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## Borderline personality disorder and antisocial personality disorder: gender differences in manifestations of psychopathy

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BORDERLINE PERSONALITY DISORDER AND ANTISOCIAL  
PERSONALITY DISORDER: GENDER DIFFERENCES IN  
MANIFESTATIONS OF PSYCHOPATHY

Thesis

Submitted to the  
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in Partial Fulfillment of the Requirements for

The Degree

Master's of Arts in Clinical Psychology

by

Gregory J. Pennline

UNIVERSITY OF DAYTON

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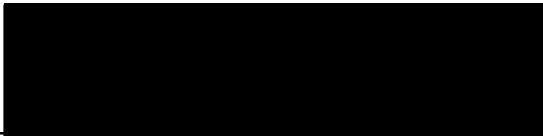
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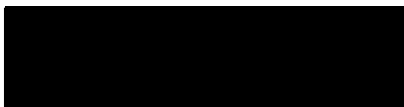
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## ABSTRACT

### BORDERLINE PERSONALITY DISORDER AND ANTISOCIAL PERSONALITY DISORDER: GENDER DIFFERENCES IN MANIFESTATIONS OF PSYCHOPATHY

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This study investigated the relationship between the construct of psychopathy and both Borderline Personality Disorder and Antisocial Personality Disorder. I proposed that psychopathy was the underlying construct that linked BPD and ASPD together. I hypothesized that women high in psychopathy would also be high in characteristics of BPD, while men high in psychopathy would be high in characteristics of ASPD. Using a sample of 51 male and 51 female college students from a Midwestern university, participants completed both peer and self measures of psychopathy, ASPD, and BPD. To test the study hypotheses, Gender x Psychopathy interactions in the prediction of ASPD and BPD were evaluated through the use of moderator-multiple regression. Results failed to reveal any significant Gender x Psychopathy interactions. Further, the main effects of gender were only significant with ASPD, not BPD. Therefore, the speculation that BPD and ASPD are sex-typed manifestations of psychopathy did not receive support in the current study. Limitations of the study included both the college sample that was used and the measure of psychopathy that was administered. These limitations and implications for future research are discussed.

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## CHAPTER I

### INTRODUCTION

The majority of research indicates that females are more likely than males to meet criteria for borderline personality disorder (BPD), whereas males are more likely than females to meet criteria for antisocial personality disorder (ASPD) (Corbitt & Widiger, 1995; Paris, 1997; Widiger, Trull, Clarkin, Sanderson & Costa, 1994). Approximately 75% of persons diagnosed with BPD are female and approximately 75% of persons diagnosed with ASPD are male (American Psychiatric Association, 2000). The two diagnoses are similar in characteristics such as impulsivity, unstable interrelationships, angry attributes, and manipulative behaviors. In view of the overlap in characteristics between the two disorders, this marked gender difference in prevalence rates is especially intriguing. These differences may be accounted for by etiological factors relating to overall differences between males and females. Such etiological factors may include biological, psychological, and social concomitants of gender. For example, childhood sexual abuse, a risk factor of BPD, has been found to be higher in females than in males (Paris, 1994a). Diagnoses of BPD and ASPD could also be accounted for by clinician bias. Due to stereotypes regarding greater emotionality of females and the greater rates of delinquent behaviors among males, clinicians may diagnose males more with ASPD while diagnose females more with BPD (Ford & Widiger, 1989).

The hypothetical construct of psychopathy may be an underlying concept that links BPD

and ASPD together. Cleckley (1941) suggested that psychopathy is marked by emotional callousness, irritability, impulsivity, manipulation, charisma, and social charm. Psychopathy has overlapping features found in both BPD and ASPD. Biological and psychosocial differences between men and women may cause psychopathic tendencies to be manifested as ASPD in men and BPD in women (Cale & Lilienfeld, 2002a).

The current study sought to advance our understanding of the gender differences between BPD and ASPD, by employing the hypothetical construct of psychopathy. The remainder of the introduction will examine the previous research findings relating to gender differences in BPD and ASPD along with previous research on the hypothetical construct of psychopathy. Finally, the current study will be presented that examined the different manifestations of psychopathy as BPD in women and ASPD in men.

#### *DSM-IV TR Definitions of Borderline and Antisocial Personality Disorder*

According to the DSM-IV Text Revision (TR), the essential feature of BPD is a pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts. There are also nine other criteria of which to diagnose BPD five or more are needed. The first criterion is that individuals with BPD make frantic efforts to avoid real or imagined abandonment. The next is a pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation (American Psychiatric Association, 2000). There may be an identity disturbance characterized by markedly and persistently unstable self-image or sense of self. The fourth criterion is impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). Fifth is recurrent

suicidal behavior, gestures, or threats, or self-mutilating behavior (American Psychiatric Association, 2000). The next is affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days). The seventh criterion is chronic feelings of emptiness. The eighth is inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights). The ninth and last criterion is transient, stress-related paranoid ideation or severe dissociative symptoms.

Persons diagnosed with BPD are characterized by behaviors of physically self-damaging acts, such as suicidal gestures, or threats, self-mutilation, or the provocation of fights (Gunderson, 2001). Their social and occupational accomplishments are often less than their intelligence and ability warrant. Interpersonally, persons with BPD are characterized by their paradoxical instability (Sperry, 1995). They fluctuate quickly between idealizing and clinging to another individual and devaluing and opposing that individual. They are sensitive to rejection and experience depression after even the most minor stressors (Kraus & Reynolds, 2001). These individuals develop interpersonal relationships rather quickly and intensely, yet these attachments tend to be superficial. They have difficulty tolerating being alone and they go to great lengths to seek out the company of others (Sperry, 1995). These individuals are also marked by inflexibility and impulsivity which complicates the process of identity formation. Their uncertainty about self-image, gender identity, goals, values, and career choices reflects this impulsive and inflexible stance (Gunderson, 2001). Finally, mood shifts are also identified in persons with BPD. They may suddenly shift from a normal or euthymic mood to a dysphoric mood. In addition, inappropriate and intense anger and rage may be easily triggered. At the

other extreme are feelings of emptiness and boredom (Sperry, 1995).

ASPD has an essential feature of a widespread pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood. For this diagnosis to be given, the individual must be at least age 18 years and must have had a history of symptoms of conduct disorder before age 15. According to the DSM-IV TR, there are seven other criteria of ASPD of which at least three are needed for a diagnosis. The first criterion is failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrests. The second criterion is deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure. Third is impulsivity or failure to plan ahead. Decisions are made on the spur of the moment, without forethought, and without consideration for the consequences to self and others. The next is irritability and aggressiveness, as indicated by repeated physical fights or assaults. The fifth criterion is reckless disregard for safety of self or others. Sixth is consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations. The final criterion is lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another (American Psychiatric Association, 2000).

The behavioral style of individuals with antisocial personalities is characterized by impulsivity, irritability, and aggressiveness. They are likely to be irresponsible in things such as honoring work commitments and financial obligations. They are also noted for their impulsive anger, deceitfulness, and cunning (Kraus & Reynolds, 2001). They are likely to be forceful individuals who regularly engage in risk and thrill seeking behaviors (Sperry, 1995). They are likely to be highly competitive and distrustful of others and are often poor losers. In their

relationships, they may appear at times to be “slick,” as well as calculating. These behaviors can characterize the successful businessperson, politician, and professional, as well as the criminal (Sperry, 1995). These individuals tend to develop superficial relationships that involve few, if any, lasting emotional ties or commitments (Hare, Hart & Harpur, 1991). Furthermore, they tend to be callous about the pain and suffering of others and do not feel guilty from their actions (Kraus & Reynolds, 2001). These individuals also tend to be keenly aware of social cues and may be quite adept at “reading” people and situations. Because they are contemptuous of authority, rules, and social norms, they easily rationalize their own behavior (Sperry, 1995).

#### *Comparison of Underlying Dimensions of BPD and ASPD*

Impulsivity is one of the primary dimensions that accounts for the commonality between ASPD and BPD (Paris, 1997). There is a significant overlap between the range of impulsive behaviors found in persons with BPD and ASPD. A person with BPD can show impulsive behaviors that are common in persons with ASPD such as petty theft, substance abuse, reckless driving or high risk sexual activities (Zanarini, Gunderson & Frankenburg, 1990a). However, there is an important difference in terms of how impulsivity is manifested in interpersonal relationships; persons with ASPD are more likely to exploit others, while persons with BPD are more likely to be exploited (Paris, 1997). Persons with ASPD will simply use people and then discard them, lacking any concern for the victims. Persons with BPD are more likely to idealize others and then devalue them.

Affective instability is a trait frequently found in persons with BPD. According to Siever and Davis (1991), this dimension of affective instability differentiates BPD from ASPD. Persons with BPD suffer either episodic or continuous dysphoria, and these affects are highly responsive

to the environment. Persons with BPD may use impulsive actions to distract them from these dysphoric emotions. Since persons with ASPD can become overwhelmed by dysphoria when they are prevented from acting out, it is not clear whether affective instability is entirely absent in persons with ASPD (Paris, 1997).

Regarding cognitive symptoms, Zanarini, Gunderson and Frankenburg (1990b) found that cognitive disturbances appear to differentiate persons with BPD from those with other forms of personality disorders. These symptoms can include auditory hallucinations, subdelusional paranoid trends, micropsychoses, or chronic depersonalization and derealization experiences. Yet, cognitive disturbances have not been systematically studied in persons with ASPD.

### *Gender Differences between BPD and ASPD*

To examine the gender differences between BPD and ASPD, the gender-specific etiologies of each disorder must be analyzed. This section will examine personality traits, genetic/biological predispositions, along with social and family factors involved in the development of each disorder.

### *Personality Traits*

Personality disorders are best understood as amplifications of normal personality traits. The five factor model of personality (FFM) is one well known model of describing personality. The FFM is a dimensional model of normal personality that has been supported by a great deal of empirical research (Corbitt & Widiger, 1995; Wiggins & Pincus, 1992). The FFM proposes that personality consists of five broad dimensions: neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. Furthermore, Costa and McCrae (1990) proposed that each factor of personality can be broken down into six facets or subscales which reflect certain

attributes of that factor. Personality disorder symptomatology, therefore, should reflect these five dimensions of personality and their six facets.

According to the FFM, both ASPD and BPD are high in neuroticism and low in agreeableness (Corbitt & Widiger, 1995). Yet there are differences found in the facet or subscale level. BPD involves high levels of every facet of neuroticism, including anxiousness, angry hostility, depression, self-consciousness, vulnerability, and impulsiveness (Costa & McCrae, 1990). In persons with ASPD, neuroticism may only be expressed as hostility and impulsiveness. Neuroticism may be the personality trait most relevant to BPD. Empirical studies have consistently supported this association, finding substantial correlations between neuroticism and BPD (Costa & McCrae, 1990; Trull, 1992; Wiggins & Pincus, 1989). Neuroticism captures the major behavioral dimensions of emotional dysregulation and impulsivity found in persons with BPD (Skodal, 2000). A study done by Corbitt and Widiger (1995) examined sex differences relating to the factors and facets found in the FFM. They found that women tend to score higher than men on neuroticism and its facets of impulsiveness, anxiety, self-consciousness, vulnerability, and depression (Corbitt & Widiger, 1995). The greater proportion of women in the very high range of neuroticism supports a greater female prevalence of BPD. Males, on the other hand, have very low scores on the facets of vulnerability and anxiety (Corbitt & Widiger, 1995).

ASPD primarily involves low agreeableness, including traits such as deceit, lack of compliance, and tough-mindedness (Widiger et al, 1994). Males account for the majority of extreme low scores on the factor of agreeableness on the FFM. For example, males score lower on the facets of altruism (83%), tender-mindedness (80%), straightforwardness (79%), and

compliance (65%) (Corbitt & Widiger, 1995). These traits of low agreeableness are similar to the traits of deceit and lack of empathy characteristic of individuals with psychopathy (Skodal, 2000). ASPD is also associated with the extroversion facet of excitement-seeking. Again, males tend to comprise a larger portion of those with very high excitement-seeking compared with females (Corbitt & Widiger, 1995).

A meta-analysis done by Feingold (1994) combined gender differences in personality traits with results from different inventories according to facets of the FFM. Results showed that the two major gender differences observed were that males scored higher than females in the personality trait of assertiveness and females scored higher than males in tender-mindedness (Feingold, 1994). These results are related to the traditional theory that males score higher than females on instrumental traits and females score higher than males on expressive traits (Skodal, 2000). Thus, gender differences in prevalence rates of ASPD and BPD may, in part, reflect more general differences between men and women on traits embodying instrumentality versus emotional expressiveness.

### *Genetic/Biological Predispositions*

#### *Genetic.*

Much research of twin and adoption studies have examined genetic influences on criminality and adult antisocial behavior. In behavior genetic studies of adult criminality, monozygotic (MZ) twins typically have higher concordance rates than dizygotic (DZ) twins (Dilalla & Gottesman, 1989; Eysenck & Eysenck, 1978; Tehrani & Mednick, 2001). Goldsmith and Gottesman (1996) conducted a review of genetic studies of adult criminality and calculated MZ and DZ concordance rates of 52% and 23%, respectively. Some research suggests



concordance rates as high as 70% for MZ and 28% for DZ twins (Cloninger, Reich & Guze, 1978). In addition, adoption studies of criminality have provided evidence for genetic contributions to the etiology of antisocial behavior. Reviews have shown that adoptees with biological parents who were criminal had higher rates of criminal convictions than control samples of adoptees (Tehrani & Mednick, 2001). There is some suggestion that there is a stronger heritability for female criminality than for male criminality, although the data are not unequivocal. It has been suggested that females at genetic risk for ASPD might also be at risk for histrionic personality disorder (HPD) and BPD (Lilienfeld, 1992). Unlike ASPD, there are only a small number of twin studies of BPD. In one study, Torgensen et al. (2000) examined 221 twin pairs, 92 MZ and 129 DZ. They labeled persons with BPD as either "definite" meaning that the required criteria for BPD was fulfilled or "broad" meaning cases with one or two criteria less. Results showed that the concordance for "definite" BPD was 35% in MZ pairs and 7% in DZ pairs. With the "broad" BPD persons, the concordance was 38% in MZ pairs and 11% in DZ pairs (Torgensen et al, 2000).

Community and clinical studies suggest that the traits seen in ASPD and BPD (impulsivity, affective instability and cognitive deficits) all may possess a heritable component (Paris, 1996). For instance, elevated rates of impulsivity and affective behaviors have been found from family informants in the relatives of BPD probands (Silverman, Pinkham & Horvath, 1991). Twin and adoption studies have demonstrated that impulsive aggression may be heritable (Coccaro, Bergeman, & McClearn, 1993). Neuroticism, negative emotionality, and novelty or stimulus seeking behaviors have also each been found to be hereditary (Heath, Cloninger & Martin, 1994; Tellegen et al., 1988). These genetic predispositions to certain traits may make an

individual more inclined to develop BPD or ASPD.

*Neuro-chemical.*

Different biological effects have shown to be related to the traits found in ASPD and BPD. These biological effects of ASPD and BPD include resting heart rate, cerebrospinal fluid serotonin, and reduced levels of frontal lobe activity. Each of these three biological components will be discussed separately.

Resting heart rate is an indicator of autonomic nervous system arousal. Low resting heart rate has been related to fearlessness (Raine, 1993). Compared with females, males have lower levels of autonomic arousal (Skodal, 2000). Young antisocial individuals have also been shown to have low resting heart rates. This lack of fear would help to explain poor socialization, especially in childhood, since reduced fear of punishment would reduce the effectiveness of conditioning behaviors. This "under arousal" concept may be linked to the notion that antisocial persons show reduced psychophysiological reactivity to stressful or aversive events. For example, many antisocial acts entail significant risks to the perpetrator. Reduced fearfulness or reduced reactivity to the possibility of an aversive event may be a predispositional factor that makes it easier for the perpetrator to engage in a violent act (Raine, Lencz & Scerbo, 1995). Autonomic under arousal may also lead to stimulus-seeking behaviors, passive coping, withdrawal in the face of threat, and insensitivity to socializing punishments (Skodal, 2000). In contrast, high heart rates in infants and young children is associated with anxiety and fearful, inhibited temperament (Kagan, 1989).

Impulsive aggression, a dimension common to both ASPD and BPD, has been found to be related to low levels of cerebrospinal fluid serotonin. Serotonin is related to central nervous

system behavioral inhibition, which is deficient in impulsive patients. Haperin et al. (1997) report that low central serotonin levels are consistent with animal model studies of aggression indicating lowered central serotonin, and studies demonstrating lowered central serotonin in adult patients with ASPD, and violent and homicidal adult criminals. There is some indication that men may have less serotonergic responsivity than do women (McBride, Tierney, DeMeo, Chen & Mann, 1990), meaning that males in general may be more predisposed to impulsive traits.

Brain studies have shown reduced frontal activity in violent male offenders (Raine, 1993). Research suggests that dysfunction to the frontal regions of the brain (specifically, the prefrontal cortex), combined with impulsivity, represents a predispositional factor for violence and antisocial behavior (Raine et al, 1995). Prefrontal dysfunction has also been associated with generalized loss of inhibition, increases in risk taking, rule breaking, impulsivity and poor judgment. Reduced concentration and reasoning ability; and decreased problem-solving skill and verbal communication ability have also been found in persons with prefrontal dysfunction (Skodal, 2000). These behaviors can be found in both ASPD and BPD patients, but correspond more strongly to persons with ASPD. In general, males appear to have reduced frontal activity in the brain, while women appear to have enhanced frontal activity. These biological differences with males could contribute to poorer socialization, reduced fear of punishment and less behavioral inhibition that may potentially contribute to greater antisocial tendencies in males compared to females.

### *Social and Family Factors*

Social factors and related family factors may also play a role in the etiology of both ASPD and BPD. This section will examine sex-role socialization differences, child abuse, and

other childhood disorders

*Socialization Differences.*

Socialization differences between young boys and girls may play a role in sex differences in prevalence rates of ASPD and BPD. There is some suggestion that compared with girls, boys are more susceptible to peer influence and are more likely to instigate delinquent behavior. Gender role stereotypes traditionally tend to support male aggressiveness and female passivity. Males are also socialized to be more independent while females are socialized to be dependent (Lilienfeld, 1992). Research indicates that parents seem more concerned about “appropriate” gender role behavior with boys than with girls and will attempt to lead boys to conform to gender role appropriate behavior by physically punishing “inappropriate” behavior (Skodal, 2000). “Appropriate” behavior could be defined as more masculine traits such as aggression and competitiveness. More feminine traits such as showing signs of gentleness, compassion and passivity, may be deemed “inappropriate” for boys. Girls are clearly reinforced for less aggressive behavior patterns than are boys, and thus, girls who develop delinquent or antisocial behavior patterns have probably been exposed to harsher, more unusual environmental experiences than have delinquent boys (Skodal, 2000). Furthermore, gender role socialization may also affect the types of aggression in which individuals engage (Werner & Crick, 1999). For example, there is evidence that physical aggression correlates more with ASPD symptoms in males than in females, perhaps because of sex differences in perceived consequences learned from gender roles (Magdol et al., 1997).

*Child Abuse.*

Child abuse may also play a role in the development of BPD and ASPD. Child abuse has

been associated with a range of negative outcomes, including physical injury; attentional problems, learning disorders, and poor school performance; anxiety and depression; alcohol and substance abuse; self-destructive behaviors and suicide attempts; poor relationships; and physical aggression and violence (Malinosky-Rummell & Handsen, 1993). There is a relationship between many of these problems and BPD and ASPD. A review of several studies suggest that persons with BPD have been shown to report a higher frequency of childhood sexual and physical abuse than persons with ASPD or other personality disorders (Paris, 1994b). For instance, Zanarini, Gunderson, Marino, Schwartz and Frankenburg (1989) studied outpatients with either borderline, antisocial, or other personality disorders. Based on clinical interview data, 80% of patients with BPD reported some type of abuse, compared with 38% of the patients with ASPD, and 50% of patients with other personality disorders. Another study by Ogata et al. (1990) studied inpatients with either BPD or major depression. Using systematic interviews they collected information on abuse and neglect in childhood. Results showed that sexual abuse was significantly more common in subjects with BPD (71%) than in depressed subjects (22%). They also found that subjects with BPD reported more physical abuse (42% vs. 33%) and physical neglect (17% vs. 6%) than depressed subjects (Ogata et al., 1990).

Epidemiological studies suggest that sexual abuse is ten times more common in females than in males, whereas physical abuse is more equal between the genders (Jason, Williams & Burton, 1982). Child sexual abuse has been proposed as an important factor in the etiology of BPD (Trull, 2001). Bryer, Nelson, Miller and Krol (1987) examined questionnaires and other self-report items for female inpatients and found that 59% of the women experienced some type of abuse before age 16. Family members were the perpetrators in 52% of the cases reporting

early sexual abuse, with fathers and brothers mentioned most often. Of 14 of the female patients diagnosed with BPD, 12 (86%) had experienced early sexual abuse (Bryer et al., 1987). Some of the negative outcomes of child sexual abuse including depression, suicidality, substance abuse, problems in intimate relationships, and revictimization resemble borderline pathology (Paris, 1994a). It has also been suggested that the gender differences in rates of BPD could be explained by gender differences in the sexual abuse of children (Stone, 1990).

### *Childhood Disorders.*

ASPD in adults has been linked to disruptive behavior disorders that are found in children. Research suggests that there is a greater preponderance of boys with childhood disruptive behavior disorders versus girls with these disorders (Zoccolillo, 1993). Disruptive behavior disorders include attention-deficit-hyperactivity disorder (ADHD), oppositional defiant disorder, and conduct disorder. ADHD is seen six to nine times more frequently in males than in females among clinic samples, whereas conduct disorders are found in approximately 9% of males and 2% of females under the age of eighteen (Andrulonis, 1991). Oppositional defiant disorder is twice as common in boys as it is in girls under twelve (American Psychiatric Association, 2000). A significant number of these children with disruptive behavior disorders have ASPD in adulthood. In children suffering from conduct disorders, physical aggression towards other people, animals, and property is common together with stealing, running away, lying, truancy, and fire setting (Andrulonis, 1991). Oppositional defiant disorder is less severe than conduct disorder with a pattern of negativity, hostility, and defiant behavior.

During pre-adult development, emotional problems show a gender pattern different from that of behavior problems (Skodal, 2000). These disorders in childhood may influence the

development and diagnosis of BPD in adulthood. In childhood, the gender ratio for depression is even. Yet, by adolescence, more girls are affected than boys. Childhood anxiety disorders such as separation anxiety disorder and posttraumatic stress disorder are more common among girls than boys (American Psychological Association, 2000). One explanation for the gender differences in ASPD and BPD might be that girls are more biologically and socially influenced toward internalizing problems, such as anxiety and depression, but with increasing “doses” of biological and social factors influencing impulsive aggression, they may develop BPD (Skodal, 2000). The opposite process would hold that for aggressive boys, who as a result of high genetic loadings for affective dysregulation or exposure to environmental circumstances engendering emotional disequilibrium would develop ASPD (Skodal, 2000).

#### *The Relationship of Psychopathy to BPD and ASPD*

Before elaborating a theory that postulates psychopathy as the underlying dimension of both BPD and ASPD, I will begin with a definition of psychopathy including associated characteristics and common measures of this construct. This section will focus on Cleckley’s classic description of psychopathy and Hare’s construction of the most widely-used measure of psychopathy. Finally, connections between the construct of psychopathy with ASPD and BPD will be addressed.

The hypothetical construct of psychopathy has evolved from a term whose etymology simply implies “illness of the mind” to the notion of being irresponsible and morally weak throughout life (Stone, 1998). Cleckley (1941) provided the first comprehensive description of the psychopathy. He specified 16 criteria for psychopathy, including superficial charm, lack of anxiety, unreliability, deceitfulness, lack of remorse, inadequately motivated antisocial behavior,

failure to learn from punishment, egocentricity, poverty of affect and emotional bonds, lack of insight, and failure to plan ahead (Cale & Lilienfeld, 2002a).

### *Psychopathy Checklist*

Nearly fifty years later, Hare (1991) took up where Cleckley left off in elaborating the construct of psychopathy. Hare sought to transform the Cleckley criteria into a reliable diagnostic instrument. The result was the initial Psychopathy Checklist (PCL) and its revision, the Psychopathy Checklist-Revised (PCL-R). Since its publication, the PCL-R (Hare, 1991) has been a widely-used measure and has been shown to have excellent psychometric properties in a variety of incarcerated populations (Hare, 1996). The development of the PCL-R as a standardized diagnostic tool has provided the foundation for a deluge of much needed empirical work investigating the nature of the psychopathy construct (Brinkley, Schmitt, Smith & Newman, 2001).

The PCL-R assesses twenty psychopathic characteristics and is designed to evaluate lifetime functioning on the basis of both a client interview and review of collateral information (Clark & Harrison, 2001). Factor-analytic studies of the PCL-R have found that these twenty characteristics form two correlated factors (Harpur, Hare & Hakstian, 1989). Factor 1 emphasizes “personality” traits consistent with Cleckley’s conceptualization of psychopathy (e.g., callousness, grandiosity, and superficial charm), whereas Factor 2 emphasizes the “social deviance” and criminality features (e.g., impulsivity and irresponsibility).

Blackburn (1975) empirically identified two types of subclasses of psychopaths: primary and secondary. Based on MMPI profiles of violent offenders, Blackburn (1975) characterized primary psychopaths as aggressive, impulsive, and undersocialized with secondary psychopaths



exhibiting these qualities in addition to social introversion and guilt-proneness. The PCL-R appears to tap aspects of both primary and secondary psychopathy (Levenson, Kiehl & Fitzpatrick, 1995). The first factor of the PCL-R is more related to primary psychopathy, while the second factor relates more to secondary psychopathy.

### *Psychopathy and the FFM*

Widiger and Lynam (1998) have argued that psychopathy can be understood from the perspective of the Five Factor Model of personality. Working from descriptions of constructs from the PCL-R, Widiger and Lynam (1998) translated psychopathy into the language of the FFM on an item-by-item basis. In the end, the 20 items of the PCL-R were translated into 16 facets of the FFM. The final FFM profile of psychopathy included facets from the domains of low agreeableness (low altruism, low straightforwardness, low compliance, low modesty, and low tender-mindedness) and low conscientiousness (primarily low dutifulness, low self-discipline, and low deliberation). Within the domain of neuroticism, the profile included low self-consciousness and high angry hostility and high impulsiveness. Finally, the domain of extroversion showed low in the facets positive emotions and warmth, and high in excitement seeking (Widiger & Lynam, 1998). The domains of agreeableness and conscientiousness noted above were the most well-represented FFM facets on the PCL-R, appearing in at least six different PCL-R items (Miller, Lynam, Widiger & Leukefeld, 2001). Furthermore, when the PCL-R factor structure is examined according to the FFM, a distinction between Factor 1 and Factor 2 emerges. Factor 1 appears to be confined largely to dimension of low agreeableness (with a minimal representation of neuroticism and extroversion), and Factor 2 is predominated by the items that are a mixture of low conscientiousness and low agreeableness (Widiger & Lynam,

1998).

### *Psychopathy and ASPD*

The construct of psychopathy and ASPD have many overlapping qualities. Yet they are not interchangeable, largely because psychopathy is marked primarily by personality features whereas ASPD is marked primarily by behavioral features (Lilienfield, 1998). The DSM-IV-R criteria for ASPD emphasizes such behavioral features as repeated arrests, frequent lying, and failure to maintain consistent employment (Hare, Hart, & Harpur, 1991). In contrast, the concept of psychopathy defined by Cleckley (1941) emphasizes both antisocial behaviors, as well as characteristic traits of personality such as superficial charm, grandiose sense of self-worth, and a fundamental inability to empathize with the feelings of others (Hare, 1991).

Correlations of ASPD are moderate with PCL-R total scores, low to moderate with Factor 1 (psychopathic personality characteristics) scores, and moderately high with scores on Factor 2 (socially deviant behaviors). At least in forensic settings, ASPD is the broader construct, with the vast majority of criminal psychopaths meeting DSM criteria (90%), but only approximately 25% of those with ASPD meeting criteria for PCL-R psychopathy (Clark & Harrison, 2001). Simply stated, the majority of psychopaths in a prison setting meet criterion for ASPD, but not all persons who meet the criterion for ASPD are psychopaths. Again, the difference largely relates to the assumption that psychopathy is a personality pattern marked by callousness and lack of empathy, whereas ASPD is a pervasive pattern of chronic antisocial behavior. From an FFM perspective, ASPD consists of slightly elevated scores on the dimension of neuroticism and low scores on conscientiousness and agreeableness. FFM profiles of persons with ASPD is similar to that of persons high in psychopathy in that they both share aspects of low agreeableness and low

conscientiousness (Miller, Lynam, Widigier & Leukefeld, 2001).

### *Psychopathy and BPD*

There has also been research that indicates a possible overlap between psychopathy and BPD. According to Hart and Hare (1989), BPD features covary with such psychopathic features as anxiety, impulsivity, and angry reactivity. Edens, Buffington-Vollum, Colwell, Johnson and Johnson (2002) examined the differences between the PCL-R and the Personality Assessment Inventory (PAI) in a sample of convicted sex offenders. Initially, the focus of their study was on the antisocial features scale of the PAI, yet re-analysis of their data indicated that the borderline features scale was a significant correlate of Factor 2 of the PCL-R. Several other studies have examined the relationship between PCL-R factor scores and the diagnostic criteria for BPD. There is evidence that PCL-R total scores are significantly associated with measures of BPD in male (Raine, 1986) and female inmates (Salekin, Rogers & Sewell, 1997). Overall, studies that have focused on the relationship between PCL-R factor scores and BPD scores (Hart & Hare, 1989; Salekin, Rogers & Sewell, 1997) indicate that BPD tends to be more strongly associated with Factor 2 (social deviance and impulsivity) than with Factor 1 (callousness and superficial charm).

Stanlenheim and von Knorring (1998) found that BPD was more closely related to psychopathy than ASPD. They administered the Karolinska Scales of Personality (KSP) and the PCL-R to a population of 58 nonpsychotic males in a forensic psychiatric examination. The KSP is a self-report instrument for measurements of stable temperament traits and was developed in order to identify vulnerability factors underlying different types of disturbances such as psychopathy. Results indicated that subjects with BPD had a very strong positive relationship

with the psychopathy factor on the KSP. Subjects with BPD also had higher scores in impulsiveness, indirect aggression, verbal aggression, and in the aggression factor than subjects without the disorder (Stanlenheim & von Knorring, 1998). Furthermore, the relationship between the KSP and ASPD were generally weak. One reason for this may be that psychopathy is more extensively defined than ASPD, which is mostly limited to behavioral descriptors as mentioned previously. BPD diagnostic criteria include symptoms of affective disturbance and interpersonal difficulties, which can resemble the affective and interpersonal deficits of the psychopath (Stanlenhiem & von Knorring, 1998).

Overall, traits associated with psychopathy are not necessarily specific to any one category of personality disorder. In DSM-IV-TR, psychopathic traits can be detected among the criteria for several personality disorders in addition to ASPD, notably histrionic (superficial charm, insincerity, egocentricity, manipulativeness), narcissistic (grandiosity, lack of empathy, exploitativeness), paranoid (mistrust) and borderline (impulsivity, suicidal gestures) (Blackburn & Coid, 1998). Although most closely linked conceptually with ASPD, the data overall questions the assumption that psychopathy is one distinct category, but may rather overlap with several types of personality disorders (Blackburn & Coid, 1998).

#### *Gender Differences in Psychopathy*

The literature on gender differences in psychopathy is limited. Although many researchers have studied female criminality, the investigation of psychopathy in women has been largely neglected (Cale & Lilienfeld, 2002a). One published study done by Salekin, Rogers, and Sewell (1997) examined PCL-R psychopathy base rates in an incarcerated female sample. They administered the PCL-R to 103 female inmates and found that 15% met the criteria for

psychopathy. Compared with male correctional samples that found ranges of psychopathy to be 15% to 30% (Hare, 1991), these figures are somewhat lower and may indicate a gender difference in psychopathy. Another study done by Vitale, Smith, Brinkley and Newman (2002) examined psychopathy among 528 nonpsychotic female offenders using the PCL-R. They found a relatively low base rate also (9%) among the sample. They attributed this either to a lower base rate of psychopathy among women or the inclusion of items in the PCL-R that do not adequately capture this personality construct among women (Vitale et al., 2002). Yet a recent study done by Warren et al. (2003) using a sample of 138 incarcerated female inmates showed a base rate of 17.4% met the criteria for psychopathy.

A study by Grann (2000) examined the response patterns of 36 females and 36 males referred for forensic psychiatric evaluations again using the PCL-R. Results showed psychopathy to be more common among males (31%) than females (11%), although the differences in total, Factor 1, and Factor 2 means scores were not significant. By using discriminant analyses they were able to differentiate between the males and females with a correct classification rate of 74% using three items-callous/lack of empathy and juvenile delinquency which were "male items," and promiscuous sexual behavior which was a "female item" (Grann, 2000).

Much research on psychopathy and gender differences comes from undergraduate college samples. For example, Forth, Brown, Hart and Hare (1996) using 150 undergraduates, found that males scored significantly higher than females on total Psychopathy Checklist Revised: Screening Version (PCL-R:SV) scores and on almost all PCL-R:SV items. Wilson, Frick and Clements (1999) used the Self Report Psychopathy Scale-II (SRP-II) along with the Levenson Psychopathy Scales (LPS) to measure psychopathy in 91 male and 108 female undergraduates.

The LPS is a measure designed to assess Factors 1 (Primary) and 2 (Secondary) of psychopathy (Cale & Lilienfeld, 2002a). They reported that men scored significantly higher than women on SRP-II Factor 1 and Factor 2 and LSRP Primary and Secondary scale scores (Wilson et al., 1999). In addition, Lilienfeld and Hess (2001) found in a sample of 33 male and 117 female undergraduates that males scored significantly higher than females on SRP-II Factor 1 and Factor 2, LSRP Primary and Secondary, and Psychopathic Personality Inventory (PPI) total scale scores. With few exceptions, studies of both incarcerated and nonincarcerated individuals show that males have higher base rates and mean symptom levels of psychopathy than females.

### *The Current Study*

Some authors have hypothesized that males and females diagnosed with “cluster B” personality disorders possess the same underlying personality features of psychopathy, but differ in their overt behavioral manifestations (Cale & Lilienfeld, 2002a). It has been proposed that somatization disorder (SD), histrionic personality disorder (HPD), and possibly, BPD (Hamburger, Lilienfeld & Hogben, 1996; Morgenstern, Langenbucher, Labouvie & Miller, 1997; Paris, 1997) are predominately female manifestations of underlying psychopathic tendencies, whereas ASPD is a predominately male manifestation of such tendencies. Individuals with HPD, BPD and ASPD all share an inclination towards impulsivity, excitement-seeking, superficiality, and manipulateness, all of which are reflected in the construct of psychopathy. However, because of the biological and environmental differences discussed previously, women may in general be more prone toward emotionality, whereas men may be more prone toward externalizing behaviors such as aggression and hyperactivity. Thus, the most prominent characteristics of males with psychopathic tendencies may be acting out behaviors (i.e., ASPD).

Conversely, the most prominent characteristics of females with psychopathic tendencies may be extreme emotional and interpersonal volatility (i.e., HPD or BPD).

One specific study done by Cale and Lilienfeld (2002b) examined sex differences in manifestations of psychopathy. They predicted that psychopathic features would be associated mainly with HPD features in females and mainly with ASPD features in males. Modeling their research after Hamburger et al. (1996), they used self-report measures along with peer-ratings. Peer-ratings were considered an important component in this study because persons with personality disorders, specifically Cluster B subtypes, tend to lack insight into the nature and extent of their symptoms (Grove & Tellegen, 1991). Their participants included 75 theater actors who were given three measures to complete: the Psychopathic Personality Inventory (PPI), the Personality Diagnostic Questionnaire (PDQ-4+), and the Coolidge Axis II Inventory (CATI). The participants also were asked for the names and addresses of three people who knew them well. These people were mailed a peer-rating questionnaire that was completed regarding the participants in the study. The peer-rating questionnaire consisted of 39 items which were modeled after the work of Harkness (1992) and the DSM-IV. It specifically assessed Cleckley's psychopathic traits, HPD criteria, and ASPD criteria.

Six moderated multiple regression analyses were conducted to examine the hypothesis that HPD and ASPD represent sex differences in the manifestations of psychopathic features. They used either HPD or ASPD as the criterion variable. Gender and psychopathy main effects were entered in the first step and the Gender x Psychopathy interaction was entered in the second step. They were looking for a significant Gender x Psychopathy interaction such that females high in psychopathy would be high in HPD and the other three groups would be low in HPD.

This was also done with the idea that males high in psychopathy would be high in ASPD, and the other three groups would not. Their hypothesis received only weak and inconsistent support.

Overall, the associations among psychopathy, HPD, and ASPD features were typically significant, yet further examination of sex differences provided some, but inconsistent, evidence that females with psychopathic traits tend to exhibit histrionic features, whereas males with psychopathic traits tend to exhibit antisocial features (Cale & Lilienfeld, 2002b).

The current study was modeled closely after the work done by Cale and Lilienfeld (2002b) with the exception that it examined the underlying psychopathic tendencies of BPD rather than HPD. To test the study's hypotheses, a sample of 51 male and 51 female undergraduates from the University of Dayton was surveyed. The participants were asked to bring a roommate or friend to complete peer-ratings. In order to optimize the number of participants, each person served both as a participant and as a "peer rater" of their study partner. A total of four measures were used in this study. Two assessed both BPD and ASPD and the third measured psychopathy. A social desirability measure was administered in order to control for possible self-presentational response sets. Each participant completed the four measures relating to themselves. Due to time constraints, the participants answered only two questionnaires relating to their peers (one measuring personality disorders and the other measuring psychopathy). In terms of the goals of the current study, the following hypotheses were offered:

H1: For regression equations using either self or partner ratings of the participant, the Gender x Psychopathy interaction will significantly predict BPD above the main effects for gender and psychopathy alone.



H2: A follow-up examination of the mean ratings for BPD will reveal that females high in psychopathy will score higher on the BPD measure than males high in psychopathy or participants in low psychopathy of either sex.

H3: For regression equations using either self or partner ratings of the participant, the Gender x Psychopathy interaction will significantly predict ASPD above the main effects for gender and psychopathy alone.

H4: A follow-up examination of the mean ratings for ASPD will reveal that males high in psychopathy will score higher on the ASPD measure than females high in psychopathy or participants in low psychopathy of either sex.

## CHAPTER II

### METHOD

#### *Participants*

A total of 102 participants, 51 males and 51 females, were recruited from a medium size private university in the Midwest. All participants completed a demographic measure, which can be found in Appendix A. The average age of the participants was 18.83 (SD = 0.82).

Participants' racial composition was Caucasian (91%), African-American (4%), Asian (2%), or other (3%). The participants were sampled from undergraduate Introduction to Psychology courses, and they were compensated with credit for the requirement of their classes. The study took approximately an hour to complete.

#### *Measures*

##### *Coolidge Axis II Inventory (CATI)*

The Coolidge Axis II Inventory, created by Coolidge (1984), is a self-report measure that assesses personality disorder dimensions that are embodied by DSM criteria. This measure can be found in Appendix B. The CATI contains 200 questions that are answered on a four-point true-false Likert type scale ranging from strongly false (1) to strongly true (4). The questions were almost directly created from the 117 unique criteria from the 11 personality disorders on Axis II of the DSM-III-R plus the two personality disorders from Appendix A of the DSM-III-R (Coolidge & Merwin, 1992). Therefore, each criterion of every DSM personality disorders is

represented by at least one question of the 200 total on the CATI. Due to time constraints, only the BPD and ASPD scales were used (totaling 62 questions) for this study. The possible range of values for the BPD scale was 23 to 92 and for the ASPD scale was 45 to 180. Note that there are six overlapping questions that correspond to both scales.

The 13 personality disorder scales of the CATI have been found to have sound psychometric properties. Coolidge (1993) reported that the mean 1-week test-retest reliability coefficient was 0.90. Furthermore, predictive validity with clinical diagnosis was 50% concordance, and internal consistency was 0.76 (Coolidge & Merwin, 1992). Factor analytic research has shown similarities in dimension structure between the CATI, the Millon Clinical Multiaxial Inventory (MCMI-II), and the Minnesota Multiphasic Personality Inventory (MMPI-2) in both clinical and nonclinical samples (Watson & Sinha, 1998). When comparing CATI scores with scores from the MCMI-II, convergent validity correlations for Cluster B scales were 0.57 (ASPD), 0.87 (BPD), 0.72 (HPD), and 0.38 (NPD) (Coolidge, 1993). In the current study, coefficient alphas for the Borderline scales were 0.85 (self-report) and 0.84 (peer-report). For the Antisocial scales, the self-report alpha was 0.77 and the peer-report was 0.85.

#### *Personality Diagnostic Questionnaire (PDQ-4)*

The PDQ-4 (Hyler, 1994) is a self-report measure that is designed to measure the DSM-IV personality disorders. This measure can be found in Appendix C. It was used to assess the number of DSM-IV BPD and ASPD symptom criteria met by each subject. It consists of 99 true-false items that correspond to the DSM-IV criteria for each of the personality disorders. There are also seven questions that correspond to the Too Good and Suspect Questionnaire scales. High Too Good and Suspect Questionnaire scores suggest under-reporting and lying or

inaccurate responses on the questionnaire. Subjects are given descriptions of abnormal behaviors and are asked to indicate whether each description is “generally true” or “generally false” of them. The total score is an index of overall personality disturbance. The PDQ-4 also can examine specific DSM-IV personality disorders by matching the “true” responses to the criteria given for each personality disorder on a scoring key. If the threshold is reached or exceeded, the diagnosis is recorded. For our purposes, I only used the questions that correspond to ASPD and BPD. These totaled 17 true-false items. To obtain a threshold score for ASPD the participant must have a score of three or greater out of a total of eight questions. The range for ASPD is 0 to 8. The participant must have a score of five or greater out of nine questions to obtain a threshold score for BPD. The possible range of values for this subscale is 0 to 9.

The test-retest reliability of the subscales of the PDQ-R (the DSM-III-R version of the measure) have been found to range from  $r = 0.62$  to  $r = 0.75$  (Trull, Goodwin, Schopp, Hillenbrand & Schuster, 1993). Validity studies which compared the results of the PDQ-R with the results of structured clinical interviews such as the SCID-II and the Personality Disorders Examination (PDE) have shown that the PDQ-R demonstrated high sensitivity and moderate specificity for most personality disorders (Hyler, Skodol, Kellman, Oldham & Rosnick, 1990). Using the PDQ-4, Yang et al. (2000) found ten day test-retest to average 0.67. Internal consistency estimates for the PDQ-4 have been found to average 0.62 (with ranges from 0.46 to 0.74) using clinical samples from Italy and China (Fossati et al., 1998; Yang et al., 2000). The PDQ-4 also appears to serve reasonably well as a screening instrument in that it does not miss many valid personality disorders diagnoses despite the fact that it has a high false positive rate (Davidson, Leese & Taylor, 2001). Coefficient alphas in the current study for the Borderline scale was 0.63

and for the Antisocial scale was 0.66.

*Levenson's Self-Report Psychopathy Scale (LSRP)*

Levenson's Self-Report Psychopathy Scale (Levenson, Kiehl & Fizpatrick, 1995) was used in this study to measure psychopathic traits. This measure can be found in Appendix D. The LSRP is a self-report measure that consists of 26 items which are answered on a 4-point Likert type scale, with responses ranging from "disagree strongly" to "agree strongly." This psychopathy scale also assesses primary and secondary psychopathy. That is, it assesses a selfish, callous, uncaring, and manipulative orientation towards others (primary psychopathy) as well as impulsivity, reactivity, and poor behavioral controls (secondary psychopathy) (Lynam, Whiteside & Jones, 1999). The primary (16 items) and secondary (10 items) psychopathy subscales were rationally constructed by modeling items after PCL-R Factors I and II (Lilienfeld & Hess, 2001). Examples for the primary psychopathy subscale include, "For me, what's right is whatever I can get away with" and "I enjoy manipulating other people's feelings." Some examples for the secondary psychopathy subscale include, "I have been in a lot of shouting matches with other people" and "I find myself in the same kind of trouble, time after time." Participants' total scores may range from 26 to 104, with the primary psychopathy subscale ranging from 16 to 64 and the secondary psychopathy subscale ranging from 10 to 40. For our study, I used the full-scale score for the primary analyses and both subscale scores for supplemental analyses.

Levenson, Kiehl and Fizpatrick (1995) found the two subscales to have a Cronbach's alpha of 0.82 for primary psychopathy and 0.63 for secondary psychopathy. A study done by Lynam, Whiteside and Jones (1999) found test-retest reliability over a eight week span to be

0.83. This study found that the LSRP was significantly correlated with a history of serious antisocial behavior. The LSRP was also found to have convergent validity with the HSRP (a self-report version of the PCL) of 0.64 for the LSRP total psychopathy score and 0.66 for the primary psychopathy scale and 0.42 for the secondary psychopathy scale (Lynam, Whiteside & Jones, 1999). The coefficient alphas in the current study for the self-report scales were 0.79 (primary psychopathy), 0.63 (secondary psychopathy), and 0.80 (total psychopathy). For the peer-report scales, the alphas were 0.87 (primary psychopathy), 0.70 (secondary psychopathy), and 0.89 (total psychopathy).

#### *Social Desirability Scale*

The Balanced Inventory of Desirable Responding (BIDR) was used to control for possible self-presentational bias (Stober, Dette, & Musch, 2002). This measure can be found in Appendix E. The BIDR, created by Paulhus (1984), is a 40-item measure of two types of socially desirable responding, self-deceptive enhancement and impression management. The self-deceptive enhancement scale was designed to assess self-deceptive tendencies, while the impression management subscale was intended to assess the tendency to fake good (Peterson et al., 2003). The items are stated as prepositions and agreement with each item is rated on a seven point scale with 1=not at all true and 7=very true. Scores are computed by reversing negatively keyed items, awarding 1 point for each "6" or "7" response and then summing points across items. The two subscales of self-deceptive enhancement and impression management each consist of 20 items. Thus, total scores on the self-deception scale and impression management scale can range from 0 to 20. The BIDR may yield an overall measure of socially desirable responding by adding together the self-deceptive enhancement and impression management subscales. The range for

the full scale is 0 to 40. Higher scores indicate greater self-deception or impression management (Stober et al., 2002). I used the full scale score to analyze the results of the current study.

For both subscales, coefficient alphas over 0.80 and test-retest reliability coefficients over 0.60 have been found (Reid-Seiser & Fritzsche, 2001; Paulhus, 1994; Peebles & Moore, 1998). Concurrent validity of the BIDR has been assessed using the Marlowe-Crowne scales (0.71) and with the Multidimensional Social Desirability Inventory (0.80) (Paulhus, 1991). Coefficient alpha for the current sample was 0.66.

### *Peer Measures*

For the peer-rater measures, both the CATI and the LSRP were given to the friend who rated the participant. The CATI and the LSRP were modified so that the questions correspond to the third person ("your friend") and not to the first person ("I").

### *Procedure*

Participants included 51 male and 51 female students who were recruited from undergraduate psychology courses at the University of Dayton. Participants were asked to bring along a friend, roommate, or classmate who knows them well. Four measures were administered to the participants to be rated about themselves. These included two measures of personality, a measure of psychopathy, and a social desirability measure. One measure of personality (CATI) and one measure of psychopathy (LSRP) were given to the friend who rated the participant. After measures were completed for self and peer, then the two participants switched, so the self-reporter then reports on their friend and vice versa.

All measures were grouped into two packets for each participant: self-report and peer-report. Demographic measures always came first in the packet. The order of the rest of the

measures were randomized using a Latin Square procedure. The original order for the self-report packet the PDQ-4 was first, the BIDR second, the CATI third, and the LSRP last. For the peer-report packet, the CATI was first and the LSRP second. The demographic sheet included a code that ensured that self and peer packets correspond to the correct participants. Finally, participants were thanked and debriefed.



## CHAPTER III

### RESULTS

#### *Preliminary Analyses*

Table 1 summarizes the means, standard deviations, and ranges of the continuous variables for this study. Preliminary analyses were conducted to examine the relationships between criterion variables (BPD self-report CATI, BPD peer-report CATI, ASPD self-report CATI, ASPD peer-report CATI, BPD self-report PDQ, ASPD self-report PDQ) and demographic variables or social desirability in order to assess for the possibility of any confounding variables. Nominal level demographics (i.e., race) and the criterion variables were analyzed using a one-way Analyses of Variance (ANOVA). No significant differences were found in the criterion variables with respect to race. Therefore, race was not controlled in the main analyses. Zero-order correlations were then conducted to examine the relationship between both the continuous demographic variables (age and closeness of the friend) and social desirability and the criterion variables. These results are summarized in Table 2. No significant relationships were found between the criterion variables and the continuous variables age and closeness of the friend. Therefore, neither age nor closeness of the friend were controlled in the main analyses. However, social desirability (BIDR) was found to be negatively correlated with five of the six criterion variables such that participants who had a tendency to represent themselves in a positive manner were less likely than other participants to score high on the measures of personality

## Descriptive Statistics for Continuous Study Measures

Variables	Mean	Std. Dev.	Min-Max
Demographics			
Age	18.83	0.82	17-22
Closeness of Friend	4.14	0.79	2-5
Criterion			
Self Antisocial PDQ	1.46	1.47	0-6
Self Borderline PDQ	2.19	1.60	0-7
Peer Antisocial CATI	81.89	15.06	58-124
Peer Borderline CATI	45.80	8.86	29-73
Self Antisocial CATI	79.05	10.49	61-113
Self Borderline CATI	45.78	8.93	30-76
Predictors			
Peer Primary Psychopathy	29.83	8.75	16-55
Peer Secondary Psychopathy	20.24	4.82	10-32
Peer Total Psychopathy	50.07	12.56	27-80
Self Primary Psychopathy	29.04	7.05	17-45
Self Secondary Psychopathy	20.06	3.89	13-32
Self Total Psychopathy	49.10	8.78	33-67
Social Desirability			
Total BIDR	9.42	4.25	1-21

Table 2

Zero-Order Correlations Between Demographics (Age and Closeness of Friend), Social Desirability (BIDR), and Criterion Variables (Self Borderline CATI, Self Antisocial CATI, Peer Borderline CATI, Peer Antisocial CATI, Self Borderline PDQ, Self Antisocial PDQ)

Variable	Age	Close	BIDR	Self BPD CATI	Self ASPD CATI	Peer BPD CATI	Peer ASPD CATI	Self BPD PDQ	Self ASPD PDQ
Age	--								
Close	.19	--							
BIDR	.17	.25*	--						
Self BPD CATI	-.04	-.04	.23*	--					
Self ASPD CATI	-.00	-.04	.27**	.54**	--				
Peer BPD CATI	.07	.13	.28**	.59**	.48**	--			
Peer ASPD CATI	-.00	-.01	.12	.35**	.59**	.63**	--		
Self BPD PDQ	-.04	.04	.24*	.74**	.44**	.55**	.34**	--	
Self ASPD PDQ	.02	-.01	.26**	.40**	.72**	.36**	.54**	.38**	--

\*\*p<.01 \*p<.05

Note. BPD = Borderline Personality Disorder; ASPD = Antisocial Personality Disorder; BIDR = Balanced Inventory of Desirable Responding; CATI = Coolidge Axis II Inventory; PDQ = Personality Diagnostic Questionnaire.

pathology. Thus, social desirability was not controlled in the main analyses for those criterion variables.

Table 2 also depicts the relationship between the peer and self-report measures of the criterion variables and between the two different measures of ASPD and BPD. As one can see, self and peer ratings were significantly, positively correlated with each other for both the BPD and ASPD subtests of the CATI. This indicates that participants who rated themselves high in borderline or antisocial characteristics were more likely to also have peers who rated them high in such characteristics respectively than participants who didn't. Furthermore, significant, positive relationships were found between CATI and PDQ measures of either BPD or ASPD. This suggests that participants that scored high on one measure of borderline or antisocial characteristics were also likely to score high on the other measure of that trait. Thus, these analyses provided evidence of convergent validity for the personality disorder measures used in the current study.

### *Tests of Primary Hypotheses*

Prior to testing the primary study hypotheses (H1 and H3), the simple relationships between the predictor (gender and psychopathy) and criterion variables (BPD and ASPD) were examined. This was done to determine how the predictor variables were related to each other. A correlation matrix was first computed between the predictors variables of self total psychopathy and peer total psychopathy and the criterion variables. These results are shown in Table 3. The results show that both self and peer total psychopathy were significantly, positively correlated with all measures of BPD and ASPD, suggesting that participants high in psychopathy were more likely to be high in borderline or antisocial features as well. However, an informal examination

Table 3

Zero-Order Correlations Between Predictors (Self Total Psychopathy, Peer Total Psychopathy) and Criterion Variables (Self Borderline CATI, Self Antisocial CATI, Peer Borderline CATI, Peer Antisocial CATI, Self Borderline PDQ, Self Antisocial PDQ)

Variable	Self Total Psychopathy	Peer Total Psychopathy	Self BPD CATI	Self ASPD CATI	Peer BPD CATI	Peer ASPD CATI	Self BPD PDQ	Self ASPD PDQ
Self Total Psychopathy	--							
Peer Total Psychopathy	.59**	--						
Self BPD CATI	.27**	.28**	--					
Self ASPD CATI	.67**	.59**	.54**	--				
Peer BPD CATI	.38**	.46**	.59**	.48**	--			
Peer ASPD CATI	.58**	.71**	.35**	.59**	.63**	--		
Self BPD PDQ	.31**	.27**	.74**	.44**	.55**	.34**	--	
Self ASPD PDQ	.54**	.56**	.40**	.72**	.36**	.54**	.38**	--

\*\*p<.01      \*p<.05

Note. BPD = Borderline Personality Disorder; ASPD = Antisocial Personality Disorder; CATI = Coolidge Axis II Inventory; PDQ = Personality Diagnostic Questionnaire.

of the values suggested that the magnitude of the correlations were higher for ASPD than for BPD. To test this magnitude,  $r$  to  $z$  transformations were computed and the significance of the differences between these values was tested with  $t$ -tests. The results indicated that total psychopathy more strongly related to the three measures of ASPD, than to the three measures of BPD.

Independent-samples  $t$ -tests were done in order to examine the relationship between gender and personality disorder tendencies or psychopathy. In all analyses, gender was the grouping variable and the other variable was the dependent variable. The results are shown in Table 4. In the  $t$ -tests with BPD or ASPD as the dependent variables, significant group differences between males and females were found in three of the six tests: self ASPD PDQ, self ASPD CATI, and peer ASPD CATI. This indicates that males scored higher on all measures of ASPD, but females did not score higher than males on any of the measures of BPD. Analyses conducted with psychopathy as the dependent variable showed that there were significant gender differences with both self total psychopathy and peer total psychopathy. On both measures of psychopathy, males scored higher than females.

To test Hypotheses 1 and 3 (i.e., that the Gender x Psychopathy interaction would predict ASPD or BPD beyond the main effects for either of those two variables alone), a total of six moderator-multiple regressions were conducted. Specifically, the first four regression equations were conducted using self-report measures and the last two used peer-report measures. For five of the six regression equations, social desirability was controlled in the first step, the main effects of gender and psychopathy were entered in the second step, and the Gender x Psychopathy interaction was entered in the third step. In the equation using peer ASPD CATI as the criterion

Independent Sample T-Tests With Gender as the Independent Variable and All Other Primary Study Variables as Dependent Variables

Variables	Mean Males	Mean Females	t (100)	p
Criterion				
Self Antisocial PDQ	1.80	1.12	2.41	.02
Self Borderline PDQ	2.25	2.12	.43	.67
Peer Antisocial CATI	86.06	77.71	2.91	.01
Peer Borderline CATI	46.39	45.22	.67	.51
Self Antisocial CATI	82.32	75.78	3.30	.00
Self Borderline CATI	46.12	45.45	.38	.71
Predictors				
Peer Total Psychopathy	53.33	46.80	2.71	.01
Self Total Psychopathy	51.73	46.47	3.16	.00

variable, social desirability was not controlled and, thus, that equation only had two steps.

Support for the study hypotheses would be indicated by a significant Gender x Psychopathy interaction. This would, in turn, be indicated by a significant R squared change value in the final step.

Results of the moderator-multiple regression equations are found in Table 5 through Table 10. Results showed that the Gender x Psychopathy interaction was not significant in any of the six regression equations. However, social desirability and the main effects of psychopathy were found to be significant at the 0.05 level in all of the equations. These results indicated that persons who scored high in social desirability and psychopathy were also high in traits of BPD or ASPD. Gender was not found to be significant in any of the six regression equations.

In the last two regression equations, the peer rated measures were examined. The first equation with peer BPD CATI as the dependent variable showed a significant relationship between BPD and both social desirability and psychopathy. This indicates that persons who were rated high on the peer BPD CATI also were rated high on measures of social desirability and psychopathy. No significant main effects between BPD and gender were demonstrated. The final equation used peer ASPD CATI as the dependent variable and, as mentioned above, social desirability was not controlled. Like the previous regression equations there was a significant effect between ASPD and psychopathy, but not between ASPD and gender. Again, this indicates that persons who were rated high on the peer ASPD CATI also were rated high in psychopathy.

Because none of these analyses revealed significant Gender x Psychopathy interactions, follow-up analyses examining the pattern of means on these variables (i.e., H2 and H4) were not computed.



## Moderated Multiple Regression Analyses with Self Borderline CATI as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Social Desirability	.23	.02	.05	.02
Step 2				
Self Total Psychopathy	.27	.01	.06	.03
Gender	.07	.48		
Step 3				
Gender X Psychopathy Interaction	-.00	.99	.00	.99

## Moderated Multiple Regression Analyses with Self Antisocial CATI as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Social Desirability	.27	.01	.07	.01
Step 2				
Self Total Psychopathy	.62	.00	.42	.00
Gender	-.10	.19		
Step 3				
Gender X Psychopathy Interaction	.40	.34	.01	.34

## Moderated Multiple Regression Analyses with Self Borderline PDQ as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Social Desirability	.24	.02	.06	.02
Step 2				
Self Total Psychopathy	.31	.00	.09	.01
Gender	.08	.42		
Step 3				
Gender X Psychopathy Interaction	-.08	.89	.00	.89

## Moderated Multiple Regression Analyses with Self Antisocial PDQ as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Social Desirability	.26	.01	.07	.01
Step 2				
Self Total Psychopathy	.50	.00	.26	.00
Gender	-.06	.52		
Step 3				
Gender X Psychopathy Interaction	.54	.27	.01	.27

## Moderated Multiple Regression Analyses with Peer Borderline CATI as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Social Desirability	.28	.00	.08	.00
Step 2				
Peer Total Psychopathy	.47	.00	.20	.00
Gender	.09	.30		
Step 3				
Gender X Psychopathy Interaction	.57	.16	.02	.16

## Moderated Multiple Regression Analyses with Peer Antisocial CATI as the Dependent Variable

Variables Entered	Beta	Significant Beta	R Squared Change	Significant F Change
Step 1				
Peer Total Psychopathy	.68	.00	.51	.00
Gender	-.10	.17		
Step 2				
Gender X Psychopathy Interaction	.17	.61	.00	.61

### *Additional Analyses*

As supplemental analyses, the primary analyses were recomputed using the primary and secondary psychopathy subscales of the LSRP separately, as opposed to the total psychopathy score. A correlation matrix was also computed between the predictors (self primary psychopathy, self secondary psychopathy, peer primary psychopathy, peer secondary psychopathy) and the criterion variables. These analyses are shown in Table 11. All measures of psychopathy were positively correlated with the measures of both BPD and ASPD, except between self primary psychopathy and the measures of self BPD CATI and self BPD PDQ. This indicates that persons who obtained high scores on measures of BPD and ASPD tended to obtain high scores on measures of primary or secondary psychopathy. To examine possible differences in the strength of the correlations,  $r$  to  $z$  transformations were computed and the significance of these differences tested with  $t$ -tests. Results indicated that at the .05 level, self primary psychopathy was more strongly correlated with measures of ASPD (self CATI:  $t = 4.88$ , peer CATI:  $t = 2.62$ , self PDQ:  $t = 2.06$ ) than with measures of BPD. Peer primary psychopathy was also more strongly correlated with measures of ASPD (self CATI:  $t = 2.81$ ; peer CATI:  $t = 3.64$ ; self PDQ:  $t = 2.61$ ) than with measures of BPD. In regards to self and peer secondary psychopathy, there were no significant differences between the ASPD and BPD measures.

Independent-samples  $t$ -tests were done examining the relationship between either primary or secondary psychopathy and gender. Results show that there were significant gender differences with self primary psychopathy ( $t(100) = 3.59, p < .01$ ) and peer primary psychopathy ( $t(100) = 3.49, p < .01$ ). On average, males ( $M = 31.41$ ;  $SD = 7.30$ ) scored higher than females

Zero-Order Correlations Between Predictors (Self Primary Psychopathy, Self Secondary Psychopathy, Peer Primary Psychopathy, Peer Secondary Psychopathy) and Criterion Variables (Self Borderline CATI, Self Antisocial CATI, Peer Borderline CATI, Peer Antisocial CATI, Self Borderline PDQ, Self Antisocial PDQ)

Variable	Self Primary Psychopathy	Self Secondary Psychopathy	Peer Primary Psychopathy	Peer Secondary Psychopathy
Self Primary Psychopathy	--			
Self Secondary Psychopathy	.22*	--		
Peer Primary Psychopathy	.54**	.31**	--	
Peer Secondary Psychopathy	.36**	.46**	.69**	--
Self BPD CATI	.10	.42**	.22*	.33**
Self ASPD CATI	.60**	.42**	.55**	.54**
Peer BPD CATI	.26**	.33**	.37**	.52**
Peer ASPD CATI	.56**	.30**	.69**	.59**
Self BPD PDQ	.14	.45**	.22*	.31**
Self ASPD PDQ	.41**	.47**	.53**	.50**

\*\*p<.01

\*p<.05



( $M = 26.67$ ;  $SD = 5.97$ ) in self-rated primary psychopathy. In regards to peer primary psychopathy, males ( $M = 32.71$ ;  $SD = 8.14$ ) also scored higher than females ( $M = 26.96$ ;  $SD = 8.47$ ). There were no gender differences found with the two measures of secondary psychopathy.

Regression equations were computed similar to the ones in the previous section, but analyzing primary psychopathy and secondary psychopathy separately. Thus, a total of twelve regression equations were computed. Results were similar to the main analyses. There were no significant interactions with Gender x Psychopathy, yet both social desirability and the main effects of gender and psychopathy were found to be significant in some of the equations.

In the regression equations for primary psychopathy, four equations showed a significant relationship between the criterion variables (self ASPD CATI, self ASPD PDQ, peer BPD CATI, peer ASPD CATI) and primary psychopathy at the .01 level. This indicates that persons who obtained high scores on the measures of self ASPD CATI, self ASPD PDQ, peer BPD CATI, and peer ASPD CATI also obtained high scores on primary psychopathy. All equations showed social desirability to be significantly related ( $p < .05$ ) to the criterion variables. No significant gender differences were found in any of the equations for primary psychopathy.

The regression equations for secondary psychopathy did show significant gender main effects in three of the equations at the .05 level: one with self ASPD CATI, one with peer ASPD CATI, and one with self ASPD PDQ. This indicates that males tended to score higher on these three measures of ASPD than females. Secondary psychopathy was found to be significant in all of the six regression equations ( $p < .01$ ). This suggests that participants with high scores on the personality disorder measures tended to have high scores on secondary psychopathy. Social desirability was also significant in all six equations.

One other correlation matrix was computed between all measures of psychopathy (primary, secondary, total). This matrix was computed in order to examine how primary and secondary psychopathy correlated with the psychopathy total score. These results can be seen in Table 12. All measures of psychopathy were positively correlated with one another. To test for differences in the strength of the correlations,  $r$  to  $z$  transformations were computed and the significance of the differences tested with  $t$ -tests. Results indicated that both self ( $t = 5.34$ ) and peer ( $t = 4.66$ ) total psychopathy were more strongly related to the measures of primary psychopathy than to the measures of secondary psychopathy.

Table 12

## Zero-Order Correlations Between All Measures of Psychopathy

Variable	Self Primary Psychopathy	Self Secondary Psychopathy	Self Total Psychopathy	Peer Primary Psychopathy	Peer Secondary Psychopathy	Peer Total Psychopathy
Self Primary Psychopathy	--					
Self Secondary Psychopathy	.22*	--				
Self Total Psychopathy	.90**	.62**	--			
Peer Primary Psychopathy	.54**	.31**	.57**	--		
Peer Secondary Psychopathy	.36**	.46**	.49**	.69**	--	
Peer Total Psychopathy	.52**	.39**	.59**	.96**	.86**	--

\*\*p&lt;.01

\*p&lt;.05

## CHAPTER IV

### DISCUSSION

The current study was conducted in order to examine the possibility of gender differences in the manifestations of psychopathy for persons with borderline personality disorder (BPD) and antisocial personality disorder (ASPD). The study was modeled from a study done by Cale and Lilienfeld (2002b) that examined gender differences in psychopathy with persons with ASPD and histrionic personality disorder (HPD). Unfortunately, support was not found for the study hypotheses in that the Gender x Psychopathy interactions did not predict BPD or ASPD. There were significant differences in the main effects of gender for ASPD, but not BPD. There were also significant main effects found between psychopathy and BPD and ASPD, meaning that participants that were high in psychopathy were also high in traits of BPD or ASPD. However, the magnitude of the correlations between psychopathy and ASPD was greater than between psychopathy and BPD. The remainder of the discussion section will address the implications of the current findings as well as limitations and suggestions for future research.

#### *Tests of Primary Hypotheses*

In regards to the primary hypotheses, the results were not consistent with the predictions. The Gender x Psychopathy interactions were not significantly related to BPD or ASPD. That is, evidence was not found for the prediction that males high in psychopathy were high in ASPD characteristics and females high in psychopathy were high in BPD characteristics. Hence, the

speculation that BPD and ASPD are sex-typed manifestations of psychopathy received no support in the current study. This finding was similar to that of Cale and Lilienfeld (2002b). Their interactions between Gender x Psychopathy and ASPD or HPD were also found to be non-significant. However, a study done by Hamburger, Lilienfeld and Hogben (1996) that was similar to Cale and Lilienfeld (2002b) did find that the relationship between psychopathy and both ASPD and HPD traits was moderated by gender. Their study used multiple self-report measures, no peer measures and instead of using multiple regression analyses, they tested their primary hypothesis using structured equation modeling. Their main hypotheses that males high in psychopathy would be more likely to exhibit traits of ASPD than females, and females high in psychopathy would be more likely to exhibit traits of HPD than males were supported by their results. To this author's knowledge, no study has examined the interaction between gender and psychopathy in relation to BPD as opposed to HPD.

Part of the explanation for the overall failure to find support for the primary hypotheses can be found by examining the simple relationships between the primary study variables. Specifically, the most surprising finding of the current study was that there were only gender differences with ASPD, but not BPD. This is inconsistent with the initial hypothesis that females are more likely than males to meet criteria for BPD, whereas males are more likely than females to meet criteria for ASPD. The study did find significant group differences between males and females in the three measures of ASPD, with males scoring higher than females, but no significant group differences were found with BPD. This is extremely important because if there were no gender differences found in BPD, then it would not be logical to posit an interaction between gender and psychopathy. The interactional model assumes that women are more likely

to have BPD than men, and that BPD is the sex-typed manifestation of psychopathy for women. Hence, if women are no more likely to possess borderline characteristics than men, then such theorizing is untenable. One explanation for these results may be related to sex-bias on the part of the clinicians in the diagnosis of personality disorders. Certain personality disorders (ASPD, narcissistic personality disorder, obsessive-compulsive personality disorder) are diagnosed more frequently in men, while others (BPD, histrionic personality disorder, and dependent personality disorder) are diagnosed more frequently in women (American Psychiatric Association, 2000). Despite these prevalence rates mentioned in the DSM-IV-TR, many researchers suggest that there is a sex-bias in diagnosing personality disorders (Corbitt & Widiger, 1995; Lindsay & Widiger, 1995; Lindsay, Sankis & Widiger, 2000; Widiger & Spitzer, 1991). Thus, these prevalence rates may not accurately reflect the real rates of the disorders. In contrast to clinician interviews, self-report measures may bypass some of these sex-biases, thereby accounting for discrepancies in findings between the two types of assessment modalities.

Another explanation for the failure in the current study to find sex differences in BPD is that sex-role identity rather than biological sex is the more critical variable, specifically for college samples. Some research suggests that sex-role identification for many men and women does not occur until the college years (Archer, 1992; Bernard, 1981). Many students in college, free from the burden of parental supervision, may be more open to express themselves in either more feminine or masculine ways where they are not judged. The college setting may allow some individuals to be more open about their sex-role identity. In terms of explaining the results of the current study, feminine people of either genders may be more likely than masculine people to internalize behavior, and thus may be more likely to score high on borderline traits. In the

current study this could explain why no gender differences in BPD were found. One possible way to correct for this would be to include a test that measures sex-role identity such as the Bem Sex Role Inventory (Bem, 1981) or the Personal Attributes Questionnaire (Spence & Helmreich, 1978) in future studies of this kind.

A series of other simple relationships converge to suggest that the measure used to assess psychopathy in the current study may not have as adequately tapped traits or characteristics pertinent to BPD. First, in the current study total psychopathy demonstrated a stronger relationship with ASPD than BPD. The results also showed that males scored significantly higher than females in psychopathy.

When additional analyses were conducted by breaking down total psychopathy into primary and secondary psychopathy, the study found that while measures of ASPD were correlated to both primary psychopathy and secondary psychopathy, the measures of BPD were only correlated with secondary psychopathy. Previous research (Hart & Hare, 1989; Salekin, Rogers & Sewell, 1997) also suggests that BPD tends to be more strongly associated with secondary psychopathy than with primary psychopathy. This presumably is because secondary psychopathy is characterized more by emotionality, rather than acting out behaviors found in primary psychopathy. Finally, the primary psychopathy subscale was more strongly related to the psychopathy total score than was secondary psychopathy.

Taken together, the results point to the speculation that the Levenson measure may more adequately tap primary rather than secondary psychopathy traits. If borderline features are better reflected in secondary psychopathy, then this measure might not have allowed for the most complete test of the hypotheses in the current study. A construct validity study done by Brinkley,

Schmitt, Smith and Newman (2001) examining correlations between Hare's PCL-R and the LSRP found significant correlations between secondary psychopathy and Factor 2 of the PCL-R. Yet, due to low coefficient alphas for the LSRP secondary psychopathy scale, they propose further revisions to the scale in order to reflect a more homogeneous construct. Another validation study examining Hare's Self Report Psychopathy Scale (HSRP) and the LSRP found that the HSRP was related to scores of primary psychopathy significantly more strongly than to scores of secondary psychopathy (Lynam, Whiteside & Jones, 1999). Other research suggests that some of the questions on the LSRP may need revised. Lilienfeld (1994) reports one of the shortcomings of both the LSRP and PCL-R is the absence of items that explicitly assess anxiety, one of the characteristics of BPD. Lynam, Whiteside and Jones (1999) suggest adding such items such as "I find it useless to worry about things" or "I don't scare easily" to help remedy this shortcoming. They also found that the item "love is overrated" loaded weakly on both LSRP factors and suggest it should be dropped from the measure.

#### *Limitations and Directions for Future Research*

Regarding the other measures used in the study, there is confidence in the results. To examine BPD and ASPD, the study utilized two measures of personality with well-established reliability and validity (PDQ and CATI). Using two different measures of personality helped establish convergent validity. The study also added a measure of social desirability to examine response bias. This was done in order to control for participants that were being deceptive when filling out the measures or were trying to present themselves in a "better light." Self and peer raters for all measures were significantly correlated with one another lending further confidence in the results because it suggests the personality disorder measures were tapping personality



rather than merely self-concept. Nonetheless, these findings would ideally be replicated in future research by adding a structured interview. In regards to the measure of psychopathy used in this study, future research could replace the LSRP with a different measure of psychopathy such as the Psychopathic Personality Inventory (PPI) or Hare's Self Report Psychopathy Scale (HSRP). These measures are both self-report and have been extensively used in noninstitutionalized samples. Also if a structured interview is added the Psychopathy Checklist-Revised: Screening Version (PCL-R:SV) could be used.

One of the most significant limits in the current study was the fact that a college sample was used. The majority of the participants were likely to be highly functioning adults. Some of the aspects of BPD (e.g., self-mutilating behavior) could make a person less likely to attend college. Also, in the criteria for ASPD many of the characteristics relate to criminal behavior. Such behavior may be less common among college students. Another possible confounding variable could be that the college sample used was from Psychology classes. Students may be familiar from class with some of the disorders being studied, which could potentially have led to certain response biases. Suggestions for future research may be to instead of using a college sample use a clinical population: persons diagnosed with BPD or ASPD. This study only examined characteristics or traits of BPD and ASPD found in participants. It did not use a sample that were clinically diagnosed as either BPD or ASPD. Cale and Lilienfeld (2002a) note that sex differences in psychopathy have more often been examined in forensic and undergraduate samples than in clinical samples, whereas sex differences in ASPD have more often been examined in clinical than in forensic and undergraduate samples.

In conclusion, the findings in this study do not provide evidence that BPD and ASPD are

sex-typed manifestations of psychopathy. However, prior to drawing firm conclusions regarding the veracity of this model, some of the methodological issues enumerated above need to be resolved. Ultimately, it is important for researchers in this area to continue to gain increased conceptual clarity regarding the links between these disorders.

## APPENDIX A

## Demographic Sheet

Please take a few moments to complete the demographic information on this page, and then proceed in completing the remainder of the assessment packet.

Age: \_\_\_\_\_

Gender:      Male    Female

Race: \_\_\_\_\_

Year in School:      Freshman      Sophomore      Junior      Senior

On a scale of 1 (barely know them) to 5 (my best friend), Please rate how well you know your friend: \_\_\_\_\_

## APPENDIX B

## Coolidge Axis II Inventory (CATI)

The things written in this questionnaire ask you to answer as you see yourself. Some sentences will seem strongly false, and some sentences will seem strongly true. Other sentences will seem somewhere in between the strongly false and strongly true. You are to choose if they are more false than true, or more true than false. It is important that you try not leave out any answers. If the sentence does not exactly describe you, do your best to find the answer that most closely is like you. After each sentence, you will find four possible answers: **SF** for "Strongly False," **MF** for "More False than True," **MT** for "More True than False," and **ST** for "Strongly True." Put a circle around the answer that is most like you.

## Antisocial Personality Disorder

- |  |    |    |    |    |
|--|----|----|----|----|
| 1. I have had a lot of different jobs in the last few years.             | SF | MF | MT | ST |
| 2. Before the age of 15, I was a big liar.                               | SF | MF | MT | ST |
| 3. I am afraid to do things that might get me arrested. <b>RS</b>        | SF | MF | MT | ST |
| 4. Some people say that I take too many chances.                         | SF | MF | MT | ST |
| 5. People make me angry.   | SF | MF | MT | ST |
| 6. When I fall in love, I'm usually the one who ends up hurt. <b>RS</b>  | SF | MF | MT | ST |
| 7. I have never hit anyone in any of my relationships. <b>RS</b>         | SF | MF | MT | ST |
| 8. People think I am tied to my job or work. <b>RS</b>                   | SF | MF | MT | ST |
| 9. I pay back all my loans and debts. <b>RS</b>                          | SF | MF | MT | ST |
| 10. Before the age of 15, I ran away from home overnight more than once. | SF | MF | MT | ST |

11. Before the age of 15, I often started fist fights.	SF	MF	MT	ST
12. Before the age of 15, I stole from others more than once (shoplifting, forgery, etc.)	SF	MF	MT	ST
13. I have quit more than one job without having plans for my next job.	SF	MF	MT	ST
14. I never destroyed other people's property on purpose (like vandalism or setting fires). <b>RS</b>	SF	MF	MT	ST
15. I would never put down or shame someone in public even if they deserved it.	SF	MF	MT	ST
16. Before the age of 15, I was mean and hurt people or animals.	SF	MF	MT	ST
17. I have traveled around without a job, a clear goal, or a travel plan.	SF	MF	MT	ST
18. I guess you could say I was a juvenile delinquent.	SF	MF	MT	ST
19. It takes a lot to make me uptight. <b>RS</b>	SF	MF	MT	ST
20. It is a fact of life that sometimes you have to step on people or hurt people to get what you really want.	SF	MF	MT	ST
21. People consider me to be a rebel.	SF	MF	MT	ST
22. I have been mean in order to control someone in my care.	SF	MF	MT	ST
23. I have little or no desire to have sex with another person.	SF	MF	MT	ST
24. Before the age of 15, I often skipped school.	SF	MF	MT	ST
25. I have never forced anyone to have sex with me. <b>RS</b>	SF	MF	MT	ST
26. I have lived without a mailing address for more than a month.	SF	MF	MT	ST
27. I have never stolen from someone face-to-face (like mugging or robbing someone). <b>RS</b>	SF	MF	MT	ST
28. I tell lies a lot.	SF	MF	MT	ST

29. It takes a lot to bug me. <b>RS</b>	SF	MF	MT	ST
30. I would lie to hurt someone if I felt that they deserved it.	SF	MF	MT	ST
31. People have told me that I am too picky.	SF	MF	MT	ST
32. I would never frighten others to get them to do things I want them to do. <b>RS</b>	SF	MF	MT	ST
33. I have been sexually faithful to one person for more than one year. <b>RS</b>	SF	MF	MT	ST
34. I have never been accused of hurting, neglecting, or mistreating a child. <b>RS</b>	SF	MF	MT	ST
35. I have never been a bad parent. <b>RS</b>	SF	MF	MT	ST
36. When I lose a close friend, I feel finished or helpless. <b>RS</b>	SF	MF	MT	ST
37. I have gotten into trouble because of my drinking or drug problem.	SF	MF	MT	ST
38. I feel just fine if I hurt or treat someone badly.	SF	MF	MT	ST
39. I have used scams or conned people for money or pleasure.	SF	MF	MT	ST

#### Borderline Personality Disorder

1. My feelings don't change a lot. <b>RS</b>	SF	MF	MT	ST
2. I wonder who I am most of the time.	SF	MF	MT	ST
3. I can get sad pretty quickly.	SF	MF	MT	ST
4. I try hard to not be alone.	SF	MF	MT	ST
5. I feel strong emotional feelings.	SF	MF	MT	ST
6. I am more calm than other people. <b>RS</b>	SF	MF	MT	ST

7. My moods change quite fast.	SF	MF	MT	ST
8. People tell me that I am a cold person.	SF	MF	MT	ST
9. I am very afraid of being left alone by someone.	SF	MF	MT	ST
10. I have said I would kill myself, or tried to, more than once in my life.	SF	MF	MT	ST
11. I've had a lot of temper tantrums.	SF	MF	MT	ST
12. I see myself as a person whose feelings are well controlled. <b>RS</b>	SF	MF	MT	ST
13. I seem able to change my feelings quickly.	SF	MF	MT	ST
14. I do not often feel empty or bad. <b>RS</b>	SF	MF	MT	ST
15. More than once, I have hurt myself badly on purpose, like cutting my wrists or smashing my fist against a wall.	SF	MF	MT	ST
16. Recently, I have felt like killing myself.	SF	MF	MT	ST
17. When I get stressed, I start to feel unreal, weird, or strange.	SF	MF	MT	ST

#### Both ASPD and BPD

1. I have gotten into at least one hitting fight in the past few years.	SF	MF	MT	ST
2. I usually have heavy and up and down relationships.	SF	MF	MT	ST
3. I am a person who has to do things right away.	SF	MF	MT	ST
4. I have been very thoughtless in my spending money, or sex, drug use, shoplifting, reckless driving, or binge eating.	SF	MF	MT	ST
5. My anger gets out of control easily.	SF	MF	MT	ST
6. I try not to get into physical fights. <b>RS</b>	SF	MF	MT	ST

**RS** denotes reverse score items

## APPENDIX C

## Personality Diagnostic Questionnaire (PDQ-4)

The purpose of this questionnaire is for you to describe the kind of person you are. When answering the questions, think about how you have tended to feel, think, and act **over the past several years**. Please circle either True or False to each item. Even if you are not entirely sure about the answer indicate "T" or "F" for every question.

## Antisocial Personality Disorder

- |   |   |   |
|---|---|---|
| 1. I've been in trouble with the law several times (or would have been if I had been caught).                 | T | F |
| 2. I get into a lot of physical fights.   | T | F |
| 3. I have difficulty paying bills because I don't stay at any one job for very long.                          | T | F |
| 4. I do a lot of things without considering the consequences.   | T | F |
| 5. Lying comes easily to me and I often do it.  | T | F |
| 6. I enjoy doing risky things.  | T | F |
| 7. I don't care if others get hurt so long as I get what I want.  | T | F |
| 8. When I was a kid (before age 15), I was somewhat of a juvenile delinquent, doing some of the things below. | T | F |

*Now, check all that apply to you:*

- |  |       |
|--|-------|
| (1) I was considered a bully.              | _____ |
| (2) I used to start fights with other kids | _____ |
| (3) I used a weapon in fights that I had   | _____ |
| (4) I robbed or mugged other people        | _____ |



- (5) I was physically cruel to other people \_\_\_\_\_
- (6) I was physically cruel to animals \_\_\_\_\_
- (7) I forced someone to have sex with me \_\_\_\_\_
- (8) I lied a lot \_\_\_\_\_
- (9) I stayed out at night without my  
parents permission \_\_\_\_\_
- (10) I stole things from others \_\_\_\_\_
- (11) I set fires \_\_\_\_\_
- (12) I broke windows or destroyed property \_\_\_\_\_
- (13) I ran away from home overnight  
more than once \_\_\_\_\_
- (14) I began skipping school a lot, before  
age 13 \_\_\_\_\_
- (15) I broke into someone's house,  
building or car \_\_\_\_\_

### Borderline Personality Disorder

- |   |   |   |
|---|---|---|
| 1. I'll go to extremes to prevent those who I love from ever leaving me.                              | T | F |
| 2. I either love someone or hate them, with nothing in between.                                       | T | F |
| 3. I often wonder who I really am.  | T | F |
| 4. I have tried to hurt or kill myself.   | T | F |
| 5. I am a very moody person.  | T | F |
| 6. I feel that my life is dull and meaningless.   | T | F |
| 7. I have difficulty controlling my anger, or temper.   | T | F |
| 8. When stressed, things happen like I get paranoid or just "black out."                              | T | F |
| 9. I have done things on impulse (such as those listed below) that could have gotten me into trouble. | T | F |

*If you answered true, please check all that apply to you:*

- a. Spending more money than I have \_\_\_\_\_
- b. Having sex with people I hardly know \_\_\_\_\_

- c. Drinking too much \_\_\_\_\_
- d. Taking drugs \_\_\_\_\_
- e. Eating binges \_\_\_\_\_
- g. Reckless driving \_\_\_\_\_

Note that there are no reverse score items

## APPENDIX D

## Levenson's Self-Report Psychopathy Scale (LSRP)

Please answer the following questions using the scale below:

1= Disagree strongly

2= Disagree somewhat

3= Agree somewhat

4= Agree strongly

## Primary Psychopathy

- \_\_\_\_\_ 1. Success is based on survival of the fittest; I am not concerned about the losers.
- \_\_\_\_\_ 2. For me, what's right is whatever I can get away with.
- \_\_\_\_\_ 3. In today's world, I feel justified in doing anything I can get away with to succeed.
- \_\_\_\_\_ 4. My main purpose in life is getting as many goodies as I can.
- \_\_\_\_\_ 5. Making a lot of money is my most important goal.
- \_\_\_\_\_ 6. I let others worry about higher values; my main concern is with the bottom line.
- \_\_\_\_\_ 7. People who are stupid enough to get ripped off usually deserve it.
- \_\_\_\_\_ 8. Looking out for myself is my top priority.
- \_\_\_\_\_ 9. I tell other people what they want to hear so that they will do what I want them to do.
- \_\_\_\_\_ 10. I would be upset if my success came at someone else's expense. **RS**
- \_\_\_\_\_ 11. I often admire a really clever scam.
- \_\_\_\_\_ 12. I make a point of trying not to hurt others in pursuit of my goals. **RS**
- \_\_\_\_\_ 13. I enjoy manipulating other people's feelings.
- \_\_\_\_\_ 14. I feel bad if my words or actions cause someone to feel emotional pain. **RS**
- \_\_\_\_\_ 15. Even if I were trying very hard to sell something, I wouldn't lie about it. **RS**
- \_\_\_\_\_ 16. Cheating is not justified because it is unfair to others. **RS**

## Secondary Psychopathy

- \_\_\_\_\_ 1. I find myself in the same kinds of trouble, time after time.
- \_\_\_\_\_ 2. I am often bored.
- \_\_\_\_\_ 3. I find that I am able to pursue one goal for a long time. **RS**

- \_\_\_\_\_ 4. I don't plan anything very far in advance.
- \_\_\_\_\_ 5. I quickly lose interest in tasks I start.
- \_\_\_\_\_ 6. Most of my problems are due to the fact that other people just don't understand me.
- \_\_\_\_\_ 7. Before I do anything, I carefully consider the possible consequences. **RS**
- \_\_\_\_\_ 8. I have been in a lot of shouting matches with other people.
- \_\_\_\_\_ 9. When I get frustrated, I often "let off steam" by blowing my top.
- \_\_\_\_\_ 10. Love is overrated.

**RS** denotes reverse score items

## APPENDIX E

## Balanced Inventory of Desirable Responding (BIDR)

Using the scale of 1 to 7 below, write a number beside each statement to indicate how much you agree with it.

Strongly							Strongly
Disagree							Agree
1	2	3	4	5	6	7	

1. My first impressions of people usually turn out to be right. \_\_\_\_\_
2. It would be hard for me to break any of my bad habits. \_\_\_\_\_ RS
3. I don't care to know what people really think of me. \_\_\_\_\_
4. I have not always been honest with myself. \_\_\_\_\_ RS
5. I always know why I like things. \_\_\_\_\_
6. When my emotions are aroused, it biases my thinking. \_\_\_\_\_ RS
7. Once I've made up my mind, other people can seldom change my opinion. \_\_\_\_\_
8. I am not a safe driver when I exceed the speed limit. \_\_\_\_\_ RS
9. I am fully in control of my own fate. \_\_\_\_\_
10. It's hard for me to shut off a disturbing thought. \_\_\_\_\_ RS
11. I never regret my decisions. \_\_\_\_\_
12. I sometimes lose out on things because I can't make up my mind soon enough. \_\_\_\_\_ RS
13. The reason I vote is because my vote can make a difference. \_\_\_\_\_
14. My parents were not always fair when they punished me. \_\_\_\_\_ RS
15. I am a completely rational person. \_\_\_\_\_
16. I rarely appreciate criticism. \_\_\_\_\_ RS
17. I am very confident of my judgments. \_\_\_\_\_
18. I have sometimes doubted my ability as a lover. \_\_\_\_\_ RS
19. It's all right with me if some people happen to dislike me. \_\_\_\_\_
20. I don't always know the reasons why I like to do things. \_\_\_\_\_ RS
21. I sometimes tell lies if I have to. \_\_\_\_\_ RS
22. I never cover up my mistakes. \_\_\_\_\_
23. There have been occasions when I have taken advantage of someone. \_\_\_\_\_ RS
24. I never swear. \_\_\_\_\_

25. I sometimes try to get even rather than forgive and forget. \_\_\_\_\_ RS  
26. I always obey laws, even if I'm unlikely to get caught. \_\_\_\_\_  
27. I have said something bad about a friend behind his or her back. \_\_\_\_\_ RS  
28. When I hear people talking privately, I avoid listening. \_\_\_\_\_  
29. I have received too much change from a salesperson without telling him or her. \_\_\_\_\_

**RS**

30. I always declare everything at customs. \_\_\_\_\_  
31. When I was young I sometimes stole things. \_\_\_\_\_ RS  
32. I have never dropped litter on the street. \_\_\_\_\_  
33. I sometimes drive faster than the speed limit. \_\_\_\_\_ RS  
34. I never read sexy books or magazines. \_\_\_\_\_  
35. I have done things that I don't tell other people about. \_\_\_\_\_ RS  
36. I never take things that don't belong to me. \_\_\_\_\_  
37. I have taken sick-leave from work or school even though I wasn't really sick. \_\_\_\_\_

**RS**

38. I have never damaged a library book or stole merchandise without reporting it. \_\_\_\_\_  
39. I have some pretty awful habits. \_\_\_\_\_ RS  
40. I don't gossip about other people's business. \_\_\_\_\_

**RS** denotes reverse score items (Award 1 point for each "6" or "7" responses and 0 points for any other response)

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