

INTERPERSONAL ASSESSMENT OF PSYCHOPATHY

By

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ABSTRACT

This study was concerned with the relations between representations of psychopathy and interpersonal perceptions. From 147 inmates seen in a federal medium-security prison, 79 of the men provided complete data for comparisons. Groups were defined under criteria from (1) the Psychopathy Checklist (PC) (Hare, 1985b), or (2) American Psychiatric Association (1980, 1987) outlines for Antisocial Personality Disorder (APD). Measures were derived from the Interpersonal Adjective Scales-Revised (IAS-R) (Wiggins, Trapnell, and Phillips, 1988) which relate interpersonally defined perceptions of personality as locations within a circumplex space--Interpersonal Circle (Wiggins, 1979, 1980). Self-ratings were obtained as descriptive of (1) self, (2) ideal self, (3) self as thought seen by a friends, and (4) self as thought seen by a specific member of the institutional staff. A rating was also obtained from the specific staff members as descriptive of the particular inmates.

Comparisons were also made with respect to the specificity and sensitivity of MMPI profiles considered relevant to psychopathy. Supplementary comparisons used selected scales from the Adjective Checklist (ACL) (Gough and Heilbrun, 1980) and Rosenberg's (1965) Self-

esteem Scale. These comparisons provided manipulation checks of the consistency of the data and contributed to the interpretive generalizability of the results.

The primary hypotheses were that a group of individuals defined as psychopathic would show differences in representations obtained from self-rated and other-rated descriptions, with respect to circumplex location and derived difference scores from the IAS-R, in comparison to groups considered non-psychopathic.

Results indicated differential perceptions, particularly by staff members, which provided good discriminations of groups based on the PC but not for groups defined by APD. Circumplex locations of psychopaths defined by the PC were consistent with expectations for the Interpersonal Circle. The discriminative utility of group differences was much higher for the PC-defined groups than for APD relative to the base rates for these different categorizations.

The results are discussed in terms of (1) their contribution to the nomological network for the concept of psychopathy as represented by the PC, (2) specific limitations of the study, and (3) the evident confusion which can result from the use of measures assumed to relate to the 'psychopath,' but that rely on primarily behavioural descriptions.

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INTRODUCTION

This study provides an evaluation of a variety of assessment strategies with respect to the identification and characterization of the psychopath in a sample of incarcerated adult male offenders. A particular focus is the use of an interpersonal model of personality assessment, designed to, among other things, evaluate dissimulation in self-report obtained from such a sample. The primary interest is in the potential differences among self-rated and other-rated descriptions of groups formed by differing diagnostic criteria on measures derived from a personality assessment strategy not previously used in criminal populations. The purpose is to test expectations based on the Interpersonal Circle--a circumplex model of personality (Kiesler, 1985; Leary, 1957; Wiggins, 1979, 1980, 1982)--with respect to groups classified by the criteria of the Psychopathy Checklist (Hare, 1980, 1985a, 1985b) or by the diagnosis of antisocial personality disorder defined by the American Psychiatric Association (APA, 1980, 1987).

Psychopathy represents a particularly problematic personality disorder in terms of nosological reference, theoretical understanding, and efforts for intervention. It is

perhaps the most baffling and poorly understood personality disorder, and is seen to be particularly resistant to interventions, whether correctional, medical, or psychological (e.g., Cleckley, 1982; Hare, 1970, 1981; Hart, Kropp, & Hare, 1987; Weiss, 1986). The development of further insights into the form and nature of this disorder requires continued efforts to systematically delineate the essential characteristics of the psychopath, and develop appropriate assessment strategies. In this way, steps may be made toward more meaningful management of the psychopathic personality as he (to date little research has involved females) may be encountered in correctional or treatment settings.

Descriptively, there is good consensus for the concept of psychopathy in terms of an apparent incapacity to form meaningful relationships with others and impulsive antisocial behaviour devoid of conscience or remorse (Buss, 1966; Cleckley, 1982; Hare, 1970, 1979, 1982, 1986; Hare & Cox, 1978; Maher, 1966; McCord & McCord, 1964; Millon, 1969, 1981; Weiss, 1986). However, there has been considerable debate over the relative importance of the psychological aspects of the disorder (e.g., lack of empathy) versus the behavioural manifestations of antisocial acts or delinquency. Pichot (1978) provides an interesting historical perspective of the development of this debate. He concludes that the rift derived from independent nosologies of German and Anglo-French origins. Historically,

"psychopathies" represented a class of disorders akin to current conceptions of the personality disorders, with reference to the broader usage of "psychopathy" as any disease of the mind (e.g., Dorland's Illustrated Medical Dictionary, 26th Ed., 1981).

Gradually, the reference to the psychopathic personality came to focus on the expression of antisocial behaviour in the absence of any obvious mental defect. In England, the early conception attributed to Pritchard in 1835 as "moral insanity" emphasized a "congenital deficiency of moral sense" (Pichot, 1978, p. 56) and was echoed by the French in 1866 as "reasoning insanity." Both focussed on behaviour as the manifestation of the disorder and related "perverse instincts" or "depraved feelings" as the basis of its expression. As the usage evolved, the German conception retained the emphasis on a "personality disorder" focussing upon the characterological aspects believed to underlie the behaviour, while the English and French conceptions have favoured "moral insanity" as defined by "abnormally aggressive or seriously irresponsible conduct " (Mental Health Act for England and Wales, 1959).

Current manifestations of this debate may be seen in the reliance of some authors on behavioural patterns as selective criteria (e.g., American Psychiatric Association (APA), 1980, 1987; Robins, 1966) or in an emphasis on personality characteristics (e.g., McCord & McCord, 1964). Others provide an integrated approach, giving relatively equal weight to both

characterological dispositions and behavioural expressions (e.g., Buss, 1966; Hare, 1980; Maher, 1966). Arguments still recur as to which are of relative primacy or if both are necessary for classification (e.g., Blackburn & Maybury, 1985). Generally, however, there is agreement on the fundamental role of personality as the core of psychopathy and that antisocial behaviour is the typical expression of that core (e.g., Cleckley, 1982; Hare, 1986; McCord & McCord, 1964). Similarly, it should be agreed that conceptual discontinuity will result where behaviour is emphasized to the exclusion of consideration of the personality or interpersonal style. Behaviour may constitute the most tangible aspect of the psychopath, but it is not sufficient for the diagnosis; its necessity may also be a point of debate. Clearly, similar patterns of behaviour may occur with quite different motivations and, moreover, individuals who may possess a "psychopathic" relationship with their environment do not necessarily exhibit the pattern of poorly integrated antisocial behaviour common to incarcerated samples (cf. Hare, 1986; Millon, 1981). A basic complaint, however, has been the difficulty of reliably and validly assessing the "personality" of the psychopath.

Consequently, characterization of this disorder has proven problematic due to the application of different emphases and the apparent loss of focus. This point has been one of concern and confusion for research with the psychopath (Hare, 1979, 1980,

1986; Hare & Cox, 1978; Millon, 1981), where assessments with adult males have relied upon various definitions such as single or composite scale profiles from the Minnesota Multiphasic Personality Inventory (MMPI), behavioural checklists, self-report scales, or the criteria for Antisocial Personality Disorder (APD), (APA, 1980, DSM-III). As outlined by Hare and Cox (1978), this variety of assessment contributes to the confusion of antisocial behaviour or criminality per se in place of the more clinically meaningful concept of psychopathy emphasizing a lack of conscience or empathy.

Problems in reaching some clear consensus for research purposes are exemplified in (but by no means unique to) a recent article by Blackburn and Maybury (1985) concerning the homogeneity of samples defined by various criteria. Although recognizing the apparent sources of confusion in identifying "the" psychopath, Blackburn and Maybury argue against the primacy of affective characteristics and assert a need to apply criteria involving both affective and impulsive-aggressive behaviour characteristics in order to obtain a more homogeneous sample. It is likely that such a sample may be more homogeneous in terms of their behaviour, but also likely that they do not adequately or uniquely represent the psychopathic character. Another frequent point of confusion in the literature, and which also arises in Blackburn and Maybury's article, relates to the experience of anxiety and the suggestion of the primary vs. secondary

psychopath as being free of anxiety or subject to anxiety, respectively. It has been responded to most succinctly by Hare and Harpur (1986) who, in reference to the "secondary psychopath," stated: "They may be neurotic, anxious, socially withdrawn or psychotic criminals, but they are not psychopaths" (p. 150).

The utility of the concept in applied settings is similarly confused, as indicated by a recent newspaper article (Still, 1987, May 21) in which a psychiatrist with some expertise in forensic consultations apparently dismissed the prognostic usefulness of a diagnosis of "psychopath" with a comment to the effect that three out of four Federal (Canadian) prisoners are psychopathic. This estimate is clearly out of keeping with more rigorous definitions of the psychopath (Hare, 1983, 1985a), and with the potential predictive utility with respect to such behaviour as parole violations (Hart, Kropp, and Hare, 1988). These problems typically derive from the emphasis placed upon an individual's current antisocial behaviour and history of delinquency, which are indeed common in incarcerated samples. The problem thus becomes, from the point of view of assessment, the ability to make valid and reliable discriminations with such populations based upon some coherent theoretical frame of reference.

Although perhaps not widely acknowledged, and occasionally misrepresented (e.g., Blackburn & Maybury, 1985), Hervey Cleckley (1941/1982. 6th ed.) provides a most coherent representation of the psychopathic personality. Cleckley acknowledges the likely

tendency of the psychopath to come to public attention as a result of his behaviour, but argues there is a more remarkable affective deficit at the core of the psychopathic personality. Using the analogy of a "semantic aphasia" in accounting for the lack of emotional relationship with the world, Cleckley suggests that the psychopath can intellectually relate to others but lacks understanding of the emotional, connotative meaning of communications and, hence, lacks the capacity to value others. It should be noted that this affective deficit appears distinct from the blunted or flattened affect associated with schizophrenia; the psychopath is capable of a range of affective expression. Rather, this deficit refers more to a restricted or shallow affective capacity in which self-interests are almost always placed above the feelings of others (cf. Raine, 1986). Cleckley refers to the psychopath's ability to vocalize appropriate affective relationships but with an apparent shallowness or absence of feeling, likening "a reflex machine that can mimic the human personality perfectly" (Cleckley, 1982, p. 228). He notes that the basic demonstration of the psychopath's inability to relate emotionally is the failure to behave by any appropriate standards. This lack is thus described in terms of interpersonal attachment or sincerity, related as a failure to appreciate the emotional experience of others. Cleckley's criteria are listed in Table 1.

The principal interest of the present research is to further

TABLE I

Cleckley's characteristics of the psychopath (Cleckley, 1982)

1. superficial charm and good "intelligence";
2. absence of delusions and other signs of irrational thinking;
3. absence of "nervousness" or psychoneurotic manifestations;
4. unreliability;
5. untruthfulness or insincerity;
6. lack of remorse or shame;
7. inadequately motivated antisocial behaviour;
8. poor judgement and failure to learn from experience;
9. pathologic egocentricity and incapacity for love;
10. general poverty in major affective relations;
11. specific loss of insight;
12. unresponsiveness in general interpersonal relations;
13. fantastic and uninviting behaviour with drink and sometimes without;
14. suicide rarely carried out;
15. sex life impersonal, trivial, and poorly integrated;
16. failure to follow any life plan.

flesh out this characterological/interpersonal aspect of psychopathy with an assessment strategy based upon a model of the interpersonal domain: the Interpersonal Circle (IPC) (Freedman, Leary, Coffey, & Ossario, 1951; Kiesler, 1985; Leary, 1957; Wiggins, 1980, 1982). The application of this model is of interest for several reasons. In terms of theory and conceptual development, psychopathy is clearly an interpersonal disorder; the IPC may allow a means of mapping the self- and other-rated perceptions of this interpersonal style. The demonstration of congruence between ratings of psychopathy and expectations for its representation on the IPC will thus contribute to construct validity. Moreover, the IPC has been recommended as a structural foundation for a possible revision of the diagnosis of the Personality Disorders as presented in DSM-III, Axis II (APA, 1980) (Kiesler, 1985; McLemore & Benjamin, 1979; Widiger & Frances, 1985) and its performance with respect to a criminal population is also of interest. On the practical or applied side, the IPC may provide a means of reliably assessing the personality aspects of psychopathy considered so elusive by those who assert that only behaviour is appropriate for assessment. It may also allow a better means to approach populations other than the incarcerated criminal. Further discussion of these issues and a review of the psychometric qualities of one format of the IPC will be presented shortly.

A previous attempt to assess psychopathy in terms of

interpersonal style was made by Blackburn and Maybury (1985). Although their method was rather idiosyncratic, it suggests that the circumplex may be useful in the assessment of the psychopathic personality. Despite procedural problems--a sample of mentally disordered inmates of the Broadmoor Hospital, observational rating scales with interrater reliabilities varying from .32 to .66, and factor analyses of 36 variables based on 57 subjects--Blackburn and Maybury (1985) obtained a 2-dimensional representation of interpersonal styles approximating the circumplex of interest here. The present research will attempt to expand on this approach using assessment techniques with some demonstrated psychometric stability.

Assessment Techniques Relevant to the Present Research

The Minnesota Multiphasic Personality Inventory (MMPI)

The MMPI has a long history of use and contributes to a vast literature; the use of the MMPI as a criterion or discriminative measure in research with delinquent youth and adult offenders spans some forty years. An early summary of research with delinquents was provided by Hathaway and Monachesi in 1953. More recent uses with adults are exemplified by Brown and Gutsch (1985) who use scale 4 elevations to identify the psychopath, or by Megargee (1977, 1984) who uses the MMPI as the basis for a typology in criminal populations.

As outlined by Dahlstrom, Welsh, and Dahlstrom (1972), scale

4 (Pd - psychopathic deviate) is intended to address the "amoral and asocial subgroup of persons with psychopathic personality disorders" (p. 195). Thus, scale profiles involving scale 4 as a high point are typically regarded as representing psychopathy. However, some secondary scale elevations (e.g., 1 - Hypochondriasis, 2 - Depression, 3 - Hysteria, 5 - Masculinity-Femininity, 7 - Psychasthenia) are considered to diminish the likely expression of antisocial behaviour or acting out, whereas the involvement of scales 6 (Paranoid), 8 (Schizophrenia), and 9 (Hypomania) in particular, are considered to increase the likelihood of antisocial behaviour (Lachar, 1978). The two-point code "49" is considered the "classic psychopath" by Dahlstrom, Welsh, and Dahlstrom (1972) and has shown some discriminative ability with psychopathic/non-psychopathic criminals (Hare, 1970). Lachar (1978) refers to the 49 profile as a likely sociopathic personality, and suggests that the 48 profile is representative of "classical psychopaths" (p. 85).

Major descriptive features attributed to scale 4 elevations are consistent with current definitions of psychopathy, including flagrant disregard for social values, inability to profit from punishing experiences, and emotional shallowness in relations with others. The involvement of scale 9 is considered to increase activity level and the likelihood of acting out; scale 8 involvement may reflect the interpersonal withdrawal associated with schizoid tendencies, which may be

considered similar to the emotional detachment of the psychopath. It is apparent that the MMPI has some utility; but its broad application in various populations, its reliability over time and, more particularly, its validity in identifying the psychopath may be questioned.

The development of scale 4 was organized with respect to its ability to discriminate a criterion group of delinquent youth from normative groups of adults used in the MMPI standardization sample and from a sample of college students. The relevance of the criterion group, "fairly young people, with more girls in the group than boys" (Dahlstrom, Welsh, & Dahlstrom, 1972, p. 196), with a history of delinquency ("amoral and asocial" behaviour--primarily minor crime and status offences), to the psychopath as currently defined is clearly debatable. Moreover, the interpretation of this scale varies widely depending upon the population to which it is applied, and various factor patterns have been proposed based on intercorrelations among items on the scale (e.g., Astin, 1959, Comrey, 1958). Among normal males scoring high on scale 4, such positive attributes as adventurous and courageous, sociable, enthusiastic, good-tempered, generous, and fair-minded have been applied; other normal samples have been described as aggressive, immature, irritable, leisurely, and unemotional (Dahlstrom, Welsh, & Dahlstrom, 1972). In normal college males, scale 4 may be considered an index of "rebelliousness," reflecting difficulty with authority.

In correctional populations, scale 4 elevations would appear to be the most common aspect of MMPI profiles. Tables provided in Dahlstrom, Welsh, and Dahlstrom (1972: Appendix M, pp. 438-448) outline the proportions of two-point codes found in various populations. In a sample of male youthful offenders (N=183), 48% of the profiles obtained had scale 4 as the high point and another 20.1% involved scale 4 as the secondary peak (McMahon, 1970, cited in Dahlstrom et al., 1972). Similarly, a sample of male military prisoners (N=2,126) exhibited scale 4 as the peak in 41.4% of the profiles and involved scale 4 as the secondary peak in another 21.6% (Brodskey, 1967, cited in Dahlstrom et al., 1972). The more discriminative 49/94 two-point codes accounted for 24.6% in the youth sample and 22.6% of the military males. Comparative samples of normal adult Minnesota males (N=258) provide scale 4 as a primary or secondary peak in 21.4% of obtained profiles, with 49/94 profiles seen in 6.2% (Hathaway & Meehl, 1951, cited in Dahlstrom et al., 1972); a sample of college freshmen (N=1,537) provide scale 4 as a primary or secondary peak in 29.1% of the profiles, with 49/94 profiles seen in 9.5% (Dahlstrom & Reifler, 1970, cited in Dahlstrom et al., 1972). Dahlstrom et al. (1972) also note that scale 4 peaks are prominent in profiles from alcoholic samples, homeless vagabonds, delinquent subgroups, disciplinary and sexual offenders within a prison system, drivers with high frequencies of violations and accidents, and various drug abuse groups (p. 270).

Megargee and his associates (Megargee, 1977, 1984; Megargee & Bohn, 1977; Megargee & Dorhout, 1977; Meyer & Megargee, 1977) have developed an MMPI typology within prison samples (males, age 19-27 years) which provides data suggesting the relationship of the previously mentioned scale profiles (i.e., 4, 49, 48) with characteristics of the psychopath. Megargee empirically derived groups based on a cluster analysis of profiles; ten profiles, obtained with relatively specific selection criteria, accounted for 87% of the sample. However, seven of the ten profiles involved elevations on scale 4 with differentiation provided by secondary peaks and relative elevations. These seven profiles accounted for 62% of the sample or 71% of the classified profiles. As might be expected, correlated self-report and other descriptive data which would relate to "psychopathic" characteristics were distributed among these seven groups, some being described as cold and aggressive, others as glib and superficial in relationships, and others as pleasant but manipulative. Problems with this typology may also derive from instability. Simmons, Johnson, Gouvier, and Muzyczka (1981) provided retesting of 50 inmates previously classified on the Megargee MMPI typology at an average follow-up interval of ten months. They found that only 14 of the 50 retained their original group classification. Considering that retest reliabilities of MMPI scale scores range from .44 to .73 with intervals on the order of eight months (Dahlstrom, Welsh, &

Dahlstrom, 1975), such a result is not entirely unexpected. As a "clinical" inventory, MMPI profiles should be expected to change over time. Further, the more specific rules become, the less likely it is that profiles will prove reliable.

An additional difficulty with the MMPI and "cookbook" rules for profile identification (e.g., Gilberstadt & Duker, 1954, or Marks & Seeman, 1963) is that the more specific rules for code types generally fail to classify a significant portion of target populations (Butcher & Tellegen, 1978; Payne & Wiggins, 1968). Classification strategies used by Megargee resulted in classification rates varying from 63% to 96% (Dorhout & Megargee, 1977). Hare (1985a), using standard "cookbook" rules as named above, found few profiles meeting the criteria. Higher rates of inclusion can be obtained with some relaxation of code criteria (Hare, 1985a; Payne & Wiggins, 1958), and may be more readily obtained where only the one or two high point peaks are used to identify the profile (e.g., Dahlstrom, Welsh, & Dahlstrom, 1972). Another difficulty not often specifically addressed is the rate of occurrence of invalid profiles, particularly among correctional populations in which individuals are "required" to complete the form. Although the MMPI allows identification of different approaches to dissimulation on the test, such profiles are not usually included in research.

The validity of MMPI codes in identifying the psychopath as defined by Cleckley criteria has been questioned primarily by

Hare and his associates. Relatively poor overlap of MMPI profiles related to the "psychopathic personality" has been obtained in research comparing definitional criteria (e.g., Hare, 1980, 1985a). Further confusion is likely to result from researchers using elevations on one or two scales (e.g., 4, or 4 and 9) in isolation from the overall scale profiles to "define" the psychopath (e.g., Ray & Ray, 1982). It is apparent that scale 4 appears as a high point in various populations with various descriptive associations. Perhaps a more basic correspondence of antisocial behaviour, drug or alcohol use, or conflict with authority or parental figures, explains the common occurrence of scale 4 elevations in criminal samples.

In view of the above problems, a relatively straightforward approach to classifying obtained MMPI profiles has been applied for the purposes of this research. Eleven profiles are proposed under this system: three incorporate invalid profiles, three identify the typical "psychopathic" profiles, four are other readily discriminable profiles, and one is "normal." Criteria for these profiles are outlined in Table II. Profiles within group 10 ("other") may include elevations involving scale 4 with secondary elevations on scales 1, 2, 3, 5, or 7. These profiles are not included among "psychopathic" profiles as the implications of guilt, remorse, anxiety, or contrition whether situational or otherwise are further confounds to an already tenuous representation of the psychopath using the MMPI. This

TABLE II
MMPI Group Definitions

<u>Category</u>		<u>Criterion Rules</u>	
<u>Group</u>	<u>Invalid</u>	<u>raw scores</u>	<u>Implication</u>
1		- $T > 30$	test avoidance
2		- $F > 23$ or $F - K > 15$	'fake bad'
3		- $L \geq 9$ and $K - F > 15$	'fake good'
	<u>Sociopath</u>	<u>Scale Elevations</u>	
4		- 4 is only scale $\geq 70T$	'spike 4 - antisocial'
5		- 4 + 9 only scales $\geq 70T$	'sociopath'
6		- 4 + 8 $\geq 70T$; 9 & /or 6 may also be $\geq 70T$	'psychopath'
	<u>Other</u>		
7	- involving 1 or more of scales 1, 2, 3, 7 as only scales $\geq 70T$		'neurotic'
8	- scales 6 & /or 8 are only $\geq 70T$ or are highest elevations by 10T		'psychotic'
9	- scale 9 only elevation $\geq 75T$ and scale 2 $\leq 50T$		'hypomanic'
10	- fails to meet any of above, but has scale elevations $\geq 70T$		'other'
	<u>Normal</u>		
11	- no scale elevation $\geq 70T$		'normal'

strategy is intended to simplify the information available from the MMPI profiles obtained, and to focus more specific interest on the "psychopathic" profiles and their overlap with criterion groups otherwise defined.

Antisocial Personality Disorder (APD)

Diagnoses of APD using the criteria of the Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. (DSM-III: APA, 1980) and its recent revision (DSM-III-R: APA, 1987), were based on data available from interview, case history, and file information. Criteria for APD have focussed upon antisocial behaviour as the "essential feature" of this disorder, and basically provide a checklist of childhood and adult behaviour. Common childhood signs are listed as "lying, stealing, truancy, vandalism, initiating fights, running away from home, and physical cruelty" (APA, 1987, p. 342). The pattern must persist into adulthood and would include financial, vocational, or parental irresponsibility; commission of acts which would be grounds for arrest; irritability and aggressiveness; recklessness, impulsivity, and/or promiscuity. Although alluding to interpersonal characteristics as a "markedly impaired capacity to sustain lasting, close, warm, and responsible relationships" (APA, 1980, p. 318; APA, 1987, p. 343), the application of the diagnosis may require little or no consideration of this aspect.

As previously suggested, the DSM-III criteria have been

faulted for being too liberal (Frances, 1980; Hare, 1980, 1981, 1983, 1985a; Millon, 1981). The reliance on behavioural descriptions of a delinquent history prior to age 15, and recurrent antisocial behaviour since age 18 does not provide a distinction between "persistent criminality" (Trasler, 1978) and the remorselessness or lack of empathy considered central to the psychopath.

Hare (1981) has outlined the potential for confusion between APD and psychopathy, and demonstrated the extent of agreement with various criteria. Hare (1983) reported "generally good agreement" between extreme group assignments of psychopathic and APD diagnoses with a Kappa coefficient of .83; however, the tendency for overinclusiveness with APD is reflected in the relative rates of diagnosis: 39% APD vs. 22% psychopathic by a checklist assessment. Hare (1985a) obtained more similar rates of diagnosis in a sample of 229 federal inmates, 38% APD vs. 33% psychopathic, and also showed a high congruence of the diagnoses, however, only with the extreme groups (Kappa = .79).

Some modest changes have been made to the criteria for APD under the new DSM-III-R (APA, 1987); however, there is little reason to suspect the changes will significantly affect the frequency or distribution of the diagnosis in incarcerated samples. The annotated comparative listing of changes from DSM-III to DSM-III-R (Appendix D, DSM-III-R) only notes the addition of an item to express the absence of guilt or remorse, provided

in response to "frequent criticism" of the DSM-III criteria for APD. However, the added item--"lacks remorse (feels justified in having hurt, mistreated, or stolen from another)" (APA, 1987, p. 346)--is only included as the tenth of a set of ten aspects of adult behaviour from which any four satisfy the criterion. This addition obviously does little to realign the APD diagnosis with respect to psychopathy as there remain many (actually 126) ways an individual might meet the criteria within that section without inclusion of a remorseless attitude. The emphasis for diagnosis continues to be irresponsible and antisocial behaviour as the "essential feature" for both DSM-III and DSM-III-R. Other changes within the criteria under DSM-III-R are basically only changes in wording or emphasis; however, academic difficulties or problems at school have been dropped from the adolescent subsection, which may serve to tighten the criteria for adolescence, and the criteria for a pattern of adult behaviour has had the age criterion reduced to 15 years. The only other changes of possible consequence--and this to increase the application of the diagnosis--are the omission of the continuity criterion, i.e., that there has been no period of five years or more since age 15 without evidence of antisocial behaviour, and the relaxation of the overlap of other mental disorders, i.e., that behaviour is now "not exclusive" to a course of Schizophrenic or Manic disorder rather than "not due to" such a disorder.

The overlap of APD with the other criteria used in this

study was assessed, as was the agreement of the APD diagnosis under DSM-III (APA, 1980) and the DSM-III-R (APA, 1987).

The Psychopathy Checklist (PC)

The PC has been developed by Hare and his colleagues as a means of standardizing research criteria to identify the psychopath within incarcerated male samples. Considering that Cleckley had provided the most influential conception of the psychopath, early efforts were given to globally rating inmates based on interview and file information as to how well they met Cleckley's criteria (Hare & Cox, 1978). With the perception that this provided a very useful and conceptually-based approach to assessing the psychopath, attention was given to standardizing a checklist format which could be more readily utilized by other researchers. A 22-item checklist was developed which provided good correspondence with previous global ratings (Hare, 1979), and outlines were provided for its application (Hare & Frazelle, 1980). Two items were subsequently dropped (previous diagnosis as a psychopath, and drug and alcohol abuse not direct cause of antisocial behaviour) with evidence that they contributed little to the discriminative power of the checklist (Hare, 1986). The current 20-item checklist is shown in Table III. The PC incorporates case history data allowing longitudinal evaluation of problem behaviour and characterological inferences from interview which in total provide a more complete profile in

TABLE III

Items of the Psychopathy Checklist (Hare, 1985b)

1. glibness/superficial charm;
2. grandiose sense of self-worth;
3. need for stimulation/proneness to boredom;
4. pathological lying;
5. conning/manipulative;
6. lack of remorse or guilt;
7. shallow affect;
8. callous/lack of empathy;
9. parasitic lifestyle;
10. poor behavioural controls;
11. promiscuous sexual behaviour;
12. early behaviour problems;
13. lack of realistic, long-term goals;
14. impulsivity;
15. irresponsibility;
16. failure to accept responsibility for own actions;
17. many short-term marital relationships;
18. juvenile delinquency;
19. revocation of conditional release;
20. criminal versatility.

keeping with the clinical concept of psychopathy.

Administration of the checklist requires about one-and-one-half hours for review of available institutional files plus approximately two hours for a structured interview. Items are rated on a three-point scale (0, 1, 2 where 0 indicates that the item does not apply, 1 indicates that its application is questionable, and 2 indicates the item definitely applies); scores for the 20-item checklist thus may range from 0 to 40. If information is lacking for completion of a particular item, the item may be omitted and the score prorated. Rather than assuming the measure to represent a continuum, i.e., a range of psychopathic tendencies, for research purposes the scale is used with cut-off scores to provide diagnostic discontinuity. Individuals with scores falling approximately 1 standard deviation above the range (e.g., > 30) are considered to be psychopaths. Those in the lower range (e.g., < 20) are considered non-psychopathic, and those in the middle range may be of questionable status.

In use with adult male inmates, the checklist has been demonstrated to yield high reliability across (.84 to .91) and within (.85 to .93) raters, good test-retest reliability (.89), and high internal consistency (.90) (Schroeder, Schroeder, & Hare, 1983). Consideration of the validity of the PC is somewhat more problematic in that there is the question of "Compared to what?". Other assessments related to psychopathy may be faulted

for being too broad or based on questionable criterion groups. However, the evidence is at least consistent. In most instances adult male prison inmates identified as psychopathic by the PC are also considered psychopathic by other assessments (or as APD by DSM-III), although the converse is not necessarily true, i.e., those identified as "psychopathic" by other devices (or as APD) may not be identified as psychopathic by the PC (cf. Hare, 1983, 1985a, 1986; Schroeder et al., 1983). These results affirm the more stringent criteria afforded by the PC. Apart from the convergence with other assessments, demonstration of the validity of the checklist may be taken from its apparent utility in providing clearly discriminable groups for psychophysiological research (Hare, 1979; Hare & Cox, 1978), and the predictive validity in the contexts of parole performance (Hart et al., 1987) or response to treatment (Wong, 1985).

The factor structure of the PC (Harpur, Hakstian, & Hare, 1988a) reflects its psychometric stability across samples and the importance of evaluating personality characteristics in identifying the psychopath. Harpur et al. (1988a) considered a 2-factor solution to best represent data obtained from five samples providing a total subject pool of 982. The obtained solution was not orthogonal, but oblique, reflecting the interrelationship of behavioural expression and "core" psychological attributes. Factor I, containing the items glibness/superficial charm, egocentricity/grandiose sense of

self-worth, pathological lying and deception, conning/lack of sincerity, lack of remorse or guilt, lack of affect and emotional depth, callous/lack of empathy, and failure to accept responsibility for own actions, reflects the personality characteristics considered central to psychopathy. Factor II isolated the behavioural items, reflecting a chronically unstable lifestyle and the expression of antisocial behaviour.

Differential relationships are seen with Factors I and II and external variables (Harpur, et al., 1988b), again reflecting the distinction of the personality and behavioural aspects of psychopathy and, more broadly, criminality. For example, APD diagnosis correlated more highly with Factor II ($r = .55$) than with Factor I ($r = .42$) ($z = 2.90$, $p < .005$), consistent with the impression (Hare, 1985a) that the congruence obtained between the PC and APD diagnoses relates to the common aspects of antisocial behaviour. The relationship of Factor I, as a more specific measure of personality attributes, to the interpersonal assessment strategy to be outlined next is a principal interest of this study.

The Interpersonal Adjective Scales (IAS and IAS-Revised)

A line of enquiry which has not been previously pursued in this context and which may serve several interests with respect to the characterization of the psychopath involves an interpersonal assessment strategy evolving from the circumplex model of Leary (1957), as currently developed by Wiggins (1979;

Wiggins, & Broughton, 1985; Wiggins, Trapnell, & Phillips, in press). The major values of this orientation to the assessment of psychopathy are that: (1) psychopathy is clearly an "interpersonal" disorder; (2) defined scales of the circumplex relate directly to the descriptive aspects of the psychopathic profile; (3) the IAS and IAS-R assessment have good psychometric properties; and (4) with additional research, this strategy may be more generally applicable to assessment settings other than correctional institutions.

Psychopathy is readily characterized as an interpersonal disorder: it is the apparent remorselessness and superficiality in relationships with others that constitute the basis of this personality disorder. As such, it is the failure of the psychopath to form affective interpersonal relationships or to behave in keeping with social values that defines the disorder. These personality aspects form a strong component in the factor structure of Hare's checklist (Hare, 1979; Harpur et al., 1988a), and it is these aspects for which the circumplex model for the assessment of interpersonal behaviour may be particularly well-suited.

The development of the circumplex model of interpersonal behaviour, and Wiggins' interpersonal adjective scales in particular, is described by Wiggins (1979, 1980, 1982; Wiggins, Trapnell, & Phillips, in press). The basis of the model as developed by Wiggins provides eight adjectival scales which, by

the nature of their intercorrelations, can be related as a circumplex oriented in a two-dimensional space (see Figure 1). The dimensions are defined by two orthogonal components represented as Status (dominance) and Love (affiliation), corresponding to the theoretical definition of interpersonal events as "dyadic interactions that have relatively clear-cut social (status) and emotional (love) consequences for both participants (self and other)" (Wiggins, 1979, p. 398). The underlying structure of this circumplex is related to the eight combinations derived from the granting or denying of love and/or status to oneself and/or the respective other. Thus, in terms of the interpersonal circumplex, psychopathy can be conceived of as the granting of love and/or status to oneself while denying both love and status to the other--an arrogant, cold, calculating personality.

The adjectival scales expected to relate to psychopathy and other measures correlated to them can be seen to concur well with previous definitions of the psychopathic character. The arrogant-calculating profile (variable label BC), has been used by Wiggins to characterize the narcissistic personality disorder of DSM-III (Keisler, 1985; Wiggins, 1982); however, the content and correlates of this scale have obvious application to the psychopath. As discussed by Wiggins (1982), narcissism is an exaggerated characterization of the BC profile involving grandiosity, lack of empathy for others, acting out, feelings of

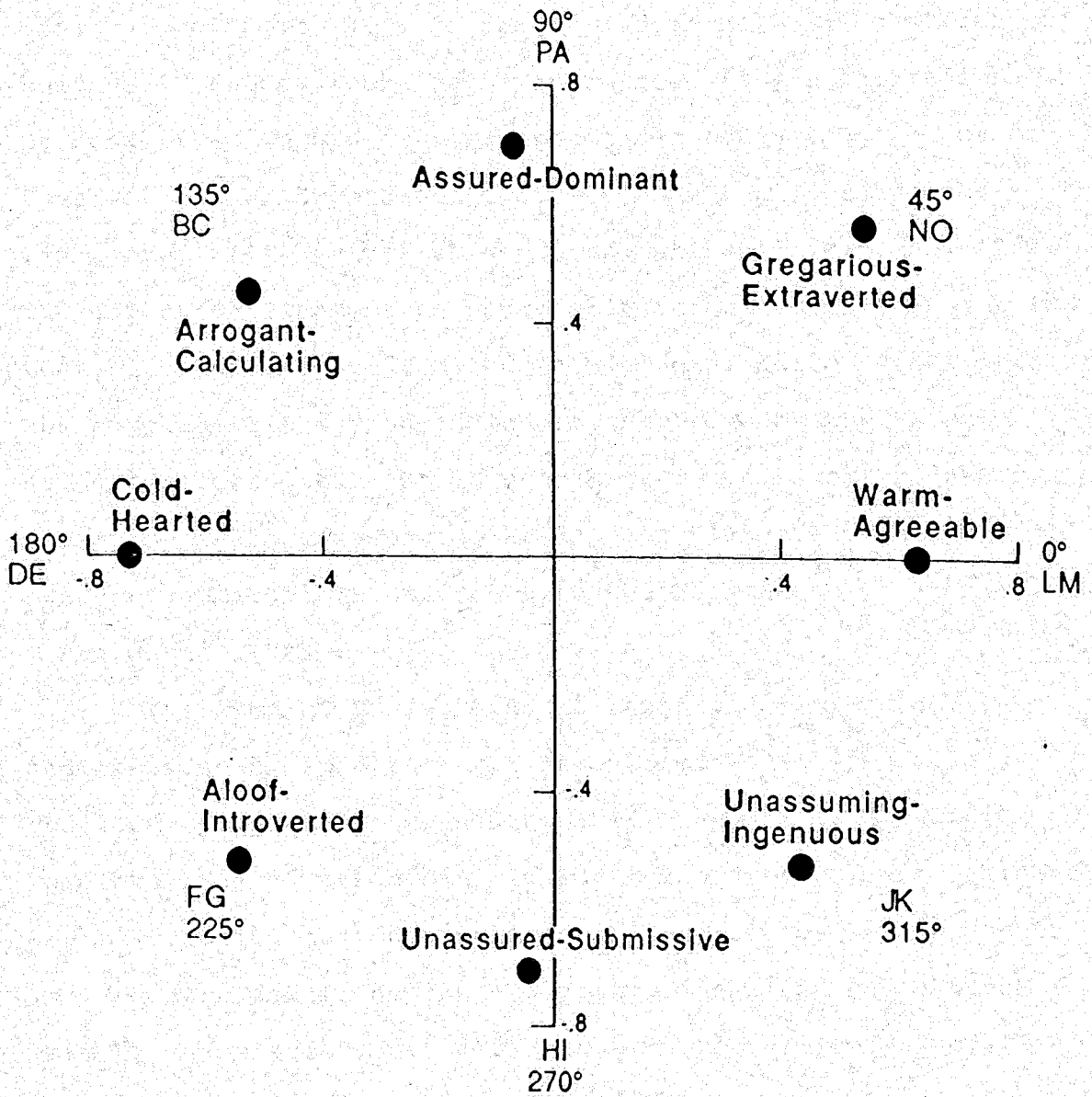


Figure 1

Circumplex structure of the IAS-R (Wiggins, Trapnell, & Phillips, in press)

special entitlement, and exploitative relations with others. The adjacent variable (DE), characterized as cold, quarrelsome, or cold-hearted behaviour, has been related to the paranoid personality disorder as representing excessive suspiciousness, hypervigilance, hypersensitivity to the behaviour of others, and restricted affectivity (cold and unemotional) (Wiggins, 1982). The expected placement of personality disorders within the IPC by Leary and Coffey (1955: cited in Widiger & Kelso, 1983) located the psychopathic and sadistic personalities at the DE pole. From studies relating the IAS to contemporary inventories assessing Murray's (1938) taxonomy of needs, correlates and analysis of content commonalities serve to further define the scales (Wiggins & Broughton, 1985).

Correlates of BC (arrogant-calculating) emphasize aggressiveness, impulsivity, rationalization of behaviour, conflict with authority, and exploitiveness. Item factor loadings reflect arrogance, exploitiveness, ready expression of anger (verbal), and competitiveness. Variables related to DE (cold-quarrelsome), depict manipulativeness and the absence of warmth, cooperation, or nurturant behaviour. The adjectives comprising these two scales (BC and DE) of the IAS-R are listed in Table IV. It can be seen that the content of these scales relates well to the characterization of the psychopath, and it is the octant bounded by these two scales which can be hypothesized to capture the psychopathic profile as obtained from ratings by

TABLE IV

Adjectives of scales BC/DE from the IAS-R (Wiggins, Trapnell, & Phillips, in press)

(BC) Arrogant-calculating

cocky

crafty

cunning

boastful

wily

calculating

tricky

sly

(DE) Cold-hearted

ruthless

ironhearted

hardhearted

uncharitable

coldhearted

cruel

unsympathetic

warmthless

others. In that dissimulation of self-report may be expected as the norm rather than the exception for a psychopathic group, self-report profiles were expected to be of interest more for the relative disparity of self versus others' ratings across groups rather than for veracity of self-depiction. Psychopaths were expected to provide more positive self-evaluations in greater disparity to the perceptions of others when compared with similar ratings for other inmate groups. This effect may, of course, be moderated by the manipulative facility and superficial charm of the individual, with the result that the most successful psychopath may escape identification in this assessment (or the checklist) by having convinced others of his basic sincerity and good intentions. An assessment strategy in which the IAS-R provides several derived measures of disparities which may counter such results will be outlined presently.

In discussing the psychometric properties of the IAS, Wiggins (1979) presents data which support general construct validity, acknowledges a confound, and suggests high internal consistency for the scales. Sex difference data reveal statistically significant ($p < .03 - .0001$, $N > 600$) differences in a pattern that suggests an even split of the circumplex with a line rotated slightly clockwise from the principal dimension of status. Interestingly, the dimension that is orthogonal to this line passes through the octant of interest here, BC/DE, postulated to contain the psychopathic profile. The mean

differences across scales suggest small sex differences (approximately .25s) with respect to seeing (identifying) oneself as either self-assured (dominant), or unassured (submissive), but relatively large differences (.5s - .75s) where ascribing characteristics to self as arrogant, calculating, cold, and quarrelsome (males > females) or warm, agreeable, unassuming, ingenuous (females > males) (Wiggins, 1979). These differences are slightly attenuated but retain the same pattern when using the revised scales (IAS-R) (Wiggins, Trapnell, & Phillips, in press).

These differences may be interpreted in relation to the apparent confound with social desirability in responding inherent to self-report with evaluative words (Wiggins, 1979). In that the desirability in this instance seems to involve portrayal of social sexual stereotypes, high scores on the BC/DE scales may also result from a tendency of males to endorse items considered masculine. This confound has implications for the present research. In that scales BC/DE demonstrate associated negative characteristics (see Wiggins & Broughton, 1985) as correlations with "negative masculinity" (M-; Spence, Helmreich, & Holahan, 1979) and Machiavellianism (MACH; Christie and Geis, 1970), it is expected that psychopaths, as more sophisticated respondents, would minimize these endorsements in favour of self-portrayals as more affable and easy-going. This supposition led to the expectation that psychopaths would score lower (by self-

description) on scales BC/DE than other inmate groups, and would score higher on scales JK/LM which depict the individual as more modest and agreeable.

Internal consistency estimates for the eight scales of the IAS over a combined sample of university students ($N = 610$) all "meet a reasonably stringent requirement of internal consistency ($\alpha > .80$)" (Wiggins, 1979, p. 408). The alpha coefficients for the scales of interest here, obtained over four subsamples of the student population (N 's range 100-152), ranged from .845 to .889. These results support the internal cohesiveness of these scales. The revised scales demonstrate similar levels of reliability, with alphas ranging from .749 to .856 in a total sample of 1161 (Wiggins, Trapnell, & Phillips, in press).

External validation of the scales is well demonstrated in recent research by Buss, Gomes, Higgins, and Lauterbach (1987). In an effort to demonstrate differences among individuals in the use of interpersonal "tactics of manipulation" and the relation of situational aspects and personality variables, Buss et al. (1987) found good congruence between interpersonal styles and different scales from the IAS circumplex. That is, different tactics were found to correlate with scales from the IAS in a way that is consistent with interpretation of the scales. Of particular interest was the manipulative capacity demonstrated by those identified within octant BC (Arrogant-Calculating). These individuals were more likely to use all of the identified

manipulative tactics, rather than rely on one or two as was more typical of other groups defined by the IAS scales. Such a result is certainly consistent with the characterization of a "calculating" interpersonal style. Gifford and O'Connor (1987) have demonstrated similar patterns of behaviour consistency in relation to scales from the IAS, with a more subtle measure of interpersonal distance.

The potential utility of this assessment of personality evolves from its development and structural characteristics and its ease of administration. The IAS-R is a 64 adjective list; respondents are instructed to rate each adjective on an 8-point scale, ranging from (1) extremely inaccurate to (8) extremely accurate, as to how well the word describes them (or some other designated target). Completion time for the list is generally quite brief, on the order of ten to fifteen minutes.

A potential problem, however, for the use of adjective lists within the population of interest here is that some words may be too difficult. Not all words may represent a similar level of difficulty (e.g., "kind" vs. "unauthoritative") or familiarity of usage (e.g., "outgoing" vs. "perky"). For the purposes of this research, a glossary was appended to the adjective list providing definitions in terms of interpersonally oriented tendencies (e.g., "cunning" - skillful in manipulating others) or simple synonyms (e.g., "jovial" - happy; good sense of humour). The glossary was provided in order to better standardize the word

presentation and level of understanding for individuals who may otherwise have been uncertain of a word's meaning. It also serves to orient the respondents to the interpersonal intent of the words, suggesting styles of relating to others rather than intrapersonal qualities or characteristics.

Once completed, the list can be scored to yield eight independent (no items overlap) scales, and these scales combined to provide two coordinates corresponding to the dimensions of Love and Dominance (e.g., Laforge, 1977) or polar coordinates within the circumplex (Phillips, 1983). Either computation results in summarizing the scale results as a point in a 2-dimensional space which is located within a particular octant of the circle and at a certain distance from the centre. The octant identifies the individual's likely interpersonal style, and the distance from the centre (vector length) may be taken as the strength of association within that octant as a function of response variability across the eight scales. Vector length is also looked upon as a potential measure of relative pathology or rigidity of interpersonal style (e.g., Chartier, 1984; Kiesler, 1985; Widiger & Frances, 1985; Wiggins, 1982; Wiggins, Phillips, & Trapnell, in press), particularly within a given octant.

The scoring and interpretation of point locations within the circumplex offers a model for representations of personality disorders. Hypothetical placements of the various personality

disorders have been suggested (e.g., Kiesler, 1985; Leary & Coffey, 1955; Wiggins, 1982), and some research has related ratings of personality disorders to the circumplex structure (e.g., Plutchik & Platman, 1977). Widiger and Kelso (1983) point to the advantages of the Interpersonal Circle in providing structure to the organization of the personality disorders, and in affording diagnostic flexibility with respect to dimensional measures and prototypic representations rather than the assumptions of discreet, classical categories. These characteristics of the scales have appeal here in providing a means to organize the conceptual coherence of different approaches to the psychopath with respect to perceptions (by self and others) of the psychopath's interpersonal style. An obvious limitation lies in the actual representations of these perceptions as obtained by self-report.

In addition to obtaining a basic profile of self-reported self-perception using the IAS-R, it was felt to be of some tactical value and potential theoretical interest to pursue a slightly more complicated set of self-report profiles. Four self-rating profiles were obtained with the IAS-R: 1) describe yourself; 2) describe your ideal self--the person you would best like to be; 3) describe yourself as you think your friends would describe you; 4) describe yourself as you think "-----" (a specific member) of the institutional staff would describe you.

The tactical value is in the aim of being able to counter

the efforts of evasive respondents attempting to distort the self-report. Because it was expected individuals would elect to bias response toward more favourable representations, the utility of different instructional sets was to provide contrasts of relative discrepancies or difference scores among the different profiles across groups. This strategy was hoped to provide a pattern of measures that could discriminate across groups although the content of self-representation may be less than veridical. Theoretically interesting results would also derive from discrepancies among representations of self as they may relate to self-perception and insight in the psychopath.

An additional source for further comparisons of discrepant ratings was also obtained from others' ratings of the inmates. Institutional staff reasonably familiar with the inmates as individuals provided ratings on the IAS-R which could be contrasted with the self-report profiles. The possible interpretations and implications of these contrasts will be discussed shortly.

Supplementary Assessments

In order to provide comparative analyses with the responses to the IAS-R, the Adjective Checklist (ACL; Gough & Heilbrun, 1980) and Rosenberg's Self Esteem Scale (Rosenberg, 1965) were also obtained as self-report.

The ACL has an extensive research background, as is

reflected in its having attained 26th position in Buros' (1978) 8th Mental Measurements Yearbook list of the 100 most used and most often referenced assessment devices in psychology. The ACL is an alphabetical list of 300 adjectives. Respondents simply check off those adjectives which they consider to be self-descriptive. The current ACL Manual (Gough & Heilbrun, 1980) outlines 37 scales which may be scored with reference to normative data. Analyses by Wiggins and Broughton (1985) have demonstrated that several of the ACL subscales have high commonalities within the circumplex space of the IAS and provide numerous zero-order correlates with the IAS scales of interest here. In the interest of providing adequate representation, yet keeping the overall number of scale comparisons within reason, a specific subset of ACL scales was selected with reference to their demonstrated relations to the IAS. To compare self-descriptions, ACL scales were selected which best represented the IAS octants of interest here: PA (assured-dominant); BC (arrogant-calculating); DE (cold-hearted); HI (unassured-submissive); JK (unassuming-ingenuous); and LM (warm-agreeable). Nine ACL scales were selected; three 'modus operandi' (MO) scales: Total Checked, Number Favourable, and Number Unfavourable; and six scales considered representative of Murray's needs: Achievement, Dominance, Autonomy, Aggression, Abasement, and Deference.

The first of these scales (Total Checked) provides both a

measure of "loquacity" and a criterion against which the other scales are standardized for scoring (Gough & Heilbrun, 1980). Standard score transforms are provided in the ACL Manual based upon differing tendencies to endorse few or many adjectives, broken into five groups. The remaining scales are scored with reference to these standardized group scores.

Megargee (1984) has found the ACL to provide discriminative differences of adjective endorsements and scale scores when contrasted across inmate groups formed on the basis of his MMPI typology. Overall, responses were notable for the rates of positive self-descriptions. Sutker, De Santo, and Allain (1985) commented upon similar response styles with the ACL seen in a sample of antisocial men and women participating in a drug abuse program. Sutker et al. (1985), however, did not provide the more typical scale score results. With respect to the ACL scales selected here, Megargee (1984) found that, overall, his inmate groups scored essentially at the mean of the normative range; but some pronounced differences were apparent when the inmates' self-ratings were compared to ratings of the inmates provided by institutional staff psychologists. Large discrepancies were evident with the scales Number Favourable, Number Unfavourable, Aggression, Achievement, and Dominance, wherein the inmates' self-ratings all reflected more positive descriptions than those made by staff.

These results supplement the pattern of results expected

with the IAS-R, and comparative analyses and correlations of scale representations will serve to enhance the interpretive generalizability of results obtained. A problem remains, however, in the functional vocabulary required to adequately complete the ACL. Given a list of 300 adjectives, it was not practical to provide a glossary as was done with the IAS. The consistency of results may be affected by differences of word usage in an inmate sample as compared to student samples.

The Rosenberg self-esteem scale was chosen as a simple scale (10 items) providing an additional measure of positive self-regard which can be compared with the ACL and IAS-R results, and included in contrasts of criterion groups. The scale has demonstrated reasonable reliability and validity (Rosenberg, 1965; Silber & Tippet, 1965) as a measure of "self-acceptance," and is attractive in its brevity and ease of administration. It is useful here as a supplementary "manipulation check" or test of consistency in responding across the self-report profiles. If the profiles are consistent and meaningful, one would expect to see a reasonable correlation between the Rosenberg scale and a measure of the discrepancy between representations of self and an ideal (e.g., low self-esteem should correspond to a greater discrepancy). Campos (1986) has presented data suggesting a relation of self-esteem with congruence of depictions of self and an ideal-self.

PURPOSE

The purpose of this research was to investigate characteristics of interpersonal style in incarcerated criminal psychopaths using the 64-adjective format of the Interpersonal Adjective Scales-Revised (IAS-R) (Wiggins, Phillips & Trapnell, in press; Wiggins, Trapnell, & Phillips, in press). Additional self-report profiles were obtained with the 300-word Adjective Check List (ACL) (Gough & Heilbrun, 1980) and the Rosenberg Self-esteem Scale (Rosenberg, 1965). Psychopathy was defined by the 20-item Psychopathy Checklist (PC) (Hare, 1985b), and comparisons made with the Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway & McKinley, 1951) and the diagnostic criteria for Antisocial Personality Disorder of the DSM-III (APA, 1980) and the DSM-III-R (APA, 1987).

Although the IAS-R has not been used specifically with clinical samples, the theoretical structure of the scales allows for specific expectations regarding the location of the psychopath within the circumplex space. It is also possible to compare the relative locations of groups defined under the various diagnostic criteria. In this way differences can be assessed in the construct validity of the various criteria as

providing groups which can be meaningfully distinguished from one another. Do men identified as psychopathic by the PC criteria differ from men considered non-psychopathic, and is the representation of the psychopath consistent with expectations? Are men who meet the criteria for APD or APD-R different from those not meeting the criteria? These questions are central to this research.

The concurrent validity of the diagnostic assessment strategies can be organized with respect to groups formed over the range of PC scores. The group defined as psychopathic by the PC constituted the criterion against which the congruence of APD diagnosis and MMPI profiles was assessed. Although this represents an essentially nominal choice, it is not entirely arbitrary. The focus of this research is to investigate an interpersonal representation of the psychopath as identified by the PC. It is apparent from the review of the literature that there continues to be considerable debate over what criteria adequately represents the psychopath; this research also affords the opportunity to further assess the congruence of different diagnostic criteria and to compare the interpersonal representations associated with these criteria. Of interest also are comparisons of diagnostic congruence when the criterion is replaced by high scores in Factor I of the PC--the "remorseless character" (Hare, 1979; Harpur, Hare, & Hakstian, 1988a).

Each of these diagnostic assessments can be taken as

independent definitions of criterion groups under which the IAS-R, the ACL, and the Rosenberg scales can be evaluated with respect to the discrimination of the resultant groups. The IAS-R profiles for groups defined by the PC and PC Factor I scores are of primary interest.

Given the previously described structure of the IAS-R as a 2-dimensional circumplex yielding point locations as profile summaries, it is possible to compute and compare Euclidean distances between points representing different profiles (Wiggins, 1982). However, simple Euclidean distance loses information which is basic to the circumplex model, i.e., octant location, and relative distance from the origin. Thus, more information could also be obtained from the contrast of polar coordinates, yielding a difference between angles and relative vector lengths. This coordinate system is the basis of an analysis program devised by Phillips (1983). Madison and Paddock (1983), in reviewing Leary's (1957) approach to the analysis of variability in circumplex models, recommend adopting a system similar to the use of polar coordinates relating relative distance from the origin but using the arc segment between points rather than the relative angular locations. Since the calculation of the arc is rather more complicated and would not provide a directional orientation, the use of angles was considered the more reasonable choice.

These two approaches, Euclidean distance and polar

coordinates, provide two ways to analyse the contrasts between points. The Euclidean distance measure can be used to summarize the simple linear distances between points and forms the basis of the contrasts following, while polar coordinates can be used to summarize octant locations and vector lengths which are more relevant to the description of interpersonal styles identified by the circumplex. The principal interest was in the comparison across groups of the relative distances between points corresponding to five conditions:

- 1) self versus ideal self;
- 2) self versus self as think friends see;
- 3) self versus self as think institutional staff see;
- 4) self versus self as seen by others (institutional staff); and
- 5) self as think staff see versus self as seen by staff.

Based on expectations for the psychopathic character, patterns of differences among these distance measures were expected for the groups. A central question with respect to assessment with the psychopath concerns dissimulation with self-report. Various expectations may effect different interpretations of patterns across these distance measures.

With respect to the first measure, self versus ideal self, the psychopath was expected to show lesser distance between these points than other respondents for at least two reasons: (1) as

facile and manipulative, sensitive to impression management, it was expected that he (all subjects are male) would portray himself in a favourable way both as self-descriptive and ideal descriptive; and (2) it is consistent with the egocentric view of the psychopath that he may see self as ideal. The second measure, self versus self as think friends see, was also expected to show lesser distance than other groups in the belief that the psychopath, more so than others, would wish to portray himself as well liked by others with whom he should be expected to have good relations.

Conversely, with the third measure, self versus self as think institutional staff see, the psychopathic group was expected to show greater distance than other groups as a result of a performance pressure to consider the perceptions of others, i.e., in the knowledge that certain staff would make ratings of them and may not think well of them. The fourth measure, self versus self as seen by staff, if consistent with the pattern proposed, should also be a maximum for the psychopathic group.

The last distance measure, self as think staff see versus self as seen by staff, has interesting implications for the self-insight or social awareness of the psychopath; i.e., is the psychopath aware of how he comes across to others? It was expected that the psychopathic group would respond to a task presented as a challenge--could they accurately predict how they are seen by a particular member of the institutional staff? To

the extent that the psychopathic group can provide profiles congruent with the perceptions of others, it may be argued that they can at least articulate the effect their behaviour has on the perceptions of others. Although not representative of empathy, it is relevant to role-taking--an hypothesized deficit in the psychopath (Gough, 1948).

The capacity of psychopaths to merely understand or grasp the perceptions of others or the effects their behaviour may have on the feelings of others is not clear. Does the psychopath blithely pursue his own ends in the absence of any understanding for others [as I believe Cleckley conceived] or does he act in self-interest despite his understanding of others' reactions? That the psychopath can verbally present an understanding of social roles and expectations is generally agreed (i.e., Buss, 1966; Cleckley, 1982; Hare, 1970, 1978; Trasler, 1978).

However, the foregoing hypotheses need also be considered with respect to other interpretations of the possible motivations for the distortion of self-report. At least four interpretations may be considered relevant: first, in keeping with Cleckley's formulation, an inability to appreciate the perceptions of others (a specific loss of insight); second, the obvious effects of desirability on self-report; third, egocentric distortion or, in effect, the denial of negative characteristics; or, fourth, egocentric manipulation or the desire to "con" others. It is probably the case that we cannot know which of these conditions

hold, as the interplay of these possible motivations may provide alternative explanations to all the foregoing expectations. However, the test of a postulated pattern of disparities among perspectives was expected to reflect better for one interpretation than another.

It would be of considerable interest to have a means to approach Cleckley's "semantic aphasia," the defect postulated to account for the inability of the psychopath to appreciate the meaning of principles of behaviour (although able to verbalize apparent understanding) and the resulting loss of insight as to the effects of his behaviour on others. This concept, in relation to the foregoing hypotheses, suggests that psychopath provides representations of himself based on his egocentric self-view rather than the interpreted perceptions of others. The expectation here would have the psychopath providing a consistent appraisal of himself without regard to the instructed perspective; thus, the psychopath's discrepancy scores should be the least across groups for all contrasts of self-rated profiles.

Recent research has pursued psychophysiological correlates of lexical analysis in male offenders and psychopaths in an attempt to identify differences in language processing which may be related to psychopathy (see Hare, Williamson, and Harpur, 1988). Considerable data have accumulated across studies using various techniques and modalities demonstrating differences in the language processing of psychopaths which may relate to

differences in cerebral organization or utilization (Hare et al., 1988). In that differences have been shown in the responses to affective words and connotative meanings, one may expect this to affect the psychopath's capacity to organize his responses to self-description with evaluative words.

In this instance, similar to that just outlined, inconsistencies in the psychopath's approach to the task would be reflected in the absence of any identifiable pattern of responses. That is, with the IAS profiles psychopaths would be expected to fall toward the centre of the circumplex (no discriminations of description) and show minimum distances across the sets of self-descriptions. Similarly, one would expect no particular differences with the ACL "MO" scales of favourable and unfavourable adjectives if the psychopaths were, in fact, to ascribe no significance to the words. However, it appears, as is pointed out by Hare et al. (1983) and others, that the psychopath does make use of the usual literal meaning of words and has the capacity to use them in a systematic way (e.g., to manipulate others). The difference with the psychopath seems a more subtle one, likened to "knowing the words but not the music," in which he generally makes appropriate use of words but does not show consistency between his words and his behaviour (cf. Hare et al., 1988).

Another interpretation of the psychopath's tendency to distort self-report may be related to the manipulation of

desirability which could operate in three ways. First, as simple social desirability, the psychopath's responses can be seen as reactive to their perceptions of the values of others (i.e., fellow inmates). The pattern of results under this condition may show relatively lesser distances between self and ideal, and self and self as think friends see than the other groups; but no difference from others with respect to the contrast of self and self as think staff see in the absence of any vested interest in the staff perceptions. A second desirability mechanism may be seen as egocentric denial of negative traits. This process may have more impact on the portrayal of self and ideal than on the perceptions of others and as a consequence would yield a pattern of discrepancies wherein the distance between self and ideal would be minimized relative to the other groups, but the contrasts of self and self as seen by others (friends and staff) would both show no difference across groups. The suggestion here is that psychopaths think well of themselves despite the understanding that others may not think well of them. The third desirability distortion can be seen as an egocentric, pro-active response style in an effort to manipulate or "con" the system (i.e., the researcher).

This last desirability manipulation is interesting in that it implies the psychopath sees himself as one who can be seen by others as affable and sincere (i.e., to expect the "con" to work) and by corollary, to possess some "insight" into behaviour and

his effect on others, i.e., know how to behave in order to be seen as a "nice guy." This obviously suggests, then, the psychopath to be aware of and responsive to principles of appropriate behaviour but to reject them in favour of more egocentric pursuits of immediate goals. The consideration of the psychopath as one who rejects social values and authority is also mentioned by Buss (1966, p. 433) and by Sarason (1978, p. 304). This implication is also considered tentatively by Cleckley (1982, pp. 229, 238-239) with respect to the issue of culpability for behaviour. It is obviously a central issue as to whether the psychopath elects to act in the knowledge of potential consequences or acts without the capacity to "understand" appropriate behaviour. Hare (1970) points out that the psychopath may be untroubled by discrepancies between his behaviour and social expectations, but that does not mean he is unaware of such discrepancies.

A summary of the hypothesized relationships among the IAS response sets under the expectation of dissimulation and three alternative interpretations is provided in Table V.

As can be seen from Table V, discrimination among the alternative sets of hypotheses regarding distance measures should also derive from the corresponding relations of polar coordinates. With the exception of differential octant locations, the polar coordinates should provide differences across groups even if the distance measures fail to do so.

TABLE V

Hypotheses and possible alternative relations.I Basic expectations - dissimulated self-report

<u>DISTANCES</u>		<u>POLAR COORDINATES</u>		<u>Vector Length</u>
		<u>Angle</u>	<u>Octants</u>	
Self vs. ideal	P < NP,M	Self P > 270	HI/JK	P > NP,M
Self vs. as friend	P < NP,M	Ideal P > 270	HI/JK	P > NP,M
Self vs. as staff	P > NP,M	As friend P > 270	HI/JK	P > NP,M
Self vs. by staff	P > NP,M	As staff P < 180	PA/BC	P > NP,M
As staff vs. by staff	P < NP,M	By staff P < 180	BC/DE	P > NP,M

II Alternative relationsA. Egocentric self-view ("semantic aphasia")

<u>DISTANCES</u>		<u>POLAR COORDINATES</u>		<u>Vector Length</u>
		<u>Angle</u>	<u>Octant</u>	
Self vs. ideal	P < NP,M	Self P > 270	HI/JK	P > NP,M
Self vs. as friend	P < NP,M	Ideal P > 270	HI/JK	P > NP,M
Self vs. as staff	P < NP,M	As friend P > 270	HI/JK	P > NP,M
Self vs. by staff	P > NP,M	As staff P > 270	HI/JK	P > NP,M
As staff vs. by staff	P > NP,M	By staff P < 270	HI/JK	P > NP,M

B. Failure to discriminate ("lexical indifference")

<u>DISTANCES</u>		<u>POLAR COORDINATES</u>		<u>Vector Length</u>
		<u>Angle</u>	<u>Octant</u>	
Self vs. ideal	P < NP,M	Self ---	---	P < NP,M
Self vs. as friend	P < NP,M	Ideal ---	---	P < NP,M
Self vs. as staff	P < NP,M	As friend ---	---	P < NP,M
Self vs. by staff	P > NP,M	As staff ---	---	P < NP,M
As staff vs. by staff	P > NP,M	By staff ---	---	P > NP,M

C. Social manipulation ("the effective 'con'")

<u>DISTANCES</u>		<u>POLAR COORDINATES</u>		<u>Vector Length</u>
		<u>Angle</u>	<u>Octant</u>	
Self vs. ideal	P < NP,M	Self P > 270	JK/LM	P > NP,M
Self vs. as friend	P < NP,M	Ideal P > 270	JK/LM	P > NP,M
Self vs. as staff	P < NP,M	As friend P > 270	JK/LM	P > NP,M
Self vs. by staff	P < NP,M	As staff P > 270	JK/LM	P > NP,M
As staff vs. by staff	P < NP,M	By staff P > 270	JK/LM	P > NP,M

Psychopaths, particularly as characterized by staff ratings, are expected to be represented in the upper left quadrant of the circumplex, the psychopathic group having most and the non-psychopathic group least. Vector length may itself provide some basis for discriminations. As outlined by Wiggins, Phillips, and Trapnell (in press), vector length may be expected to apply best as a measure of extremity or "rigidity" within a given octant; however, there is as yet little information on the relation of vector length alone to outside measures of deviance or general psychopathology.

The IAS-R may, thus, prove useful to further development in the assessment and characterization of the psychopath. To the extent that group profiles can be obtained which demonstrate discriminative utility among the groups to be assessed here, there is the potential for future research to pursue the assessment of psychopathy in populations other than incarcerated criminal or mentally disturbed offender groups. The emphasis of Cleckley's portrayal of the psychopath has focussed more on the callous superficiality of the character than on unlawful behaviour and, given the abilities of Cleckley's "true" psychopath to avoid prolonged contact with legal or psychiatric intervention, the opportunities to develop assessment profiles are rare (cf. Widom, 1978). Such opportunities may, of course, remain rare in the absence of more methods to flag a profile with instruments that may be used in more general assessment settings.

In summary, the principal objectives of this research are to evaluate the concurrent validity of assessments provided by Hare's (1985b) checklist, DSM-III, and DSM-III-R, and the MMPI for the identification of the psychopath within an incarcerated adult male population and to evaluate the utility of the Interpersonal Adjective Scales - Revised (Wiggins, Trapnell, and Phillips, in press) in discriminating among the obtained classified groups.

METHOD

Subjects

Subjects were obtained from among the inmates of Matsqui Correctional Institution--a medium security Canadian federal facility for men serving sentences ranging from two years to life. With "cascade" through the federal correctional system -- moving men down the security levels of various institutions--the men may have been convicted of crimes ranging from break and enter or theft to murder.

Participants were solicited by word-of-mouth, posters, and advertisements in the inmate newsletter. Explanation of the general research interests was made to the Inmate Committee in an effort to facilitate understanding of the independence of the research from any affiliation with correctional authorities and to provide assurances of confidentiality. The men were offered \$5.00 per session for their time as an additional incentive.

Formal consent was obtained when a subject was seen in the first session. A brief explanation was given of the research interest as emanating from the University of British Columbia Department of Psychology and that all information gained would remain completely confidential. A consent form was provided

prior to beginning the interview which again outlined the basic research interest in obtaining systematic data concerning life history. Inmates acknowledged consent by signature to participate in the interview; have the interview videotaped; provide access to institutional case management and psychological files; and complete the questionnaires for this research. It was made clear assurances of confidentiality were limited by the communication of likely harm to self or others. The men were informed that they could withdraw from the research at any time without consequence, and that neither their participation nor their withdrawal would have any effect on their status within the institution.

For the purposes here, inmates completing the questionnaires had to have a minimum grade 8 education with English as their primary language.

After 13 months of data collection, 147 men had participated in the initial diagnostic interview. From these 147, complete IAS-R protocols were obtained for 79 individuals. Data collection was stopped at this point as, based on expectations for the potential size of mean differences seen in the Wiggins, Trapnell, and Phillips (in press) normative data, power calculations suggested a group size of $n \geq 25$ to be good. The sample of 79 could also be considered adequate for multivariate analyses based on a rule-of-thumb as a ratio of subjects to variables exceeding 5. Although estimates of that ratio for an

optimal test might be considered 30 to 1 or more (cf. Anderson, 1958), practical considerations must also hold some weight. An additional 18 provided complete IAS-R self-ratings, but identified staff members failed to complete ratings for them. Another 16 men completed IAS-R ratings for sets 1, 2, and 3 but either refused (6), failed to appear for subsequent appointments (9), or were "unable" (1) to complete set 4 which asked for a rating from the perspective of a specific staff member. These additional individuals with incomplete IAS-R protocols were retained for analyses involving the data which they did provide, yielding a total sample of 113 for some comparisons.

Thirty-four men provided no data for the present purposes: 11 refused; 22 were omitted due to education less than Grade 8 (11), inadequate English (6), transfer from the institution (3), or an inability to complete a significant portion of the material (2); and one individual asked to have his data removed from the study. See Table VI for a breakdown of non-participants categorized by the Psychopathy Checklist (PC). Based on simple tests of proportions (Glass and Stanley, 1970), the groups did not differ in terms of their rates of non-participation.

The 113 men providing usable data were an average age of 29.94 years ($SD = 7.57$), with a range of 19 to 53 years. Their average education was 10.60 years ($SD = 1.67$), ranging from 8 to 16 years. The sample of 79 men who provided complete IAS-R protocols were 30.13 years ($SD = 7.46$) of age on the average,

TABLE VI
Distribution of Subjects Refusing or Omitted From
Participation Grouped with Respect to the PC

PC Group	1 (Psychopathic)	2 (Mid-Range)	3 (Non-Psychopathic)	Test of Proportions
<u>Refused</u>				
IAS-R: ALL	4	5	2	N.S.
PART	2	10	4	N.S.
MMPI	8	9	2	N.S.
<u>Omitted</u>				
IAS-R				
Education	2	6	3	N.S.
Language	1	2	3	N.S.
Transferred	0	3	0	N.S.
Incomplete	0	2	0	N.S.
MMPI				
Language	1	7	4	N.S.
Transferred	4	8	5	N.S.
Total Group Number Based on N = 146	38	65	43	

TABLE VII
Means and Standard Deviations of Age
and Years of Education Across Groups

GROUP CLASSIFICATIONS			AGE		EDUCATION		DIFFERENCES	
<u>N = 113</u>		(n)	Mean	SD	Mean	SD	Age	Education
PC GROUP	1	(31)	30.19	7.52	10.23	1.41	N.S.	N.S.
	2	(47)	29.19	7.04	10.55	1.69		
	3	(35)	30.71	8.37	11.00	1.80		
FACTOR I GROUP	1	(31)	29.81	7.73	10.42	1.50	N.S.	N.S.
	2	(29)	31.03	7.82	10.79	1.86		
	3	(53)	29.41	7.42	10.60	1.67		
APD	1	(75)	31.76	8.25	10.35	1.43	N.S.	$\underline{p} < .025$
	2	(38)	29.01	7.07	11.10	1.98		
APD-R	1	(66)	28.65	7.02	10.33	1.56	$\underline{p} < .05$	$\underline{p} < .05$
	2	(47)	31.74	8.00	10.98	1.75		
<u>N = 79</u>								
PC GROUP	1	(27)	29.74	6.79	10.18	1.24	N.S.	N.S.
	2	(27)	29.30	6.98	10.85	1.85		
	3	(25)	31.44	8.69	11.08	1.58		
FACTOR I GROUP	1	(25)	29.04	6.91	10.44	1.42	N.S.	N.S.
	2	(20)	33.15	7.19	11.10	1.94		
	3	(34)	29.15	7.73	10.65	1.52		
APD	1	(52)	31.78	8.45	10.36	1.34	N.S.	$\underline{p} < .01$
	2	(27)	29.27	6.83	11.33	1.88		
APD-R	1	(47)	29.15	6.82	10.30	1.35	N.S.	$\underline{p} < .01$
	2	(32)	31.56	8.21	11.28	1.78		

NOTE: Within each set, Group 1 refers to those meeting the relevant criteria.

with an age range of 19 to 53 years. Their average education was 10.70 years ($SD = 1.60$), ranging from 8 to 16 years. Of the groups formed by the different classification criteria (Psychopathy Checklist (PC), PC Factor I scores, APD under DSM-III, or APD under DSM-III-R (APD-R), only the groups formed with reference to APD and APD-R showed differences in age and/or education (See Table VII). In the sample of 113, the 66 men meeting APD-R criteria tended to be younger ($M = 28.65$, $SD = 7.02$ versus $M = 31.74$, $SD = 8.00$; $t_{(111)} = 2.18$, $p < .025$) and to have slightly less education ($M = 10.33$, $SD = 1.56$ versus $M = 10.98$, $SD = 1.75$; $t_{(111)} = 2.06$, $p < .025$) than the men not meeting the same criteria. Under APD by DSM-III, the 75 men meeting the criteria did not differ in age but tended to have somewhat less education ($M = 10.35$, $SD = 1.43$ versus $M = 11.10$, $SD = 1.98$; $t_{(111)} = 2.33$, $p < .025$). From the subsample of 79, the 47 men meeting the APD-R criteria did not differ in age but tended to have less education ($M = 10.30$, $SD = 1.35$ versus $M = 11.28$, $SD = 1.78$; $t_{(77)} = 2.79$, $p < .005$). Under APD-R by DSM-III, the 52 men meeting the criteria similarly did not differ in age but tended to have less education ($M = 10.36$, $SD = 1.34$ versus $M = 11.33$, $SD = 1.88$; $t_{(77)} = 2.64$, $p < .01$) than those not meeting the criteria.

Overall, the men participating in this research were quite cooperative and interested. A good rapport was generally established with the men seen. Once accepted as representing a

research interest independent of the Corrections Service or other authorities, the men were typically quite willing to provide detailed life histories and complete the questionnaires provided. Assurances of confidentiality served to remove any threat of personal consequence and many men appeared to enjoy the opportunities for conversation. As such, the assessment situation may have compromised generalization to an institutional assessment and may not reflect the responses given in an applied context.

Setting

Matsqui is a relatively open institution. Inmates within the general population have free movement between the living unit, grounds, vocational training centre, academic centre for upgrading or university coursework, and work settings during most daytime hours with the exception of counts before lunch and dinner when all inmates must be accounted for. After the dinner hour, inmates may only have access to a more limited portion of the facilities, including the gymnasium, hobby shops, library, or games room unless specifically provided with a pass. Inmates within the segregated unit have little or no access to the rest of the institution, and times for their appointments generally had to be restricted to the evening hours when the general population was under more restricted access.

Security staff (men and women) are highly visible within the

institution, but are not armed. Major control points, such as the living unit tiers or main entrance, are run from secure rooms with electronic gate controls. The perimeter of the institution is fenced by a double series of 12-foot chain links topped by barbed wire and watched by video surveillance and perimeter guards.

Interviews and testing for the current research were conducted in a room provided for this purpose within the institution's Health Care Centre. Appointment times were set in advance and passes provided on the day prior to the appointment. The room was quite comfortable, approximately 15 feet square, with carpeting, blinds, plants, and wall posters. Office furniture consisted of a desk, three chairs, a filing cabinet, and a table with a computer and monitor. Interviews were videotaped with a camera and recorder placed beside the desk.

Personnel

The research personnel consisted of one female and two male graduate students ranging in age from 25 to 35 years, and two female research assistants aged 27 and 32. As projects other than this one were being conducted concurrently, inmates participating could see up to four different individuals in connection with various aspects of the research program. Interviews were conducted by all research personnel; the self-report questionnaire specific to this research were all

administered by the author.

Materials

Rating forms were completed for the PC and APD criteria. The PC (Hare, 1985b) consisted of 20 items rated on a three-point scale (0-2) as to how well the inmate met the description for each item. The APD diagnoses were completed with respect to criteria provided in DSM-III (APA, 1980) and DSM-III-R (APA, 1987). Self reports were obtained with the IAS-R, ACL, Rosenberg scale, and MMPI. The IAS-R (Wiggins, Trapnell, and Phillips, in press) is a 64-adjective list completed by rating each adjective on an 8-point scale (1-8) as to its accuracy of description. The ACL (Gough and Heilbrun, 1980) is an alphabetic list of 300 adjectives completed by simply indicating which adjectives are considered appropriate for the descriptive task. The Rosenberg Scale (Rosenberg, 1965) is a ten-item questionnaire in which each item is endorsed on a four-point scale (1-4) as to agreement with the statement presented. The MMPI (Hathaway and McKinley, 1947) was the 556-item booklet format, each statement being responded to as true or false.

Procedure

Men participating in the research were first interviewed with a semi-structured protocol outlining educational and work histories, psychological or health problems, family and other

relationships, drug use, juvenile and adult criminal history, and general questions relating to attitudes and perceptions regarding self and others (see Appendix A). The interview was videotaped for subsequent review. At the conclusion of the interview, the interviewer noted impressions regarding the inmate with respect to verbal style, behaviour, and attitudes.

Institutional case management, medical, and psychological files were reviewed for information relating to past history, criminal record, staff impressions, psychiatric contacts, and psychological testing or reports.

The interviewer completed PC ratings and APD criteria on the basis of interview and available file information. A second, independent rating of the PC and APD criteria was made on the basis of the videotape of the interview and from file information.

At the completion of the interview, the inmate was booked for a subsequent appointment for the completion of the IAS-R, ACL and Rosenberg scale. Presentation of these questionnaires was fixed, and a standard introduction provided:

What I would like you to do today is complete a few questionnaires, word lists actually, to describe yourself in a few different ways. All together these questionnaires take about an hour to complete. The first thing I need is a bit of backgrounds information,

The inmate's age, birthdate, education and upgrading achieved, any history of or current reading difficulties, and recent employment history were requested. The IAS-R was then presented

four times in a fixed order with both a written and verbal instructional set. The inmate was provided with a glossary for reference if he was unsure of the meaning of a word (see Appendix A).

The IAS-R sequence was presented as follows:

Here is the first one, please read the instructions and then I will explain it a bit What I would like you to do here is describe yourself as an individual, on average, not just here in the institution but you as a person, by rating each of these words on the list below as to how accurately it describes you. Use the numbers from the scale at the top: 1 means the word is 'extremely inaccurate'--it doesn't describe you at all, or some number over to 8 which means the word is 'extremely accurate'--it fits you to a 'T.' So the idea is to rate how accurate the word is in describing you as a person. If you are unsure of the meaning of a word, you can look it up on this other list, which gives you an explanation of how the word is meant. Some of the words are a bit odd so if you're not sure please look it up. If you're still not sure, ask and I'll try to explain it. Any questions about it? O.K., go ahead.

At the completion of the first set, it was taken away and the second set provided with a written and verbal introduction:

This is the same list of words again, but this time I would like you to describe an 'ideal self,' a perfect character for you, sort of the person you would most like to be. So this time rate the words as to how accurately they would describe a perfect character for you.

At the completion of the second set, it was taken away and the third set provided with verbal and written instructions:

O.K., this is the same list again, but this time I'd like you to describe yourself as you think a friend of yours would describe you. Think of someone who knows you pretty well and I'd like you to rate the words as you think they would describe you.

At the completion of the third set, it was taken away and the fourth set provided with verbal and written instructions:

O.K., last time for this one, same list again, but this time sort of like the last one but a bit more specific. This time I'd like you to describe yourself as you think some member of the institution staff would describe you. I'd like you to think of someone in particular who has some knowledge of you; I know you don't have a lot of opportunity or interest to talk to staff, or that they necessarily know you, but perhaps your casemanager or work supervisor or someone else you can think of is likely to have an impression of you based on what they see of you. I'd like you to think of someone in particular and note their name, so that for the flip side of this, I can send the same form to the person you name to have them describe you. O.K.?

Once the inmate had indicated someone, the instruction continued:

O.K., good, so now describe yourself as you think he'll/she'll describe you, and then I'll send one to them and ask them to describe you. You won't see theirs and they won't see yours; just try to describe yourself as you think they will, as accurately as you can.

At the completion of the fourth set, it was taken away and the ACL was provided with verbal and written instructions:

O.K., thanks, this next one is a different list of words and this time you don't have to rate the words, just indicate with a check or an 'X' which words describe you. So this is to describe yourself again, as you think you are, as an individual, on average, not just in here. Go through the list and check off those words which describe you and leave them blank if they don't. Some of these words are a bit odd, so if you're not sure of a word, please ask and I'll try to explain it.

Upon completion of the ACL, it was taken away and the Rosenberg scale presented with the following verbal instructions:

O.K., here's the last one; just indicate how you'd agree with each of these statements."

With the completion of the Rosenberg scale, the inmate was thanked for his participation and queried as to whether he would be available at another time for another questionnaire if necessary.

Staff ratings of the inmate were obtained by sending the particular staff member, named by the inmate, forms in a returnable envelope using the institution mail. The staff member thus received a copy of the IAS-R and glossary with written instructions and a cover letter indicating the interest in having him/her rate the indicated person, that the individual named was aware of it being sent and had given his consent, and that all responses would remain confidential.

At the conclusion of the research, a representative sample of staff respondents was selected and these individuals were asked to provide a hypothetical descriptive rating of the "average inmate" seen at this institution, based on their own experience. Responses were received from eight staff members: six men and two women, representing case management personnel, vocational instructors, and security staff. These responses were pooled to provide a descriptive reference point for staff perceptions which may be related as an inmate "stereotype."

The MMPI was administered at a separate time as it required approximately 1 1/2 hours to complete. As the MMPI was also routinely administered as part of psychological testing with induction to the institution, it was given again only to those

inmates who did not have one on file (had refused testing) or, if it was on file, the previous administration was more than six months prior to the current assessment. Inmates completing the MMPI were provided with the 566-item format, hand scorable True/False answer sheets, and written and verbal instructions:

This questionnaire is a bit longer, but looks worse than it is. It takes about 1 1/2 hours to finish. You may have seen it before. This one is a list of statements with which you might agree or not as being true for you. The statements range from simple preferences like 'I like mechanics magazines' to other statements of beliefs, problems, or concerns. So the idea is to read the statement and consider it, on average, as being true or false for you. They don't require much thought, so you can go through it quite quickly. If you have any question as you go through, please ask. O.K.? Go ahead.

Throughout the administration of these questionnaires, the administrator remained in the room and read while the inmate completed the forms.

Scoring

The PC totals for two raters were averaged and the averaged totals greater than or equal to 30 were classified as the psychopathic criterion group. The averaged totals which were less than or equal to 20 were classified as non-psychopathic, and those greater than 20 and less than 30 constituted the mid-range or mixed group. The PC totals averaged for two raters were also retained for correlational analyses. The independent ratings provide assessment of interrater reliability. Where ratings were

discrepant by more than five points, a third independent rating was scored and paired to the closest of the discrepant two.

Totals for the PC items comprising Factor I (Harpur, et al., 1988a) were summed over the two raters. Totals could thus range to a maximum of 36. Total scores ranging from 28 to 36 inclusive constitute the high group (psychopathic), from 20 to 28 the mid-range, and less than 20 the low group (non-psychopathic). These total scores were also retained for correlation analyses.

APD ratings were completed as 3, 2, 1 where 3 indicates not APD, 2 indicates possible APD, and 1 indicates definite APD under the criteria for each of DSM-III and DSM-III-R. The use of "possible" was used here to indicate those men who may meet all but one of the criteria in either set A or set B as defined by the APA (1980, 1987) for the diagnoses. These three point ratings were used to assess the congruence of APD ratings across both criteria, as well as collapsed criterion ratings of 3 (3, 2) or 1 (1) indicating not or definite APD. Interrater reliabilities were taken from a subset of the total sample.

The IAS-R results were entered into a computer for scoring point profile summaries, polar coordinates, and calculation of distances between points across the different instructional sets. The point coordinates (Dominance, Love) and polar coordinates are based on the raw scale scores standardized with reference to the means and standard deviations obtained from the cumulative sample of 1,162 college students reported by Wiggins, Trapnell, and

Phillips (in press). The Dominance and Love coordinates are derived as weighted linear combinations of the standardized scale scores:

$$\text{Dom} = (.3\text{PA} + .212 \text{ BC} + .212 \text{ NO} - .212 \text{ FG} - .212 \text{ JK} - .3\text{HI})$$

$$\text{Lov} = (.296\text{LM} + .209 \text{ NO} + .209 \text{ JK} - .209 \text{ FG} - .209 \text{ BC} - .296 \text{ DE})$$

and the polar coordinates calculated with respect to the obtained point locations (Phillips, 1983). The ACL was handscored for the scales Total Checked, Number Favourable, Number Unfavourable, Achievement, Dominance, Aggression, Autonomy, Abasement, and Deference. These scale scores (with the exception of Total Checked) were then transformed to standard scores according to the norms provided in Gough and Heilbrun (1980). The raw score Total Checked and the standardized scale scores were entered for comparative and correlational analyses.

The Rosenberg Scale was totalled with respect to low self-esteem, i.e., appropriate item scores were reflected so that high score totals would correspond to low self-esteem. Scores could range from 10 to 40. The MMPI profiles obtained were classified to groups on the basis of previously defined criteria (Table II, p. 17). Thus, group membership was used as the basis for analysis using the MMPI as a criterion. Interrater reliability of categorical assignment was assessed for a subset of the sample.

RESULTS

DIAGNOSTIC CRITERIA

This section will outline the obtained distributions of the diagnostic criterion groups; the following section will examine diagnostic agreement across criteria.

Psychopathy Checklist (PC)

Group assignments under the PC were made with respect to the average of checklist scores obtained from two raters. These scores ranged from 3.5 to 37 (maximum = 40) with a mean of 23.84 (SD = 7.26) in the sample of 113, and a mean of 23.96 (SD = 7.85) in the sub-sample of 79. The "adjusted" (use of a third independent rater when the other two differed by more than 5 points) interrater reliability was .896 for the sample of 113 and .903 for the sub-sample of 79. The overall unadjusted interrater reliability for an N of 142 was .780. (A subsequent analysis of the intraclass correlation over 5 pairs of 4 raters was also .780 with an N of 174).

In keeping with classification guidelines provided by Hare (1985b), men with averaged scores equal to or greater than 30 were categorized as psychopaths, men with averaged scores less than or equal to 20 were categorized as non-psychopaths, and the

balance constituted the mid-range. The sample of 113 men divided into groups as follows: 31 psychopaths, 47 mid-range, and 35 non-psychopathic; the sub-sample of 79 provided groups of 27, 27, and 25.

PC Factor I Scores

The men were also scored from the PC with respect to Factor I item score totals (Harpur, et al., 1988a) summed for the two raters. Scores could range from 0 to 36. Men with scores equal to or greater than 28 were classified as psychopaths by this criterion; those with scores less than or equal to 19 were non-psychopathic, and the rest constituted the mid-range. Obtained scores ranged from 5 to 34 with a mean of 21.62 ($SD = 6.89$) in the sample of 113, and a mean of 21.91 ($SD = 7.24$) in the sub-sample of 79. The sample of 113 provided groups as follows: 31 psychopaths, 29 mid-range, and 53 non-psychopathic; the subsample of 79 yielded groups of 25, 20 and 34 as defined by the Factor I score criterion.

Antisocial Personality Disorder (APD and APD-R)

Diagnostic assignments of APD were made using the criteria specified in DSM-III (APA, 1980) and APD-R by DSM-III-R (APA, 1987) with information provided from the interview and available institutional files. Ratings were made which resulted in 3-group (not APD, possible APD, definite APD) or 2-group (not APD,

definite APD) assignments. In the latter case, "not APD" corresponds to the collapsing of the "not" and "possible" categories of the 3-group set. Interrater agreements for the 2-group assignments were calculated on a subsample for whom two independent ratings were available; results were fair with Kappa coefficients of .62 for APD and .55 for APD-R. The following results are based on diagnoses provided by one rater only.

In the sample of 113, 75 men met the criteria for definite APD and 66 met the criteria for definite APD-R, 10 were considered possible APD and 20 possible APD-R, 28 men were categorized as not APD and 27 as not APD-R. When only 2-group assignment possibilities were used, 38 of 113 men did not meet the criteria for APD and 47 did not meet the criteria for APD-R.

In the subsample of 79, 52 men met the criteria for definite APD and 47 for definite APD-R, 8 were considered possible APD and 13 possible APD-R, 19 were categorized as not APD and 19 as not APD-R. Thus, as 2-group assignments, 27 of 79 men did not meet criteria for APD and 32 did not meet the criteria for APD-R.

Minnesota Multiphasic Personality Inventory (MMPI)

MMPI profiles were obtained from 89 of the sample of 113 men and 64 of the sub-sample of 79 (see Tables VIII and IX for the distribution of MMPI groups previously defined). For the purposes of this research the profiles commonly considered to be related to the psychopathic personality are of primary interest.

TABLE VIII
Overall Frequency Distributions of MMPI Group Categories
For the Parent Sample (N = 113)

		-9	1	2	3	4	5	6	7	8	9	10	11
		"missing"	"omits"	"Fake bad"	"Fake good"	"Spike 4"	4/9	4/8	"Neurotic"	"Psychotic"	"Hypo- manic"	"Other"	"Normal"
MMPI GROUP ^a N = 113	Overall	24	4	4	1	9	6	5	0	2	4	48	6
PC GROUP ^b	1 (31)	8	1	1	0	4	2	2	0	0	2	10	1
	2 (47)	11	3	2	0	3	2	3	0	0	1	19	3
	3 (35)	5	0	1	1	2	2	0	0	2	1	19	2
FACTOR I ^b GROUP	1 (31)	8	2	1	0	4	2	2	0	0	3	8	1
	2 (29)	6	0	1	0	2	2	3	0	0	1	12	2
	3 (53)	10	2	2	1	3	2	0	0	2	0	28	3
APD ^c	1 (75)	19	3	4	1	5	4	4	0	0	2	28	5
	2 (10)	3	0	0	0	2	0	0	0	0	0	5	0
	3 (28)	2	1	0	0	2	2	1	0	2	2	15	1
APD-R ^c	1 (66)	13	3	3	1	8	3	4	0	0	2	24	5
	2 (20)	6	0	1	0	0	1	0	0	0	0	12	0
	3 (27)	5	1	0	0	1	2	1	0	2	2	12	1

- NOTES: (a) see Table II for definitions of the MMPI Group categories.
 (b) group classifications are defined as 1 = Psychopathic, 2 = midrange, 3 = non-psychopathic.
 (c) group classifications are defined as 1 = Definite APD, 2 = Possible APD, 3 = Not APD.

TABLE IX

Overall Frequency Distributions of MMPI Group Categories
For the Sub-Sample (N = 79)

MMPI GROUP ^a N = 79 (n)	-9 "missing"	1 "omits"	2 "Fake bad"	3 "Fake good"	4 "spike 4"	5 4/9	6 4/8	7 "neurotic"	8 "psychotic"	9 "hypo- manic"	10 "other"	11 "normal"
Overall	15	2	2	1	8	3	4	0	2	4	32	6
PC GROUP ^b												
1 (27)	5	0	1	0	4	2	2	0	0	2	10	1
2 (27)	5	2	1	0	2	0	2	0	0	1	11	3
3 (25)	5	0	0	1	2	1	0	0	2	1	11	2
FACTOR I GROUP ^b												
1 (25)	5	0	1	0	4	2	2	0	0	3	7	1
2 (20)	3	0	0	0	2	0	2	0	0	1	10	2
3 (34)	7	2	1	1	2	1	0	0	2	0	15	3
APD ^c												
1 (52)	10	2	2	1	5	2	3	0	0	2	20	5
2 (8)	3	0	0	0	0	0	0	0	0	0	3	0
3 (19)	2	0	0	0	1	1	1	0	2	2	9	1
APD-R ^c												
1 (47)	9	2	2	1	8	1	3	0	0	2	14	5
2 (13)	3	0	0	0	0	1	0	0	0	0	9	0
3 (19)	3	0	0	0	0	1	1	0	2	2	9	1

- NOTES: (a) see Table II for definitions of the MMPI group categories.
 (b) group classifications are defined as 1 = Psychopathic, 2 = Midrange, 3 = Non-Psychopathic.
 (c) group classifications are defined as 1 = Definite APD, 2 = Possible APD, 3 = Not APD.

Thus, groups 4 ("spike 4"), 5 (49/94), and 6 (48/84 with 9 and/or 6) are the focus here. In the sample of 113 (89 profiles) 20 profiles fit one of these groups (9 in group 4, 6 in group 5, and 5 in group 6); the sub-sample of 79 (64 profiles) yielded 15 fitting one of these groups (8 in group 4, 3 in group 5, and 4 in group 6). As can be seen from Table VIII, group 10 ("other")--profiles failing to meet more straightforward criteria--was the most common, constituting 53.9% of the larger sample and 50% of the sub-sample. Interestingly, group 7 (a "neurotic" profile) was not represented. Interrater agreement for group assignments was 100% for a sub-sample of 55 profiles.

DIAGNOSTIC CONGRUENCE

Comparisons of diagnostic congruence have been made using lambda (λ) coefficients (Hays, 1973) of predictive association when contrasting 3 group criteria and Kappa coefficients for diagnostic agreement for collapsed two group sets. Comparisons involving the MMPI are based on tests of proportions of the relevant MMPI groups across each contrasted diagnostic set, as well as lambda coefficients based on the overall distributions of MMPI profiles. It is also possible to consider the specificity and sensitivity of the relevant MMPI profiles in comparison to assignments made by other criteria, particularly the PC.

The ten possible pairwise contrasts of the five diagnostic criteria will be outlined in the order listed in Table X, first

TABLE X

Lambda (λ) Coefficients of Predictive Association and Kappa (K) Coefficients of Diagnostic Agreement Across the Different Criteria Based on the Parent Sample (N = 113)

	λ AB	COEFFICIENT ^a		Simple "Agree"		
		λ BEST	K			
DIAGNOSTIC CONTRASTS						
PC vs. Factor I	.524	(\rightarrow PC) .545	.778	91.2%		
vs. APD	.183	(\rightarrow APD) .211	.183	59.3%		
vs. APD-R	.115	(\rightarrow PC) .121	.114	56.6%		
Factor I vs. APD	.012	(\rightarrow FI) .017	.076	54.0%		
vs. APD-R	0.0	0.0	.079	54.9%		
APD vs. APD-R	.471	(\rightarrow APD) .500	.529	77.9%		
MMPI CONTRASTS ^b						
			Specificity ^c	Test of Proportions ^d (Approx. Z)	Sensitivity ^e	Test of Proportions ^f (Approx. Z)
MMPI vs. PC	.038	(\rightarrow PC) .076	40%	1.29	25.9%	1.54
vs. Factor I	.056	(\rightarrow FI) .117	40%	0.99	25.9%	2.01
vs. APD	.019	(\rightarrow APD) .053	65%	4.22	17.8%	0.86
vs. APD-R	.018	(\rightarrow APD-R) .043	75%	7.98	22.7%	0.86

- NOTES:
- Lambda coefficients are based on 3x3 group comparisons, Kappa and simple agreements are based on 2x2 comparisons; λ_{AB} refers to the symmetric average, λ_{BEST} refers to the best predictive relation with the associated dependent variable in parenthesis.
 - MMPI contrasts providing Lambda coefficients are based on the overall MMPI distribution.
 - Specificity refers to the proportion of relevant MMPI profile groups (i.e., 4, 5, and 6) accounted for by the target criterion group (i.e., psychopathic or definite APD).
 - Test of proportions of extreme groups within the diagnostic category.
 - Sensitivity refers to the proportion of the target criterion group accounted for by the relevant MMPI profile groups.
 - Test of proportions of extreme groups within the diagnostic category.

comparing the PC to Factor I, APD, APD-R, and so forth, for comparisons based on the parent sample of 113 men. As can be seen from Table X, the PC and the derivative Factor I scores provide the highest level of agreement ($\text{Kappa} = .778$) and predictive association ($\lambda_{AB} = .524$). It is interesting to note, however, that the correspondence is less than perfect and that Factor I scores are a better predictor ($\lambda_{\text{best}} = .545$) of the PC totals than the converse.

The correspondence between the PC classification and diagnoses of APD and APD-R is clearly poor ($\text{Kappas} = .183$ and $.114$ respectively), and much lower than has been reported previously by Hare (1981, 1983, 1985a). The differences here likely derive from having used the complete data set in a collapsed 2×2 comparison of those meeting or not meeting the criteria, rather than the association of extreme groups without inclusion of the mid-range as was reported by Hare (e.g., 1985a). The relations of the Factor I categories to APD and APD-R are somewhat worse still ($\text{Kappas} = .076$ and $.079$ respectively) and, within this data set at least, it is apparent that knowledge of an individual's status with respect to APD-R diagnosis tells you nothing about his possible Factor I group membership and vice versa. The level of agreement evident between APD and APD-R is surprisingly low ($\text{Kappa} = .529$) and may reflect the effect of tightening the adolescent criteria for the APD-R diagnosis as well as potential rater variability.

The MMPI profile group identified previously contribute little to the prediction of the other diagnostic group categories (see Table X). The more circumscribed set of profile groups 4, 5, and 6 (total 20) do, however, show a modest level of correspondence to the specific diagnostic criterion groups, particularly APD-R. Comparisons here are based on the specificity of these profiles--defined for the purposes here as the proportion accounted for by the specific criterion group, and the sensitivity--defined here as the proportion of a specific criterion group having the relevant profiles. The proportions within the various diagnostic groups were tested as an approximate Z -statistic (Glass and Stanley, 1970) comparing the extreme groups of each diagnostic set. It is apparent these profiles are quite specific to the APD-R diagnosis (75% of the obtained profiles), but are evident in only a small proportion (22.7%) of those receiving the diagnosis. The association of "psychopathic" MMPI profiles to the PC or Factor I psychopathic group is rather modest, 40% of the profiles being specific to these criterion groups and 25.9% of the criterion groups exhibiting the relevant profiles.

Table XI provides the same diagnostic comparisons for the subsample of 79. The relationships among the various criteria maintain the same pattern as seen in the parent sample although the absolute magnitude appears marginally greater for all comparative measures. This suggests that the smaller sample is a good representation of the parent sample and that the data remain

TABLE XI

Lambda (λ) Coefficients of Predictive Association and Kappa (K) Coefficients of Diagnostic Agreement Across the Different Criteria for the Sub-Sample (N = 79)

COEFFICIENT ^a							
DIAGNOSTIC CONTRASTS	λ_{AB}	λ_{BEST}	K	Simple "Agree"	χ^2	d.f.	P
PC vs. Factor I	.608	(PC) .635	.771	89.9%	73.3	4	< .00005
vs. APD	.304	(PC) .327	.317	65.8%	28.7	4	< .00005
vs. APD-R	.250	(PC) .269	.238	62.0%	24.9	4	.0001
FACTOR I vs. APD	.097	(FACI) .156	.215	60.8%	13.6	4	.0088
vs. APD-R	.078	(FACI) .133	.183	59.5%	10.1	4	.0388
APD vs. APD-R	.559	(APD-R) .563	.648	83.5	71.3	4	< .00005

MMPI CONTRASTS ^b	λ_{AB}	λ_{BEST}	Specificity ^c	Test of Proportions ^d (Approx. Z)	P	Sensi- tivity ^e	Test of Proportions ^f (Approx. Z)	P
MMPI vs. PC	.081	(PC) .154	53.3%	1.59	> .05	29.6%	1.55	
vs. Factor I	.087	(FACI) .178	53.3%	1.59		32.0%	2.26	< .02
vs. APD	.027	(APD) .074	67.7%	2.64	< .01	19.2%	0.318	
vs. APD-R	.025	(APD-R) .063	80.0%	3.72	< .01	25.5%	1.34	

NOTES: (a) Lambda coefficients are based on 3x3 group comparisons, Kappa and simple agreements are based on 2x2 comparisons; λ_{AB} refers to the symmetric average, λ_{BEST} refers to the best predictive relation with the associated dependent variable in parenthesis.

(b) MMPI contrasts providing Lambda coefficients are based on the overall MMPI distribution.

(c) Specificity refers to the proportion of relevant MMPI profile groups (i.e., 4, 5, and 6) accounted for by the target criterion group (i.e., psychopathic or definite APD).

(d) Test of proportions of extreme groups within the diagnostic category.

(e) Sensitivity refers to the proportion of the target criterion group accounted for by the relevant MMPI profile groups.

(f) Test of proportions of extreme groups within the diagnostic category.

quite robust despite the loss of 30% of the sample.

DEPENDENT MEASURES

Interpersonal Adjective Scales - Revised (IAS-R)

As a preliminary evaluation of the adequacy of the IAS-R data, a principal components analysis of the self-descriptions (set 1) was conducted for the sample of 113 men. The data were consistent with a 2-component solution (eigenvalues of 3.26 and 2.57, all others $< .7$; accounting for 72.8% of the variance) which provided a good distribution of the scales suggesting a circumplex space (see Figure 2). The same analysis for the subsample of 79 was similarly encouraging, with the 2-component solution accounting for 69.7% of the variance.

Since complete IAS-R protocols (sets 1 through 5) were only obtained for the subsample of 79, the following outline of the descriptive aspects of the IAS-R measures is based on that subsample. Table XII provides the summary statistics derived from standardized scores (see p. 69) yielding the DOM and LOV coordinates, polar coordinates expressed as the angle corresponding to the mean Dom and Lov coordinates with the associated vector length, and the modal octant locations for the sample of 79 across the five IAS-R representations. A manipulation check, or test of the adoption of different perspectives as instructed for the different IAS-R representations, is afforded by the assessment of the main effect

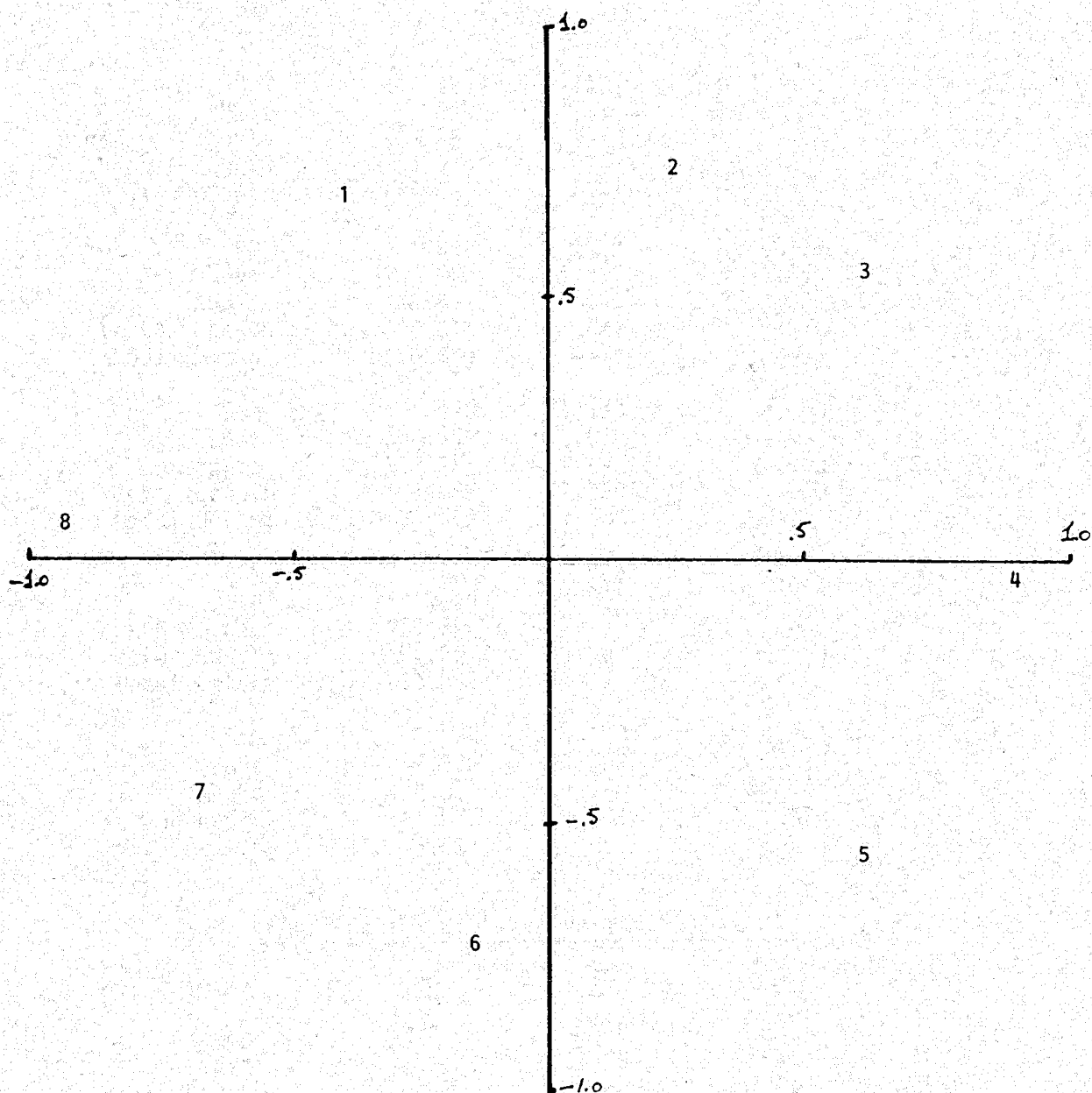


Figure 2

Obtained 2-factor solution for the circumplex based on $N = 113$.

Note: The obtained scale locations provide a clockwise rotation, convention reflects to counter-clockwise.

TABLE XII

Summary Statistics for the Overall Distributions of Point Coordinates
and Modal Octant Locations for the Sample N = 79

IAS-R SET	Coordinates	Mean	Standard Deviation	Minimum	Maximum
1. Self	Dom	.304	1.064	-3.020	3.250
	Love	-.511	1.336	-3.230	2.800
	Angle ^a	149.25	---	3.000	342.000
	Vector Length	1.615	.796	.090	4.35
	Modal Octant (BC) 2(21.5%)	---	---	---	---
2. Ideal	Dom	.982	.837	-.770	3.190
	Love	.420	1.499	-3.060	3.700
	Angle	66.84	---	1.000	360.000
	Vector Length	1.812	.881	.080	4.420
	Modal Octant (NO) 8(26.6%)	---	---	---	---
3. As Friend	Dom	.478	1.133	-2.890	3.270
	Love	-.461	1.653	-3.900	3.430
	Angle	133.96	---	4.000	359.000
	Vector Length	1.889	.920	.240	4.320
	Modal Octant (DE) 3(24.1%)	---	---	---	---
4. As Staff	Dom	.432	.906	-2.140	2.850
	Love	-1.180	1.831	-7.060	2.96
	Angle	159.89	---	7.000	347.000
	Vector Length	2.003	1.307	.080	7.080
	Modal Octant (DE) 3(38.0%)	---	---	---	---
5. By Staff	Dom	.125	1.103	-1.640	2.540
	Love	-1.377	1.582	-5.310	2.090
	Angle	174.81	---	45.000	350.000
	Vector Length	2.027	1.143	.370	5.440
	Modal Octant (DE) 3(35.4%)	---	---	---	---

Staff Rating of "Average Inmate" (N = 8)

	Mean	SD	Min	Max
Dom	.344	.480	-.63	1.00
Love	-4.00	1.399	-6.66	-1.98
Angle	175.08	---	168.00	188.00
Vector Length	4.04	1.403	1.99	6.67
Modal Length (DE) 3 (100%)	---	---	---	---

NOTE: (a) ANGLE is derived as ARCTAN DOM/LOV using the mean DOM, LOV coordinates obtained for each set.

for the obtained Dom and Lov coordinates within a repeated measures MANOVA; that test is highly significant ($p. < .0005$). Figure 3 provides the point representations of the different profiles obtained from the sample of 79, and Figures 4 through 7 show the profiles obtained for the various group criteria.

Overall, the average self-description provided by these men is surprisingly negative in that they tend to endorse adjectival descriptions placing them clearly within the "arrogant-calculating/cold hearted" octants (BC/DE) of the IAS-R. However, as indicated by the ranges of obtained coordinates (Table XII), there is considerable variability in the group as a whole. From review of the scatter-plots for these profiles it is difficult to say that the variability derives from a few distinct outliers versus a broad range of self-descriptions. There is an apparent positive shift for the representation of an ideal-self, with most coming to occupy octant NO and ascribing to positive characteristics as warm and outgoing. The depictions of perceptions as a friend or as a staff member, as well as the ratings provided by staff are relatively consistent and re-emphasize the negative aspects of a cold and aloof interpersonal style, perceived both by staff and the inmates themselves. The description of an "average inmate" provided by a sample of the staff respondents yields some suggestion of a staff-perceived inmate stereotype. The relative location of this 'stereotype' is interesting for its descriptive associations and in making it

S = self
 I = Ideal
 AF = as friend
 AS = as staff
 BS = by staff

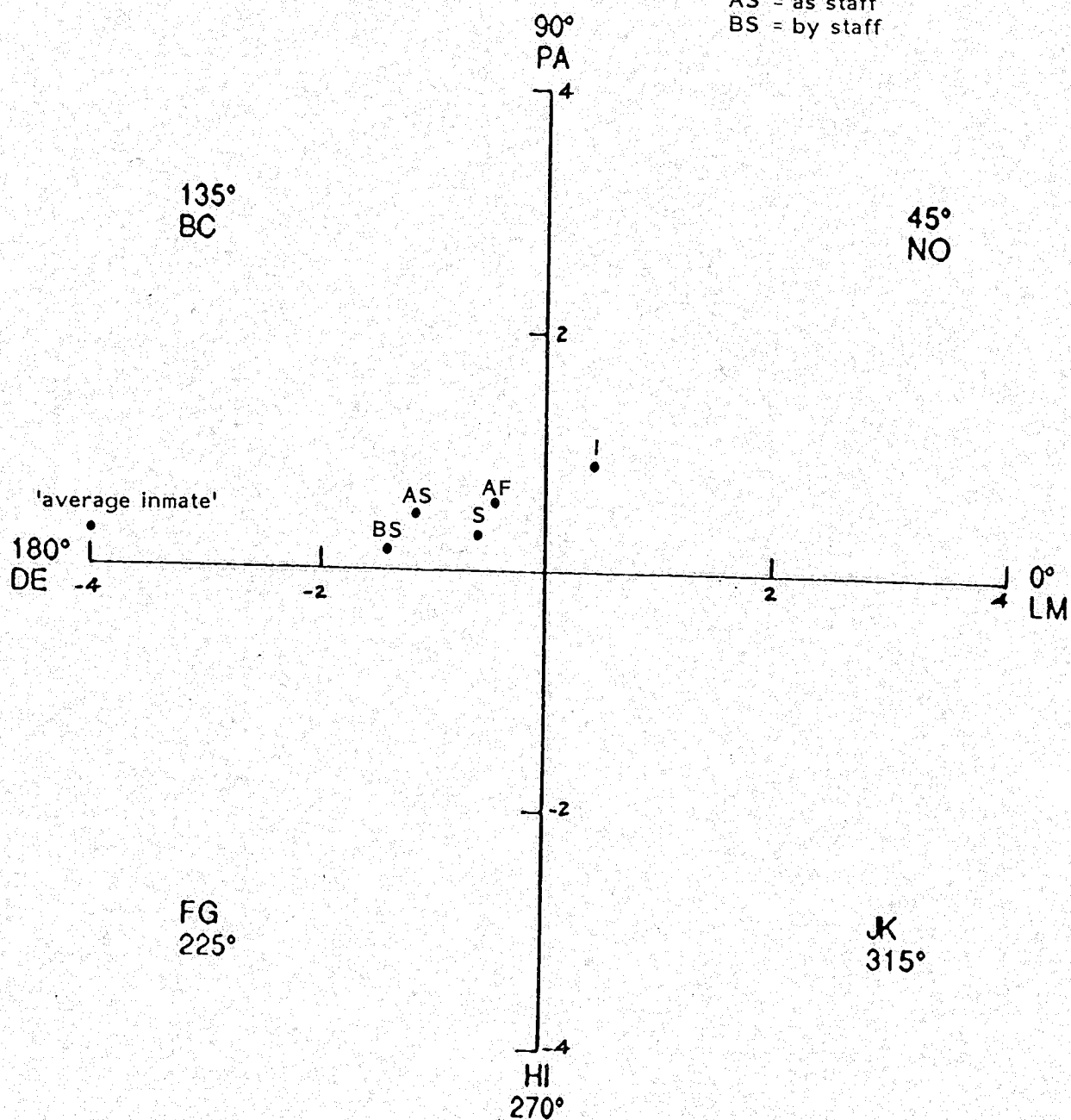


Figure 3

Mean Dom and Lov coordinate locations of
 IAS-R response sets for the overall sample
 ($N = 79$)

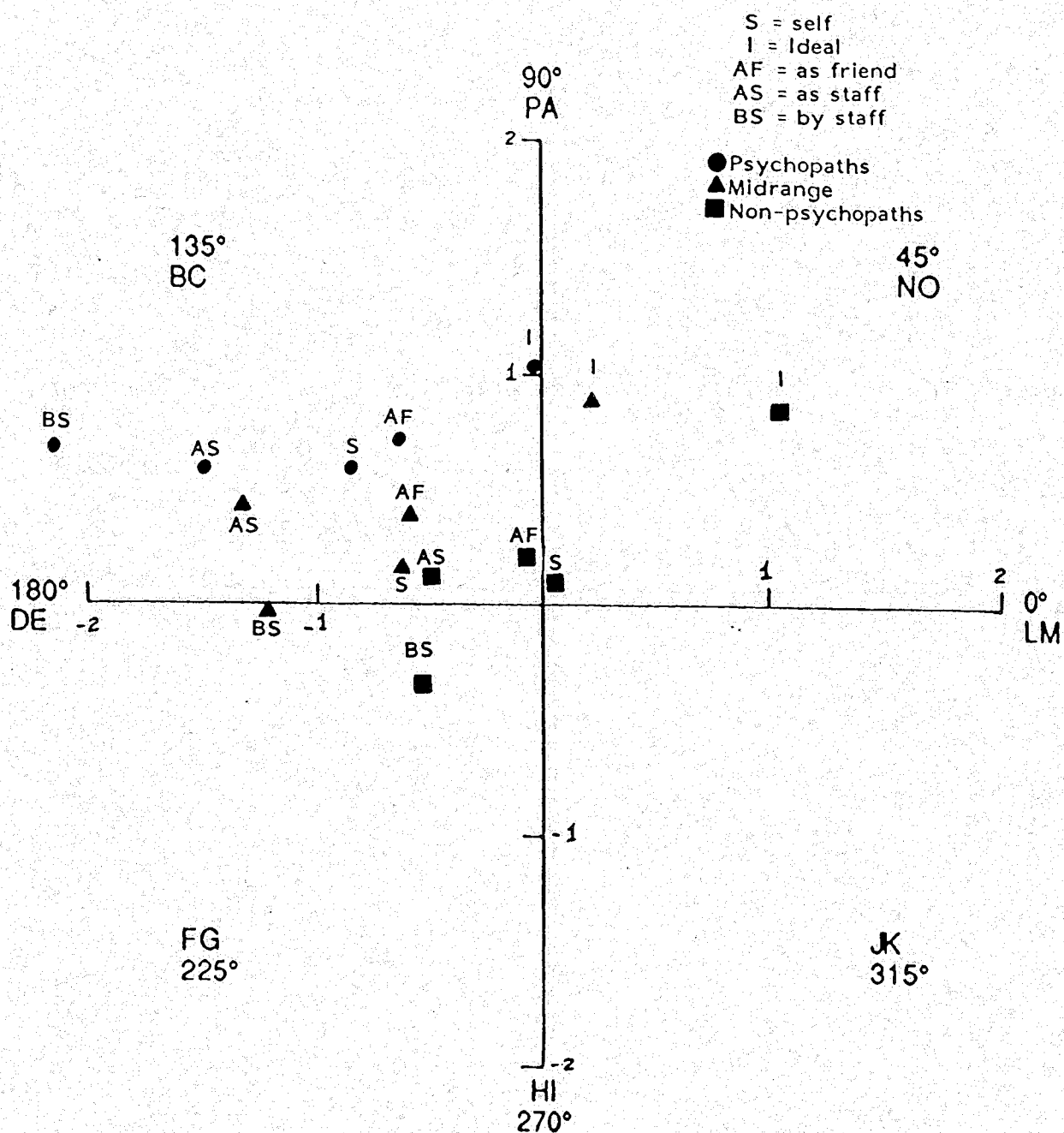


Figure 4

Mean Dom and Lov coordinate locations of IAS-R response sets for the PC groups.

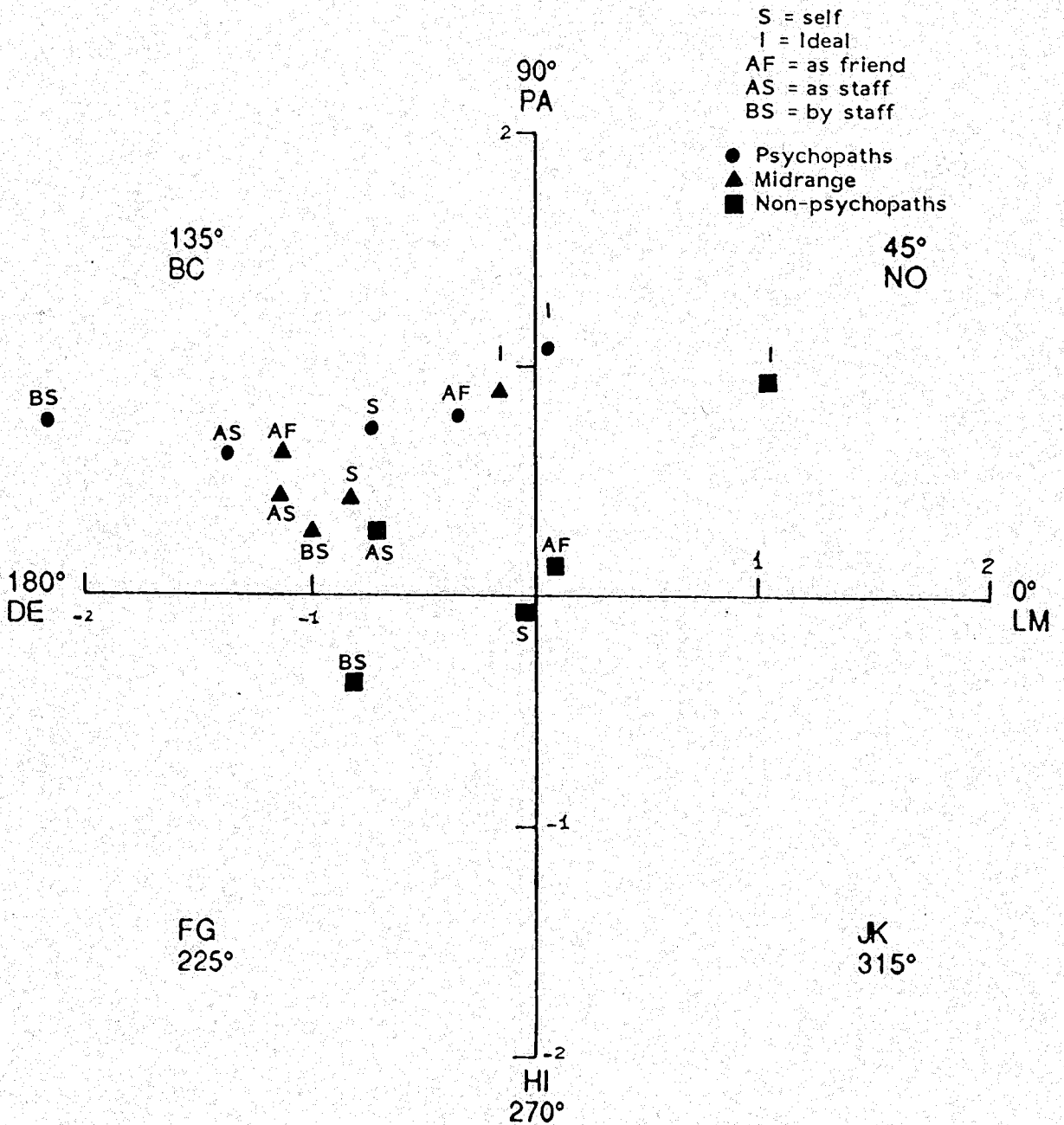


Figure 5

Mean Dom and Lov coordinate locations of IAS-R response sets for the Factor I groups.

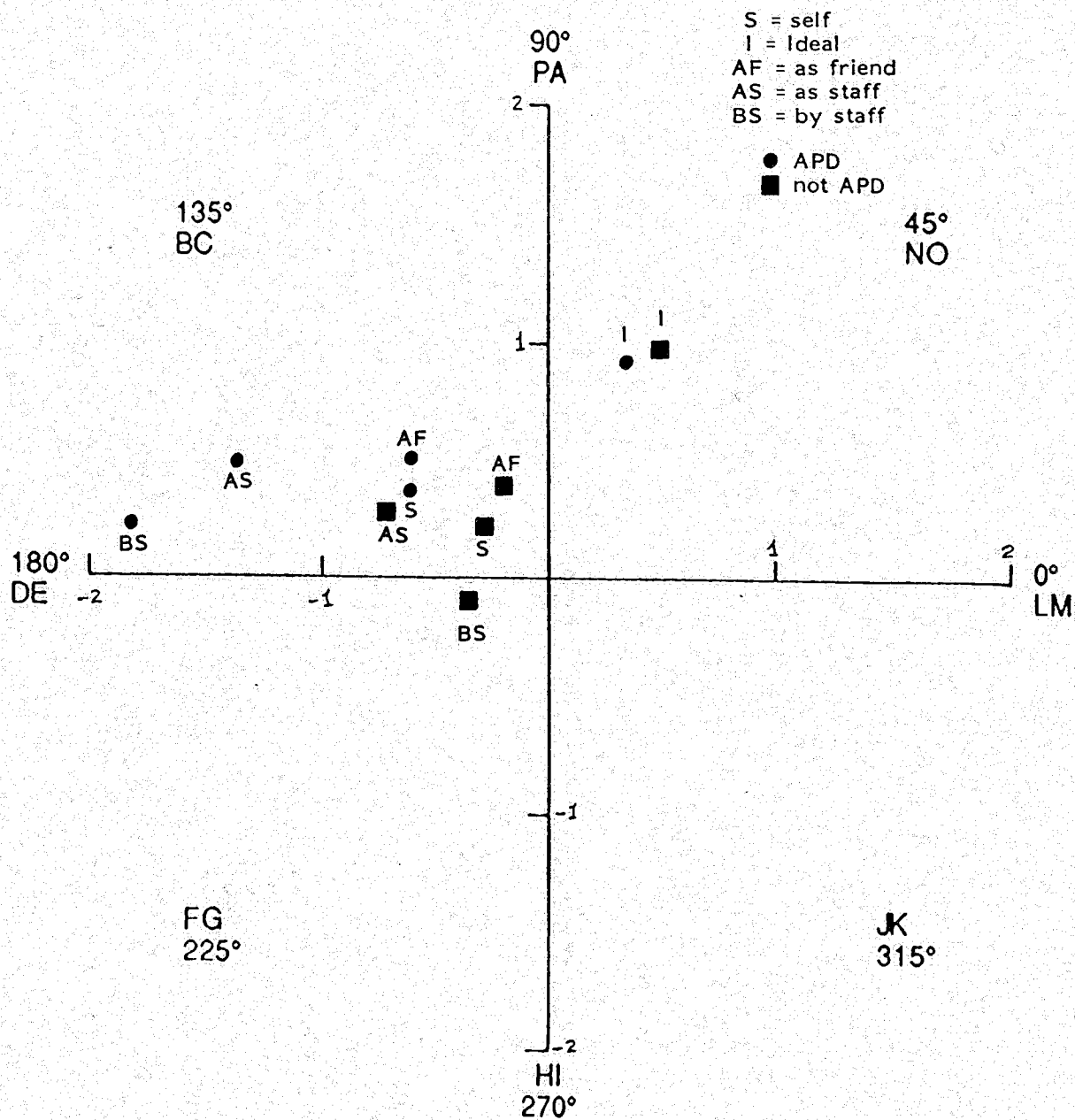


Figure 6

Mean Dom and Love coordinate locations of IAS-R response sets for the APD (DSM-III) groups.

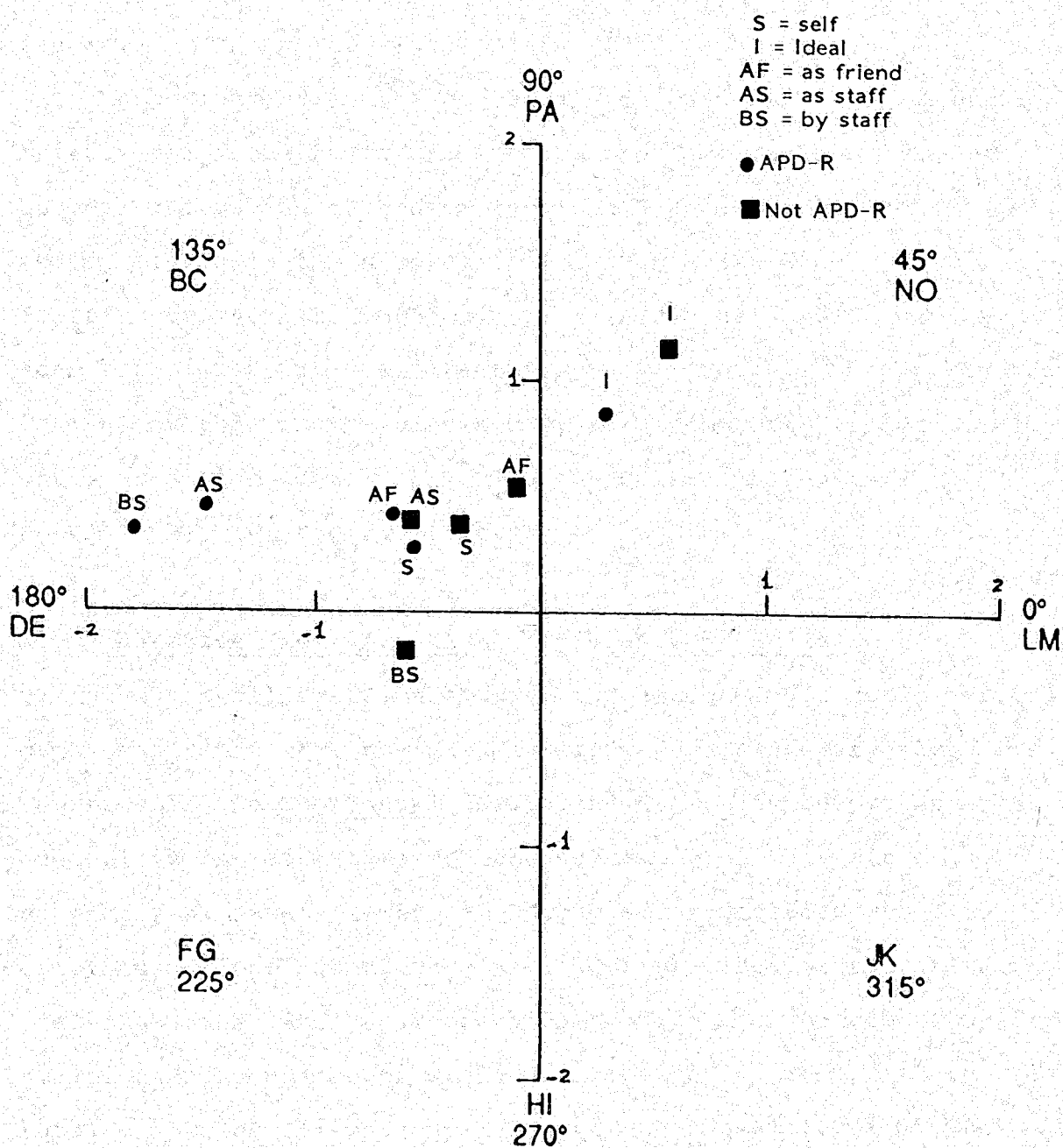


Figure 7

Mean Dom and Lov coordinate locations of IAS-R response sets for the APD-R (DSM-III-R) groups

evident that staff are providing reasonable discriminations among the inmates on an individual basis.

An indication of the potential relation of vector length to relative psychopathy is provided by the correlations obtained between the PC scores and vector length and Factor I scores and vector length in the sample of 79. When taken from self-description, vector length correlates .235 ($p = .019$) with PC scores and .248 ($p = .014$) with Factor I scores. When taken from ratings of the inmates provided by staff members, vector length correlates .461 ($p < .0001$) with the PC scores and .437 ($p < .0001$) with Factor I scores.

Adjective Checklist (ACL) and Rosenberg Scale

The overall distributions of the selected ACL scales are quite congruent with the standardizing population of males reported in the ACL Manual (Gough and Heilbrun, 1980), and are summarized in Table XIII for the subsample of 79. Although evidently somewhat skewed, an adequate distribution was also obtained for the Rosenberg scale. Correlations of the IAS-R scales obtained from self-description with the selected ACL scales and the Rosenberg scale are reported in Table XIV for the total sample of 113 and Table XV for the subsample of 79. As can be seen in these tables, substantial correlations consistent with the expected relations for these scales were obtained and reflect a good level of consistency in self-report.

TABLE XIII

Summary Statistics for Selected Scales of the Adjective Checklist
and the Rosenberg Scale Obtained from Self-Description (N = 79)

	<u>Mean</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
ACLTOT ^a	131.747	37.210	45	213
FAV	50.152	7.873	29	65
UNFAV	51.266	10.629	36	78
ACH	49.810	8.662	31	66
AUT	50.595	10.736	19	77
DOM	50.519	10.229	21	70
AGG	50.671	10.123	29	77
ABA	49.025	11.492	21	82
DEF	49.367	10.855	16	71
ROSEN ^b	18.278	5.000	10	30

- NOTES: (a) ACLTOT refers to the simple total number of adjectives endorsed, the remaining ACL scale scores are T-scores taken from male norms provided in the ACL Manual (Gough & Heilbrun, 1980).
- (b) The Rosenberg scale is scored so that high scores reflect low self-esteem (maximum score = 40).

TABLE XIV

CORRELATIONS OF IAS-R SCALES FROM SET 1 WITH
THE SELECTED ACL SCALES (AND THE ROSENBERG SCALE) (N = 113)

	ACLTOT	FAV	UNFAV	ACH	DOM	AUT	AGG	ABA	DEF	ROSEN
PA	.193 (.02)	.274 (.002)	-.165 (.04)	.570* (.0000)	.646* (.0000)	.413* (.0000)	.375* (.0000)	-.644* (.0000)	-.434* (.0000)	-.530* (.0000)
BC	.113 (.118)	-.119 (.105)	.174 (.033)	.111 (.122)	.193 (.020)	.367* (.0000)	.284 (.0012)	-.327* (.0000)	-.383* (.0000)	-.109 (.1255)
DE	.054 (.286)	-.475* (.0000)	.472 (.0000)	-.153 (.053)	.288 (.381)	.559* (.0000)	.462* (.0000)	-.288 (.0010)	-.498* (.0000)	.198 (.018)
FG	.001 (.496)	-.587* (.0000)	.493* (.0000)	-.403* (.0000)	-.463* (.0000)	.213 (.012)	.068 (.237)	.185 (.025)	-.123 (.097)	.516* (.0000)
HI	-.032 (.368)	-.359* (.0000)	.202 (.016)	-.547* (.0000)	-.720* (.0000)	-.358* (.0000)	-.395* (.0000)	.667* (.0000)	.435* (.0000)	.594* (.0000)
JK	-.034 (.360)	.102 (.141)	-.104 (.136)	-.150 (.056)	-.229 (.0074)	-.284 (.0012)	-.299 (.0007)	.323* (.0002)	.351* (.0001)	.107 (.130)
LM	.222 (.009)	.473* (.0000)	-.463* (.0000)	.156 (.050)	-.020 (.415)	-.484* (.0000)	-.427* (.0000)	.301* (.0006)	.495* (.0000)	-.226 (.0080)
NO	.012 (.142)	.559* (.0000)	-.526* (.0000)	.411* (.0000)	.458* (.0000)	-.190 (.022)	-.147 (.060)	-.220 (.0095)	.104 (.137)	-.623* (.0000)

NOTE: For a table of 80 correlations, a conservative level of significance may be estimated as $.05/80 = .0006$; asterisks indicate correlations significant at that level or less; numbers in parentheses are the associated probabilities.

TABLE XV
CORRELATIONS OF IAS-R SCALES FROM SET 1 WITH
THE SELECTED ACL SCALES (AND THE ROSENBERG SCALE) (N = 79)

	ACLTOT	FAV	UNFAV	ACH	DOM	AUT	AGG	ABA	DEF	ROSEN
PA	.150 (.093)	.143 (.104)	.015 (.447)	.454* (.0000)	.581* (.0000)	.425* (.0000)	.432* (.0000)	-.563* (.0000)	-.407* (.0001)	-.406* (.0000)
BC	.103 (.182)	-.212 (.031)	.276 (.007)	.128 (.130)	.206 (.034)	.393* (.0002)	.374* (.0003)	-.320 (.0020)	-.409* (.0001)	-.097 (.199)
DE	.053 (.322)	-.451* (.0000)	.428* (.0000)	-.059 (.304)	.119 (.147)	.564* (.0000)	.523* (.0000)	-.364* (.0005)	-.507* (.0000)	.146 (.099)
FG	.037 (.373)	-.511* (.0000)	.386* (.0002)	-.284 (.006)	-.468* (.0000)	.187 (.049)	-.008 (.471)	.171 (.065)	-.100 (.191)	.430* (.0000)
HI	.007 (.476)	-.261 (.010)	.093 (.208)	-.457* (.0000)	-.695* (.0000)	-.366* (.0005)	-.477* (.0000)	.631* (.0000)	.416* (.0001)	.528* (.0000)
JK	.008 (.472)	.203 (.037)	-.198 (.041)	-.164 (.075)	-.257 (.011)	-.312 (.003)	-.429* (.0000)	.336 (.001)	.384* (.0002)	.089 (.217)
LM	.248 (.014)	.398* (.0001)	-.341 (.001)	-.002 (.494)	-.151 (.092)	-.495* (.0000)	-.444* (.0000)	.443* (.0000)	.517* (.0000)	-.074 (.259)
NO	.088 (.222)	.432* (.0000)	-.376* (.0003)	.258 (.011)	.441* (.0000)	-.165 (.073)	-.064 (.286)	-.191 (.046)	.079 (.244)	-.567* (.0000)

NOTE: Asterisks indicate correlations significant at $P \leq .05/80 = .0006$,
numbers in parentheses are the associated probabilities.

TABLE XVI

Overall Frequency Distributions of Octant Assignments
Across the IAS-R Rating Sets (N = 79)

IAS-R RATING	Octant							
	<u>2</u> (BC)	<u>3</u> (DE)	<u>4</u> (FG)	<u>5</u> (HI)	<u>6</u> (JK)	<u>7</u> (LM)	<u>8</u> (NO)	<u>1</u> (PA)
1. Self	21.5	20.3	13.9	6.3	5.1	12.7	8.9	11.4
2. Ideal	25.3	6.3	3.8	1.3	0.0	21.5	26.6	15.2
3. As Friend	21.5	24.1	7.6	5.1	6.3	12.7	8.9	13.9
4. As Staff	29.1	38.0	3.8	2.5	6.3	5.1	8.9	6.3
5. By Staff	20.3	35.4	16.5	7.6	6.3	2.5	3.8	7.6

NOTE: Frequencies are expressed as Percentages of the sample.

COMPARISONS OF IAS-R DESCRIPTIONS WITHIN DIAGNOSTIC GROUPS

Octant Locations

The most basic summary descriptive information derived from the IAS-R is given by the Octant locations of the profile points obtained; the overall frequencies obtained are outlined in Table XVI. For the purposes here, comparisons were made of the frequency distributions of profile points falling into quadrants of the circumplex formed by adjacent octants as 2/3 (BC/DE) - arrogant-calculating, cold-hearted; 4/5 (FG/HI) - aloof-introverted, unassured-submissive; 6/7 (JK/LM) - unassuming-ingenuous, warm-agreeable; and 8/1 (NO/PA) - gregarious-extroverted, assured-dominant. As previously outlined, it was to be expected that octants 2 (BC) and 3 (DE) would capture the psychopathic profile, particularly from others' description. The obtained frequencies were tested by Chi-square for each of the definitional criteria using the inmates' self-description and the staff ratings. Given two ratings and four sets of classifications, each Chi-square was assessed at the $(.05/8)$.006 level of significance.

The frequencies of quadrant location for self-descriptions and staff descriptions of the men categorized by the PC are outlined in Table XVII. It is surprising, given the expectation for dissimulation in this population, that the self-descriptions of these men show a modest tendency for differential assignment

TABLE XVII

Proportions of PC Groups Occupying IAS-R Adjacent Paired Octants
Assigned from Self-Description and Staff Description (N = 79)

PC GROUP	n	IAS-R ADJACENT OCTANT PAIRS							
		Self Description (Set 1) ^a				Staff Description (Set 5) ^b			
		2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)	2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)
Psychopathic	27	62.9%	7.4%	11.1%	18.5%	85.1%	7.4%	0.0%	7.4%
Midrange	27	37.0	29.6	11.1	22.2	51.8	29.6	3.7	14.8
Non-Psychopathic	25	24.0	24.0	32.0	20.0	28.0	36.0	24.0	12.0

NOTES: (a) $\chi^2_{(6)} = 12.78, p < .05; \lambda_{AB} = .143, \lambda_{(\rightarrow PC)} = .231$

(b) $\chi^2_{(6)} = 23.01, p < .001; \lambda_{AB} = .195, \lambda_{(\rightarrow PC)} = .288$

in which those identified as psychopaths by the checklist tend to identify with octants 2/3 (overall $\chi^2_{(6)} = 12.78, p < .05$). As expected, staff descriptions show a strong tendency to place psychopaths in octants 2/3 ($\chi^2_{(6)} = 23.01, p < .001$), with 85% (23 of 27) of the psychopathic group so placed, compared with 51.8% (14 of 27) of the mid-range and 28% of the non-psychopathic group.

When grouped with respect to scores on Factor I of the PC, (see Table XVIII) there is no evident differential assortment by self report ($\chi^2_{(6)} = 10.36, p > .10$), but staff descriptions again show a strong tendency to locate psychopaths in octants 2/3 ($\chi^2_{(6)} = 21.57, p < .005$) placing 88% (22 of 25) compared to 50% (10 of 20) of the mid-range and 35.8% (12 of 34) of the non-psychopathic group.

Classification by the DSM-III (APA, 1980) criteria for APD (Table XIX) showed no difference between the groups meeting or not meeting the criteria when compared on self report ($\chi^2_{(3)} = 0.83, p > .50$), but a strong trend in staff descriptions ($\chi^2_{(3)} = 15.63, p < .002$) to place those identified as APD in octants 2/3 (69.3%: 36 of 52) versus those not identified as APD (29.6%: 8 of 27). Under APD by DSM-III-R (APA, 1987), (Table XX) groups did not differ by self report ($\chi^2_{(3)} = 2.74, p > .40$) and showed a somewhat less robust trend by staff descriptions ($\chi^2_{(3)} = 10.35, p < .02$), with 66.1% (32 of 47) of those identified as APD(-R) falling in octants 2/3

TABLE XVIII

Proportions of Factor I Groups Occupying Adjacent Paired Octants
Assigned from Self-Description and Staff Description (N = 79)

FACTOR I GROUP		IAS-R ADJACENT OCTANT PAIRS							
		Self Description (Set 1) ^a				Staff Description (Set 5) ^b			
		n	2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)	2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)
Psychopathic	25	52.0%	8.0%	12.0%	28.0%	88.0%	0.0%	4.0%	8.0%
Midrange	20	55.0	20.0	10.0	15.0	50.0	25.0	5.0	20.0
Non-Psycho- pathic	34	26.5	29.4	26.5	17.6	35.3	41.2	14.7	8.8

NOTES: (a) $\chi^2_{(6)} = 10.36$, $p > .10$; $\lambda_{AB^2} = .066$, $\lambda_{(\rightarrow F1)} = .111$

(b) $\chi^2_{(6)} = 21.56$, $p < .005$, $\lambda_{AB} = .163$, $\lambda_{(\rightarrow F1)} = .244$

TABLE XIX

Proportions of APD Groups Occupying Adjacent Paired Octants
Assigned them from Self-Description and Staff Description (N = 79)

IAS-R ADJACENT OCTANT PAIRS									
APD GROUP	n	Self-Description (Set 1) ^a				Staff Description (Set 5) ^b			
		2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)	2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)
Meet APD	52	44.3%	21.2%	15.3%	19.2%	69.3%	21.2%	1.9%	7.7%
Not Meet APD	27	37.0	18.5	22.2	22.2	29.6	29.6	22.2	18.5

NOTES: (a) $\chi^2_{(3)} = 0.83$, $p > .50$; $\lambda_{AB} = 0.0$, $\lambda_{(\rightarrow \text{APD})} = 0.0$

(b) $\chi^2_{(3)} = 15.63$, $p < .002$; $\lambda_{AB} = .097$, $\lambda_{(\rightarrow \text{APD})} = .222$

TABLE XX

Proportions of APD-R Groups Occupying Adjacent Paired Octants
Assigned from Self-Description and Staff Description (N = 79)

IAS-R ADJACENT OCTANT PAIRS									
APD-R GROUP	n	Self-Description (Set 1) ^a				Staff Description (Set 5) ^b			
		2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)	2/3 (BC/DE)	4/5 (FG/HI)	6/7 (JK/LM)	8/1 (NO/PA)
Meet APD-R	47	42.5%	25.5%	14.9%	17.1%	68.1%	21.3%	2.1%	8.3%
Not Meet APD-R	32	40.6	12.5	21.9	25.0	37.5	28.1	18.8	15.6

NOTES: (a) $\chi^2_{(3)} = 2.74, p > .40; \lambda_{AB} = 0.0, \lambda_{(\rightarrow \text{APD-R})} = 0.0$

(b) $\chi^2_{(3)} = 10.35, p < .02; \lambda_{AB} = .090, \lambda_{(\rightarrow \text{APD-R})} = .188.$

versus 37.5% (12 of 32) of those not identified as APD(-R).

In terms of the more utilitarian idea of predictive association, knowledge of an individual's quadrant location does contribute to a reduction in the probability of error in predicting group memberships within each of the diagnostic categories, particularly when using the staff descriptions. Lambda coefficients under each of the above conditions are noted in Tables XVII-XX. The predictive utility of self reports ranges from zero with both APD groups, to .231 or a 23.1% reduction in the probability of error when predicting PC group membership given an individual's octant location. Staff reports do somewhat better, ranging from .188 (an 18.8% reduction) for predicting APD-R to .288 for the prediction of PC groups.

COORDINATE DISTRIBUTIONS AND GROUP ANALYSES (MANOVAs)

Comparisons were made of the Dom and Lov coordinate values over all of the IAS-R sets across groups defined by the various criteria using repeated measures MANOVA designs. Significant MANOVA results ($p < .025$) were followed by univariate ANOVAs with significance set at $p < .005$ (.05/10), and these were followed by post-hoc comparisons using Tukey's HSD at $p < .05$ and Scheffe's comparisons at $p < .01$.

Based on the averaged multivariate tests of significance for group differences within a repeated measures design, only the PC groups (Wilk's $F_{(4,150)} = 4.75$, $p < .001$) and the Factor I groups

(Wilk's $F_{(4,150)} = 4.96, p < .001$) yielded significant differences across the Dom and Lov coordinates. Univariate comparisons for the PC groups indicated only the Dom and Lov coordinates obtained from staff ratings to differ at $p < .005$ (Dom5: $F_{(2,76)} = 10.6, p = .0001$; Lov5: $F_{(2,76)} = 9.4, p = .0002$). Post-hoc contrasts by Tukey's HSD at $p < .05$ indicated the psychopathic group was scored higher on Dom than either the mid-range or non-psychopathic groups and lower than both other groups on Lov. Scheffe's contrasts at $p < .01$ indicated the differences to be retained only for the psychopathic versus non-psychopathic groups. The results for the PC groups are summarized in Table XXI.

Table XXII outlines the results from the Factor I groups. Univariate comparisons were most significant for the coordinates obtained from staff ratings (Dom5: $F_{(2,76)} = 14.59, p < .00005$; Lov5: $F_{(2,76)} = 7.63, p = .0001$). Post-hoc contrasts by Tukey's HSD at $p < .05$ indicated that both the mid-range and psychopathic groups were scored higher by staff on Dom and that the psychopathic group was scored lower than both the mid-range and non-psychopathic groups on Lov. Scheffe's contrasts at $p < .01$ retained these differences only between the psychopathic and non-psychopathic groups. A difference was also evident across groups for self ratings of ideal on the dimension Lov (Lov2: $F_{(2,76)} = 6.11, p < .004$). Post-hoc comparisons here were significant only at the .05 level and indicated both the

TABLE XXI
MEANS (AND SDS) OF DOM AND LOV COORDINATES ACROSS
GROUPS DEFINED BY THE PC

		GROUP ^a		
COORDINATES		P (n=27)	M (n=27)	NP (n=25)
SELF	DOM 1	.644 (.984)	.172 (1.285)	.080 (.800)
	LOV 1	-.886 (1.410)	-.657 (1.271)	.053 (1.171)
IDEAL	DOM 2	1.072 (.902)	.951 (.842)	.918 (.783)
	LOV 2	-.017 (1.446)	.238 (1.561)	1.090 (1.295)
AS FRIEND	DOM 3	.780 (.929)	.411 (1.292)	.226 (1.118)
	LOV 3	-.664 (1.741)	-.618 (1.667)	-.071 (1.533)
AS STAFF	DOM 4	.639 (.767)	.480 (1.000)	.157 (.903)
	LOV 4	-1.550 (1.985)	-1.355 (1.672)	-.589 (1.745)
BY STAFF	DOM 5	.740 (1.117)	-.008 (.849)	-.395 (.688)
	LOV 5	-2.258 (1.439)	-1.271 (1.395)	-.539 (1.472)

		COMPARISONS		
COORDINATES		Univariate F(2,76)	Tukey HSD (p < .05)	Scheffe (p < .01)
SELF	DOM 1	2.21, $\underline{p} = .117$	---	---
	LOV 1	3.69, $\underline{p} < .03$	P > NP	---
IDEAL	DOM 2	0.24	---	---
	LOV 2	4.16, $\underline{p} < .02$	P < NP	---
AS FRIEND	DOM 3	1.65	---	---
	LOV 3	1.02	---	---
AS STAFF	DOM 4	1.94	---	---
	LOV 4	2.03	---	---
BY STAFF	DOM 5	10.61, $\underline{p} = .0001$	P > M, NP	P > NP
	LOV 5	9.43, $\underline{p} = .0002$	P < M, NP	P < NP

NOTE: (a) Groups are: P = Psychopathic, M = Midrange,
NP = Non-Psychopathic.

TABLE XXII

MEANS (AND STANDARD DEVIATIONS) OF DOM AND LOV
COORDINATES ACROSS GROUPS DEFINED BY FACTOR 1

COORDINATES		GROUP ^a		
		P (n=25)	M (n=20)	NP (n=34)
SELF	DOM 1	.749 (.968)	.438 (1.096)	-.101 (.987)
	LOV 1	-.814 (1.445)	-.893 (1.086)	-.063 (1.288)
IDEAL	DOM 2	1.038 (.901)	.938 (.766)	.966 (.850)
	LOV 2	.052 (1.446)	-.189 (1.424)	1.050 (1.374)
AS FRIEND	DOM 3	.817 (.955)	.656 (1.000)	.125 (1.249)
	LOV 3	.398 (1.632)	-1.186 (1.401)	-.081 (1.708)
AS STAFF	DOM 4	.644 (.739)	.447 (1.045)	.268 (.923)
	LOV 4	-1.468 (2.089)	-1.219 (1.347)	-.944 (1.893)
BY STAFF	DOM 5	.792 (.891)	.248 (1.108)	-.438 (.684)
	LOV 5	-2.311 (1.511)	-1.092 (1.275)	-.857 (1.526)

COMPARISONS

COORDINATES		Univariate F (2,76)	Tukey HSD (p < .05)	Scheffe (p < .01)
SELF	DOM 1	5.33, $\underline{p} < .007$	P > NP	P > NP
	LOV 1	3.59, $\underline{p} < .04$	---	---
IDEAL	DOM 2	0.09	---	---
	LOV 2	6.11, $\underline{p} < .004$	P, M < NP	---
AS FRIEND	DOM 3	3.18, $\underline{p} < .05$	---	---
	LOV 3	2.99	---	---
AS STAFF	DOM 4	1.25	---	---
	LOV 4	0.59	---	---
BY STAFF	DOM 5	14.59, $\underline{p} < .00005$	P, M > NP	P > NP
	LOV 5	7.63, $\underline{p} = .001$	P < M, NP	P < NP

NOTE: (a) Groups are: P = Psychopathic, M = Midrange,
NP = Non-Psychopathic.

psychopathic and mid-range groups to have scored lower than the non-psychopathic group. One other measure approached significance ($F(2,76) = 5.33, p < .007$) suggesting the psychopathic group to score higher than the non-psychopathic group ($p < .01$) on the Dom dimension taken from self-description.

The overall MANOVA for the Factor I groups also revealed a significant interaction (Wilk's $F(16,138) = 2.53, p < .002$) reflecting the alternate directions of group differences across the significant contrasts outlined, and the inconsistent relationship of the mid-range group.

The Dom and Lov coordinates and univariate Fs obtained for the APD and APD-R groups are outlined in Tables XXIII and XXIV; no overall comparisons reached significance.

Discriminant analyses based on the Dom and Lov coordinates provided an overall hit rate of 58.4% for the three group classifications under the PC, and performed best for the psychopathic group in correctly classifying 70.4%. As expected, based on the post-hoc comparisons from the foregoing MANOVAS, the coordinates obtained from the staff descriptions contributed most to the discrimination. Pooled within-group correlations to the first discriminant function were $-.643$ for the Dom5 coordinate and $.606$ for Lov5.

The analysis for the Factor I groups provided a hit rate of 65.8% overall, and correctly classified 72% of the psychopathic group. Again the Dom and Lov coordinates obtained from staff

TABLE XXIII

Means (and Standard Deviations) of DOM and LOV Coordinates
Across Groups Defined by APD (DSM-III; APA, 1980)

COORDINATES		GROUP ^a		Univariate $F^b_{(1,77)}$
		APD-R (n=52)	Not APD (n=27)	
SELF	DOM 1	.357 (1.083)	.203 (.1040)	.369
	LOV 1	-.632 (1.376)	-.277 (1.247)	1.26
IDEAL	DOM 2	.966 (.867)	1.012 (.790)	.054
	LOV 2	.363 (1.544)	.531 (1.432)	.220
AS FRIEND	DOM 3	.519 (1.026)	.401 (1.332)	.189
	LOV 3	-.598 (1.718)	-.198 (1.514)	1.04
AS STAFF	DOM 4	.510 (.896)	.283 (.923)	1.12
	LOV 4	-1.408 (1.894)	-.740 (1.647)	2.41
BY STAFF	DOM 5	.252 (1.060)	-.120 (.882)	2.44 $p > .10$
	LOV 5	1.897 (1.440)	-.376 (1.363)	20.55 $p < .00005$

NOTES: (a) Groups are APD = meet DSM-III criteria for Antisocial Personality Disorder, not APD = do not meet the criteria.

(b) Univariate F for 2 groups corresponds to a T -test as

$$t_{(v2)} = \sqrt{F_{(v1,v2)}}$$

TABLE XXIV

Means (and Standard Deviations) of DOM and LOV Coordinates
Across Groups Defined by APD-R (DSM-III-R; APA, 1987)

		GROUP ^a				
COORDINATES		APD-R (n=47)		Not APD-R (n=32)		Univariate F ^b (1,77)
SELF	DOM 1	.271	(1.028)	.353	(1.130)	.111
	LOV 1	-.606	(1.368)	-.371	(1.297)	.588
IDEAL	DOM 2	.871	(.890)	1.144	(.736)	2.06
	LOV 2	.314	(1.569)	.576	(1.401)	.577
AS FRIEND	DOM 3	.429	(.977)	.552	(1.343)	.223
	LOV 3	-.676	(1.684)	-.144	(1.577)	2.00
AS STAFF	DOM 4	.469	(.885)	.379	(.947)	.187
	LOV 4	-1.544	(2.034)	-.644	(1.342)	4.83 p < .04
BY STAFF	DOM 5	.350	(1.096)	-.205	(.780)	6.07 p < .02
	LOV 5	-1.875	(1.506)	-.645	(1.415)	13.33 p = .0005

NOTES: (a) Groups are APD-R = meet criteria for antisocial personality disorder (DSM-III-R).not APD-R = do not meet the criteria.

(b) Univariate F for 2 groups corresponds to a T-Test as

$$t_{(v2)} = \sqrt{F_{(v1,v2)}}$$

ratings contributed most, and correlated .610 and -.418 to the first discriminant function. The Lov3 (as friend) and Lov2 (ideal) coordinates contributed best to the second discriminant function, correlating .638 and .575, although the second function contributed relatively little to group discrimination, accounting only for the remaining 14% of the variance after the first function.

Interestingly, although not achieving significance in the foregoing MANOVA, the discriminant function based on the Dom and Lov coordinates for the two group discrimination of Yes/No APD-R did reach significance ($\chi^2_{(10)} = 21.80, p < .02$). Here Lov5 (staff rating) contributed most to the discrimination, correlating .700 followed by Dom5 (- .472) and Lov4 (as staff: .421). This provided an overall hit rate of 68.4%, and correctly classified 68.1% of those categorized as APD-R. The discriminant functions for the APD groups did not reach significance ($\chi^2_{(10)} = 18.55, p < .05$) within this set of analyses.

Distance Measures

The comparisons of primary interest to this research relate to the hypothesized differences expected across the sets of IAS-R responses for the various criterion groups, particularly for those defined by the PC and Factor I scores. Figure 3 (p. 84) shows the location of the profiles for the total subsample of 79 men.

The pattern of distance measures taken among the five sets of responses were analyzed in a oneway between groups MANOVA design. Although demonstrating differences in the obtained coordinates of the 2-dimensional system for the PC and Factor I groups, no significant results were obtained for the pattern of distances between the point locations for any of the defined groups.

Figures 4 to 7 (pp. 85-88) show the point locations based on the mean Dom and Lov coordinates obtained for the sets of IAS-R profiles for the different diagnostic criterion groups, and the means and standard deviations are shown in Tables XXV through XXIX. Although it might be suggested that the means display a relatively different profile pattern, it is apparent that the contrasts suffer from the high variability obtained. Indeed, only the comparisons for the APD groups survived the multivariate BOX-M test for homogeneity of the dispersion matrices.

However, results of some interest are apparent in the patterns of within cell correlations obtained for these distance measures across the various groups outlined in the tables. Inspection of the correlations significant at $p < .001$ suggests differential patterns in the abilities of members of the various groups to consider the perspectives of others and, in particular, to predict the perceptions of specific staff members.

For example, Table XXVI contains the within cell correlations among the distance measures obtained for the groups

TABLE XXV
Summary Statistics of Distance Measures
 For the Overall Sample (N = 79)

<u>Distance</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
Self vs. Ideal (SVSI)	1.543	1.034	0.17	4.83
Self vs. as Friend (SVSF)	1.001	0.656	0.09	3.55
Self vs. as Staff (SVSSO)	1.350	1.377	0.13	7.81
Self vs. by Staff (SVSO)	2.060	1.232	0.18	6.90
As Staff vs. by Staff (SOVSO)	1.798	1.056	0.37	5.25

TABLE XXVI

MEANS AND STANDARD DEVIATIONS OF DISTANCE MEASURES AND
WITHIN CELL CORRELATIONS FOR THE PC GROUPS

PC GROUP		DISTANCE ^a				
		SVSI	SVSF	SVSSO	SVSO	SOVS0
1. Psychopathic	Mean	1.500	1.147	1.344	2.451	2.064
	SD	(.877)	(.714)	(1.457)	(1.302)	(1.276)
2. Midrange	Mean	1.623	.927	1.546	2.025	1.681
	SD	(1.309)	(.628)	(1.488)	(1.410)	(.825)
3. Non-Psychopathic	Mean	1.502	.924	1.144	1.676	1.636
	SD	(.881)	(.618)	(1.172)	(.786)	(1.001)

WITHIN CELL CORRELATIONS ^b												
Psychopathic (n=27)				Midrange (n=27)				Non-Psychopathic (n=25)				
	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO
SVSF	.207				.687**				.449			
SVSSO	-.238	.476			.405	.479			.010	.422		
SVSO	-.024	-.079	.227		.001	.280	.605**		-.071	-.100	-.034	
SOVS0	.070	-.000	.215	.719**	-.060	.154	.155	.248	-.048	-.198	.281	.524*

NOTE: (a) SVSI = Self vs. Ideal; SVSF = Self vs. Friend; SVSSO = Self vs. as Staff;
SVSO = Self vs. By Staff; SOVS0 = As Staff vs. by Staff.

(b) Asterisks indicate correlations significant at * $p < .01$, ** $p < .001$

TABLE XXVII

MEANS AND STANDARD DEVIATIONS OF DISTANCE MEASURES AND
WITHIN CELL CORRELATIONS FOR THE FACTOR 1 GROUPS

FACTOR 1 GROUP		DISTANCE ^a										
		SVSI	SVSF	SVSSO	SVSO	SOVSO						
1. Psychopathic	Mean	1.495	1.127	1.401	2.419	2.001						
	SD	(.907)	(.752)	(1.504)	(1.399)	(1.359)						
2. Midrange	Mean	1.219	.768	.937	1.819	1.599						
	SD	(.911)	(.395)	(.596)	(.838)	(.652)						
3. Non-Psychopathic	Mean	1.768	1.046	1.555	1.938	1.765						
	SD	(1.155)	(.685)	(1.575)	(1.271)	(.995)						
WITHIN CELL CORRELATIONS ^b												
Psychopathic (n=25)			Midrange (n=20)				Non-Psychopathic (n=34)					
	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO
SVSF	.221				.276				.631**			
SVSSO	-.260	.486			.079	.162			.283	.436		
SVSO	-.040	-.040	.238		-.073	.424	.214		.003	.070	.447*	
SOVSO	.056	.037	.237	.747**	.060	.509	.013	.577*	-.111	-.186	.193	.238

NOTE: (a) SVSI = Self vs. Ideal; SVSF = Self vs. Friend; SVSSO = Self vs. as Staff;
SVSO = Self vs. by Staff; SOVSO = As Staff vs. by Staff.

(b) Asterisks indicate correlations significant at * $p < .01$, ** $p < .001$.

TABLE XXVIII

MEANS AND STANDARD DEVIATIONS OF DISTANCE MEASURES AND
WITHIN CELL CORRELATIONS FOR APD VS. NOT APD

APD GROUP		DISTANCE ^a				
		SVSI	SVSF	SVSSO	SVSO	SOVSO
1. Definite APD	Mean	1.626	1.053	1.447	2.209	1.881
	SD	(1.032)	(.700)	(1.399)	(1.388)	(1.125)
2. Not APD	Mean	1.382	.902	1.161	1.774	1.636
	SD	(1.038)	(.561)	(1.337)	(.804)	(.906)

WITHIN CELL CORRELATIONS^b

	Definite APD (n=52)				Not APD (n=27)			
	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO
SVSF	.414*				.512*			
SVSSO	.012	.424*			.314	.507*		
SVSO	-.122	.016	.332		.232	.323	.360	
SOVSO	-.001	-.019	.145	.566**	-.090	.065	.334	.314

- NOTE: (a) SVSI = Self vs. Ideal; SVSF = Self vs. Friend; SVSSO = Self vs. as Staff;
SVSO = Self vs. by Staff; SOVSO = As Staff vs. by Staff.
- (b) Asterisks indicate correlations significant at $\underline{*}p < .01$, $\underline{**}p < .001$.

TABLE XXIX
MEANS AND STANDARD DEVIATIONS OF DISTANCE MEASURES AND
WITHIN CELL CORRELATIONS FOR APD-R vs. NOT APD-R

APD-R GROUP		DISTANCE ^a				
		SVSI	SVSF	SVSSO	SVSO	SOVSO
1. Definite APD-R	Mean	1.521	1.022	1.523	2.224	1.964
	SD	(1.057)	(.710)	(1.524)	(1.426)	(1.213)
2. Not APD-R	Mean	1.574	.972	1.096	1.819	1.554
	SD	(1.015)	(.577)	(1.099)	(.839)	(.720)

WITHIN CELL CORRELATIONS ^b								
	Definite APD-R (n=47)				Not APD-R (n=32)			
	SVSI	SVSF	SVSSO	SVSO	SVSI	SVSF	SVSSO	SVSO
SVSF	.548**				.399			
SVSSO	.510**	.475**			-.051	.444		
SVSO	.269	.225	.570**		-.125	.042	.256	
SOVSO	.088	.083	.085	.502**	-.045	-.018	.221	.507*

NOTE: (a) SVSI = Self vs. Ideal; SVSF = Self vs. Friend; SVSSO = Self vs. as Staff; SVSO = Self vs. by Staff; SOVSO = As Staff vs. by Staff.
(b) Asterisks indicate correlations significant at *p < .01, **p < .001.

defined by the PC. Given that staff show a tendency to rate the members of the psychopathic group most extremely (highest Dom score and lowest Lov score) as previously outlined, and that the distance measures for self ratings versus staff ratings have a relatively high magnitude, it may be taken that the low correlation (.227) between self versus as staff (SVSSO) and self versus by staff (SVSO) seen in the psychopathic group and the same group's notably high correlation (.719) between self versus by staff (SVSO) and as staff versus by staff (SOVSO) reflect a particularly poor ability for members of this group to predict the staff perceptions of them. By the same line of reasoning, the mid-range group under the PC shows the best facility for predicting staff perceptions, and the non-psychopathic group takes a rather middling position suggestive of poor prediction of the staff perceptions. For the groups formed by Factor I (Table XXVII), the psychopathic group retains the pattern suggesting a poor prediction of the staff perceptions of them; however, the mid-range and non-psychopathic groups do not retain the same relations as seen with the PC groups. The changes in these latter groups likely reflect the changed group membership effected by the different criteria, and suggests the non-psychopathic group to be relatively best (although not good) at predicting staff perceptions. The relative magnitudes and patterns of correlations are not nearly as striking for the groups defined by APD and APD-R (Tables XXVIII and XXIX).

COMPARISONS USING THE SELECTED ACL SCALES

Means and standard deviations of the obtained scale scores based on self-description for the groups defined by the PC, Factor I, APD, and APD-R are shown in Tables XXX through XXXIII respectively. Overall differences were noted only for the PC groups; however, rather anomalous results were obtained for the Factor I groups in which evidently significant univariate differences were not reflected in the overall test by MANOVA.

A oneway MANOVA indicated significant differences (Wilk's $F(20,134) = 1.86, p < .020$) for self-descriptions among the selected ACL scales across the groups defined by the PC. Subsequent univariate analyses at $p < .005$ ($.05/10$) indicated differences among the groups on the number of unfavourable adjectives (UNFAV) endorsed ($F(2,76) = 8.15, p .001$), and the Autonomy ($F(2,76) = 7.59, p < .001$), and Deference ($F(2,76) = 9.32, p < .0005$) scales. Post-hoc contrasts using Tukey's HSD at $p < .05$ and Scheffe's at $p < .01$ indicated the psychopathic group to have scored higher than both the mid-range and non-psychopathic groups on the Unfavourable Adjective Scale at $p < .05$, but to differ only from the non-psychopathic group at $p < .01$. Differences on the Autonomy scale were evident only between the psychopathic and non-psychopathic groups in which the former group scored higher ($p < .01$). On the Deference scale, both the psychopathic and mid-range groups scored lower than the

TABLE XXX

Means and Standard Deviations of the Selected ACL Scales
and Rosenberg Scale for the PC Groups

ACL SCALES ^a	GROUP					
	Psychopathic		Midrange		Non-Psychopathic	
	Mean (n=27)	SD	Mean (n=27)	SD	Mean (n=25)	SD
ACL Total	139.15	41.77	116.85	29.94	139.84	35.48
Favourable	49.48	8.62	49.85	8.46	51.20	6.46
Unfavourable	57.04	11.69	50.11	9.94	46.28	6.88
Achievement	49.52	7.43	49.41	10.12	50.56	8.50
Dominance	53.52	8.58	49.63	11.31	48.24	10.25
Autonomy	55.78	10.91	50.56	10.10	45.04	8.52
Aggression	55.22	10.86	49.56	9.32	46.96	8.50
Abasement	44.67	10.76	48.37	12.15	54.44	9.58
Deference	43.89	10.95	49.00	9.82	55.68	8.56
Rosenberg	17.70	4.75	17.70	5.88	19.52	4.12

COMPARISONS^b

	Univariate F (2,76)	Tukey HSD (p < .05)	Scheffe (p < .01)
ACL Total	3.50, p < .04	---	---
Favourable	0.33	---	---
Unfavourable	8.15, p < .001	P > M, NP	P > NP
Achievement	0.14	---	---
Dominance	1.93	---	---
Autonomy	7.59, p < .001	P > NP	P > NP
Aggression	5.05, p < .009	P > NP	---
Abasement	5.28, p < .007	P > NP	P < NP
Deference	9.32, p < .0005	P, M < NP	P < NP
Rosenberg	1.13	---	---

NOTES: (a) ACL Total refers to the total number of adjectives endorsed (max = 300), the remaining ACL scales are T scores taken with respect to male norms obtained from the ACL MANUAL (Gough & Heilbrun, 1980).

(b) The overall MANOVA was significant at p < .02.

TABLE XXXI

Means and Standard Deviations of the Selected ACL Scales
and Rosenberg Scale For the Factor 1 Groups

ALL SCALES ^a	GROUP					
	Psychopathic Mean (n=25)		Midrange Mean (n=20)		Non-Psychopathic Mean (n=34)	
		SD		SD		SD
ACL Total	128.04	39.35	134.55	40.21	132.82	34.63
Favourable	49.84	8.54	52.00	7.26	49.29	7.76
Unfavourable	55.68	12.10	49.70	9.92	48.94	9.06
Achievement	50.20	7.57	50.85	8.89	48.91	9.41
Dominance	53.52	8.98	52.65	11.25	47.06	9.70
Autonomy	54.64	10.41	52.90	12.22	46.27	8.53
Aggression	53.80	10.85	51.30	11.57	48.00	8.03
Abasement	44.48	10.37	47.35	12.22	53.35	10.56
Deference	44.00	10.76	49.50	11.54	53.24	9.04
Rosenberg	16.60	4.47	18.20	6.25	19.56	4.27

COMPARISONS^b

	Univariate F (2,76)	Tukey HSD ($P < .05$)	Scheffe ($p < .01$)
ACL Total	0.19	---	---
Favourable	0.77	---	---
Unfavourable	3.38, $p < .04$	$P > NP$	---
Achievement	0.35	---	---
Dominance	3.69, $p < .03$	$P > NP$	---
Autonomy	5.59, $p < .005$	$P > NP$	$P > NP$
Aggression	2.51	---	---
Abasement	5.05, $p < .009$	$P < NP$	---
Deference	5.87, $p < .004$	$P < NP$	$P < NP$
Rosenberg	2.63	---	---

NOTES: (a) ACL Total refers to the total number of adjectives endorsed (max = 300), the remaining ACL scales are F scores taken with respect to male norms obtained from the ACL MANUAL (Gough & Heilbrun, 1980).

(b) The overall MANOVA did not reach significance ($p > .05$)

TABLE XXXII

Means and Standard Deviations of the Selected ACL
Scales and Rosenberg Scale for the APD Groups

ACL SCALES ^a	APD		Not APD		Univariate ^b F (1,77)
	Mean	SD (n=52)	Mean	SD (n=27)	
ACL Total	132.06	39.88	131.15	32.14	0.01
Favourable	49.69	8.55	51.04	6.44	0.52
Unfavourable	53.60	10.95	46.78	8.47	7.97, $p < .006$
Achievement	49.44	8.56	50.52	8.98	0.27
Dominance	50.98	10.12	49.63	10.57	0.31
Autonomy	52.50	12.00	46.93	6.49	5.04
Aggression	52.15	10.91	47.81	7.81	3.36
Abasement	47.14	12.27	52.67	8.94	4.29
Deference	47.04	11.70	53.85	7.30	7.59
Rosenberg	17.98	4.95	18.85	5.13	0.54

NOTES: (a) ACL Total refers to the total number of adjectives endorsed (max = 300), the remaining ACL scales are F-scores taken with respect to male norms obtained from the ACL MANUAL (Gough & Heilbrun, 1980).

(b) The overall MANOVA did not reach significance ($p > .15$)

TABLE XXXIII
Means and Standard Deviations of the Selected ACL
Scales and Rosenberg Scale for the APD-R Groups

ACL SCALE ^a	GROUP				Univariate ^b F (1,77)
	APD-R Mean (n = 47)	SD	Not APD-R Mean (n = 32)	SD	
ACL Total	129.79	38.02	134.63	36.39	0.32
FAVOURABLE	49.81	8.16	50.66	7.54	0.22
UNFAVOURABLE	53.11	10.54	48.56	10.32	3.60
ACHIEVEMENT	48.81	8.61	51.28	8.67	1.56
DOMINANCE	50.85	10.00	50.03	10.70	0.12
AUTONOMY	52.40	10.45	47.94	10.76	3.40
AGGRESSION	51.72	10.00	49.13	10.26	1.26
ABASEMENT	46.72	11.51	52.41	10.76	4.89
DEFERENCE	47.13	10.14	52.66	11.19	5.20, > .02
ROSENBERG	17.36	4.70	19.63	5.19	4.05

NOTES: (a) ACL Total refers to the total number of adjectives endorsed (max = 300), the remaining ACL scales are F-scores taken with respect to male norms obtained from the ACL MANUAL (Gough & Heilbrun, 1980).

(b) The overall MANOVA was not significant ($p > .04$).

non-psychopathic group at $p < .05$, but the difference was only retained for the psychopathic vs. non-psychopathic groups at $p < .01$. Two other scales, Aggression and Abasement, approached significance ($p < .009$ and $p < .007$, respectively) in the univariate analyses reflecting a $p < .05$ difference on Aggression with the psychopathic group scoring higher than the non-psychopathic group, and a $p < .01$ difference on Abasement with the psychopathic group scoring lower than the non-psychopathic group. Thus, compared to the non-psychopathic group, the psychopaths as defined by the PC described themselves with more unfavourable adjectives, and as more autonomous and less deferrent; modest trends also suggest them to describe themselves as more aggressive and less abasing. These results are again surprising in appearing to be rather realistic self-appraisals, quite inconsistent with the expectation for dissimulation on self-report. Moreover, these results do not evolve from simple differences in "loquacity" as there was no evident group difference in the total number of adjectives endorsed

($F_{(2,76)} = 3.50, p < .035$; no significant post-hoc contrast).

As mentioned, the multivariate analysis for the groups formed by the Factor I criterion did not reach significance ($F_{(20,134)} = 1.57, p < .05$), and only two of the ten univariate contrasts met $p \leq .005$ (Autonomy and Deference). The multivariate group comparisons for APD and APD-R were not significant and no univariate contrasts met $p \leq .005$.

Discriminant Analyses with the ACL Scales

Discriminant analysis for the PC groups using the ACL scales did not perform as well as the IAS-R coordinate system, yielding a 57% overall hit rate and best identifying the non-psychopathic group members at 68%. Scales contributing most to the discrimination, in order, were Deference, Number Unfavourable, Autonomy, Abasement, and Aggression.

None of the functions for classification of the other criterion groups were significant.

SUPPLEMENTARY ANALYSES

Polar Coordinates

Use of polar coordinates (vector length and angular placement) as a bivariate system proved to be problematic for analysis, given that the full circular array of angles cannot be used to derive simple arithmetic means and standard deviations. Considered individually, vector length for the different IAS-R perspectives across the criterion group sets did not reach significance for any of the comparisons made, although, as previously mentioned, vector length did show an appreciable correlation with PC scores, particularly when taken from staff descriptions ($r = .461$, $n = 79$). See Tables XXXIV-XXXVII for summaries of the vector lengths obtained for the different groups.

Similarly, tests of "angular preference" or a tendency to a

TABLE XXXIV

Means and (Standard Deviations) of Vector Length
Across Psychopathy Checklist Groups (N = 79)

IAS-R SET	Psychopathic Vector Length (n = 27)	Midrange Vector Length (n = 27)	Non-Psychopathic Vector Length (n = 25)	Overall Vector Length
1. "Self"	1.769 (.977)	1.747 (.760)	1.306 (.505)	1.615 (.796)
2. "Ideal"	1.752 (.954)	1.785 (.914)	1.908 (.785)	1.812 (.881)
3. "As Friend"	1.951 (1.017)	1.989 (.955)	1.714 (.773)	1.889 (.920)
4. "As Staff"	2.253 (1.475)	2.063 (1.234)	1.668 (1.162)	2.003 (1.307)
5. "By Staff"	2.763 (1.122)	1.777 (1.033)	1.502 (.869)	2.027 (1.143)

TABLE XXXV

Means and (Standard Deviations) of Vector Length
Across Factor I Groups (N = 79)

IAS-R SET	Psychopathic Vector Length (n=25)	Midrange Vector Length (n=20)	Non-Psychopathic Vector Length (n=34)
1. "Self"	1.811 (.941)	1.614 (.824)	1.472 (.643)
2. "Ideal"	1.734 (.947)	1.615 (.911)	1.986 (.803)
3. "As Friend"	1.864 (.903)	1.929 (.990)	1.884 (.918)
4. "As Staff"	2.212 (1.579)	1.850 (1.038)	1.940 (1.245)
5. "By Staff"	2.755 (1.179)	1.808 (.856)	1.619 (1.025)

TABLE XXXVI

Means and (Standard Deviations) of Vector Length
 Across APD versus NOT APD (N = 79)

IAS-R SET	MEET APD Vector Length (n=52)	NOT MEET APD Vector Length (n=27)
1. Self	1.663 (.884)	1.522 (.595)
2. Ideal	1.802 (.953)	1.832 (.740)
3. As Friend	1.905 (.970)	1.857 (.832)
4. As Staff	2.180 (1.353)	1.663 (1.161)
5. By Staff	2.337 (1.167)	1.428 (.825)

TABLE XXXVII

Means and (Standard Deviations) of Vector Length
 Across APD-R versus NOT APD-R (N = 79)

IAS-R SET	MEET APD-R Vector Length (n=47)	NOT MEET APD-R Vector Length (n=32)
1. Self	1.664 (.741)	1.543 (.879)
2. Ideal	1.173 (.957)	1.870 (.767)
3. As Friend	1.903 (.863)	1.868 (1.013)
4. As Staff	2.311 (1.456)	1.550 (.891)
5. By Staff	2.369 (1.206)	1.523 (.830)

particular angular orientation within samples based on the Rayleigh test (attributed to Lord Rayleigh circa 1880; Norcliffe, 1977) did not provide any positive results. The problem here may be related to the small sample sizes within groups relative to the potential dispersion of specific angles.

Another basic test of the angular distributions for groups has already been outlined in reference to octant locations which correspond to the relative frequencies of angles within arc-segments of the circle and tested by Chi-square (cf. Mardia, 1972; Norcliffe, 1977). It was shown that tendencies for differential assortment across adjacent octant pairs was quite evident, particularly with reference to the staff ratings and groups formed by the Factor I criterion.

Self Esteem and "Self" versus "Ideal"

As a simple supplementary test of the adequacy or consistency of the obtained data and the derived distance scores, a correlation was computed between the Rosenberg scale as a measure of self-esteem and the distance measure "self versus ideal" (SVSI). This result (.342 with $N = 79$; .469 with $N = 113$) suggests an adequate level of correspondence consistent with the idea that lower self-esteem (a higher score) relates to a larger disparity between one's view of self versus a self ideal, and reflects reasonably well on the consistency of the data obtained from the self-reports.

DISCUSSION

Overview and Basic Methodological Issues

Although not wholly supporting the specific expectations and hypotheses considered of central interest to this study, the results were generally consistent conceptually in pointing to characteristics of the psychopath which are assessable with the IAS-R. As such, the results contribute to both the conceptual validity of the psychopath as identified by the Psychopathy Checklist and the construct validity of the circumplex structure of the IAS-R. The results demonstrated differences in the discriminative utility of interpersonal descriptions identified by the IAS-R in relation to groups formed by the PC versus those based on APD categories, and showed placement of those individuals identified as psychopaths by the PC where they were to be expected within the Interpersonal space defined by the IAS-R. I will return to further discussion of the diagnostic and theoretical implications of these results following consideration of the limitations of this study.

Perhaps the most basic threat to the interpretive validity of any study is its generalizability to populations more or less similar to the sample targeted by the study. The present study

is affected to some extent by the characteristics of the men seen and by the circumstances under which they were seen. These confounds will have the greatest effect on any anticipated practical application of the assessment used here.

The foremost characteristic of the men seen for this study was their willingness to participate. Compared to others not seen, these men may be considered to be relatively more active in programs and other opportunities for activities or interests within the institution, to be more open to participation in psychological research oriented to criminality, and/or to be less engaged by the "con code" or institutional ethic proscribing any manner of cooperation with "the system." Through efforts to solicit volunteers and negotiate with individuals and groups such as the Inmate Committee, it became clear that such participation was not considered trivial by many of the men within the institution. Considerable effort was given to assuring the inmates of the confidentiality of any material obtained in relation to any particular individual, and of the independence of the research interest from any association with the institution or other authorities. Also, offering the men money for their participation must be considered to have affected their motivation and interest. The selection of subjects was also affected by the need for education and English language criteria in order to complete the adjective lists.

Thus, at basis, the sample of men seen for this research is

not necessarily representative of the general population of correctional inmates, or even of the population specific to this particular institution. It is not known, for example, how others may differ in the relative prevalence of diagnostic categories used here. Based on research with the PC, the prevalence of psychopathy within inmate samples has been found to be approximately 22-27%, but may vary as functions of the distribution of scores obtained and selected cut-offs. We do not know whether psychopaths may be more or less likely than other inmates to choose to participate in the research programs offered. However, comparable distributions of scores have been shown by Wong (1985) with a random sample of inmates using scoring based on file information alone.

A further confound to the possible practical utility of the assessment strategy used here derives from the setting or circumstances in which the men were seen; this may also be considered to have affected the obtained distance measures which formed the primary hypotheses for this study. As was mentioned, considerable effort was given to assurances of confidentiality and independence from correctional authorities; as such, the obtained self-reports may not reflect the response styles to be obtained when the men believe their responses to be of some consequence within the system. If so, this may have worked against the expectations for dissimulated self-reports. In the absence of "threat" or some perceived consequence resulting from

how they chose to portray themselves, these individuals may have felt no particular pressure to depict themselves in a more favourable way. Therefore, one might still assume that differential patterns of dissimulation would result if the men, particularly the psychopaths, believed the assessment to have some effect within the institutional setting.

Statistical influences on the results are seen to derive from high and heterogeneous variability across groups and across the dependent measures which may tend to obscure potential differences at the higher levels of analysis (i.e., MANOVA), particularly when contrasting the more specific derived measures. Several sources of variability may be seen to operate on the responses obtained with the word lists, not the least of which is the basic motivation of the individual to respond in some reasonably meaningful way. The content of the adjective scales themselves and the level of understanding of the word usage which the men may possess was an initial concern which was moderated to some extent for the IAS-R by the provision of a glossary. That the glossary itself did no particular violence to the intent of the IAS-R was supported by the results of the obtained circumplex from the self descriptive profile, and the resulting octant placements of the profiles being consistent with theoretical expectations.

Approach to the task by individual subjects ranged from very fast rates of completion of the adjective lists with, one may

suspect, very superficial levels of attention, to such painstaking efforts that two subjects were considered unable to complete the task. Personal expectations and the role of stereotypes are also likely to influence the responses offered, particularly when asked to consider the perspective of a member of the institutional staff. One may expect an inmate to consider himself to be seen by staff as a "bad ass" as, to many, this is what the system demands. Similarly, it was expected that staff, too, would suffer from stereotyped perceptions. To assess this, a rating of "an average inmate" was requested at the conclusion of the study from a representative sample of the staff who had been asked to provide ratings of inmates participating in the study. This anchor point description was seen to fall at essentially the DE pole of the circumplex and constituted a far more extreme rating than was obtained on average as staff ratings of individual inmates. This would suggest the staff to be cognizant of a stereotyped "average inmate" and to generally have made ratings of individual inmates which were not unduly influenced by the stereotype. Moreover, the results indicated that the staff ratings provided the basis of group discrimination obtained with the IAS-R.

Two additional considerations might be raised with respect to the inmates' completion of the instructed self-report sets and their selection of staff: differential effects of memory abilities on the consistency of self-report, and systematic

selection bias. With respect to the first, memory effects, concurrent data were available providing measures of intellectual and memory function collected for a different research interest. Comparisons of these measures (Hare and Forth, 1988) showed no group differences for the groups defined herein and support the contention that there were no differential abilities to remember and manipulate responses across the instructed sets. Although not specifically assessed, selection bias was not expected to be evident across groups as the inmates typically complained of little opportunity or interest in relating to staff and generally expected a negative perception from them. It was also considered that the derived measures would reflect the ability to predict staff perceptions, and, as such, did not rely on a particular consistency of negative or positive expectation.

Given the above considerations of potential variability and inaccuracies in the data, the obtained results may be seen as quite promising. On the more global level of the octant distributions obtained for the criterion groups and the overall consistent pattern of dependent measures, the data are quite good. Initial consideration for the power of the tests was put at approximately .80 for groups of 25, based on mean differences seen in the data reported by Wiggins, Trapnell, and Phillips (in press), using simple contrasts and a Type I error rate of .025. That the multivariate comparisons of the Dom and Lov coordinates for groups based on the PC resulted in differences

significant at $p < .001$ suggests that the IAS-R may prove fruitful for further research.

A further consideration in the interpretation of the results is the number of comparisons made and the consequent overall Type I error rate. As an exploratory study, a relatively liberal alpha level was used (.01), taken in relation to each of the dependent comparisons of interest. Thus, each of the derived measures used in the MANOVAs--Dom and Lov coordinates, interprofile distances, and vector length--were considered independently, and comparisons of the defined criterion groups (by PC, Factor 1, APD, and APD-R) were each evaluated at $p < .025$ (.10/4). Although this would suggest a nominal experiment-wise Type I error rate of .30 for the MANOVAs alone, it may be seen that the nominal alpha levels are quite arbitrary and that the same pattern of results would be retained even if the alpha levels were set lower. Comparisons were not made for groups which may be defined under Factor 2 in order to avoid further inflation of the overall alpha level and in the expectation that Factor 2 shows considerable overlap with APD (see Appendix B). Given the interests of the study in comparing profiles across diagnostic sets, it was felt heuristic value would be better served by a systematic use of a relatively more liberal statistical criterion. The consistent pattern of results ranging from the more global non-parametric comparisons, through simple correlations, to the more specific contrasts based on the MANOVAs

and subsequent post-hoc comparisons may contribute more to the inferential process and suggestions for further research than a simple yes or no based on MANOVAs at a more stringent level of significance.

Given the above considerations, it is possible to review the strengths of the present research. With respect to issues of generalizability, the results have inherent limitations but are not atypical of other studies in which consenting volunteers are obtained from a correctional institution sample. As such, a sample with defined characteristics was obtained which provides the basis for comparisons of diagnostic criteria within the sample, and which demonstrates patterns of differences on selected dependent measures that show reasonable levels of statistical reliability and good conceptual congruity. I shall now return to a discussion of the implications of these results.

Diagnostic Considerations

The central issues for diagnostic usage with the psychopath relate to the poor consensus for definitional criteria and the potential for misapplication where "psychopathic characteristics" are assumed to apply despite the use of inappropriate or incomplete criteria. Current literature continues to provide examples where specific reference is made to research with "psychopaths" when, in fact, the basis for inclusion is diagnosis of APD by DSM-III (APA, 1980) or more or less significant

elevations on Scale 4 (Pd - psychopathic deviate) of the MMPI. Such continued misapplication contributes to ongoing misinterpretation of the meaning of these terms and continued confusion in the interpretation of research with "the psychopath."

Comparisons of the base rates of individuals meeting the criteria under the PC or APD are a basic illustration of the potential for confusion. Based on the total sample of 113 subjects, 27.4% were identified as psychopaths by both the PC and the Factor I criteria, whereas 66.4% met the criteria for APD by DSM-III and 58.4% as APD by DSM-III-R. The subsample of 79 demonstrates the more usual convention with research involving the PC in which approximate thirds of the obtained distribution of scores are taken to facilitate group comparisons; here 34.2% met the PC criterion and 31.7% met the Factor I score cut-off. The APD criteria for DSM-III were met by 65.8% and by 59.5% for DSM-III-R criteria. Although these rates result from diagnoses made by one rater only and may be somewhat high compared to the rates where two raters agree, they are generally consistent with past research (e.g., Hare, 1981, 1983, 1985a) and point again to the fact that, although most, if not all, of the individuals meeting the PC criterion also meet the criterion for APD, the converse is far from true--APD cannot be considered synonymous with psychopathy as a more rigorously defined concept.

The more specific measures of concordance rates and

contributions to the prediction of group membership across criteria underscore the above base rate differences. Poor rates of agreement were obtained between the PC and APD criteria for either DSM-III or DSM-III-R (Kappas of .183 and .114, respectively). These rates are much lower than have been previously reported (e.g., Hare, 1983, 1985a) and, as mentioned, may relate to the inclusion of all subjects (here, 113) rather than agreement for the extreme groups only. Indeed, results here could appear much more favourable if based only on the extremes, yielding Kappas of .621 with APD by DSM-III or .527 by DSM-III-R. The rates of agreement were somewhat worse still when comparing the APD criteria to groups based on the Factor I scores, and may further emphasize the conceptual differences of APD as grounded in persistent antisocial behaviour versus psychopathy as emphasizing the lack of empathy.

Contributions to the predictions of group membership based on knowledge of membership under another criterion again reflect the poor levels of association seen between the PC criteria and APD. Symmetric lambda coefficients ranged from 0 between the Factor I groups and APD-R to .183 between the PC and APD, indicating little reduction in the probability of error for such predictions. Although somewhat better relations were seen in the subsample of 79 (compare Tables X and XI, pp. 76 and 79), the overall results reflect poor levels of association and emphasize the misrepresentation inherent in assuming the diagnosis of APD

to be equivalent to psychopathy as identified by the PC.

The utility of the MMPI in defining the psychopath is seen to be particularly poor. The low rates of profiles conforming to specific criteria (e.g., Gilbertstad & Duker, 1965; or Marks & Seeman, 1963) precluded group comparisons. Comparisons were instead made with respect to the specificity and sensitivity of profiles considered typical of the psychopath in relation to the other criterion groups. The sample of 113 men provided only 89 MMPI profiles of which 20 were considered relevant to the typical association of "psychopathy" (i.e., elevations > 70 T on scale 4 - psychopathic deviate--alone, or with scales 9 - hypomania, 8 - schizophrenia, or 6 - paranoia). These 20 profiles were then sorted by their specificity--the proportion being specific to the criterion group of interest (i.e., psychopathic by the PC or definite APD), and their sensitivity--how many of the relevant criterion group actually had the profile. It was found that the profiles were most specific to APD-R (75% versus 40% for PC psychopathy), and might be suggested to reflect the correspondence of common behavioural elements--family problems, conflict with authority, poor school performance, substance abuse, and so forth. Overall, the profiles show little sensitivity and appear in only 23.2% of those definite APDs who provided profiles, up to 34.8% of those identified as psychopathic by the PC or Factor I criteria and who provided a profile. Although the psychopathic group defined by Factor I

demonstrated a significantly different proportion ($Z = 2.26, p < .02$) with a relevant profile than among the non-psychopathic group, it is still to be seen that more than 65% of the individuals in the psychopathic group did not provide a profile considered "diagnostic" of psychopathy. Values shown in Table XI (p. 79), show relatively larger proportions relating the relevant profiles (15) obtained in the subsample of 79, but the same pattern of results can be seen.

It would appear that MMPI profiles associated with "psychopathy" have a similar relationship to more stringent criteria as seen between APD and the PC criteria. That is, the majority of relevant profiles may be common to the other criterion (here, APD), but the majority of the criterion group do not exhibit the relevant profiles. The MMPI is seen to be a particularly poor representation of psychopathy as defined by the PC.

From the foregoing it should be clear that failure to discriminate between APD, MMPI criteria, and psychopathy as identified by the PC can only contribute to confusion in efforts for research with the psychopath as was noted ten years ago by Hare and Cox (1978). There are obvious problems in assuming APD or MMPI scale 4 elevations to be equivalent to psychopathy, as it is quite unlikely that one is relating to a common population. Continued misuse of these terms contributes to a "halo" effect common to categorical assignments wherein one assumes all

associated features are present, given the diagnosis, when in fact only a minimum subset required to meet the criteria are actually applicable. This is particularly evident with APD under DSM-III-R (APA, 1987) wherein the inclusion of a feature relating to a remorseless attitude is somehow considered to make the diagnosis more consonant with the concept of psychopathy. It is quite apparent in the structure of the diagnostic criteria that this feature need not be considered in order to apply the diagnosis. Individuals receiving such diagnoses may be better served if specific reference were made to the features considered present for the application. In correctional and forensic treatment settings particular care should be given to avoid attributing a "psychopathic" label on the basis of loose criteria.

Relations of the Dependent Measures to the PC and APD

Descriptive differences were obtained with the IAS-R in relation to the PC and Factor I groups which are consistent with the concept of psychopathy and which were not evident in comparisons with the APD criteria.

The most basic level of analysis utilizing the circumplex structure of the IAS-R derives from the relative frequencies of octant locations seen for the various groups. As outlined in the introduction, it was expected that octants 2 and 3 (BC/DE) would capture the psychopathic profile, particularly from staff

descriptions. This was shown to be the case for the PC groups, with staff descriptions demonstrating significant differential assortment across groups; placing 85.1% of the psychopathic group in octants 2 and 3, versus 28.0% of the non-psychopathic group and 51.8% of the mid-range. Interestingly, there was a modest trend ($p < .05$) for the groups to be differentially sorted by self-description, with 62.9% of the psychopathic group falling in octants 2 and 3 versus 24.0% of the non-psychopathic group and 37.0% of the mid-range. Similar results were obtained with staff descriptions for the Factor I groups with 88% of the psychopathic group being placed in octants 2 and 3, versus 35.3% of the non-psychopaths and 50% of the mid-range. There were no evident differences by self-description by the Factor I groups.

Staff descriptions also demonstrated differential assignments for the individuals meeting DSM-III criteria for APD, placing 69.3% of the definite APDs in octants 2 and 3 versus 29.6% of those not meeting the criteria. However, it might be argued that there is some element of confound here in that 26 of the 52 men identified as APD were also seen as psychopathic by the PC. Thus, in essence, only 10 of the remaining 26 (38.5%) were placed to octants 2 and 3. Under the DSM-III-R criteria, staff showed a tendency ($p < .02$) to place more of the APDs in octants 2 and 3 (68.1% versus 37.5%), but the same confound applies with 22 of the 47 APD-Rs also being identified as psychopaths by the PC. Thus, here 40% (10 of remaining 25) of

those meeting APD-R criteria but not the PC criteria were placed in octants 2 and 3.

Thus, at this point there are evident differences in the perceptions of others relating to the interpersonal characteristics of the men identified as psychopaths by the PC versus those receiving a diagnosis of APD. Psychopaths as identified by the PC are more likely to be associated with such characteristics as grandiosity, lack of empathy with others, attitudes of special entitlement, restricted affect or an absence of warmth, and exploitative relations with others; aspects considered central to the psychopathic personality. It is interesting to note that these descriptive characteristics are also common to the narcissistic character as falling within octant BC (Kiesler, 1985; Wiggins, 1982) of the circumplex space. These results perhaps reflect the dichotomy of the clinical concept of psychopathy as a psychological construct versus the behavioural aspects of antisocial adjustment more typically associated with the APA (1970, 1987) definition of Antisocial personality. (A basis for the analysis of this dichotomy has been pursued in recent research by Harpur, et al. (1988b) investigating external correlates of Factors 1 and 2 of the Psychopathy Checklist (see Appendix B).)

The results are reiterated, and given a stamp of relatively better statistical reliability, in the repeated measures analyses of the Dom and Lov coordinates. Post-hoc comparisons also allow

more specific identification of group differences on these measures. From these analyses differences were evident among the groups defined by the PC and Factor I criteria, but were not seen for the APD or APD-R groups. For the PC groups, differences derived from the Dom and Lov coordinates of the staff ratings; post-hoc contrasts at $p < .05$ indicated the psychopathic group to be scored higher on the Dom dimension and lower on the Lov dimension than either of the mid-range or non-psychopathic groups; however, these differences were retained only for the extreme groups at $p < .01$.

Groups formed by the Factor I criterion also showed differences on the Dom and Lov coordinates of the staff ratings, but here both the mid-range and psychopathic groups were scored higher ($p < .05$) than the non-psychopathic group on the Dom dimension and the psychopathic group was scored lower ($p < .05$) than both the mid-range and non-psychopathic groups on the Lov dimension. Again, these differences were only retained for the extreme groups at $p < .01$. The Factor I groups also differed on the Lov dimension for representation of an ideal self, with both the mid-range and psychopathic groups scoring lower ($p < .05$) than the non-psychopathic group. One other measure suggested a significant trend in which the psychopathic group scored higher than the non-psychopathic group on the Dom dimension for self-description.

Thus, the results based on the dimensional structure of the IAS-R reflect the differential perceptions of others in which psychopaths are quite distinct from non-psychopaths at least, as being more dominant and assured and less warm or affiliative; a pattern suggestive of an arrogant, cold and calculating interpersonal style. The additional differences seen in the Factor I group suggest some refinement in which the non-psychopathic group comes to differ in terms of the depiction of a more nurturant or affiliative ideal relative to the others, and the extreme groups reflect a difference in self-perceived dominance or social status.

Comparisons based on the derived distance measures taken between the point representations of the IAS-R protocols were disappointing; no differential patterns were evident in any of the criterion group comparisons. As outlined in the Introduction, expectations here were predicated upon assumptions incorporating dissimulation in the response profiles, particularly for self-description in the psychopathic group defined by the PC and Factor I criteria. Review of Tables XXVI - XXIX providing the group means and standard deviations of the distance measures, and Figures 5 - 7 depicting the point locations suggests that, although the groups appear to occupy relatively different locations in the space (as seen for the PC and Factor I groups in the DOM/LOV analyses outlined above), the pattern of distances between points is quite similar.

As already suggested, one implication here is that the

psychopathic group was surprisingly candid. It is quite apparent that, on average, the men in this group endorse self-descriptions which incorporate the characteristics of octants BC/DE, contrary to the expectations of them denying such attributes. This may be interpreted in either of two ways: first, that given the research situation with assurances of confidentiality, these men felt no particular pressure to portray themselves in a more favourable way; or, alternatively, that they responded in keeping with a sex role stereotype of exaggerated (negative) masculinity. This latter aspect was outlined in the Introduction with respect to sex differences and social desirability outlined in Wiggins (1979) and Wiggins and Broughton (1985); however, the expectation was that psychopaths would tend to avoid this pattern. The obtained result may be a combination of the above interpretations, and the suggestion repeated that this pattern may not obtain if these individuals believed their responses to have some personal consequence.

Another problem evident in the analyses of these measures stems from the high and heterogeneous variability which tends to overwhelm the differences obtained. This aspect might be moderated with a more substantial sample size.

The distance measures did, however, yield some results of interest with inspection of the within cells correlation matrices for these measures across groups. Patterns evident among these matrices for the PC and Factor I groups appear consistent with

Gough's (1948) hypothesis of a deficit of role-taking in the psychopath. It would appear that those identified as psychopaths here show a particular inability to predict staff perceptions of them, despite their own relatively negative self-descriptions. Thus, even though appearing rather candid in their representations of self ("insight"?), psychopaths may still not appreciate how poorly they may be seen by others. Again, these differences were not evident for those men identified as APD.

Group comparisons with scales from the ACL taken as self-description were also interesting and also only provided demonstrable differences among the groups formed with the PC. Here, too, results suggested rather realistic self-appraisals by the psychopathic group, differing ($p < .01$) from the non-psychopathic group in endorsing more unfavourable adjectives, scoring higher on Autonomy, and lower on Deference and Abasement; an additional near difference suggested a higher score ($p < .05$) on Aggression. Based on descriptive associations provided in the ACL Manual (Gough and Heilbrun, 1980), this profile of relatively high and low scores suggests characteristics such as pessimistic, changeable mood, quick to take offense, feelings of bitterness and hostility toward others, indifference for the feelings of others, egotistic, headstrong, a view of others as rivals to be vanquished, risk-taking, and impulsive behaviour which frequently leads to conflict with others. Such characteristics are quite consistent with perceptions of the psychopath; however, it should

be noted that the differences obtained were only relative to the non-psychopathic group in particular and do not reflect extreme scores on the scales described. Overall, the scale score results were within the normative range suggested by Gough and Heilbrun (1980, p. 48) as lying between 40T and 60T; the maximum seen for the psychopathic group was 57T (UNFAV) and the minimum 43.9T (DEF) (See Table XXX, p. 116).

As has been suggested, the obtained results are notable in being quite specific to the psychopath as defined by the PC and Factor I criteria. Groups defined by the criteria for APD as defined by either DSM-III (APA, 1980) or DSM-III-R (APA, 1987) do not show similar descriptive differences. This specificity contributes to the view that APD does not capture "personality" attributes whether self-described or perceived by others, but appears more generally to reflect an individual's tendency to criminal behaviour.

The performance of discriminative functions based on the IAS-R coordinates in differentiating the groups defined by the PC or APD criteria further illustrates these differences. It was seen that the IAS-R Dom/Lov coordinates provided an overall 58.2% hit rate and correctly predicted 70.4% of the psychopathic group. While these results are not particularly high, it is a substantial improvement over the base rate for the psychopathic group of some 34%. The false positive rate of 37.6% primarily resulted from the mid-range group (29.6%); the rate for members

of the non-psychopathic group predicted to be psychopaths was quite low (8% : 2 of 25). The discrimination of the Factor I groups was somewhat better with an overall hit rate of 65.8% and correct prediction of 72% of the psychopathic group. The false positive rate was reduced to 25.9%, and incorrectly predicted only 5.9% (2 of 34) of the non-psychopaths as psychopaths.

Although the numbers appear good for the discrimination of the APD groups--an overall hit rate of 70.9% for APD and 68.4% for APD-R--they do not represent much gain over the base rates for these diagnoses--65.8% APD and 59.5% APD-R. Moreover, it should be recalled that much of the discrimination may derive from the fact that 26 of the 52 APDs were psychopaths by the PC, as were 22 of the 47 APD-Rs.

Overall, it becomes quite clear that the data obtained are supportive of the conceptual validity of the psychopath as assessed by the PC in having identifiable interpersonal characteristics not seen in those receiving a diagnosis of Antisocial Personality. Similarly (if circuitously), these results support the construct validity and potential utility of the IAS-R as an assessment strategy for use in this typically problematic population.

Practical Implications and Theoretical Considerations

As indicated, the obtained results suggest some potential utility for the IAS-R as an assessment strategy for use with

criminal populations. However, it is apparent that the differences seen derive primarily from staff perceptions of the inmates and not from readily discriminable differences based on simple self-report. Moreover, the differences are relative across groups and do not, at this point, lend themselves to ready or likely replicable cut-off scores for identification of the psychopath. A possible application might be in the use of the IAS-R for staff ratings, helping to characterize and standardize interpersonal perceptions of individual inmates in assessment contexts where the desire to identify such attributes is quite salient, e.g., treatment progress or pre-release reviews.

In terms of theoretical issues, it is apparent the IAS-R does contribute to the characterization of the "average" psychopath in identifying a discriminable interpersonal style, and that its location within the defined Interpersonal Circle is consistent with expectations for this personality type. There has been debate regarding this location, however, with Leary and Coffey (1955) expecting the DE pole to represent the sadistic and psychopathic personalities, and Kiesler (1985) arguing against octant BC as representative of the psychopath. It was considered here, however, that BC/DE (CD?) would provide a more likely location as representing both cold-hearted and manipulative characteristics. It is interesting to note that the staff description of the "average inmate" fell at the DE pole (coordinates Dom: 0.34, Lov: -4.0) suggesting a criminal

stereotype as "cold-hearted" and essentially without a relative interpersonal status. The psychopath, however, was clearly seen as one who is both cold-hearted and domineering (manipulative), reflecting characteristics in common with the narcissistic personality defined by APD (1980, 1987).

Another aspect of the circumplex representation that is of interest relates to the conceptualization of vector length or the distance of a point representation from the origin, and its applicability as an index of pathology or rigidity of interpersonal style (see Wiggins, Phillips, and Trapnell, in press). To the extent that the scores on the PC may be considered a continuum of psychopathology, this interpretation of vector length is consistent here, demonstrating a correlation of .461 between PC scores and the vector length obtained from staff ratings of the inmates taken over the sample of 79 men.

SUMMARY AND CONCLUSIONS

From 147 men seen over 13 months of data collection, 79 provided complete data for the analyses of interest here. Issues of generalizability have been discussed, but the sample may be considered adequate for the purposes of diagnostic comparisons and the assessment of differences among the descriptive aspects derived from the dependent measures as they apply to the different diagnostic groups. These latter differences reflected staff perceptions of interpersonal characteristics as described by the IAS-R which provided reasonably good discrimination of groups based on the PC and Factor I criteria but not for groups defined for APD. The discriminative utility of these differences was seen to be much higher for the PC and Factor I groups than the APD and APD-R groups relative to the base rates for these different categorizations.

Thus, these results contribute to the nomological network for the construct validity of the Psychopathy Checklist and reflect well on potential applications of the IAS-R in clinical samples.

Speculations and Suggestions for Further Research

With respect to the population targeted here, and the interest in the representation of IAS-R inter-profile point distances relying on expectations of differential patterns of dissimulation, it is suggested that such patterns may still obtain in a different context for the assessment. That is, particularly for the psychopathic group, the present context with assurances of confidentiality and no consequence from their participation may have resulted in a relatively more forthright pattern of description that would result from an institutional assessment with assumed consequences resulting from their self-presentations. This raises an issue for informed consent for research in such settings where the goal may be in developing an assessment strategy with practical applications. As "research" there is an ethical onus to inform subjects as to the interests of the research and their own freedom from any obligation or consequence in participating. As an applied interest, however, there is a desire to know how the results of assessment may be expected to obtain in the context of its application. This is a general issue for assessment and also affects the use of the Psychopathy Checklist in contexts other than its research applications.

There is also interest in obtaining more information concerning the differential application of the Factor I items of

the PC versus the total PC in the assessment of psychopathy. As has been suggested, Factor I may assess the characterological aspects considered central to psychopathy and, as less dependent on behaviours common to incarcerated samples, may have broader utility in contexts beyond correctional institutions. Research investigating the relation of other measures of narcissism to Factor I and IAS-R results within incarcerated and other populations would also be of interest.

Further research using the IAS-R in clinical samples would provide information necessary to assess the potential differential utility of IAS-R profiles in various clinical populations, and whether such profiles may differ from those seen here. It may be seen that ratings provided by relatively familiar but objective others could be useful in the characterization of interpersonal perceptions related to other personality or psychiatric disorders, and contribute to "prototype" development of the personality disorders in relation to the Interpersonal Circle.

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APPENDIX A

SUBJECT CONSENT

A title for this research could be "Self-perception in adult male offenders." This research is being conducted by persons affiliated with the Department of Psychology at UBC. The coordinator for this research project is Mike Foreman who can be reached at 228-5581.

The purpose of this research is to investigate how individuals who have had problems with the law see themselves and see themselves in relation to others. In order to do this, we wish to have you complete three different questionnaires.

All information which you provide is confidential and will not be identified to anyone nor entered in to any file or record kept by the police or the institution. Our files will be coded and not identified by your name.

The total time to be expected of you is about 3 hours which may not happen all at once. You will be paid \$5.00 (five dollars) for the completion of the questionnaires. If you have any questions about the procedures please ask, and I will explain further to be sure you fully understand what is expected of you and what the program involves.

If you do decide to participate and change your mind later, you may withdraw from the program at any time without consequence. Refusal to participate or withdrawal from the program will in no way affect your status or standing in the Correctional centre.

I have read this form and agree to participate in this study and understand that I may withdraw at any time without consequence.

Signature _____

Date _____

Witness _____

INTRODUCTION TO THE QUESTIONNAIRE

The following questionnaires are being used as a means of measuring how individuals such as yourself in Matsqui think about themselves. The results of this study will be used to make suggestions for future research into how psychological services may make a better contribution to the Corrections system.

Since the questionnaires rely on your self-report, they can only be as accurate as you will allow. The information gained is confidential (identification is coded and will be used only for the purposes of this research) and will not reflect on you as an individual. Our interest is in the overall average response of a large group of people to which you are one contributor.

Please respond to the items as best you can so as to provide an accurate representation of what you actually believe.

Altogether, the questionnaires take about 1 hour to complete, although you may be asked to do another questionnaire which takes about 1 to 1 1/2 hours.

You may withdraw from this program at any time without any consequence or effect on your status in the institution. If the questionnaires are completed it will be assumed that you have agreed to participate in the study.

When completing the word lists, if you are uncertain of the meaning of a word ask to have it explained to you. Please be sure to provide a response to all the words listed as directed in the instructions which follow.

Thank you for your cooperation.

IAS SET 1

On the page that follows, you will find a list of words that are used to describe people's personal characteristics. The next two pages provide explanations of the words in the list. If you are uncertain about the meaning of a word in the list, look up the explanation for that word to see if that makes it more clear. If you are still unsure about the meaning, ask to have the word explained to you.

For each word in the list, indicate how accurately you think the word describes you.

The accuracy with which a word describes you is to be judged on the following scale:

1	2	3	4	5	6	7	8
extremely	very	quite	slightly	slightly	quite	very	extremely
inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurate

For example, consider the word BOLD. How accurately do you think BOLD describes you as a person?

If you think this word is a quite accurate description of you, write the number "6" to the left of the word: 6 BOLD

If you think this word is a slightly accurate description of you, write the number "5" next to it, if very inaccurate, write the number "2", and so forth.

Rate the accuracy of all the words in the list as to how well you think they describe you.

IAS SET 2

On the pages that follow, you will find the same list of words used to describe people's personal characteristics, and the glossary which helps to explain them.

This time, rate the words as to how accurately they describe your ideal self - the person you would best like to be.

Rate the accuracy of the words as before with the following scale:

1	2	3	4	5	6	7	8
extremely	very	quite	slightly	slightly	quite	very	extremely
inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurate

Rate all the words in the list as to how well they describe your ideal self - the person you would like to be.

IAS SET 3

The following pages provide the same list of words and their explanation.

This time, for each word in the list indicate how accurately the word describes you as you think your friends would describe you.

The accuracy with which a word may describe how you think your friends see you is to be judged on the same scale as before:

1	2	3	4	5	6	7	8
extremely	very	quite	slightly	slightly	quite	very	extremely
inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurate

IAS SET 4

On the following pages you will find the same list of words again. This time, rate each word in the list as to how accurately the word describes you as you think a member of the institutional staff that knows you (for example, your case manager) would describe you.

1	2	3	4	5	6	7	8
extremely	very	quite	slightly	slightly	quite	very	extremely
inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurate

Indicate the staff member that you are thinking of:

1	2	3	4	5	6	7	8
Extremely	Very	Quite	Slightly	Slightly	Quite	Very	Extreme
Inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurat

____(001)	introverted	____(033)	unargumentative
____(002)	undemanding	____(034)	tender
____(003)	assertive	____(035)	unsympathetic
____(004)	unauthoritative	____(036)	timid
____(005)	uncalculating	____(037)	unbold
____(006)	accommodating	____(038)	forceful
____(007)	kind	____(039)	unwily
____(008)	charitable	____(040)	extroverted
____(009)	shy	____(041)	gentle-hearted
____(010)	uncunning	____(042)	persistent
____(011)	cold-hearted	____(043)	perky
____(012)	ruthless	____(044)	friendly
____(013)	dissocial	____(045)	unneighbourly
____(014)	tender-hearted	____(046)	self-confident
____(015)	soft-hearted	____(047)	outgoing
____(016)	cheerful	____(048)	boastful
____(017)	dominant	____(049)	bashful
____(018)	antisocial	____(050)	firm
____(019)	iron-hearted	____(051)	uncrafty
____(020)	enthusiastic	____(052)	unsociable
____(021)	self-assured	____(053)	hard-hearted
____(022)	cruel	____(054)	wily
____(023)	unsparkling	____(055)	calculating
____(024)	cunning	____(056)	uncheery
____(025)	meek	____(057)	sly
____(026)	uncharitable	____(058)	neighbourly
____(027)	unsly	____(059)	warmthless
____(028)	unaggressive	____(060)	distant
____(029)	jovial	____(061)	cocky
____(030)	crafty	____(062)	sympathetic
____(031)	boastless	____(063)	forceless
____(032)	domineering	____(064)	tricky

Glossary for the 64 item IAS-R

- 01 introverted - feel more comfortable by yourself; are less interested
in other people
- 02 undemanding - don't demand or expect much from others
- 03 assertive - tend to be aggressive and out-spoken with others
- 04 unauthoritative - don't try to influence others; go with other's opinions
- 05 uncalculating - don't try to manipulate others or maximize your own gain
- 06 accommodating - obliging, tend to do favours for others
- 07 kind - thoughtful and caring for others
- 08 charitable - generous, like to help others
- 09 shy - lack of self-confidence, tend to be uncomfortable around others
- 10 uncunning - not crafty or sly, tend to be straightforward with others
- 11 cold-hearted - have little warmth or feeling for others
- 12 ruthless - pursue your own interests regardless of the effect on others
- 13 dissocial - don't care for the company of others
- 14 tender-hearted - easily feel love, pity, or sorrow for others
- 15 soft-hearted - tend to be easy-going or gentle with others
- 16 cheerful - happy, usually in good spirits
- 17 dominant - tend to lead or control others
- 18 antisocial - dislike the company of others; behaviour not affected by
social conventions
- 19 iron-hearted - tend to be stern or harsh with others
- 20 enthusiastic - enjoy active involvement with others
- 21 self-assured - confident, know yourself to usually be right
- 22 cruel - can cause pain and suffering to others
- 23 unsparkling - not lively or entertaining with others
- 24 cunning - crafty or sly, skillful in manipulating others
- 25 meek - show little spirit or courage; mild mannered
- 26 uncharitable - don't like to help others; judge others severely
- 27 unsly - not tricky or cunning; tend to be honest and sincere
- 28 unaggressive - not forceful
- 29 jovial - happy, good sense of humour
- 30 crafty - can mislead or manipulate others for your own purpose
- 31 boastless - don't like to brag
- 32 domineering - tend to control or manipulate others
- 33 unargumentative - tend to avoid arguments or fights

- 34 tender - warm and loving with others
- 35 unsympathetic - unable to understand or uninterested in the feelings of others
- 36 timid - tend to be fearful or uncomfortable around others
- 37 unbold - not daring or courageous
- 38 forceful - tend to take charge or assert control
- 39 unwily - not tricky or crafty
- 40 extroverted - enjoy the company of others
- 41 gentle-hearted - kind or warm with others
- 42 persistent - don't give up even if others think you are wrong
- 43 perky - lively or vigorous, enthusiastic with others
- 44 friendly - pleasant toward others
- 45 unneighbourly - unfriendly, avoid contact with others around you
- 46 self-confident - self-assured, trust your own feelings or opinions
- 47 out-going - enjoy meeting other people
- 48 boastful - tend to brag
- 49 bashful - tend to shy away from public attention
- 50 firm - steady or steadfast; have others do things your way
- 51 uncrafty - not tricky or sly when dealing with others
- 52 unsociable - don't enjoy meeting people or being in the company of others
- 53 hard-hearted - have no feeling for others
- 54 wily - crafty, cagey, or tricky
- 55 calculating - tend to use or manipulate others to your own advantage
- 56 uncheery - not lively or bright with others
- 57 sly - crafty, secretive, or cunning when dealing with others
- 58 neighbourly - friendly, get involved with people around you
- 59 warmthless - have no feelings of affection or pleasure for others
- 60 distant - tend to be cold toward others; avoid relationships
- 61 cocky - conceited, self-centred; think highly of your own abilities
- 62 sympathetic - able to share or understand the interests or feelings of others
- 63 forceless - tend to be timid or weak; prefer the leadership of others
- 64 tricky - able to fool or deceive others

The enclosed form is being forwarded to you as part of a research project regarding self-perception among male inmates. One aspect of self-perception involves how one believes oneself to be seen by others, which the inmate has been asked to complete with respect to a particular member of the institutional staff whom they may choose.

As a basis for comparison it is important to have a rating completed by that staff member of the inmate. I would very much appreciate your completing this form at your earliest opportunity and returning it to me, Mike Foreman, c/o the institution hospital.

All information obtained is confidential and will not be made available to the inmate involved. He is, however, aware of this questionnaire being sent to you and has given his consent to have it completed.

If you have any questions please contact me by leaving a message with the nurse's station at the institution Hospital.

Thank you for your cooperation.

RATING BY OTHERS

On the pages that follow, you will find a list of words that are used to describe people's personal characteristics, and a glossary to help explain their meaning. For each word in the list, please indicate how accurately you think the word describes _____ using the following scale:

1	2	3	4	5	6	7	8
extremely	very	quite	slightly	slightly	quite	very	extremely
inaccurate	inaccurate	inaccurate	inaccurate	accurate	accurate	accurate	accurate

For example, consider the word BOLD. How accurately does that word describe him as a person? If you think that this word is a quite accurate description of him, write the number "6" to the left of the word: 6 BOLD

If you think that this word is a slightly inaccurate description of him, write the number "4" next to it; if a very inaccurate description write the number "2", etc.

If a word seems odd (some are) or if you are unsure of its meaning, please look it up in the list on pages 3 and 4.

APPENDIX B

Harpur, Hare, and Hakstian (1988b) have analyzed data demonstrating differential relationships of Factors 1 and 2 (characterological vs. behavioural item composition) to external variables. The pattern of differences seen underscores the integration of both personality and behavioural aspects of psychopathy as assessed by the PC, and points to the tendency of most other measures to emphasize the behavioural aspects without capturing the personality features considered central to the concept of psychopathy. Correlations of the Factors with the variables relevant to this research have been excerpted with permission, for a complete presentation the reader is referred to Harpur, Hare, and Hakstian (1988b).

CORRELATIONS OF THE FACTORS AND PC TOTAL SCORES

WITH SELECTED SELF-REPORT SCALES

SCALE	N	FACTORS		PCL TOTAL	Z-statistic ^a
		1	2		
MMPI					
Pd	138	.11	.31	.25	2.55
Pd ^b	106	.05	.28	.19	2.65*
Ma	138	.16	.32	.27	2.05
Ma ^b	106	.10	.14	.14	0.56
Pd + Ma	138	.18	.41	.35	3.29*
Pd + Ma ^b	106	.10	.30	.23	2.63*
Pd - Soc	117	.08	.49	.33	5.07**
CPI					
Soc	223	-.06	-.44	-.31	6.38**
IAS-R - SELF AND OTHER REPORTS					
SELF-RATING					
DOM	113	.35	-.01	.19	4.19**
LOV	113	-.26	-.29	-.30	0.32
STAFF RATING					
DOM	79	.53	.32	.45	2.40
LOV	79	-.41	-.42	-.46	0.08
WITH APA DIAGNOSTIC CRITERIA					
APDC	80	.34	.66	.61	3.36**
APD-R ^d	176	.32	.63	.54	5.06**

NOTE

- Test of the difference between the correlations of Factor 1 and Factor 2 with the given scale.
- Data from an independent sample.
- APD diagnosis was decided by joint agreement of two raters.
- Approximately 55% of the sample were assessed by two raters, the remainder by one rater only.

* $p < .005$. ** $p < .0001$. MMPI = Minnesota Multiphasic Personality Inventory. Pd = Psychopathic deviate scale. Ma = Hypomania scale. CPI = California Psychological Inventory. Soc = Socialization scale.