leading to an identification of factors that prevent psychopaths from pursuing criminal lifestyles. However, an important first step in the scientific investigation of psychopathy in our communities is the establishment of the construct validity of common psychopathy measures.

CONSTRUCT VALIDITY OF PSYCHOPATHY MEASURES

Instruments designed to measure the psychopathy construct have proliferated over the last decade (e.g., Psychopathic Personality Inventory [PPI; Lilienfeld & Andrews, 1996]; Antisocial Scale of the Personality Assessment Inventory [PAI-A; Morey, 1991]; Self-Report Psychopathy-II [SRP-II; Hare, 1991]); Psychopathy Checklist-Revised: Screening Version ([PCL-R:SV; Hart, Cox, & Hare, 1995]) and although standard reliability and validity information is generally provided in the initial test development articles, the broader considerations of construct validity have remained largely unexamined.

Cronbach and Meehl (1955), in delineating the basic principles of construct validation, argued that "to validate a claim that a test measures a construct, a nomological net surrounding the concept must exist" (p. 291). Although this aspect of construct validation has often been neglected, Gurtman (1992) has demonstrated that, with respect to interpersonal constructs, the interpersonal circumplex model provides such a nomological net. Wiggins and Broughton (1985, 1991) have similarly emphasized the integrative function of the circumplex model in providing a single framework for interpreting personality scales from a variety of research traditions in personality, clinical, and social psychology. Furthermore, circumplex models have proven useful in elucidating relations among various conceptions of personality disorders (Pincus & Wiggins, 1990; Soldz, Budman, Demby, & Merry, 1993; Wiggins & Pincus, 1989, 1994). In particular, examination of Interpersonal Adjective Scales (IAS) ratings within a forensic sample have indicated that prisoners tend to be rated as dominant and hostile, placing their scores within the BC (arrogant-calculating) octant of the IAS (Foreman, 1988). It is expected that psychopathy ratings in the present context will also tend to cluster within the BC octant.

The two dimensions of the circumplex (Dominance and Nurturance) have been shown to be structurally isomorphic with the first two dimensions (Extraversion and Agreeableness) of the five-factor model of personality (McCrae & Costa, 1989), and the substantial empirical literature of correlates of the interpersonal circumplex model (Kiesler, 1996; Plutchik & Conte, 1997) is impressive, not only for its range, but for its interpretability.

In particular, the mathematical properties underlying the circumplex structure are such that “*angle of separation between interpersonal tendencies provides a direct measure of their conceptual and componential similarities*” (Gurtman, 1992, p. 106, emphasis in original). These lawful relations are reflected in the geometry of the circumplex; measures that occur at right angles on the circle are unrelated, measures at straight angles (i.e., opposite ends or sides of the circle) are negatively associated, and measures that share angular locations are highly similar. As such, the interpersonal circumplex model provided a nomological net for the evaluation of construct validity in the present investigation and appeared to be the model of choice for examining convergences and divergences between various measures of the psychopathy construct. Construct validity was also assessed through an examination of convergent and discriminant validity of various psychopathy measures from personality disorders as assessed by the Personality Diagnostic Questionnaire, Fourth Edition (PDQ-4; Hyler, 1994).

METHOD

PARTICIPANTS

After providing written informed consent, psychology students ($N = 326$) at a large southeastern university participated in the study to fulfill a course requirement. Demographic characteristics of the sample included: 56% female; mean age of 22.02 years ($SD = 7.09$); mean of 13.67 years ($SD = 1.17$) of education; racial composition of 19.6% African American, 2.8% Asian, 23.3% Caucasian, 42.3% Hispanic, 0.3% Native American, 4.6% biracial, and 11% missing race data.

INSTRUMENTS

Self-Report Psychopathy-II Scale. The Self-Report Psychopathy-II Scale (Hare, 1991) (SRP-II) is an experimental 60-item, self-report measure of psychopathy, with items scored on a 7-point scale, ranging from 1 (*not true*) to 7 (*very true*). Because the SRP-II is modeled after the PCL-R, it is intended to assess the prototypical psychopath as described by Hart, Hare, and Forth (1994), involving a “cluster of personality traits and socially deviant behaviors: a glib and superficial charm; egocentricity; selfishness; lack of empathy, guilt and remorse; deceitfulness and manipulateness; lack of enduring attachments to people, principles, or goals; impulsive and irresponsible behavior; and a tendency to violate explicit social norms” (p. 103). The SRP-II is composed of two factors, a personality-based factor and a behavior-based factor.

Information concerning the reliability and validity of the SRP-II is limited, although preliminary results suggest that the measure has reasonable construct validity. Zagon and Jackson (1994) reported moderate correlations between the SRP-II scales and measures of narcissism, impulsivity, dishonesty, low levels of anxiety, and empathy in a sample of 149 university students. Also, Widiger, Frances, Pincus, Davis, and First (1991) administered the SRP-II as part of the DSM-IV field trials and reported that the SRP-II correlated from 0.24 to 0.56 ($M = 0.35$) with DSM-III-R (American Psychiatric

Association, 1987) diagnoses of APD, from 0.13 to 0.50 ($M = 0.29$) with ICD-10 (World Health Organization, 1990) diagnoses of dyssocial personality disorder, and from 0.23 to 0.68 ($M = 0.38$) with a 10-item psychopathy set derived from the PCL-R (Zagon & Jackson, 1994).

Psychopathic Personality Inventory. The Psychopathic Personality Inventory (PPI) (PPI; Lilienfeld & Andrews, 1996) is a 187-item, self-report measure of psychopathy specifically designed for the assessment of psychopathy in nonforensic populations. Items are responded to on a 4-point scale, ranging from 1 *false* to 4 *true*. The PPI differs from other psychopathy measures in a number of ways: (a) all items are designed to measure personality traits characteristic of psychopathy and not antisocial or deviant behaviors; (b) items were devised to be subtle in content, thereby making dissimulation more difficult; (c) validity scales are provided to aid in the identification of patients who may be malingering or responding in an inconsistent fashion; and (d) whereas most psychopathy measures consist of two or three factors, the PPI contains eight factor analytically derived subscales, including Machiavellian Egocentricity, Social Potency, Fearlessness, Coldheartedness, Impulse Nonconformity, Blame Externalization, Carefree Nonplanfulness, and Stress Immunity.

Internal consistencies (Cronbach's α), across several samples have ranged from .90 to .93 for the PPI total score and from .70 to .89 for the PPI subscales (Lilienfeld & Andrews, 1996; Poythress, Edens, & Lilienfeld, 1998). The test-retest reliability of the PPI over approximately a 1-month interval was found to be high (.95) (Lilienfeld & Andrews, 1996). With regard to validity, the PPI has been shown to be a valid measure of psychopathy when the PCL-R was the criterion (Poythress et al., 1998).

Personality Assessment Inventory - Antisocial Scale. The Antisocial (ANT) scale of the PAI (Morey, 1991) was constructed to tap three different facets of the syndrome consistent with contemporary theory: (a) ANT-Egocentricity (ANT-E), (b) ANT-Sensation-seeking (ANT-S); and (c) ANT-Antisocial behaviors (ANT-A). The first two components represent personality aspects of the psychopathic character, whereas the third assesses the conduct problems that characterize the DSM definition of APD. The PAI-ANT has two pre-established cutoff scores, one lenient ($T > 70$) and one more stringent ($T > 82$).

The ANT scale has been found to be a reliable measure of psychopathy (Morey, 1991; Salekin et al., 1997); α s ranged from .84 to .86 and test-retest reliability was found to be high (.89) (Morey, 1991). With regard to validity, the PAI-ANT scale correlates moderately with scales 4 (.34) and 9 (.44) of the MMPI-2, and with the SRP-II ($M = .68$) in two different samples (Morey, 1991). The PAI has also been shown to have criterion-validity when using the PCL-R as the standard (Edens, Hart, Johnson, Johnson, & Olver, 2000; Salekin et al., 1997, Salekin, Rogers, Ustad, & Sewell, 1998).

Personality Diagnostic Questionnaire-Fourth Version. The Personality Diagnostic Questionnaire-Fourth Version (PDQ-4) was rationally constructed by Hyler and Rieder (1987, 1994) to assess the DSM-IV (American Psychiatric Association, 1994) criteria for personality disorders. The PDQ-4 relies on dichotomous ratings (true or false) for each symptom and has been shown to exhibit modest agreement with personality disorder diagnoses based on two structured interviews (average κ s were .36 and .42) (Hyler, Skodol,

Kellman, Oldham, & Rosnick, 1990; Hylar, Skodal, Oldham, Kellman, &

taking the proportion of positive-keyed responses necessary for obtaining a psychopathy diagnosis on the PCL-R and applying that proportion to the SRP-II and PPI scores. Although the present cut-off scores require further empirical investigation and other methods of deriving cut-off scores could also be used, this method resulted in prevalence estimates for males that are comparable with those obtained with the PAI-ANT scale; slightly higher estimates were obtained for females: specifically, SRP-II estimates were 12.5% for males and 1.6% for females and PPI estimates were 11.1% for males and 3.8% for females. Although we used a categorical approach above to address prevalence rates, the remainder of our analyses are dimensional. We tested the correlations across gender for the psychopathy measures and the IAS-B5 and found no significant differences. Given that there were no significant differences across gender, we collapsed the data across gender for the analyses that follow.

CONSTRUCT VALIDITY

Psychopathy within a Nomological Net. To examine the construct validity of and the convergent validity among the various measures of psychopathy used in the present study, the subscales of each psychopathy measure were projected onto IAS circumplex space. Projection involves calculation of axis scores for each participant for the Dominance (DOM) and Love (LOV) axes of the circumplex space and correlation of each psychopathy subscale with the resulting DOM and LOV values. DOM and LOV are calculated according to the following formulas (where z indicates z -scores):

$$\begin{aligned} \text{DOM} &= .3[(z\text{PA} - z\text{HI}) + .707(z\text{NO} + z\text{BC} - z\text{FG} - z\text{JK})] \\ \text{LOV} &= .3[(z\text{LM} - z\text{DE}) + .707(z\text{NO} - z\text{BC} - z\text{FG} + z\text{JK})] \end{aligned}$$

Correlations between psychopathy subscales and DOM and LOV measures were then plotted within circumplex space with the DOM correlation designating standing on the y -axis and the LOV correlation designating standing on the x -axis. Additional calculations may be undertaken to determine the angular location ($\arctan[\text{DOM}/\text{LOV}]$) and communality (distance from the center of the circle) representing the extent to which a scale is related to the two dimensions of the circle ($h^2 = [r_1]^2 + [r_2]^2$ where r_1 is the correlation of the scale with DOM and r_2 is the correlation of the scale with LOV).

Projections of the SRP Factors I and II are presented in Figure 1. As can be seen from this figure, among both males and females, SRP Factor I (personality) scores suggest somewhat dominant and slightly cold characteristics and Factor II (antisocial behaviors) scores are approximately equal to Factor I scores in terms of dominance content but are associated with a greater tendency towards coldness. What is apparent is that both Factor I and II scores are associated with moderate interpersonal content (i.e., moderate communalities; associated with DOM and LOV axes) (see Figure 1). Projections of the PAI-ANT subscales of antisocial behaviors (ANT-A), egocentricity (ANT-E) and sensation-seeking (ANT-S) are also presented in Figure 1. Almost all of the subscales fall with the BC (arrogant-calculating) octant of the IAS and suggest moderate associations with both dominance and coldness.

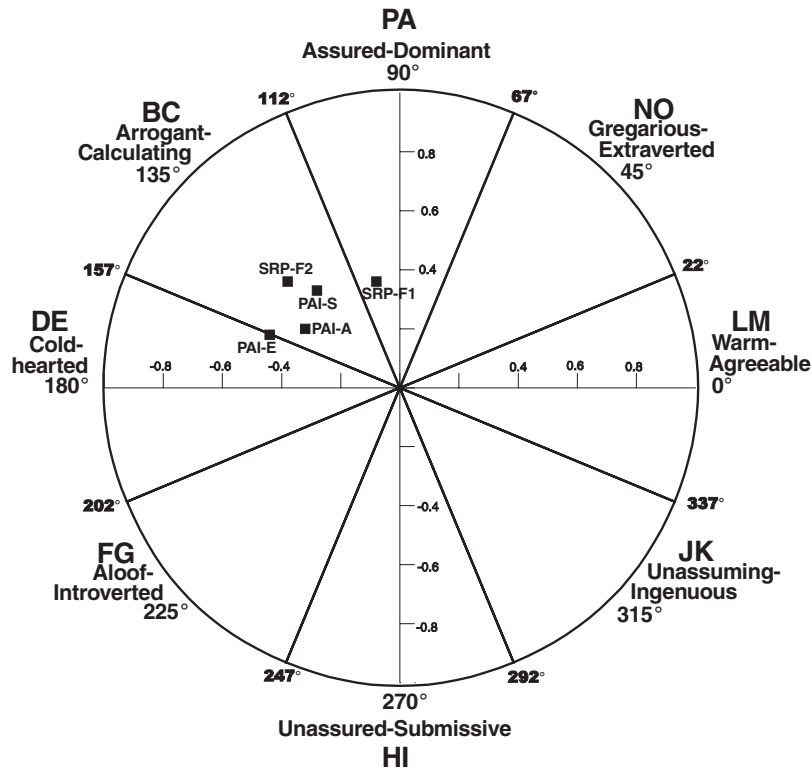


FIGURE 1. Projections of the PAI-ANT and SRP-II Factor Scores onto the Interpersonal Circumplex.

The PPI projections, which includes eight subscales, are presented in Figure 2. What is most striking about this figure is that although the BC octant contains the greatest proportion of subscale placements, the placements range from approximately 82° to 205°, covering a much broader area of the circumplex than did the SRP and PAI subscales. Recall that scales that fall 90° apart will be orthogonal and those that are greater than 90° apart will be negatively correlated; as such the PPI measure of psychopathy is composed of multiple and sometimes unrelated or even negatively related components (see Figure 2).

Total scores for the SRP, PAI, and PPI psychopathy measures were also projected onto circumplex space (Figure 3) and clearly indicate a high degree of convergent validity among the various measures; all total scores were clearly located within the BC (arrogant-calculating) octant. In general, the SRP scores appeared to have the greatest interpersonal content, followed by the PPI scales and finally the PAI scales which had, at best, modest associations with the interpersonal axes (see Figure 3). The total score for the antisocial scale of the PDQ-IV was also projected onto the interpersonal circumplex. Compared with the psychopathy measures, the PDQ-IV antisocial scale accounted for less interpersonal content. Individuals scoring high on the PDQ-IV antisocial scale were not found to be as arrogant and calcu-

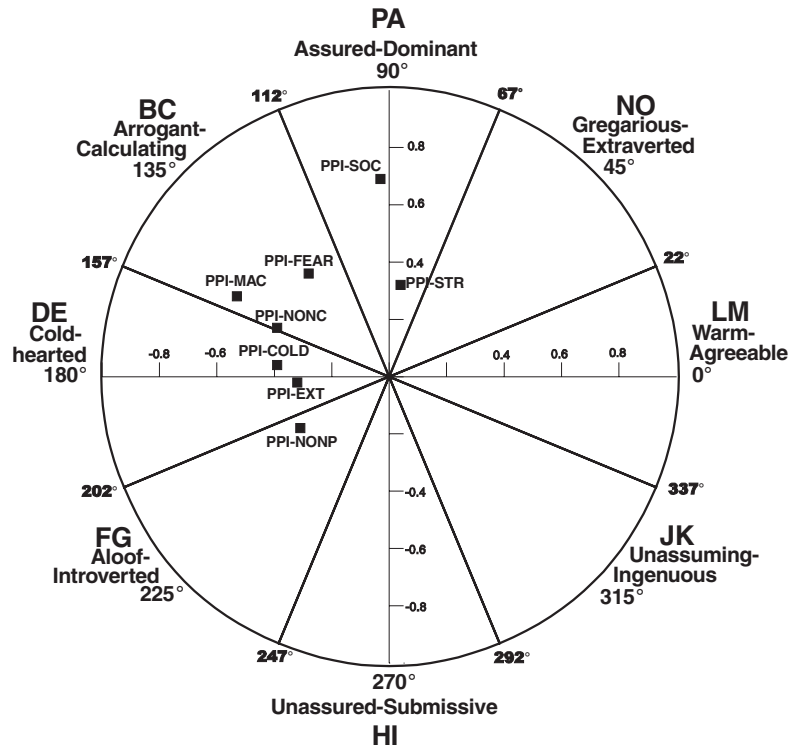


FIGURE 2. Projections of the PPI Factor Scores onto the Interpersonal Circumplex.

lating or cold-hearted as the individuals who scored high on the psychopathy scales.

Convergent and Discriminant Validity among Personality Disorders.

Convergent and discriminant validity between the various psychopathy measures and a general measure of personality disorders (PDQ-4) were also examined. More specifically, convergent validity was determined by examining correlations between PDQ-4 APD scores and the total scores of the various psychopathy measures (monotrait-heteromethod) and discriminant validity was determined by examining correlations between the psychopathy total scores and PDQ-4 scores for all personality disorders except APD (heterotrait-heteromethod). Because the various personality disorders examined vary with respect to their similarity to psychopathy, a range of discriminant validity coefficients was expected. For example, other cluster B disorders (i.e., borderline, histrionic, and narcissistic personality disorders) are more likely than disorders from cluster A and cluster C (e.g., Schizoid, Avoidant) to be associated with the psychopathy construct (Hart & Hare, 1994) and therefore provide a more stringent test of discriminant validity.

Convergent validity between psychopathy measures and PDQ-4 APD scores was examined by determining whether the validity coefficients were significantly different from zero and substantial in magnitude (Byrne & Goffin, 1993). Fiske and Campbell (1992) have noted that successful valid-

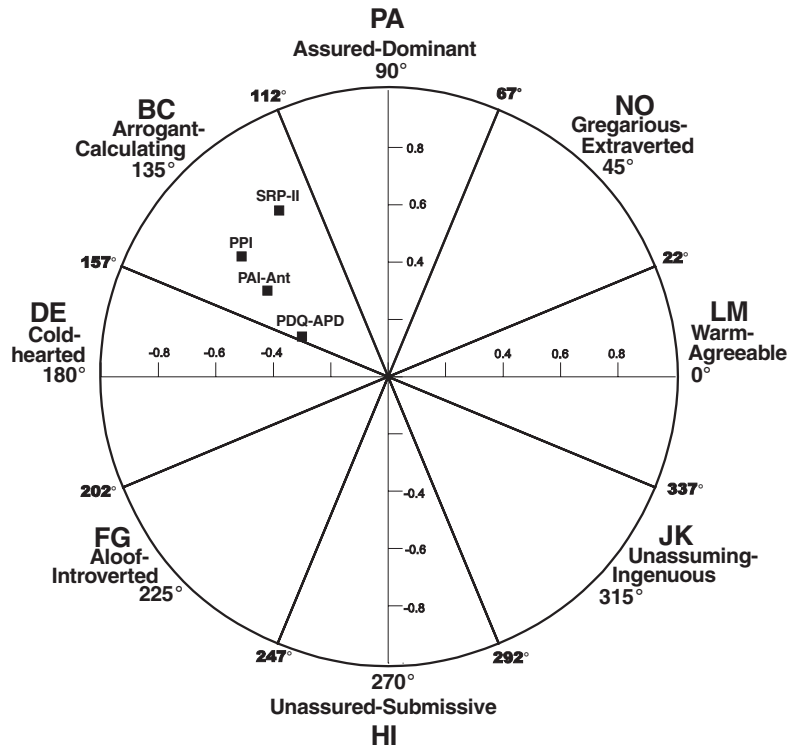


FIGURE 3. Projections of the PAI-ant, PDQ-APD, PPI, and SRP-II Total Scores onto the Interpersonal Circumplex.

ity coefficients are often modest, typically in the .30 to .50 range. Results are reported in Table 1. As can be seen from the correlations in the APD column, substantial convergent validity coefficients were obtained for all of the psychopathy measures among both males and females, although the values were somewhat higher among males (see Table 1).

Consistent with Bagozzi and Yi (1991) and Byrne and Goffin (1993), *a priori* criteria were imposed for examining discriminant validity and providing a means for interpretation. Specifically, (a) a high degree of discriminant validity requires less than 5% comparison violations; (b) moderate discriminant validity requires between 6% and 33% comparison violations; and (c) discriminant validity is judged to be low when comparison violations exceed 33%. Bagozzi and Yi (1991) defined a comparison violation as any instance in which discriminant validity coefficients exceeded convergent validity coefficients.

As shown in Table 1, discriminant validity coefficients varied from -.23 to .38 among males ($M = .08$) and from -.21 to .52 among females ($M = .14$) with no comparison violations. According to Bagozzi and Yi's (1991) and Byrne and Goffin's (1993) criteria, these results provide evidence of high discriminant validity for both male and female psychopathy. Interestingly, disorders thought to overlap substantially with female psychopathy, such as histrionic personality disorder, did not demonstrate strong convergence

TABLE 1. Convergent and Discriminant Validity of Self-Report Psychopathy Measures: Multitrait-Multimethod Correlation Matrix

Measure	Personality Diagnostic Questionnaire-4									
	SCD	SCT	PAR	AVD	DEP	OCD	HIS	NAR	BOR	ANT
Males										
SRP-II	-.03	.01	.03	-.19	-.23**	.00	.03	.18	.20	.47**
PAI-A	.01	.20	.17	-.02	.00	.06	.16	.28**	.38**	.70**
PPI	-.07	.14	.04	-.07	.01	.00	.18	.28**	.31**	.55**
Females										
SRP-II	.07	.29**	.16	-.18	-.21**	-.02	.12	.19	.29**	.42**
PAI-A	.05	.28**	.29**	.04	.08	.04	.17*	.29**	.52**	.68**
PPI	.06	.23**	.12	-.12	-.03	-.02	.20**	.20**	.38**	.43**

Note. Males, $N = 144$; females, $N = 182$. SCD = schizoid; SCT = schizotypal; PAR = paranoid; AVD = avoidant; DEP = dependent; OCD = obsessive-compulsive; HIS = histrionic; NAR = narcissistic; BOR = borderline; ANT = antisocial. SRP-II = Self Report Psychopathy Scale-II; PAI = Personality Assessment Inventory-Antisocial Scale; PPI = Psychopathic Personality Inventory.

(average $r = .16$), which differs from results found in forensic samples (Lilienfeld, Van Valkenburg, Larntz, & Akiskal, 1986; Salekin et al., 1997). However, our results may not be generalizable to the aforementioned samples given the very low prevalence of female psychopathy in the current sample.

DISCUSSION

Psychopathy has received extensive evaluation and validation with male correctional populations, although studies have not systematically addressed its applicability to noncriminal populations, despite early theorists' (e.g., Cleckley, 1941) belief that the disorder existed in the general population. It has been suggested that the almost exclusive use of incarcerated (male) samples may have limited our understanding of this construct (Belmore & Quinsey, 1994; Newman, 1991). In addition, despite the proliferation of self-report measures of psychopathy, little is known regarding the construct validity of these measures and whether or not psychopathy demonstrates criterion-related validity outside of prison settings. In particular, the present investigation set out to answer a few basic questions about psychopathy and its measurement within a nonforensic sample: (a) is the psychopathy construct applicable within the general population? (b) do psychopathy measures demonstrate construct validity? and (c) do psychopathy measures demonstrate convergent and discriminant validity from other personality disorders?

PSYCHOPATHY WITHIN A NONFORENSIC POPULATION

Psychopathy, as originally conceived by Cleckley (1941), is not limited to engagement in illegal activities, but rather encompasses such personal-

ity characteristics as manipulateness, insincerity, egocentricity, and lack of guilt—characteristics clearly present in criminals but also in spouses, parents, bosses, attorneys, politicians, and CEOs, to name but a few (Bursten, 1973; Stewart, 1991). Our own examination of the prevalence of psychopathy within a university population suggested that perhaps 5% or more of this sample might be deemed psychopathic, although the vast majority of those will be male (more than 1/10 males versus approximately 1/100 females). These prevalence rates are, not surprisingly, much lower than those typically found in forensic samples (25% to 30%; Hare, 1991), and lower rates of psychopathy among females than among males has been a consistent finding in both normal (Forth et al., 1996; Zagon & Jackson, 1994) and forensic (Salekin et al., 1996, 1997) samples. However, where past research (finding gender differences using interview methods) has been criticized on the grounds that raters were perhaps not as able to discern psychopathic traits among women (where they were less expected) than among men (see Salekin et al., 1997), the use of a self-report methodology in the present study suggests that such gender discrepancies are valid. In addition, the present findings, while understandably reporting lower rates of psychopathy within a university sample than that typically found in forensic samples, suggest that levels of psychopathy may be higher in such samples than previously thought (and hoped).

CONSTRUCT VALIDITY

A nomological net approach, as recommended by Cronbach and Meehl (1955), was used in the examination of the construct validity of psychopathy. The interpersonal circumplex has been argued to provide such a framework for the examination of interpersonal constructs (Gurtman, 1992), personality measures from a variety of research traditions (Wiggins & Broughton, 1985, 1991), and the personality disorders more specifically (Wiggins & Pincus, 1989). Findings clearly indicated that although the subscales of the various inventories varied somewhat in their circumplex placement, and in the case of the PPI seemed to include some unrelated and negatively related components, the total scores for these inventories clearly converged within the BC (arrogant-calculating) octant of the IAS. As such, psychopathy may be characterized in circumplex terms as involving a tendency towards both dominance and coldness. Wiggins (1995), in summarizing numerous previous findings with respect to the BC octant, indicates that such individuals are prone to anger and irritation and are willing to exploit others. They are arrogant, manipulative, cynical, exhibitionistic, sensation-seeking, Machiavellian, vindictive, and out for their own gain. With respect to their patterns of social exchange (Foa & Foa, 1974), they attribute love and status to themselves, seeing themselves as highly worthy and important, but prescribe neither love nor status to others, seeing them as unworthy and insignificant. This characterization is clearly consistent with the essence of psychopathy as commonly described.

CONVERGENT AND DISCRIMINANT VALIDITY AMONG PERSONALITY DISORDERS

The examination of convergent (with APD) and discriminant (across all other personality disorders) validity of psychopathy by comparing the various psychopathy measures with personality disorders as assessed by the PDQ yielded clear results: psychopathy measures demonstrated clear convergent validity with PDQ APD scores and clear discriminant validity from all other personality disorders. That psychopathy measures and APD converged was expected. The fact that the psychopathy measures demonstrated such clear divergence from all other personality disorders is perhaps somewhat unexpected, given previous findings that psychopathy correlates highly with cluster B personality disorders (Hart, Forth, & Hare, 1991). Higher rates of discriminant validity within this normal sample than is typically found in forensic samples is however not surprising when one considers that the overall level of psychopathology of all sorts is lower in college students and therefore the likelihood of multiple forms of pathology as defined in our current nomenclature is also lower. Nonetheless, this level of discriminant validity can only be considered encouraging, at least with respect to the validity of the psychopathy construct in comparison with PDQ personality disorder ratings within a nonforensic sample.

CONCLUSIONS

The present investigation sought to answer some basic questions regarding the construct of psychopathy in nonforensic settings and, in particular, to examine the construct validity of psychopathy measurement. In so doing, we have returned to Cleckley's (1941) original emphasis on psychopathy as a personality style not only among criminals, but also among successful individuals within the community. What is clear from our findings is that (a) psychopathy measures have converged on a prototype of psychopathy that involves a combination of dominant and cold interpersonal characteristics; (b) psychopathy does occur in the community and at what might be a higher than expected rate; and (c) psychopathy appears to have little overlap with personality disorders aside from APD.

Although studying psychopathy in a university setting has ferreted important information on the construct of psychopathy, future research will need to examine prevalence rates and nature of psychopathy in other nonforensic community samples. Importantly, future research should attempt follow up with successful psychopaths to determine the careers that they attain and the adjustment and attachment they have to the community. Clearly, where much more work is needed is in understanding what factors differentiate the law-abiding (although perhaps not moral-abiding) psychopath from the law-breaking psychopath; such research surely needs to make greater use of nonforensic samples than has been customary in the past.

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