

Clarifying Conceptions Underlying Adult Psychopathy Measures:
A Construct Validity Metric Approach

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Abstract

Although the Psychopathy Checklist-Revised (PCL-R) and Psychopathic Personality Inventory (PPI) ostensibly measure the same construct, they seem to emphasize different conceptions of psychopathy. This study was designed to clarify these differences by testing how well the PCL-R and PPI map alternative conceptions of psychopathy. Construct validity metrics were used to compare patterns of associations between psychopathy measures and 14 theory-relevant criterion variables that were *observed* in a sample of 1,281 offenders—with patterns of associations that were *predicted* based on alternative psychopathy conceptions. PCL-R total scores were most consistent with Karpman’s affective dysfunction-centered secondary conception, and PPI total scores were most consistent with the McCords’ lovelessness-based conception. Although similarities emerged at the factor level, the PPI demonstrated higher levels of consistency between theory-based predictions and observed relations than did the PCL-R. These results provide direction for refining measures in future research and interpreting PCL-R and PPI scores in current practice.

Keywords: psychopathy, Psychopathy Checklist-Revised, Psychopathic Personality Inventory, construct validity

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Psychopathy is a personality disorder characterized by a complex mixture of interpersonal, affective, and behavioral traits, including superficial charm, narcissism, lack of anxiety, shallow affect, lack of remorse, dishonesty, and inadequately motivated antisocial behavior (Cleckley, 1976). Measures of psychopathy have been commonly applied to inform legal decisions regarding justice-involved people that turn upon dangerousness and treatment amenability (Skeem & Cooke, 2010). In fact, surveys of forensic diplomats in the United States indicate that the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), the best-known measure of psychopathy, is one of the instruments most commonly used to assess future risk of violence for the court (Archer et al., 2006; Singh et al., 2016; Tolman & Mullendore, 2003).

Despite the construct's legal applications, the field largely lacks consensus on how the term "psychopathy" should be defined and operationalized. There are several conceptions of psychopathy, each of which highlights distinct characteristics and hypothesized etiologies (see Cleckley, 1941; Karpman, 1948a; Lykken, 1957; McCord & McCord, 1964; Mealey, 1995). There are also differences in operationalizations of the construct, and spirited debates about which is superior. Two of the most widely researched¹ adult measures of psychopathy are the PCL-R and Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) and its revised version, the PPI-R (Lilienfeld & Widows, 2005). Some have criticized the PCL-R's emphasis on violence and other criminal behavior (Skeem & Cooke, 2010) and de-emphasis of explicit indicators of positive adjustment (e.g., good apparent intelligence and absence of nervousness; Patrick, 2006; see also Cleckley, 1976). Conversely, some have criticized the PPI's

emphasis on fearlessness, contending that this trait is largely irrelevant to the condition (see Lilienfeld et al., 2012; Marcus et al., 2013; Miller & Lynam, 2012; for differing viewpoints).

This lack of consensus may result in many clinicians and researchers using psychopathy measures to inform clinical and legal decisions under mistaken assumptions. For example, a professional may assume that an individual assessed as “psychopathic” is at risk for violent behavior, regardless of the specific measure used. The differences in content and predictive utility for future violence between the PCL-R and PPI make this possibility concerning. A promising way to address this ambiguity is to identify which of several well-articulated historical conceptions of psychopathy (Cleckley, 1941; Karpman, 1948a; Lykken, 1957; McCord & McCord, 1964; Mealey, 1995) is (or are) most consistent with each measure. This study is designed to identify conceptions that best match the PCL-R and PPI.

Such an approach offers two advantages. First, when a measure is grounded in a theoretical conception, it can provide guidance for refining the measure over time to minimize error and better approximate that conception (Smith, 2005). Further, a well-articulated theory can guide researchers in designing hypothesis-driven research that addresses important unanswered questions (Cronbach, 1988; Kane, 2001), including etiological factors and the role of criminal behavior in psychopathy. Second, a theory can shed light on the clinical implications (e.g., violence risk, treatability) of a measure (Cronbach, 1988). Clinicians tend to approach the diagnostic enterprise with prototypes of disorders in mind, so it is important to ensure they are accessing the appropriate prototype or conception when they use a particular measure (Cantor et al., 1980; Genero & Cantor, 1987; Westen et al., 2006). Because the “psychopathy” label can contribute to adverse consequences, including harsh sentences in the justice system (DeMatteo et al., 2014; Edens et al., 2004; Kelley et al., 2018), it is crucial to inform professionals about the

specific conception of psychopathy assessed by each measure, so they can select a measure that is appropriate for informing a particular legal and/or clinical decision.

Psychopathy Conceptions

Although many people who use measures of psychopathy may think of this construct as a monolithic entity, theory and research evidence suggest otherwise. The field currently features several well-developed conceptions of psychopathy. For the purposes of this discussion, each of these classic conceptions was selected based on their consistency with Strauss and Smith's (2009) definition of a precise theory, which requires a theory to identify (a) a relatively homogeneous group of interest and (b) a causal process that characterizes the described group of interest. Table 1 provides a brief summary of each theory's defining characteristic and causal assumption to accompany the forthcoming descriptions.

Cleckley. In *The Mask of Sanity* (1941, 1976), Cleckley presented 15 case descriptions and delineated 16 criteria for psychopathy. Foremost among these criteria are profound global affective deficits, as exemplified by "General poverty in major affective reactions," "Absence of 'nervousness' or psychoneurotic manifestations," and "Lack of remorse or shame" (p. 338). Cleckley's (1976) conception is also characterized by poor impulse control, as emphasized by "Inadequately motivated antisocial behavior" and "Failure to follow any life plan" (p. 338-339). Other noteworthy characteristics include "Superficial charm and good 'intelligence,'" which suggests that psychopaths' irresponsible actions are not due merely to a lack of intelligence, and "Pathologic egocentricity and incapacity for love" (p. 338). Cleckley's description is largely consistent with what has since been described as primary psychopathy (Lykken, 1995).

Karpman. To reduce heterogeneity in psychopathy, Karpman (1941, 1946) proposed two subtypes of this condition, primary and secondary, that appear phenotypically similar, but

can be distinguished based on the presence of affective deficits versus affective dysfunction.

Primary psychopathy is "...characterized by a special personality organization having in particular a virtual absence of any redeeming social reaction: conscience, guilt, binding and generous emotions, etc., while purely egoistic, uninhibited instinctive trends are predominant" (1948a, p. 533). Karpman (1948b) did not believe that primary psychopathy was amenable to treatment: "...there is virtually nothing to work with psychotherapeutically..." (p. 458).

Alternatively, Karpman (1948b; 1955) regarded secondary psychopathy as antisocial behavior driven by high levels of impulsivity and disturbed emotional reactions including proneness to affective disorders and high levels of anxiety. Karpman (1948b) believed a troubled family background (e.g., parental rejection, physical or sexual abuse) contributed to an environmentally induced affective dysfunction in secondary psychopathy, and this group "...can be cured, since the basic foundation is already there, though prevented from functioning..." (p. 458).

Lykken. Lykken's conception of primary psychopathy emphasizes the etiological role of a genetically influenced fearless temperament. Specifically, Lykken's (1957) primary psychopaths possess a deficit in fear that is distinguished by a willingness to engage in dangerous activities. Lykken (1995) also predicted a low general level of fear would characterize primary psychopathy, as primary psychopaths had displayed a relative lack of fear to a conditioned shock in his classic 1957 study. Consistent with Fowles-Gray model of psychopathy, Lykken (1995) also predicted that primary psychopathy would be characterized by a weak behavioral inhibition system, which governs the extent to which individuals inhibit behaviors that are likely to result in punishment. Finally, poor passive avoidance learning (i.e., difficulty inhibiting behavior in response to punishment) distinguishes primary psychopathy (presumably owing to a lack of anticipatory fear) from secondary psychopathy (Lykken, 1957).

McCord and McCord. McCord and McCord (1964) conceptualized psychopathy as a unitary construct characterized by guiltlessness and lovelessness. They defined the psychopath as “...an asocial, aggressive, highly impulsive person, who feels little or no guilt and is unable to form lasting bonds of affection with other human beings” (McCord & McCord, 1964, p. 3). Both guiltlessness and lovelessness were thought, at least in part, to be produced by parental rejection and neglect during childhood (Patrick et al., 2010). McCords’ believed psychopathy was somewhat amenable to treatment: “...treatment of the adult psychopath, while not hopeless, is far from hopeful” (1964, p. 119). Other noteworthy characteristics of their psychopathy conception include impulsivity and being driven by uncontrolled desires, which are marked by a focus on personal gain without regard for others (McCord & McCord, 1964).

Mealey. Mealey (1995) proposed two psychopathy variants that appear phenotypically similar, but were considered genotypically dissimilar. Mealey (1995) noted that both types of psychopaths “...typically exhibit what is generally considered to be irresponsible and unreliable behavior; their attributes include egocentrism, an inability to form lasting personal commitments and a marked degree of impulsivity” (1995, p. 523). However, Mealey’s psychopathies can be distinguished based on the presence of social emotions such as anxiety, shame, and guilt. Primary psychopaths display a largely genetically based “...diminished ability to experience anxiety and to form conditioned associations between antisocial behavior and the consequent punishment...” (Mealey, 1995, p. 533). In contrast, secondary psychopaths have normal affective capabilities. Further, secondary psychopaths are etiologically distinguished by an environmentally based “competitive disadvantage” that includes a “...disrupted family life, associated with parental neglect, abuse, inconsistent discipline, and the use of punishment as

opposed to rewards...” (Mealey, 1995, p. 533). These competitive disadvantages of secondary psychopathy are linked to lower socioeconomic status and intelligence.

Leading Psychopathy Measures

Although these competing conceptions have influenced the field’s two most widely used and researched measures of adult psychopathy, neither measure was developed to adhere to a specific conception. The Psychopathy Checklist (PCL; Hare, 1980) and the subsequent PCL-R were developed with prison populations in an effort to reliably and validly detect psychopathy as inspired by the works of Cleckley along with Karpman, the McCords, and others (Hare & Neumann, 2008; 2010). The resulting 20-item checklist is completed by a clinician after a detailed semi-structured interview and the review of relevant file information. Early factor analyses suggested that the PCL consisted of two moderately correlated dimensions (Hare et al., 1990; Harpur et al., 1989). The Interpersonal-Affective factor measures characteristics such as superficial charm, shallow affect, and callousness whereas the Social Deviance factor measures disinhibition and a wide range of antisocial and at times criminal behaviors (Hare, 2003).

The PPI was designed as a self-report measure of psychopathic traits for use in non-criminal samples, although it has since been extended to criminal samples. Rather than basing the PPI on a specific conception, Lilienfeld and Andrews (1996) wrote items that assessed 34 focal personality constructs that were identified as important to a range of psychopathy conceptions, including the influential primary psychopathy conceptions already described, following an expansive literature review. Lilienfeld and Andrews focused on personality traits, excluding items that explicitly assessed criminal behavior. Using successive item-level factor analyses, the authors identified eight subscales that yield a total score. Subsequent exploratory factor analyses of the PPI’s eight scales identified a two-factor structure in community (Benning

et al., 2003; cf., Neumann et al., 2008) and offender samples (Patrick et al., 2006). However, in contrast to those of the PCL-R, these factors are largely uncorrelated. The first factor (Fearless Dominance) assesses adventurousness, social dominance, and low levels of anxiety, whereas the second factor (Self-Centered Impulsivity) assesses egocentricity, manipulateness, disinhibition, and hostile attribution bias (Benning et al., 2003; Miller & Lynam, 2012). Of the PPI's eight subscales, only the Coldheartedness subscale, which assesses a lack of affective empathy and callousness, was excluded from this two-factor structure because it did not load highly on either factor. Given the centrality of affective empathy and similar traits to conceptions of psychopathy, some researchers advocate the use of the PPI's Coldheartedness scale as a third standalone factor (Lilienfeld & Widows, 2005; Miller & Lynam, 2012; Neumann et al., 2008).

Limited Overlap between Measures

Although they both ostensibly measure “psychopathy,” there are two key differences between PCL-R and PPI. First, in a departure from Cleckley (1976), the PCL-R excludes explicit indicators of positive adjustment (e.g., good intelligence and absence of nervousness). Patrick (2006) posited that because the majority of Cleckley's psychopathy criteria (12 of 16) reflected maladjustment, the criteria gauging positive adjustment (4 of 16) may have been dropped from the measure because they did not fit with the majority of items. This conjecture is consistent with Hare's (1980) observation that certain criteria demonstrated weak associations with other criteria (Hare & Neumann, 2008). In contrast, the PPI includes Stress Immunity and Social Potency (the latter termed “Social Influence” in the revised version of the PPI, the PPI-R) subscales, which detect lack of trait anxiety and interpersonal dominance/self-confidence, respectively.

Second, in another departure from Cleckley (1976), the PCL-R includes items that explicitly gauge criminal behavior, and other items that can be scored based on the presence of

criminal acts. For example, “callousness” may be inferred from the offender's discussion of crimes and victims and from file reports of violent behavior (Hare, 2003). This inclusion of criminal behavior could be attributable to the fact that the PCL-R was developed using samples of offenders. Items assessing the extent of an individual's criminal history may have been added to better (a) distinguish more severe from less severe offenders (Patrick, 2006) and (b) identify criminal expressions of psychopathic traits. In contrast, the PPI explicitly excludes items assessing antisocial or criminal behavior, to unconfound the personality dispositions ostensibly underpinning psychopathy from their associated antisocial actions (Lilienfeld, 1998).

Because of these differences, the PCL-R and PPI may identify overlapping but separable constructs (Lilienfeld, 1998; Marcus et al., 2013). Indeed, at the total score level, the two measures explain less than 30% of each other's variance (Poythress et al., 1998). This concern is highlighted by Marcus and colleagues' (2013) meta-analytic findings ($n = 5,432$) that the PCL-R's Interpersonal-Affective factor is modestly associated with the PPI's Fearless Dominance ($r = .21$) and Self-Centered Impulsivity ($r = .20$). In contrast, the PCL-R's Social Deviance factor is weakly associated with the PPI's Fearless Dominance ($r = .15$) but moderately associated with the PPI's Self-Centered Impulsivity ($r = .41$). Hence, individuals who score highly on the PCL-R may be quite different from those who score highly on the PPI, and vice-versa.

Construct Validity Coefficients: A Way Forward

One promising approach to address this lack of clarity is to identify which of several historical psychopathy conceptions (Cleckley, 1941; Karpman, 1948a; Lykken, 1957; McCord & McCord, 1964; Mealey, 1995) is (or are) best captured by a given psychopathy measure via Cronbach and Meehl's (1955) process of construct validation. In this process, the degree that a conception is captured by a measure is evaluated based on how well the measure relates to other

theoretically relevant variables. Traditionally, researchers have ascertained construct validity by “eye-balling” the pattern of relations between a measure and criterion variables. Based on these impressions, researchers draw subjective inferences about whether the measure is working as it should or if revisions in the measure and/or theory are needed (Westen & Rosenthal, 2003).

In a departure from this informal approach to judging construct validity, Westen and Rosenthal (2003) developed fit metrics that quantitatively gauge how well a measure’s observed correlations converge with theory-predicted correlations. The magnitude of these coefficients reflects the degree of match between the hypothesized and obtained pattern of correlations. Once calculated, these indices can be compared to identify which conception is best captured by a specific measure. For example, this methodology allows one to test how well the PCL-R replicates Cleckley’s (1976) theoretically expected pattern of associations with criterion variables, compared with how well the PCL-R replicates expected patterns of associations informed by competing conceptions of psychopathy like Karpman (1948). To date, few studies have used these construct validity metrics in relation to assessment tools (Bombel et al., 2009; Kosson et al., 2008; Poythress, Lilienfeld et al., 2010), and published research has yet to use these metrics to map differing psychopathy measures onto theoretical conceptions.

Nonetheless, one study did use Westen and Rosenthal’s (2003) construct validity coefficients to gauge how well the PPI replicated the PCL-R’s pattern of relations with a range of criterion measures (Poythress, Lilienfeld et al., 2010). Rather than generate theory-predicted correlations, the authors used the PCL-R’s observed correlations with criterion measures as the basis of comparison for the PPI’s observed correlations. The results showed very high levels of convergence between the patterns of the PCL-R and PPI at the total score level ($r_{contrast-CV} = .88$). Further, the PPI Fearless Dominance scale demonstrated stronger convergence with the PCL-R

Interpersonal-Affective factor ($r_{contrast-CV} = .71$) than the PCL-R Social Deviance factor ($r_{contrast-CV} = .14$), whereas the PPI Self-Centered Impulsivity scale was more consistent with the PCL-R Social Deviance factor ($r_{contrast-CV} = .93$) than the PCL-R Interpersonal-Affective factor ($r_{contrast-CV} = .38$). These findings suggest a substantial amount of similarity in how the PCL-R and PPI relate to criterion measures despite the differences in their content and method of administration.

Present Study

The primary aim of this study is to clarify which historical conceptions of psychopathy (Cleckley, 1941; Karpman, 1948a; Lykken, 1957; McCord & McCord, 1964; Mealey, 1995) are most consistent with total and factor scores of the two most widely-researched adult psychopathy measures. Specifically, we used Westen and Rosenthal's (2003) construct validity coefficients to investigate the degree to which the pattern of observed relations between each psychopathy measure and 14 theory-relevant criterion variables was consistent with the pattern that was predicted based on alternative conceptions of psychopathy. These criterion variables were selected based on the systematic review of the theorists' original writings for each of the 7 conceptions of psychopathy included in this study. We paid special attention to authors' descriptions of defining (i.e., identifies a causal psychological process) features along with other unique characteristics for their conceptions. This review resulted in a list of 14 constructs across conceptions. We then selected the best available measure in the comprehensive National Institute of Mental Health (NIMH) dataset (see Method) for each of these 14 constructs.

For the PCL-R, we hypothesized that total scores would reflect the McCords' (1964) psychopathy conception, given the PCL-R's focus on impulsivity, aggression, lack of guilt, and callousness, as well as its omission of explicit indicators of anxiety. The McCords underscored not only the importance of lovelessness and guiltlessness in psychopathy, but also impulsivity

and aggression. According to them, the psychopath "...is an asocial, aggressive, highly impulsive person, who feels little or no guilt and is unable to form lasting bonds of affection with other human beings" (McCord & McCord, 1964, p. 3), "...has no stable goals," and "is dominated by feeling desires which leave no space for farsighted planning" (McCord & McCord, 1964, p. 10). At the scale level, we expected the Interpersonal-Affective factor to reflect primary psychopathy (i.e., Cleckley's 1941, 1976 conception) and the Social Deviance factor to be most consistent with secondary psychopathy (i.e., Karpman's 1941, 1948a conception).

For the PPI, we expected total scores to best reflect Lykken's (1957, 1995) construct of primary psychopathy, given this measure's emphasis on fearlessness and lack of anxiety (Lilienfeld & Andrews, 1996). At the sub-dimension level, we expected the Fearless Dominance scale to best reflect Lykken's (1957, 1995) primary psychopathy. In contrast, we predicted that the Self-Centered Impulsivity scale would be most consistent with the McCords' (1964) psychopathy conception given these authors' emphasis on egocentricity and impulsivity. We also expected the Coldheartedness scale to reflect the McCords' conception given that this scale substantially emphasizes lack of guilt and weak emotional attachments to others.

Method

Participants

We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study. Drawn from a larger multisite study funded by the NIMH that used measures of psychopathy to examine heterogeneity in antisocial personality disorder (Poythress, Edens et al., 2010), participants comprised a sample of 1,352 male offenders with valid scores on a psychopathy instrument (i.e., PCL-R and/or PPI). Participants were either incarcerated (52.5%) or court-ordered to participate in a community treatment facility (47.5%). Only male offenders

were examined for the analyses reported here in view of concerns that psychopathy may manifest differently in females (Cale & Lilienfeld, 2002; Verona & Vitale, 2006). Consistent with previous studies using this dataset (e.g., Poythress, Edens et al., 2010; Poythress, Lilienfeld et al., 2010), data were excluded for 28 participants whose scores on the Personality Assessment Inventory's (PAI; Morey, 1991) Inconsistency or Infrequency validity scales suggested invalid responding (i.e., $T > 79$, Edens & Ruiz, 2005) and for 43 participants who did not complete the PAI or the IQ screen (*Quick Test*; QT; Ammons & Ammons, 1962).

The final sample used in the analyses reported here consisted of 1,281 participants. All were between the ages of 18 and 59 years old (average age = 30.39 years old; $SD = 6.56$), competent in English, had an estimated $IQ > 70$ via the *QT*, and were not currently prescribed antipsychotic medications. The sample was 64.0% Caucasian, 33.7% African American, and 2.3% unidentified. Further, 9.1% self-identified as Hispanic.

Procedure

Before participating, all individuals provided informed consent and, in exchange for participation, received \$20.00 in compensation (except at one agency that did not allow participant payment). Participants were then administered the PCL-R, Structured Clinical Interview for DSM-IV Axis II (SCID-II), the Quick Test (QT), and demographic information questions based on a face-to-face interview and review of file information. Interviewers were graduate-level clinical psychology students with advanced training in the assessment of psychopathy and antisocial personality disorder. Additionally, participants completed the battery of measures described in the following section.

Measures

Descriptive information for each measure are presented in Table 2.

Measures of Psychopathy

PCL-R. The PCL-R (Hare, 2003) is a 20-item checklist completed following a detailed diagnostic interview and review of file information. Each item is rated as “0” (does not apply), “1” (applies somewhat), or “2” (definitely applies) by trained raters. The PCL-R yields a total score and Interpersonal-Affective and Social Deviance factor scores. Before conducting PCL-R interviews, raters completed formal PCL-R training, which included reviewing and scoring several practice videotapes. During the course of the study, the project coordinator made regular site visits to observe the trained raters and complete PCL-R ratings to ensure reliable PCL-R interviewing and scoring. When treating the project coordinator’s ratings as the “criterion,” acceptable levels of inter-rater reliability ($ICC = .88$) were obtained for 51 cases.

PPI. The PPI (Lilienfeld & Andrews, 1996) is a questionnaire that features 187 items scored on a 4-point Likert scale. The PPI contains eight subscales that yield a total score, two higher-order factor scores, Fearless Dominance (FD) and Self-Centered Impulsivity (SCI), along with the standalone dimension of Coldheartedness. FD comprises the Stress Immunity, Social Potency, and Fearlessness scales. SCI comprises the Machiavellian Egocentricity, Impulsive Nonconformity, Blame Externalization, and Carefree Nonplanfulness scales.

Measures of Criterion Variables

The most promising designs for evaluating construct validity feature multi-trait, multi-method designs (Campbell & Fiske, 1959). Consistent with these recommendations, this study incorporated measures to detect a variety of individual differences relevant to psychopathy from a variety of methods. For ease of presentation and identification, criterion measures are presented in groupings based on their methodology (e.g., self-report, interview). Table 2 explains the relevance of each criterion variable to specific conceptions of psychopathy.

Coding-Based Measures

Consistent with Silver (2000), **neighborhood disadvantage** was coded based on the following 2000 Census tract indices: per capita income (reverse scored), percent of households on public assistance, percent non-white only households, percent of female-headed households, and percent of people unemployed. These data were available for 223 participants from one study site where address information was collected for a follow-up study (Camp et al., 2013).

Laboratory Tasks

Affective Deficits. To assess affective deficits, a lexical decision-making task was administered via a laptop computer. Participants were presented a pairing of a word and a non-word on the screen. The actual word was sometimes positive (e.g., “sunset,” $n = 12$), negative (e.g., “misery,” $n = 12$) and neutral (e.g., “bowl,” $n = 24$). In each case, the actual word was paired with a different non-word ($n = 48$). For each pairing, the participant was asked to identify the group of actual words presented on the screen as quickly as possible. Participants completed four blocks of 12 pairings. Research indicates that higher PCL-R scores are related to slower identification of emotional words (Lorenz & Newman, 2002).

Intelligence. To assess intelligence, the Quick Test (QT; Ammons & Ammons, 1962) was administered. In this task, participants are shown a card of four pictures and asked to identify which image best matches the words read aloud by the administrator. Research suggests that the QT is strongly correlated ($r = .76$) with WAIS-R IQ scores (Craig & Olson, 1988) and intelligence scores in offenders (Doss et al., 1986; Simon, 1995).

Passive Avoidance Learning. To detect difficulty with passive-avoidance learning, a deficit long considered central to psychopathy (Lykken, 1995), a GoNoGo Task (GNG; Newman & Kosson, 1986) was administered via a laptop computer. Participants were presented eight 2-

digit numbers and asked to learn which four stimuli were associated with punishment (*loss of \$0.10*) and which stimuli were associated with reward (*earning \$0.10*). For each trial, responses were registered during the presentation of a stimulus by pressing a button on a response box. The outcome of interest is the number of times the participant pressed the button for punished responses. Each participant completed two blocks of 40 trials, with the first block serving as practice and the second as data for analysis.

Interview-Based Measures

Antisocial History. Based on a diagnostic interview and review of file information, antisocial history was assessed via the antisocial personality disorder (ASPD) module of the Structured Clinical Interview for DSM–IV Axis II (SCID-II; First et al., 1997). Total ASPD symptom counts were rendered, which includes both symptoms of Adult ASPD and Conduct Disorder. When treating the project coordinator’s ratings as the “criterion,” acceptable levels of inter-rater reliability ($ICC = .86$) were obtained for the total symptom counts of 46 cases.

Self-Report Measures

Abuse. Abuse history was measured with the Child Abuse and Trauma Questionnaire Scales (CATS; Sanders & Giolas, 1991). The questionnaire features 38 items rated on a 5-point scale rating the frequency of events ranging from never to always. Commonly used in studies of childhood abuse (Becker-Lausen et al., 1995; Ruiz et al., 1999), CATS items focus on a negative home environment and verbal, physical, and sexual abuse.

Anxiety. The Personality Assessment Inventory’s (PAI; Morey, 1991) Anxiety (ANX) scale was developed to index the clinical features of anxiety disorders. The scale focuses on cognitive features such as rumination, affective aspects such as subjective feelings of strain, and physiological signs of tension. Validity of this scale is suggested by large positive correlations

with NEO-Personality Inventory (NEO-PI; Costa & McCrae, 1985) Neuroticism ($r = .76$) and Beck's Anxiety Inventory (Beck & Steer, 1990) total score ($r = .62$).

Behavioral Inhibition System. The Behavioral Inhibition System scale (Carver & White, 1994) is a 7-item scale that gauges how much an individual is prone to inhibiting behaviors that are likely to result in punishment. Validity is indicated by strong associations with measures of anxiety, negative affect, and harm avoidance (Carver & White, 1994). The BIS was included given its relevance to Lykken's (1995) primary conception.

Egocentricity. The PAI's Antisocial Features Egocentricity scale was developed to assess the egocentric characteristics of antisocial personality disorder and psychopathy. This scale focuses on an individual's self-centeredness, disregard for others and society, willingness to take advantage of others, and lack of importance placed in relationships with spouses and children. Evidence for its validity includes strong associations with indicators of antisocial personality disorder and psychopathy (Morey, 1991).

Fearlessness. The Multidimensional Personality Questionnaire's Harm Avoidance scale (Tellegen, 1982) is a 12-item subscale that gauges how much an individual dislikes danger, disasters, and risk, as well as how an individual avoids potential injury. When reverse scored, the measure reflects a propensity toward thrill-seeking and fearlessness. Consistent with prediction, this scale displays moderate negative associations ($r = -.36$) with Zuckerman's (1979) Sensation Seeking Scale (Patrick et al., 2002).

Guiltlessness. The Levenson Self-Report Psychopathy Scale (LSRP) is a 26-item questionnaire that measures psychopathy. This measure includes a 4-item Callousness subscale (Brinkley et al., 2008) whose factor structure has been replicated (Sellbom, 2011) and was used in the analyses reported here. In light of the Callousness subscale's face validity as an indicator

of guilt and moderately strong negative association with guilt ($r = -.42$; Salekin et al., 2014), the Callousness subscale was used as a proxy measure for guiltlessness in this study.

Impulsivity. The Barratt Impulsivity Scale (Version 11; BIS-11, Barratt, 1994) is a 30-item questionnaire that indexes impulsive tendencies. Validity is supported by significant positive associations with PCL-R Social Deviance factor scores, but not PCL-R Interpersonal-Affective factor scores (Ireland & Archer, 2008).

Lovelessness. The PAI Warmth scale assesses the degree to which individuals are empathic, supportive, and warm in interpersonal relationships. Validity is suggested by a moderate association with NEO-PI Extraversion ($r = .45$) and negative associations with several MMPI personality disorder scales, including Avoidant Personality Disorder ($r = -.66$; Morey, 1991). We reverse-scored the Warmth scale and used it as a proxy measure of lovelessness, which is regarded by McCord & McCord (1964) as a central feature of psychopathy.

Treatment motivation. The PAI Treatment Rejection scale assesses treatment resistance, personal irresponsibility for change, and lack of treatment motivation. Validity is indicated by this scale's predictive utility for non-mutual treatment termination (Hopwood et al., 2007) and treatment completion in a forensic sample (Edens & Ruiz, 2005).

Analyses

Westen and Rosenthal's (2003) $r_{alerting-CV}$ and $r_{contrast-CV}$ enable more direct comparisons of findings across studies, constructs, and measures than traditional methods of "eye-balling" construct validity. The $r_{alerting-CV}$ coefficient reflects the degree of congruence between the (a) hypothesized correlations and (b) a measure's observed correlations. In contrast, the more rigorous $r_{contrast-CV}$ statistic indexes not only how well the researcher predicts the observed set of associations, but also how well the correlations explain the variance of a given measure. This is

accomplished by controlling for the (a) median intercorrelation between the psychopathy measure and criterion measures and (b) absolute value of the correlation between the psychopathy measure and criterion measures. An additional benefit of $r_{contrast-CV}$ is that this coefficient enables the computation of confidence intervals, which is not possible within the limited framework of $r_{alerting-CV}$. Both of these coefficients can be interpreted like a correlation, where values range from -1.00 to +1.00. Coefficients that are both positive and larger in magnitude indicate a stronger match between measure and theory, whereas smaller or negative coefficients indicate greater discordance between measure and theory. Detailed examples of the calculation of $r_{alerting-CV}$ and $r_{contrast-CV}$ can be found in Westen and Rosenthal (2003).

Consistent with a previous study that used the current sample (Poythress, Lilienfeld et al., 2010), a computational adjustment was needed for $r_{contrast-CV}$. This metric assumes equal n of subjects for all criterion associations. However, different ns of subjects were available for different criterion variables in this study. To address this, the unweighted harmonic mean of n for each conception's set of criterion measures was calculated, as recommended by Rosenthal (see Poythress, Lilienfeld et al., 2010). When accounting for this variation in sample size, $r_{contrast-CV}$ values decrease along with the unweighted harmonic mean of the sample size, but only slightly.

Results

Analyses were completed in two stages. First, we generated the predicted associations for each psychopathy conception via a consensus process. Second, $r_{alerting-CV}$ and $r_{contrast-CV}$ construct validity coefficients were calculated using these consensus predictions.

Consensus Predictions

To develop a set of profiles for each psychopathy conception, we consulted two different expert groups: an outside researcher group and an internal co-author group. Although both

groups completed a survey to elicit predictions, we focus on those of the internal group in this manuscript and provide those of the outside group in the online supplemental materials. The reasons are provided below.

Predictions of outside researchers. As detailed in the supplemental materials, we first enlisted the assistance of researchers with an extensive history of publishing in the field of psychopathy. Each rater completed a questionnaire that inquired about the importance of 14 constructs (e.g., Low Anxiety, Intelligence, and Lovelessness) to 7 prominent psychopathy conceptions. This list of 14 constructs was selected based on their relevance to different psychopathy conceptions and presence in the existing dataset.

For each conception and construct, the rater was asked two questions. First, the rater was asked to indicate (yes/no) whether the construct is an important characteristic of a specific conception of psychopathy. For example, if the rater believed that fearlessness is an important characteristic of Lykken's (1995) conception, the rater was asked to enter "yes." Second, for constructs that the rater identified as important to a conception, the rater was asked how this characteristic should correlate with a conception. The rater was given 7 options for rating the correlation: strong negative, moderate negative, weak negative, negligible association, weak positive, moderate positive, and strong positive associations. For example, if the rater believed that Lykken considered a lack of fear to be the trait that explained most or all other psychopathy-related features, the rater was asked to enter "strong positive association" for fearlessness.

These questionnaire ratings were converted into psychopathy conception prototypes for use in construct validity coefficient analyses in two steps. First, a construct was included in the prototype for a given conception if at least two-thirds of raters identified that construct as important to a conception. This cut-off was selected to balance the need for rater agreement and

distinction among psychopathy conception prototypes. Second, consistent with the meta-analytic research by Gignac and Szodarai (2016; see also Helphill, 2003), we assigned negligible, weak, moderate, and strong associations values of .00, .10, .20, and .30, respectively. In turn, we averaged these values to obtain the hypothesized effect size for a construct.

Limitations of outside predictions. There were several important divergences between survey responses and the writings of the theorists (see Table S1). These discrepancies may be due to some researchers' relative lack of familiarity with certain psychopathy conceptions or because of the survey's wording. For example, in aggregate, the researchers unexpectedly did not consider anxiety an important component of Karpman's secondary psychopathy. This might have been due to the survey listing the construct as "Low Anxiety." Perhaps some researchers would have considered "High Anxiety" as relevant to Karpman's secondary psychopathy, but did not realize that they could predict a strong negative association for "Low Anxiety." Alternatively, some researchers might have been insufficiently familiar with Karpman's writings, and were unaware that he emphasized high anxiety as a key feature of secondary psychopathy.

Predictions of co-authors. To address these issues, the co-authors of this study and an established psychopathy researcher (Dr. Christopher Patrick) also completed the survey (see Table 3). These ratings were converted into psychopathy conception prototypes in the same manner as the survey responses above. We focus on these for consensus predictions (which we heretofore label as "co-author predictions") going forward, but also provide complete analyses for the survey-based predictions in the online supplemental materials. The final hypothesized effect sizes for each of the psychopathy conception prototypes are presented in Table 4.

Construct Validity Coefficients

After the consensus predictions were finalized, construct validity coefficients were calculated to identify which conceptions are most consistent with the PCL-R and PPI (see Table 5). We focus on $r_{contrast-CV}$ in the text due to its relative methodological strengths, but for the sake of comprehensiveness also report $r_{alerting-CV}$ coefficients in Table 6.

PCL-R. One conception was significantly more consistent with the pattern of observed correlations for the PCL-R total score than any other conception: Karpman's secondary psychopathy ($r_{contrast-CV} = .37, CI = .33, .41$), which emphasizes affective dysfunction. To a lesser extent, the PCL-R's total score also demonstrated consistency with the McCords' ($r_{contrast-CV} = .27, CI = .25, .28$), Lykken's primary ($r_{contrast-CV} = .25, CI = .21, .28$), and Mealey's primary ($r_{contrast-CV} = .23, CI = .21, .25$) conceptions of psychopathy—but the confidence intervals for these coefficients fell below that of Karpman's secondary conception. At the subscale level, the PCL-R Social Deviance factor evinced a pattern of results similar to the PCL-R total score. Specifically, the PCL-R Social Deviance factor demonstrated even stronger consistency with Karpman's secondary ($r_{contrast-CV} = .52, CI = .48, .56$) and the McCords' ($r_{contrast-CV} = .39, CI = .37, .40$). In contrast, the PCL-R Interpersonal-Affective factor was moderately consistent with Cleckley's ($r_{contrast-CV} = .22, CI = .19, .25$) and Lykken's ($r_{contrast-CV} = .19, CI = .16, .22$) conceptions of primary psychopathy. A similar pattern of findings was observed in $r_{alerting-CV}$ coefficients for PCL-R total, Social Deviance, and Interpersonal-Affective scores.

PPI. McCords' conception of psychopathy ($r_{contrast-CV} = .53, CI = .52, .54$)—which focuses on lovelessness and guiltlessness—was significantly more consistent with the pattern of observed correlations for the PPI total score than any other conception. The PPI's total score demonstrated weaker levels of consistency with Karpman's secondary ($r_{contrast-CV} = .47, CI = .43, .51$), Mealey's primary ($r_{contrast-CV} = .46, CI = .44, .48$), and Lykken's primary ($r_{contrast-CV} = .43,$

$CI = .40, .47$) conceptions of psychopathy, as evidenced by confidence intervals that do not overlap with those for McCord's conception. At the subscale level, the PPI Self-Centered Impulsivity scale demonstrated stronger coefficients for Karpman's secondary ($r_{contrast-CV} = .77$, $CI = .73, .80$) and the McCords' ($r_{contrast-CV} = .75$, $CI = .74, .77$) conceptions of psychopathy. In contrast, the PPI Fearless Dominance scale was most consistent with Lykken's fearlessness-focused primary conception ($r_{contrast-CV} = .51$, $CI = .48, .55$). The PPI Fearless Dominance subscale was also strongly consistent with Cleckley's primary conception ($r_{contrast-CV} = .42$, $CI = .39, .45$). Similarly, the PPI Coldheartedness subscale was strongly consistent with primary psychopathy conceptions including Cleckley ($r_{contrast-CV} = .48$, $CI = .45, .52$) and Lykken ($r_{contrast-CV} = .45$, $CI = .42, .49$). As with the PCL-R, this pattern of findings was also observed with $r_{alerting-CV}$ coefficients for PPI total, Self-Centered Impulsivity, and Fearless Dominance.

Supplemental Materials. Although many similarities emerged between the findings for the survey-based (see Table S3) and the co-author consensus-based predictions presented earlier, there were a few noteworthy differences. Broadly, the magnitude of $r_{contrast-CV}$ was weaker for survey-based predictions relative to co-author consensus-based predictions. Further, in the survey-based predictions, the PCL-R total score was most consistent with the McCords' and Lykken's primary conceptions of psychopathy rather than Karpman's secondary conception. In contrast, the PPI total score was more consistent with Karpman's secondary psychopathy conception rather than the McCords' conception (a more detailed presentation of these findings can be found in the online Supplemental Materials).

Discussion

The overarching goal of this study was to identify the conceptions of psychopathy that are best reflected by the two most widely researched adult psychopathy measures. Our findings

highlight both similarities and dissimilarities between the PCL-R and PPI total and subscales. First, at the total score level, PCL-R total scores were most consistent with Karpman's affective dysfunction-centered secondary conception, whereas PPI total scores were most consistent with the McCords' lovelessness- and guiltlessness-based conception. Second, similarities between the PCL-R and PPI emerged at the subscale level, with measures of interpersonal traits and affective deficits more consistent with primary psychopathy and measures of social deviance more consistent with secondary psychopathy. Across scoring levels, the PCL-R generally demonstrated construct validity coefficients that were weaker in magnitude relative to those of the PPI. Before unpacking these findings, we first discuss study limitations.

Limitations

This study has several strengths, including a large sample size and multi-method measures, yet its limitations warrant careful consideration. First, although this study examined seven distinct conceptions of psychopathy with a range of defining features, alternative promising conceptions (e.g., Blair, 2001) were not examined here and should be tested in future research. Second, the 14 criterion measures included in this study are clearly relevant to psychopathy, but not exhaustive. Adding other criterion measures (e.g., behavioral activation system strength) might have altered the magnitude of validity coefficients and resulting conclusions. Third, no criterion measure is a perfect representation of a construct. For instance, the PAI Warmth scale was reverse-scored to serve as our measure of lovelessness, a defining feature of the McCords' conception of psychopathy. A more direct measure of this construct would have been preferable. Although other criterion measures (i.e., abuse, affective deficits, passive avoidance learning, and poverty) did not manifest predicted associations with PCL-R or PPI scores, the magnitude of associations observed here are within range of those reported in

previous research. Fourth, despite efforts to limit mono-operation bias in criterion measure selection, many measures were still based on self-report (64%). This high proportion of self-report measures may have contributed to higher construct validity coefficients, particularly $r_{contrast-CV}$, for the self-report-based PPI versus the interview-and file-based PCL-R. Fifth, this study's large sample was limited to people involved in the justice system, which could restrict variability in scores on some measures and reduce correlations, compared to what would be observed in a broader sample. As is the case with any study, it will be important to replicate the present results with other samples, additional theories, and alternative criterion measures.

PPI's Relation to Guiltlessness and Lovelessness

PPI total scores were most consistent with the McCords' (1964) conception—which views guiltlessness and lovelessness as core psychopathic features that are rooted in neglect and parental rejection—but potentially treatable. To a lesser extent, PPI total scores were also consistent with Karpman's secondary, Lykken's primary, and Mealey's primary conceptions. The strong associations between the PPI and multiple conceptions of psychopathy are consistent with the PPI's theoretically eclectic origins. Rather than emphasizing a specific conception of psychopathy, Lilienfeld and Andrews (1996) identified and assessed 34 focal personality constructs originating from a range of psychopathy conceptions.

At the subscale level, the PPI Self-Centered Impulsivity scale was strongly consistent with Karpman's secondary psychopathy ($r_{contrast-CV} = .77$) and the PPI Fearless Dominance scale was most consistent with Lykken's primary psychopathy ($r_{contrast-CV} = .51$). The PPI Coldheartedness scale did not show the expected convergence with the McCords' conception of psychopathy, perhaps given the absence of explicit indices of guiltlessness and lovelessness – the two features most emphasized by the McCords - in our criterion measures. Although McCord's

conception was the single best fit for the PPI at the total score level, this lack of expected convergence for Coldheartedness warrants future research.

PCL-R's Closer Relation to Emotional Dysfunction than Deficits

The PCL-R total score was most consistent with Karpman's secondary psychopathy. According to Karpman (1948b), the antisocial behavior of secondary psychopathy is driven by an acquired affective disturbance (i.e., disturbed emotional reactions, anxiety, and impulsivity) that can be effectively treated. In contrast, the antisocial behavior of primary psychopathy reflects an innate and untreatable affective deficit (e.g., absence of guilt and conscience). Although Karpman's secondary psychopathy was the best-fitting conception, the PCL-R total score's pattern of correlates was also moderately consistent with the McCords', which could be partially attributable to the shared emphasis on exposure to abuse by these conceptions. That said, the PCL-R demonstrated weaker construct validity coefficients than the PPI—particularly for primary psychopathy models. For example, the PCL-R Interpersonal-Affective factor ($r_{contrast-CV} = .22$, CIs = .19, .25) demonstrated a weaker $r_{contrast-CV}$ value for Cleckley's primary conception than the PPI Fearless Dominance scale ($r_{contrast-CV} = .42$, CIs = .39, .45). Similar observations emerged for Lykken's primary psychopathy.

Although the PCL-R's limited consistency with primary psychopathy theories may seem surprising, Hare significantly diverged from Cleckley during the development of the PCL and PCL-R by omitting several indicators of positive adjustment and including items focusing on antisocial behavior (Patrick, 2006). These decisions may have in part stemmed from the fact that the PCL was also informed by the writings of Karpman, the McCords, and other scholars (Hare & Neumann, 2008; 2010). Perhaps as a result, the PCL-R does not map directly onto one single conception of psychopathy, nor specifically onto various primary conceptions of the construct.

Similarities between PCL-R and PPI Subscales

There was clear overlap in which conceptions best matched the PCL-R and PPI at the subscale level. Specifically, “Factor 1” measures of interpersonal traits and affective deficits (i.e., PCL-R Interpersonal Affective and PPI Fearless Dominance scales) were most consistent with primary psychopathy conceptions (i.e., Lykken and Cleckley). In contrast, “Factor 2” measures of social deviance (i.e., PCL-R Social Deviance and PPI Self-Centered Impulsivity) were most consistent with Karpman’s secondary and the McCords’ conceptions of psychopathy.

At first, this pattern of findings may seem surprising, given differences between these two major psychopathy measures. The PCL-R excludes most explicit indicators of positive adjustment (e.g., good intelligence, absence of nervousness, and suicide rarely carried out), whereas the PPI explicitly assesses a lack of trait anxiety and fearlessness, as well as the presence of interpersonal dominance/self-confidence. Further, the PCL-R includes items that explicitly gauge antisocial or even criminal behavior as well as items that can be scored on the basis of criminal acts, whereas the PPI explicitly omits such content.

In hindsight, these findings were perhaps foreshadowed by those of Poythress, Lilienfeld et al. (2010), who found a great deal of similarity between how the PCL-R and PPI correlated with key criterion variables. At the subscale level, the PPI Fearless Dominance scale was most consistent with the PCL-R Interpersonal-Affective factor, whereas the PPI Self-Centered Impulsivity scale was most consistent with the PCL-R Social Deviance factor (Poythress, Lilienfeld et al., 2010). This finding emerged despite the fact that the scales themselves were correlated at weaker levels than one would expect for measures of the same construct (Poythress, Lilienfeld et al., 2010). Findings from these studies suggest that the PCL-R and PPI relate to most criterion variables (Poythress, Lilienfeld et al., 2010) and predicted patterns of associations

with criterion measures (the present study) similarly, despite differences in item content and minimal convergence in inter-correlations in these two psychopathy measures.

Implications

Implications for research. Explicitly linking leading measures of psychopathy with alternative conceptions of the construct provides at least three opportunities for advancing research and understanding. First, findings could be used to revise an instrument to (a) better approximate a conception or (b) not approximate a conception, depending on the test developer's purpose. For instance, psychopathy measures like the PCL-R and PPI could be revised to better assess primary psychopathy conceptions such as Cleckley (e.g., affective deficits, fearlessness, guiltlessness, and lovelessness). Alternatively, the measures could be revised to focus—even more than they already do—on assessing secondary psychopathy conceptions like Karpman (e.g., affective dysfunction, anxiety, and impulsivity). An explicit move toward assessing secondary psychopathy would help leave behind the conceptual baggage of primary psychopathy, including assumptions that it causes (predatory) violence and cannot be treated (see below; Kelley et al., 2018). Second, by linking the measure to a specific psychopathy conception, researchers can find clearer guidance about (a) how much a given finding is relevant to a theory, and (b) what types of questions are needed to better understand a construct (Strauss & Smith, 2009). This can encourage an iterative process of construct validation where, "...new findings and new theories clarify and alter existing theories, thus requiring new measures and new theory tests" (Smith, 2005, p. 400). Such a theory-guided approach to construct and measurement refinement is essential to better understanding any construct's etiology. Third, findings could offer opportunities to revise existing theories or develop new ones.

Implications for practice. Our findings also have implications for professionals' interpretation of psychopathy measures in clinical and criminal justice settings. As noted earlier, clinicians often approach assessments with intuitive prototypes of disorders in mind (Cantor et al., 1980; Genero & Cantor, 1987; Westen et al., 2006). To the extent that they approach the assessment of psychopathy with intuitive prototypes in mind, it is crucial that the prototype represents the conception that best matches a particular measure. Professionals' interpretations of PCL-R scores often reflect mistaken assumptions about primary "psychopaths" violence risk and treatment amenability—assumptions that can have serious adverse consequences like harsher sentences (Kelley et al., 2018). In a review of psychopathy evidence used in legal proceedings, Viljoen and colleagues (2010) found that evaluators testified that the "prognosis is grim" or that "unfortunately, there is no treatment for psychopathy" (p. 266). These kinds of statements appear inspired by classic conceptions of primary psychopathy. But a growing body of evidence indicates that individuals with high PCL-R scores often benefit from appropriate treatment, just like other people with high scores on risk assessment instruments (Polaschek & Skeem, 2018).

That evidence is consistent with the present study's finding that PCL-R total scores are most consistent with Karpman's (1948b) conception of secondary psychopathy. In interpreting PCL-R assessments, professionals should bear in mind that total scores on this measure are mostly (but not solely) consistent with a view of psychopathy as an acquired condition that is amenable to treatment—a condition characterized by impulsivity, anxiety, and emotional disturbance. With this stereotype-challenging conception in mind, interpretations of PCL-R scores may become more grounded, fair, and accurate. Hence, careful consideration of which psychopathy conception an instrument best captures may diminish the likelihood of mistaken assumptions concerning individuals assessed in clinical and legal settings.

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Footnotes

1. From 2005 to 2020, the PCL-R was cited 6,140 times and the PPI was cited 1,520 times per Google Scholar.

Table 1

Characterizations of Each Psychopathy Conception

Theorist	Variant	Defining Characteristic	Genetic	Environment
			Predisposition	Acquired
Cleckley	Primary	Global Affective Deficit	X	
Karpman	Primary	Affective Deficit	X	
	Secondary	Affective Dysfunction		X
Lykken	Primary	Fearlessness	X	
McCord & McCord	Not Applicable	Lovelessness and Guiltlessness		X
Mealey	Primary	Social Emotion Deficits	X	
	Secondary	Social Disadvantage		X

Table 2

Descriptive Statistics of Measures

Measure	Type	Number of Items	N	Mean (SD)	α
PCL-R Total	Interview	20	1249	23.2 (7.3)	.82
Interpersonal-Affective	Interview	8	1249	8.5 (4.0)	.81
Social Deviance	Interview	9	1244	12.7 (3.8)	.68
PPI Total	Self-report	187	1270	388.8 (40.9)	.91
Fearless Dominance	Self-report	54	1270	191.1 (31.4)	.88
Self-Centered Impulsivity	Self-report	85	1269	146.2 (20.1)	.92
Coldheartedness	Self-report	21	1271	44.7 (8.3)	.77
Abuse	Self-report	38	1261	84.4 (27.2)	.95
Affective Deficit	Lab	NA	430	36.5 (42.3)	NA
Antisocial History	Interview	22	1209	7.7 (4.4)	.83
Anxiety	Self-report	24	1281	55.3 (11.7)	.91
BIS	Self-report	7	1267	15.3 (3.6)	.75
Egocentricity	Self-report	8	1281	60.2 (13.0)	.65
Fearlessness	Self-report	12	1266	16.0 (6.1)	.86
Guiltlessness	Self-report	4	1270	7.6 (2.5)	.55
Impulsivity	Self-report	30	1270	71.5 (12.4)	.86
Intelligence	Lab	NA	1281	95.2 (9.7)	NA
Lovelessness	Self-report	12	1281	48.1 (10.6)	.78
Passive Avoidance	Lab	NA	1128	3.8 (3.5)	NA
Poverty (Z)	Coded	NA	223	-.1 (1.0)	NA
Treatment Rejection	Self-report	8	1281	37.5 (9.0)	.69

Notes: Z denotes a z-transformed variable. N s vary by criterion measure due to missing data. Two criterion measures have distinctly lower n s than most other measures. The affective deficits measure (a lexical decision making task) has a lower n due to a technical issue where certain study sites did not correctly save the recorded data on the task. In contrast, the poverty measure (neighborhood disadvantage) has a low n because addresses, which were required to code this variable, were available for only a small subset of the sample.

Table 3

Questionnaire Responses for Each Psychopathy Conception

	Cleckley	Karpman Primary	Karpman Secondary	Lykken	McCords	Mealey Primary	Mealey Secondary
Author Respondents for Conception	4	4	4	4	4	4	4
1.Abuse							
% of Authors that Rated	25.0%	75.0%	100.0%	25.0%	75.0%	75.0%	100.0%
Authors Rating <i>M(SD)</i>	.00 (NA)	.00 (.00)	.25 (.06)	.00 (NA)	.17 (.06)	.00 (.00)	.20 (.08)
2.Affective Deficit							
% of Authors that Rated	100.0%	100.0%	75.0%	50.0%	75.0%	100.0%	50.0%
Authors Rating <i>M(SD)</i>	.30 (.00)	.30 (.00)	-.10 (.17)	.30 (.00)	.30 (.00)	.20 (.12)	.00 (.14)
3.Antisocial History							
% of Authors that Rated	75.0%	75.0%	75.0%	75.0%	75.0%	100.0%	100.0%
Authors Rating <i>M(SD)</i>	.13 (.06)	.23 (.06)	.27 (.06)	.20 (.00)	.30 (.00)	.25 (.06)	.25 (.06)
4.Low Anxiety							
% of Authors that Rated	100.0%	100.0%	100.0%	100.0%	75.0%	100.0%	50.0%
Authors Rating <i>M(SD)</i>	.23 (.10)	.18 (.05)	-.28 (.05)	.23 (.10)	.10 (.10)	.13 (.05)	.00 (.14)

5.Weak BIS							
% of Authors that Rated	75.0%	50.0%	25.0%	100.0%	25.0%	50.0%	25.0%
Authors Rating <i>M(SD)</i>	-.30 (.00)	-.30 (.00)	.30 (NA)	-.25 (.06)	.00 (NA)	-.15 (.07)	-.10 (NA)
6.Egocentricity							
% of Authors that Rated	100.0%	50.0%	25.0%	50.0%	100.0%	100.0%	75.0%
Authors Rating <i>M(SD)</i>	.28 (.05)	.25 (.07)	.20 (NA)	.25 (.07)	.28 (.05)	.20 (.08)	.17 (.12)
7.Fearlessness							
% of Authors that Rated	50.0%	50.0%	50.0%	100.0%	50.0%	25.0%	25.0%
Authors Rating <i>M(SD)</i>	.20 (.00)	.15 (.07)	-.15 (.07)	.30 (.00)	.10 (.00)	.10 (NA)	-.10 (NA)
8.Guiltlessness							
% of Authors that Rated	75.0%	75.0%	75.0%	75.0%	100.0%	75.0%	50.0%
Authors Rating <i>M(SD)</i>	.30 (.00)	.27 (.06)	.03 (.15)	.30 (.00)	.30 (.00)	.20 (.10)	.00 (.14)
9.Impulsivity							
% of Authors that Rated	100.0%	75.0%	100.0%	75.0%	75.0%	75.0%	100.0%
Authors Rating <i>M(SD)</i>	.20 (.08)	.10 (.10)	.28 (.05)	.20 (.00)	.30 (.00)	.23 (.06)	.23 (.05)
10.Intelligence							
% of Authors that Rated	100.0%	25.0%	25.0%	25.0%	25.0%	25.0%	50.0%
Authors Rating <i>M(SD)</i>	.13 (.05)	.00 (NA)	-.10 (NA)	.10 (NA)	.00 (NA)	.20 (NA)	-.10 (.00)

11. Lovelessness							
% of Authors that Rated	75.0%	75.0%	50.0%	50.0%	100.0%	50.0%	25.0%
Authors Rating <i>M(SD)</i>	.23 (.06)	.20 (.00)	.05 (.07)	.25 (.07)	.30 (.00)	.20 (.00)	.10 (NA)
12. Avoid. Learning							
% of Authors that Rated	75.0%	50.0%	25.0%	100.0%	25.0%	25.0%	25.0%
Authors Rating <i>M(SD)</i>	.27 (.06)	.15 (.07)	-.30 (NA)	.28 (.05)	.00 (NA)	.10 (NA)	-.10 (NA)
13. Poverty							
% of Authors that Rated	25.0%	25.0%	75.0%	75.0%	25.0%	75.0%	100.0%
Authors Rating <i>M(SD)</i>	.00 (NA)	.00 (NA)	.17 (.06)	.00 (.00)	.10 (NA)	.00 (.00)	.30 (.00)
14. Treatment Rejection							
% of Authors that Rated	50.0%	100.0%	100.0%	50.0%	100.0%	50.0%	50.0%
Authors Rating <i>M(SD)</i>	.30 (.00)	.25 (.06)	-.08 (.15)	.25 (.07)	.18 (.10)	.25 (.07)	-.05 (.21)

Notes: Mean Predicted Association (Standard Deviation).

Table 4

Consensus Predictions of Psychopathy with Criterion Measures for Each Conception

	Cleckley	Karpman Primary	Karpman Secondary	Lykken	McCords	Mealey Primary	Mealey Secondary
Abuse		.00 (.00)	.25 (.06)		.17 (.06)	.00 (.00)	.20 (.08)
Affective Deficit	.30 (.00)	.30 (.00)	-.10 (.17)		.30 (.00)	.20 (.12)	
Antisocial History	.13 (.06)	.23 (.06)	.27 (.06)	.20 (.00)	.30 (.00)	.25 (.06)	.25 (.06)
Low Anxiety	.23 (.10)	.18 (.05)	-.28 (.05)	.23 (.10)	.10 (.10)	.13 (.05)	
Weak BIS	-.30 (.00)			-.25 (.06)			
Egocentricity	.28 (.05)				.28 (.05)	.20 (.08)	.17 (.12)
Fearlessness				.30 (.00)			
Guiltlessness	.30 (.00)	.27 (.06)	.03 (.15)	.30 (.00)	.30 (.00)	.20 (.10)	
Impulsivity	.20 (.08)	.10 (.10)	.28 (.05)	.20 (.00)	.30 (.00)	.23 (.06)	.23 (.05)
Intelligence	.13 (.05)						
Lovelessness	.23 (.06)	.20 (.00)			.30 (.00)		
Avoid. Learning	.27 (.06)			.28 (.05)			
Poverty			.17 (.06)	.00 (.00)		.00 (.00)	.30 (.00)
Treatment Rejection		.25 (.06)	-.08 (.15)		.18 (.10)		

Notes: Mean Predicted Association (Standard Deviation).

Table 5

Observed Inter-correlations among Psychopathy Measures and Correlations between Psychopathy Measures and Criterion Variables

Measure	PCL-R			PPI			
	<i>Total</i>	<i>Interpersonal- Affective</i>	<i>Social Deviance</i>	<i>Total</i>	<i>Fearless Dominance</i>	<i>Self- Centered Impulsivity</i>	<i>Cold- heartedness</i>
Psychopathy Measures							
PCL-R Total	---	---	---	---	---	---	---
Interpersonal-Affective	.84**	---	---	---	---	---	---
Social Deviance	.84**	.46**	---	---	---	---	---
PPI Total	.40**	.27**	.42**	---	---	---	---
Fearless Dominance	.25**	.23**	.18**	.55**	---	---	---
Self-Centered Impulsivity	.31**	.15**	.38**	.83**	.04	---	---
Coldheartedness	.18**	.15**	.14**	.30**	.07*	.08*	---
Criterion Measures							
Abuse	.18**	.04	.26**	.20**	-.05	.31**	-.08*
Affective Deficit	.04	.03	.05	.08	.03	.07	.06

Antisocial History	.62**	.38**	.68**	.48**	.18**	.44**	.18**
Anxiety	-.03	-.10**	.07**	.13**	-.37**	.46**	-.26**
BIS	-.15**	-.19**	-.05	-.16**	-.42**	.16**	-.37**
Egocentricity	.23**	.15**	.24**	.59**	.16**	.60**	.16**
Fearlessness	.10**	.04	.13**	.38**	.35**	.25**	.00
Guiltlessness	.21**	.14**	.21**	.50**	.13**	.45**	.37**
Impulsivity	.16**	.01	.27**	.47**	-.13**	.68**	-.01
Intelligence	-.08*	-.03	-.11**	-.01	.10**	-.07*	.00
Lovelessness	.10**	.01	.17**	.18**	-.35**	.36**	.33**
Avoid. Learning	-.04	.01	-.07*	-.01	-.02	.01	-.03
Poverty	.16*	.15*	.11	-.01	-.04	.03	-.03
Treatment Rejection	-.02	.10**	-.12**	-.14**	.19**	-.37**	.28**

Notes: ** = $p < .001$; * = $p < .05$.

Table 6

Construct Validity Coefficients for Psychopathy Measures with Consensus Predictions

Conception	PCL-R			PPI			
	<i>Total</i>	<i>Interpersonal- Affective</i>	<i>Social Deviance</i>	<i>Total</i>	<i>Fearless Dominance</i>	<i>Self-Centered Impulsivity</i>	<i>Cold- heartedness</i>
Cleckley's Primary							
<i>r_{alerting-CV}</i>	.29	.47	.15	.42	.58	.09	.79
<i>r_{contrast-CV (CIs)}</i>	.20 (.17, .23)	.22 (.19, .25)	.13 (.10, .16)	.38 (.35, .41)	.42 (.39, .45)	.11 (.07, .14)	.48 (.45, .52)
Karpman's Primary							
<i>r_{alerting-CV}</i>	.00	.29	-.13	-.09	.29	-.28	.65
<i>r_{contrast-CV (CIs)}</i>	.03 (.01, .04)	.12 (.11, .14)	-.10 (-.11, -.08)	-.05 (-.07, -.03)	.27 (.25, .28)	-.32 (-.34, -.31)	.31 (.30, .33)
Karpman's Secondary							
<i>r_{alerting-CV}</i>	.62	.26	.73	.66	-.73	.81	-.57
<i>r_{contrast-CV (CIs)}</i>	.37 (.33, .41)	.09 (.05, .13)	.52 (.48, .56)	.47 (.43, .51)	-.32 (-.36, -.28)	.77 (.73, .80)	-.25 (-.29, -.21)
Lykken's Primary							
<i>r_{alerting-CV}</i>	.37	.46	.27	.57	.80	.10	.79
<i>r_{contrast-CV (CIs)}</i>	.25 (.21, .28)	.19 (.16, .22)	.19 (.15, .22)	.43 (.40, .47)	.51 (.48, .55)	.09 (.06, .13)	.45 (.42, .49)
McCord and McCord							

<i>r</i> _{alerting-CV}	.41	.15	.51	.70	-.51	.77	.03
<i>r</i> _{contrast-CV (CIs)}	.27 (.25, .28)	.05 (.03, .06)	.39 (.37, .40)	.53 (.52, .54)	-.31 (-.32, -.30)	.75 (.74, .77)	.00 (-.01, .02)
Mealey's Primary							
<i>r</i> _{alerting-CV}	.37	.29	.39	.61	.25	.44	.52
<i>r</i> _{contrast-CV (CIs)}	.23 (.21, .25)	.08 (.06, .10)	.26 (.24, .28)	.46 (.44, .48)	.12 (.10, .13)	.45 (.44, .47)	.23 (.21, .25)
Mealey's Secondary							
<i>r</i> _{alerting-CV}	.13	.27	.03	-.67	-.27	-.64	-.24
<i>r</i> _{contrast-CV (CIs)}	.11 (.10, .11)	.11 (.10, .12)	.01 (.00, .02)	-.40 (-.41, -.39)	-.11 (-.12, -.10)	-.40 (-.40, -.39)	-.11 (-.12, -.10)

Notes: 95% confidence intervals are provided for *r*_{contrast-CV}.