

PERSONALITY ASSESSMENT IN VIOLENT OFFENDERS: THE DEVELOPMENT OF THE ANTISOCIAL PERSONALITY QUESTIONNAIRE

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The Antisocial Personality Questionnaire is a 125-item inventory that measures eight primary traits (self-control, self-esteem, avoidance, paranoid suspicion, resentment, aggression, deviance, extraversion) and two higher-order dimensions (impulsivity-aggression versus control, withdrawal versus sociability). The questionnaire was developed for assessing dangerous mentally disordered offenders, and four profile patterns of primary psychopath, secondary psychopath, controlled personalities, and inhibited personalities have been consistently identified in this population. The derivation of the APQ from an earlier questionnaire is described, and evidence for its validity presented. Although developed with violent offenders, the APQ is likely to be of use in discriminating within offender populations generally.

Research since the 1950s has regularly found that criminal samples are distinguished by traits exemplifying a "weak superego" (Andrews & Wormith, 1989). For example, a study of a New Zealand birth cohort at age 18 found that self-report personality profiles of both male and female delinquents were characterised by impulsivity, danger seeking, a rejection of traditional values, aggressive attitudes, feelings of alienation, and an adversarial interpersonal attitude (Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger & Schmutte, 1994). These findings were replicated in a younger American sample. A similar profile also predicted a DSM-III-R (American Psychiatric Association, 1987) diagnosis of antisocial personality disorder three years later (Krueger, Caspi, Moffitt, Silva & McGee, 1996).

As Krueger et al. (1996) note, this trait pattern resembles the "classical" concept of psychopathic personality proposed by Cleckley (1976), and research with the Psychopathy Checklist-Revised (PCL-R: Hare, 1991, 1996) has shown that within offender populations, the more psychopathic tend to have the most extensive criminal careers. The PCL-R also distinguishes the more violent offenders (e.g., Blackburn & Coid, 1998; Kosson, Smith, & Newman, 1990), and is a significant predictor of both general and violent recidivism (Salekin, Rogers, & Sewell, 1996).

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However, offenders are not homogeneous in personality, and this applies particularly to those who commit violent crimes. For example, a recent study of violent offenders identified three patterns of personality disorder associated with antisocial personality disorder and high PCL-R scores, and these patterns were distinguished by both offence history and psychopathology (Blackburn & Coid, 1999). Moreover, although aggressive traits may make violence more likely, violent crimes depend on situational and temporary emotional factors as well as other dispositions a person brings to a situation, and are often committed by people who are not habitually aggressive. This is recognised in the hypothesis that violent offenders can be divided into overcontrolled and undercontrolled types (Megargee, 1966). For purposes of understanding serious criminal acts, predicting recidivism, or intervention, personality assessment therefore needs to take account of traits in addition to those associated with psychopathy.

This paper describes the development of the Antisocial Personality Questionnaire (APQ: Blackburn & Fawcett, 1996, 1999), a multi-trait, self-report inventory which measures cognitive, affective and behavioural dispositions of relevance to offender populations generally, and violent offenders in particular. During the past 15 years, several comprehensive multitrait self-report measures of personality deviation have been developed as a result of growing interest in personality disorders (e.g., Millon, 1983; Clark, Livesley, Schroeder, & Irish, 1996). However, few inventories have been developed specifically for use with offenders. The APQ provides a relatively brief and reasonably comprehensive assessment of deviant traits and has the advantage of having been validated in a population of violent offenders. The variables assessed do not represent a single theory of criminality or personality, but the questionnaire samples beliefs about the self and others, aspects of emotional control, and interpersonal problem behaviours which have figured prominently in theory and research on antisocial behaviour (Andrews & Wormith, 1989; Blackburn, 1993; Wilson & Herrnstein, 1985).

The APQ is derived from an earlier questionnaire, the Special Hospitals Assessment of Personality and Socialisation (SHAPS: Blackburn, 1982). The APQ measures broadly the same variables but with fewer items, and replaces the SHAPS. Research with the SHAPS is therefore described first.

The Special Hospitals Assessment of Personality and Socialisation

The SHAPS originated from research and clinical work with adult male mentally disordered offenders detained in English maximum security hospitals (special hospitals) because of their presumed dangerousness. Some of these offenders are classified under the Mental Health Act as suffering from

psychopathic disorder ("...a persistent disorder or disability of mind... which results in abnormally aggressive or seriously irresponsible conduct on the part of the person concerned"), and early work with the SHAPS was particularly concerned with determining the relationship of this legal category to the clinical concept of psychopathic personality (Blackburn, 1975a).

However, personality deviation is often significant in the antisocial behaviour of offenders identified as *mentally ill*, who form the majority of patients in special hospitals. The SHAPS has therefore been used for personality assessment with mentally disordered offenders generally. It has also been used in research with prisoners in England (Clark, 1996; Needs, 1986), Canada (Kroner, 1997; Kuriychuk, 1990), and the United States (Como, 1977; Widom, 1978), and with community samples of delinquents (Gillham, 1978; Renwick & Emler, 1991), and sex offenders (Beckett, Beech, Fisher, & Fordham, 1994). These studies indicate that the SHAPS scales discriminate within offender populations generally.

SHAPS scales

During the 1970s, the MMPI was the most frequently used personality questionnaire in the special hospitals, but despite its rich sampling of psychological problems, this inventory has several limitations when applied to mentally disordered offenders. In particular, it fails to separate personality traits from symptoms of illness (Foulds, 1971), and traits important in the assessment of antisocial behaviour, such as aggression or hostility, are not well represented. There is also considerable redundancy in the item pool. The Neuroticism and Extraversion dimensions pervade the MMPI, and most items are heavily weighted by Neuroticism or negative affectivity (Kassebaum, Couch & Slater, 1959; McCrae & Costa, 1986).

The SHAPS was formed by selecting potentially useful scales from the MMPI. To these were added measures of hostility and aggression derived from factor analysis of the Buss-Durkee Hostility Inventory (Buss, 1961) and the Psychopathy scale of Peterson, Quay & Cameron (1959). The 213 items were rephrased as questions requiring a YES-NO response to facilitate administration to patients of low intelligence or limited literacy. The SHAPS contains 10 scales (Lie, Anxiety, Extraversion, Hostility, Shyness, Depression, Tension, Psychopathic Deviate, Impulsivity, Aggression). Anxiety (A: Welsh, 1956) and Extraversion (EX: Giedt & Downing, 1961) are markers for the Neuroticism and Introversion-Extraversion dimensions, respectively (Corah, 1964). Lie (L) and Psychopathic Deviate (PD) are standard MMPI scales, and the Shyness (I), Depression (D), and Tension (T) scales were drawn from a cluster analysis of MMPI items (Stein, 1968). Impulsivity (IM), Hostility (HO), and Aggression (AG) were developed wit-

hin the special hospitals (Blackburn, 1971a, 1972, 1974, 1975b).

At the time the SHAPS was developed, there was agreement that the higher order dimensions of Neuroticism and Extraversion accounted for much of the variation in personality, but little consensus beyond that. These dimensions are represented in the SHAPS by A and Ex. Factor analyses, however, indicate that the higher order factors in the questionnaire do not align directly with these dimensions.

An early study attempted to clarify the relationship of aggression and hostility to Neuroticism and Extraversion by means of a factor analysis of several personality measures (Blackburn, 1972). Three oblique factors of aggression, hostility-neuroticism, and extraversion emerged. The aggression factor was defined by scales of overt aggressiveness, acting out, resentment, and impulsivity, and negatively by Megargee's Overcontrol scale. This factor correlated positively with hostility-neuroticism but was independent of extraversion. It may have some relationship to what is now identified as the Agreeableness (versus antagonism) dimension of the Big Five (Costa & McCrae, 1992), but these results indicated two higher-order factors.

Subsequent analyses (Blackburn, 1979a, 1986) consistently show that these two factors account for most of the variance in the 10 SHAPS scales. The factors are *Impulsive Aggression/Psychopathy versus Control* (IM, AG, and HO vs L) and *Withdrawal versus Sociability* (I vs EX). This is not an artefact of sampling, because the same rotated factors emerge in nonoffender volunteers as in mentally disordered offenders (Table 1). Blackburn

Table 1
Rotated Factor Loadings of SHAPS Scales in Patient and Normal Samples

SHAPS scale	Patients (N = 499)		Normals (N = 238)	
	Factors		Factors	
	I	II	I	II
Lie	-.74	-.05	-.55	-.03
Anxiety	.68	.65	.54	.76
Extraversion	.35	-.84	.48	-.76
Hostility	.76	.28	.72	.44
Shyness	.27	.86	-.01	.89
Depression	.58	.72	.42	.78
Tension	.66	.56	.53	.63
Psychopathic Deviate	.61	.39	.62	.29
Impulsivity	.92	-.06	.92	-.05
Aggression	.86	.14	.86	.11
% variance	45	29	38	32

Note. SHAPS = Special Hospitals Assessment of Personality and Socialisation.

(1996) found that these factors correspond to the two largest factors in the personality disorder scales of the Millon Clinical Multiaxial Inventory (MCMI-1: Millon, 1983). The factor equivalent to impulsivity in the MCMI-1 is defined by the passive-aggressive, paranoid, borderline, and antisocial scales versus the compulsive scale, while the factor parallel to withdrawal is defined by schizoid, avoidant, and schizotypal versus histrionic and narcissistic scales. In an analysis of interview ratings of DSM-III personality disorders in violent offenders, Blackburn and Coid (1998) identified conceptually similar factors of hostile impulsivity (paranoid, histrionic, narcissistic, antisocial, borderline, and passive-aggressive disorders) and detachment (schizoid, schizotypal versus histrionic). The first factor correlated highly with Hare's PCL-R and with criminality. Although the convergence of questionnaire and interview measures of personality disorder is not generally very close (Zimmerman, 1994), the similarities of these factors across different measures is striking.

The SHAPS factors therefore represent general dimensions that subsume many of the deviant traits of personality disorder, and factor scales B (Belligerence) and W (Withdrawal) were constructed to measure these dimensions (Blackburn, 1987). The factors represent 45° rotations in the two-dimensional space of Neuroticism and Extraversion (Kassebaum et al., 1959). They therefore seem equivalent to Gray's impulsivity and anxiety dimensions (Gray, 1987), which are held to be manifestations of the Behavioural Activation System (BAS) and Behavioural Inhibition System (BIS), respectively. In view of the contribution of aggression to the first factor, it is possible that the SHAPS factors are higher order dimensions incorporating Agreeableness as well as Neuroticism and Extraversion, but relationships with the Big Five dimensions remain to be tested.

Validity of SHAPS Scales

The validity of the scales as personality measures has been supported in several studies within offender samples. Scales loading the first factor (IM, AG) correlate significantly with ratings of aggression (Blackburn, 1974, 1975b; Blackburn & Maybury, 1985; Davis, 1974), anger proneness (Blackburn & Lee-Evans, 1985), interpersonal style (Willner & Blackburn, 1988), self-reported delinquency (Renwick & Emler, 1991), autonomic and electrocortical activity (Blackburn, 1975b, 1979b; Howard, Fenton, & Fenwick, 1984), serotonergic function (Dolan, 1996), and moral reasoning (O'Kane, Fawcett, & Blackburn, 1996). Scales related to the second factor (EX, I) correlate with social skills (Renwick & Emler, 1991) and interpersonal style (Willner & Blackburn, 1988).

Table 2
Correlations of SHAPS B and W Scales with the PCL-R in Three Samples of Male Offenders

Sample	N	PCL-R Total	PCL-R Factor 1	PCL-R Factor 2
Kuriychuk (1990)	60 prison inmates and staff			
B		.48***	.31	.36*
W		.07	-.24	-.09
O'Kane et al. (1996)	39 mentally disordered offenders			
B		.34*	.19	.36*
W		.15	.15	.20
Kroner (1997)	97 prison inmates			
B		.40***	.27**	.44***
W		.22	.16	.25

Note. SHAPS = Special Hospitals Assessment of Personality and Socialisation; B = Belligerence; W = Withdrawal; PCL-R = Psychopathy Checklist-Revised.

*** = $p < .001$; ** = $p < .01$; * = $p < .05$

All scales have correlates with the personality disorder scales of the MCMI-1 (Blackburn, 1996), and the SHAPS factors as measured by B and W also correlate with the main factors of the MCMI-1. B correlates .77 with the MCMI-1 passive-aggressive-versus compulsive factor, while W correlates .80 with the MCMI-1 schizoid versus histrionic factor ($N = 133$). Correlations of the B and W scales with Hare's PCL-R have also been obtained in samples of Canadian prisoners (Kroner, 1997; Kuriychuk, 1990) and mentally disordered offenders in England (O'Kane et al., 1996). As can be seen in Table 2, B correlates moderately but consistently with PCL-R total score and scores on PCL-R Factor 2 (social deviance). The correlation of B with PCL-R Factor 1 (callous, remorseless style) is less consistent. Correlations of W with the PCL-R are small, and reach a significant level in only one sample.

These studies support the construct validity of several of the SHAPS scales. The scales have also been found to have predictive utility. Clark (1996) reports a preliminary 5-6 year follow-up of 117 life sentenced prisoners that suggests that SHAPS scales may predict progress through the penal system. Prisoners transferred to psychiatric establishments had higher scores on A, D, and PD, and lower scores on EX. Prisoners who survived the system more adaptively as shown by transfer to less secure prisons tended to score low on D and AG. Black and Spinks (1985) included some SHAPS scales in a 5 year follow-up of mentally disordered offenders discharged from a maximum security hospital. Those surviving most successfully in the community had low scores on PD and IM, while EX and IM were significantly related to

further court appearances and violent recidivism. Como (1977) also found a significant association of IM with general recidivism in an American prison sample.

An Empirical Typology of Offenders

SHAPS scales permit descriptive statements about an offender's salient personality characteristics, but certain *patterns* of scores are relatively common. Common profiles are likely to represent naturally occurring personality types that are significant in understanding antisocial behaviour. Several studies have therefore been carried out with the aim of reducing the heterogeneity of the mentally disordered offender population by means of cluster analysis.

To test Megargee's hypothesis that violent offenders can be divided into overcontrolled and undercontrolled types (Megargee, 1966), Blackburn (1971b) carried out a cluster analysis of MMPI profiles of mentally disordered offenders who had committed homicide. The results indicated two undercontrolled and two overcontrolled profile types. One undercontrolled type was defined by the well known "49" profile associated in the clinical literature with psychopathic personality (i.e., combined elevations on the PD and Hypomania scales), the other by a highly deviant profile which includes abnormal scores on most other clinical scales. Of the overcontrolled groups, one was defined by a defensive "hypernormal" pattern, the other mainly by marked social introversion and dysphoria.

This fourfold typology is consistently reproduced by cluster analyses of the SHAPS scales or factor scores. The same four profiles were distinguished among patients in the legal category of psychopathic disorder (Blackburn, 1975a), but they also constitute the main patterns of personality deviation among mentally disordered offenders as a whole (Blackburn, 1986). The four classes are: (1) *Primary Psychopaths* (P; impulsive, aggressive, hostile, extraverted, self-confident, low to average anxiety); (2) *Secondary Psychopaths* (S; hostile, impulsive, aggressive, socially anxious, withdrawn, moody, low in self esteem); (3) *Controlled* (C; defensive, controlled, sociable, nonanxious); (4) *Inhibited* (I; shy, withdrawn, controlled, moderately anxious, low self esteem). The four groups represent combinations of extremes on the two SHAPS factor dimensions. P and S score towards the impulsive-aggressive extreme of the first factor, but are distinguished by the withdrawal-sociability dimension, P being socially uninhibited, S withdrawn and anxious. The C and I groups score at a low level on the impulsivity factor, but are also differentiated by withdrawal-sociability.

The classification has been replicated in research in English prisons on "normal" murderers (McGurk, 1978), violent offenders (Henderson, 1982),

and also unselected prisoners (McGurk & McGurk, 1979). Widom (1978) identified similar types in American female prisoners. The typology is therefore robust and appears to represent the main personality types identifiable through self-report measures in prison and forensic psychiatric populations. These groups were also recovered from cluster analysis of MCMI-I personality disorder scales (Blackburn, 1996). The same types seem likely to emerge among antisocial populations from any comprehensive set of self-report measures of personality deviation because of the common influence of the two Big Five dimensions of Neuroticism and Extraversion. However, the sources of differentiation do not lie directly in these factors, but rather in their interaction in the impulsive-aggression and withdrawal dimensions.

A number of differences have been found between the "psychopathic" groups and C and I, but also between P and S. Although the groups are represented throughout the mentally disordered offender population, P and S are more predominant in the legal category of psychopathic disorder than among the mentally ill (Blackburn, 1986, 1996). Blackburn (1975a) found that P and S had earlier criminal careers than C and I, although P had more convictions for violence. Similar findings on differences between the four groups in criminal background were obtained by Pollock (1999) in a study of homicides in Northern Ireland. He also found that the homicide offences of primary psychopaths were more likely to be instrumental or goal-directed and that their victims were more commonly strangers. The offences of C and I offenders, on the other hand, were primarily reactive violence directed against acquaintances.

P and S also score higher on the aggressive or antisocial personality disorder scale of the MCMI-I (Blackburn, 1996). However, where P are also narcissistic and histrionic, S are passive-aggressive, avoidant, schizoid, dependent, and paranoid. The I group is also schizoid, avoidant, schizotypal, and passive-aggressive, but differs from S in scoring low on the antisocial scale. Controlled patients score highest on the compulsive disorder scale, but show the least signs of personality disorder more generally.

Secondary psychopaths, who are characterised by the most deviant MMPI and SHAPS profiles, are also typically most deviant in other respects. The EEG abnormalities claimed in the older clinical literature to be common among psychopaths are most likely to be found in this group (Blackburn, 1979b; Howard, 1984), and they are also the least autonomically aroused (Blackburn, 1979b). In a delinquent sample, Gillham (1978) also found that S reported the least vivid emotional imagery. Primary psychopaths differ from S in having higher levels of cortical and autonomic arousal (Blackburn, 1979b), and score highest on Zuckerman's Sensation Seeking Scale (Blackburn, 1978). The controlled group shows little distinctive that would not be anticipated from their denial of strong emotional reactions or social-

ly improper behavior, but the inhibited group includes prisoners who are the least socially skilled (Henderson, 1982). Members of this group are also more likely to be identified as mentally ill (Blackburn, 1996).

P and S describe themselves as more dominant in both threatening and friendly interactions, but differences between the psychopathic and nonpsychopathic groups are more apparent in threatening situations (Willner & Blackburn, 1988). On the other hand, S describe the most intense anger in response to verbal or physical threat (Blackburn & Lee-Evans, 1985). A study in an American prison also found that secondary psychopaths who are low in intelligence tend to be more violent than other inmates within the prison setting (Heilbrun & Heilbrun, 1985).

These findings overall support the validity of this empirically derived classification in discriminating classes of personality deviation among offenders. The first group has been described as *primary* psychopaths because its members are distinguished by a pattern of traits that closely approximate the characteristics held to define the psychopath by Cleckley. In particular, their hostile alienation from others, impulsivity, aggression, and a relative absence of anxiety or social inhibition seem consistent with this concept. Findings that this group is distinguished by narcissism, sensation seeking, interpersonal dominance, and violent criminality strengthen this interpretation. The *secondary* psychopaths share some of these traits, but differ in showing extreme social anxiety and traits of schizoid, avoidant and passive-aggressive personality disorders. The differences between the two groups are in accord with the distinction made by Lykken (1957), who proposed that Cleckley psychopaths could be divided according to high and low trait anxiety.

The primary-secondary distinction has not been favoured in recent research on psychopathy because it implies that there are two kinds of "psychopath", although Porter (1996) suggests that the distinction may be etio-logically significant. Comparisons of the SHAPS types on Hare's PCL-R suggest that although primary psychopaths are more likely to meet PCL-R criteria of psychopathy, secondary psychopaths do not. Kuriychuk (1990) found that 57% of primary psychopaths scored above the recommended PCL-R cutoff of 30, compared with 15% of secondary psychopaths and 8% of nonpsychopaths (controlled plus inhibited). Corresponding figures obtained by Blackburn (1998) were 45%, 14% and 8%. The label "secondary psychopath" may therefore be misleading. Nevertheless, the group it refers to is very real, and whatever the appropriate term, this is a clinically distinct and deviant group which seems to be prevalent among offenders.

The Antisocial Personality Questionnaire

Most SHAPS scales were developed through multivariate analysis, but they are drawn from different studies employing different samples. Some redundancy was built into the inventory, and it is likely that essential information can be extracted from fewer variables. For example, correlations between the A and D scales and between IM and Ag are typically in the region of 0.8. These scale pairs have several items in common, and it is unclear whether the correlations are artefacts of item overlap or reflect common underlying variables. In developing the APQ, the aim was to identify the main primary or correlated traits in the SHAPS item pool and to construct scales to measure these traits with minimal item overlap. Further details of the APQ scale development can be found in a recent paper (Blackburn & Fawcett, 1999).

The strategy adopted for scale development was a factor analysis of all 213 SHAPS items in a sample made up of 499 male mentally disordered offenders and 238 volunteer "normal" males. The patient group consists of 366 patients from an earlier study, and a further sample of 133 for whom additional data were obtained (validation sample). A third of the patients fell in the legal category of psychopathic disorder, the remainder being legally classified as mentally ill or mentally impaired (learning disabled). Their mean age was 31.84 ($SD = 10.41$). The normal volunteer group consists mainly of hospital and university staff, and had a mean age of 31.63 ($SD = 9.90$).

Principal components analyses were carried out within the patient and normal samples separately and within the total sample of 737. The scree test indicated 6 to 9 factors in the two subsamples and the total sample, and examination of varimax rotations within this range suggested an 8-factor solution. Items with highest loadings on each factor were subject to item analyses which aimed to yield brief homogeneous scales (maximum 20 items) with reliabilities (α) of at least .75. Maximum item overlap between scales was kept to three items, and no item contributed to more than two scales. The analyses resulted in 8 scales measured by 125 items, scale lengths varying from 16 to 20 items.

In addition to the 8 primary factor scales, two scales were formed to measure the higher order factors pervading the SHAPS and which are also reproduced by the APQ scales (see below). Criteria for scale membership were a high correlation (> 0.3) of an item with APQ factor scores on one factor and a low correlation (< 0.2) with scores on the other in both patient and normal samples. This resulted in a 33-item scale measuring the impulsivity-aggression factor (Impulsivity: I) and a 24 item-scale measuring the withdrawal factor (Withdrawal: W).

APQ Scales

Self-Control (SC) (20 items). Items are drawn from the SHAPS Impulsivity, Aggression, and Lie scales, and refer to denial of "improper" behaviour (heavy drinking, swearing, excitement seeking), strong feelings (anger, irritability), and negative interpersonal reactions (dislike, rudeness). The scale correlates negatively with all other scales except Extraversion. High scores may reflect a guarded, socially desirable presentation, but external correlates suggest that they are open to more substantive interpretation in terms of rigid conformity, limited self-awareness or insight, or a cognitive coping style that avoids information threatening to the self-concept. High scores are common among chronic, stabilised psychotic patients. Low scores reflect awareness and expression of undesirable impulses. Extreme high and low scores are consistent with Megargee's notions of overcontrol and undercontrol, respectively.

Self-Esteem (SE) (18 items). Items are drawn mainly from the Anxiety and Depression scales and refer to self-denigration, feelings of dysphoria and helplessness, and worry. The scale represents the dimension of Neuroticism or negative affectivity (Watson & Clark, 1984), but this is also related to self-esteem, and the latter description is preferred here. Higher scores reflect negative self-esteem and moodiness. Lower scores reflect positive self-esteem, but extreme low scores may suggest lack of self-criticism or denial.

Avoidance (AV) (16 items). This is essentially the Shyness (neurotic introversion) scale of the SHAPS, items referring to difficulties in and avoidance of social interaction. High scorers are likely to be socially withdrawn and unskilled, detached, and timid. Low scores are likely to be associated with sociability and spontaneity.

Paranoid Suspicion (PA) (17 items). Items come mainly from the SHAPS Hostility scale, and reflect marked suspicion and beliefs of personally directed malevolence on the part of others, particularly authority figures. Since the scale correlates quite highly with avoidance and low self-esteem, high scorers may not readily express their suspicions or grievances.

Resentment (RE) (19 items). This scale also contains items from the original Hostility scale, but includes some from other scales, notably Psychopathic Deviate and Extraversion. Items reflect mistrust, but in the context of a general cynicism about the trustworthiness and competence of others. The scale correlates highly with PA, but where the latter suggests vigilance for personal harm, RE seems to reflect a more general tendency to externalise blame.

Aggression (AG) (20 items). Items come mainly from the original Aggression scale, and describe anger arousal, impatience or loss of temper,

and assaultative behaviour. High scores are likely to reflect a tendency to be easily angered and to react with verbal and sometimes physical aggression. Low scores suggest phlegmatism and compliance or restraint in the face of provocation.

Deviance (DE) (20 items). Most items are drawn from the Psychopathic Deviate scale. They reflect a deviant social history marked by rule-breaking behaviour and delinquency and discordant intimate relationships, particularly in the family. Low scores are likely to indicate conformity and socialisation. This is mainly a historical factor for which only limited change can be expected, although negative perceptions of previous relationships may become less marked with successful clinical intervention.

Extraversion (EX) (20 items). Items come mainly from the SHAPS Extraversion scale. While they emphasise sociability or gregariousness, they also reflect an energetic involvement in and enjoyment of daily activities. This factor therefore relates to positive affectivity. High scorers are likely to be sociable, dominant and attention-seeking. Low scorers will tend to be relatively unfriendly, detached and submissive.

Factor 1 - Impulsivity (I) (33 items). This scale measures the first higher order factor of the APQ, which is virtually identical to the first SHAPS factor of impulsivity-aggression. The scale consists of items from the SC, PA, RE, AG, and DE scales, and it is therefore a general factor of awareness and expression of hostile, rebellious, and aggressive impulses. High scores reflect impulsivity, antagonism, and noncompliance, while low scores relate to control and conformity. The scale has 24 items in common with the earlier B factor scale (Blackburn, 1987). Since accumulated data suggest that high scores are more likely to be associated with overt "belligerent" behaviour when scores on the second factor (W) are low, the label "impulsivity" is preferred.

Factor 2 - Withdrawal (W) (24 items). This scale measures the second APQ factor which corresponds to the SHAPS withdrawal-sociability factor. The scale is very similar to the earlier W factor scale, with which it shares 21 items. These are drawn from the AV and EX scales. Higher scores reflect social withdrawal and anxiety, and submissiveness, while lower scores are associated with sociability, self-confidence, and assertiveness.

Reliability and Validity of the APQ

The validity of the APQ scales as measures of deviant personality traits was examined in terms of their differentiation between offenders and normals, and within the patient sample, between mentally ill and nonmentally ill (legally psychopathic disorder) patients. Following the recommendations

of Briggs and Cheek (1986) that new scales should be shown to be valid at the conceptual, self-report, and behavioural levels, validity was also determined from the relationship of APQ scales to measures of personality disorder, observer ratings of social behaviour, and criminal history.

Reliability

Scale reliabilities (Cronbach's alpha) range from .77 to .87 for the total sample (median = .86), from .79 to .88 for patients (median = .83), and from .75 to .84 for normals (median = .80), indicating satisfactory internal consistencies for all scales. Average inter-item correlations within scales range from .14 to .28 for the total sample, from .15 to .28 for patients, and from .13 to .26 for normals, indicating acceptable homogeneity for all scales.

Differentiation of Offenders and Normals

Table 3 shows the means and SDs on APQ scales of the mentally disordered offender and normal samples. Also shown are data from a small group of offenders ($N = 29$) referred for assessment by a probation service. This group is younger than the other two samples (mean age 26.55; $SD = 10.41$), and its representativeness of offenders on probation is unknown. However, it provides some indication of the scores of noninstitutionalised offenders.

Table 3
Scores of Mentally Disordered Offenders, Normals and Probationers on APQ Scales

Scales	Patients ($N=499$)		Normals ($N=238$)		Probationers ($N=29$)	
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
<i>Basic scales</i>						
Self-Control (SC)	10.44	(4.46)	7.66	(3.69)	7.03	(2.89)
Self-Esteem (SE)	7.92	(4.99)	4.83	(3.79)	9.41	(4.38)
Avoidance (AV)	7.10	(4.35)	4.55	(3.85)	7.48	(4.09)
Paranoid Suspicion (PA)	5.71	(4.42)	3.29	(3.09)	9.38	(3.71)
Resentment (RE)	9.44	(4.69)	6.65	(4.06)	12.55	(2.91)
Aggression (AG)	9.13	(4.30)	9.33	(4.02)	12.93	(4.02)
Deviance (DE)	10.21	(4.27)	7.58	(3.66)	13.89	(3.64)
Extraversion (EX)	11.54	(4.28)	13.20	(3.81)	11.21	(3.43)
<i>Factor scales</i>						
Impulsivity (I)	15.71	(6.96)	13.55	(5.86)	22.10	(5.23)
Withdrawal (W)	9.88	(5.71)	7.15	(4.91)	10.69	(5.04)

Note. APQ = Antisocial Personality Questionnaire.

The APQ scales differentiate the mentally disordered offender and normal groups at a highly significant level, and there are differences on all scales except AG. The patient group is significantly more controlled, avoidant, paranoid, resentful, socially deviant, and introverted than the normal sample, and has lower self-esteem. Patients also score higher than normals on both the I and W factor scales. The probationers also differ significantly from normals in being more introverted and more deviant on all other scales except SC. Although patients do not differ from normals on the aggression (AG) scale, both psychopathic disorder patients and probationers score higher on this scale than normals or mentally ill offenders.

Within the patient sample, psychopathic disorder patients are also less self-controlled, and more deviant, resentful and impulsive than the mentally ill. There are no significant differences on the remaining five scales, consistent with findings of substantial overlap between the two groups in personality dysfunction (Blackburn, Crellin, Morgan, & Tulloch, 1990). However, the scores of the psychopathic disorder patients are very similar to those of the probationer sample, and the only significant difference between these two groups is a higher score of the probationers on paranoid suspicion ($p < .05$). The implication that low self-control, and high paranoid suspicion, resentment, aggression, deviance and impulsivity are common among non-mentally ill offenders is congruent with evidence in the literature on the salient characteristics associated with criminality (e.g., Caspi et al., 1994).

The APQ and Personality Disorder

Further evidence for validity was obtained from a subgroup of 130 of the mentally disordered offenders who had completed self-report measures of personality disorder (MCMI-1). Correlations with MCMI-1 scales generally support the validity of all APQ scales as measures of personality deviation. Highest correlations of APQ scales with MCMI-1 scales are: Self-Control with Compulsive (.62); Self-Esteem with Avoidant (.77) and Passive-Aggressive (.64); Avoidance with Avoidant (.79) and Schizoid (.74); Paranoid Suspicion with Passive-Aggressive (.71), Avoidant (.69), and Compulsive (-.64); Resentment with Passive-Aggressive (.65) and Compulsive (-.60); Aggression with Passive-Aggressive (.57), Compulsive (-.61), and Antisocial (.41); Deviance with Passive-Aggressive (.71) and Compulsive (-.70); and Extraversion with Histrionic (.73) Narcissistic (.71), and Schizoid (-.67).

The prominence of correlations with the MCMI-1 Avoidant and Passive-Aggressive scales is consistent with findings that these two scales have high loadings on the two largest factors of the MCMI-1, which in turn correspond

broadly to the two factors in the SHAPS and APQ. This is seen in the correlations of the two APQ factor scales, Impulsivity correlating positively with Passive-Aggressive (.70) and Paranoid (.48) and negatively with Compulsive (-.70), while Withdrawal correlates positively with MCMI-1 Avoidant (.74), Schizoid (.74), and Schizotypal (.70) and negatively with Histrionic (-.72) and Narcissistic (-.68). There is clearly substantial overlap between the two sets of measures, all personality disorder scores on the MCMI-1 being significantly predictable from APQ scales. However, it should be emphasised that these personality disorder categories are defined by Millon's theory and do not necessarily correspond to the personality disorder categories of DSM-III and DSM-IV.

APQ Scales and Observer Ratings

The Chart of Interpersonal Reactions in Closed Living Environments (CIRCLE; Blackburn & Renwick, 1996) is an observer rating scale designed to measure the Leary interpersonal circumplex (Leary, 1957; Wiggins, 1982). Eight scales measure the octants of the circle (Dominant, Coercive, Hostile, Withdrawn, Submissive, Compliant, Friendly, Gregarious). Correlations of APQ scales with these ratings of interpersonal style were obtained for 100 patients.

All scales correlate significantly with at least one CIRCLE scale, and EX, AV, AG and W attain correlations of between .4 and .5. Correlations are highest for APQ scales assumed to measure the most visible behavioural tendencies (EX, W, AG, AV, DE), and lowest for scales related to beliefs (PA, RE, SE). The pattern of correlations generally supports the validity of APQ scales. Patients scoring high on EX, for example, are likely to be rated as gregarious, dominant, and coercive, and as less submissive and withdrawn, while the opposite pattern applies for those scoring high on AV and W. The validity of AG is also well supported. High scorers are more likely to be rated as coercive, dominant, gregarious, and hostile, and as less compliant and submissive. High scores on DE and I are also significantly associated with coercion, dominance, and noncompliant behaviour, consistent with the content of the scales.

Because self-reports represent conceptions of self and observer ratings are subject to perceptual biases, correlations between the two measurement methods are invariably subject to attenuation. A significant degree of convergence between self-report measures and behaviour ratings is therefore good evidence for construct validity. The finding that four of the APQ scales, including the withdrawal factor scale, have moderately strong correlations with CIRCLE scales supports their validity as measures of social dispositions.

Criminality and the APQ

Criminal records were available for 132 patients in the validation sample. Data were extracted on age at first conviction, total number of convictions, and total convictions for property acquisition (burglary, theft), violence (excluding rape), robbery, sex offences (including rape), criminal damage, and arson. A total assault measure was also obtained by combining convictions for violence, robbery and sexual assault.

Age at first conviction is one of the strongest predictors of persistent criminality (Tracy, Wolfgang, & Figlio, 1986), and it correlates significantly ($p < .05$ or greater) with DE (-.44), I (-.34), AG (-.31), PA (-.23), and RE (-.22). Higher scores on these scales are therefore associated with earlier criminal careers. Higher scores on SC, in contrast, are associated with the later appearance of criminal behaviour, as indicated by a positive correlation of .30. Total number of convictions correlates with DE (.32), I (.21), and RE (.20), and these scales also correlate significantly with number of acquisitive offences (.33, .20, and .18, respectively). DE also correlates with number of sex offences (.18), while AG correlates with convictions for violence (.17), robbery (.17), and total assaults (.21). Criminal damage and arson were not associated with any APQ scale.

Overall, DE has the strongest correlations with general criminality, supporting its validity as a measure of socially deviant behaviour, while RE and I show similar though less pronounced patterns. Although small, the significant correlations of AG with violence, robbery, and total assaults provide further evidence for the validity of this scale. The SE, AV, EX, and W scales are not directly related to any aspect of criminality, although these traits may modulate the expression of antisocial traits.

Factor Dimensions and Profile Types

Principal components analyses of the eight basic APQ scales yield similar results in the mentally disordered offender and normal samples, two significant factors accounting for 74% of the variance in the patient data, and 70% for normals (Table 4). The first factor contrasts aggression (AG), resentment (RE), deviance (DE) and paranoid beliefs (PA) with self control (SC), and represents a dimension of impulsivity and hostile beliefs versus control and conformity. The second factor contrasts avoidance (AV) and poor self esteem (SE) with extraversion (EX). The correspondence of these factors with the impulsive aggression and withdrawal factors of the SHAPS is confirmed by correlations of APQ factor scores with factor scores derived from the SHAPS. Within both patient and normal samples, these are .95 and .94, respectively.

Table 4
APQ Rotated Factors

APQ scale	Patients (N=499)		Normals (N=238)	
	Factors		Factors	
	I	II	I	II
SC	-.79	-.14	-.84	.07
SE	.57	.66	.49	.66
AV	.35	.87	.19	.88
PA	.73	.39	.71	.44
RE	.84	.08	.75	.25
AG	.87	-.04	.84	-.16
DE	.82	.18	.78	.24
EX	.18	-.88	.19	-.85
% variance	47	27	42	28

The I and W scales were constructed to provide measures of these two APQ factors. Correlations of I and W with scores on the two factors are .95 and .95 within the patient group and .92 and .94 within the normal group. However, I and W are not entirely independent of each other, as shown by correlations of .22 ($p < .001$) in patients and .16 ($p < .02$) in normals. Nevertheless, for practical purposes, I and W provide good measures of the two factors and summarise most of the variance in the APQ scales.

APQ Profile Patterns

Cluster analyses (Ward's method) of APQ factor scores and scores on the I and W factor scales of the mentally disordered offender sample reproduce the four profile patterns found previously in analyses of the SHAPS. Table 5 shows the mean profiles resulting from analysis of I and W scores. Primary and secondary psychopaths score high on I, but differ on W. Controlled and inhibited groups score low on I, but again differ on W. The four profiles emphasise different orientations towards self and others and different styles of coping with the social environment.

In terms of modal or prototypic traits, primary psychopaths are extraverted and dominant (EX, AV), aggressive (AG) moderately self-controlled (SC), mistrusting (RE), have a history of deviant behaviour and conflict in relationships (DE), and are relatively untroubled by anxiety or self-criticism (SE). Secondary psychopaths are also aggressive, low in self-control, mistrusting, and socially deviant, but are socially anxious and submissive (EX, AV), moody and lacking in self-esteem (SE), and are extremely suspicious and vigilant for threat (PA). Controlled personalities are overcontrolled and

Table 5
Means of APQ Profile Patterns

Scale	Primary psychopaths (N=219)	Secondary psychopaths (N=58)	Controlled (N=120)	Inhibited (N=102)
<i>Basic scales</i>				
SC	9.29	5.41	14.32	11.19
SE	7.94	14.13	2.76	10.31
AV	6.17	13.16	2.73	10.80
PA	6.49	12.05	1.78	5.07
RE	11.73	14.67	4.63	7.20
AG	11.08	13.34	5.28	7.09
DE	11.79	15.05	5.93	9.10
EX	13.93	6.74	13.18	7.19
<i>Factor scales</i>				
I	19.47	24.14	7.95	11.95
W	7.55	18.36	4.91	15.88

conforming (SC, AG, DE), sociable and outgoing (EX, AV), self-accepting (SE), and deny interpersonal mistrust or suspicion (RE, PA). Inhibited personalities are also overcontrolled, compliant and relatively trusting (SC, AG, RE), although reporting somewhat more deviant histories (DE) and self-criticism (SE), and are introverted, timid, and withdrawn (EX, AV). Most patients in the inhibited group have been identified as suffering from serious mental disorder.

Criminal history data of the four groups within the validation sample are shown in Table 6. Planned comparisons indicate that primary and secondary psychopaths (combined) differ from the controlled and inhibited groups (combined) in being younger at first conviction ($p < .0001$), and in having more convictions overall ($p < .01$), more custodial sentences ($p < .01$), and more convictions for burglary and theft ($p < .05$). They also tend to have more convictions for assaultive offences ($p < .06$). Secondary psychopaths have had more custodial sentences than primary psychopaths ($p < .05$), but otherwise have comparable criminal histories. There are no differences between controlled and inhibited groups. These data confirm earlier findings that primary and secondary psychopaths have longer and more extensive criminal careers (Blackburn, 1975a), and represent two forms of antisocial personality. Contrary to previous findings, however, primary psychopaths are similar to secondary psychopaths in their history of violent crimes.

Table 6
Mean Criminal Convictions of APQ Groups

Convictions	Primary psychopaths (N=51)	Secondary psychopaths (N=24)	Controlled (N=30)	Inhibited (N=27)
Age at first	17.20	16.50	22.07	22.33
Total	13.57	16.46	9.00	7.96
Custodial sentences	2.39	4.08	1.90	1.63
Burglary/theft	6.10	9.04	4.17	4.26
Robbery	0.24	0.17	0.17	0.07
Violence	2.31	2.29	1.97	1.41
Sex offences	0.71	1.00	0.47	0.22
Criminal damage	0.84	0.83	0.87	0.83
Arson	0.37	0.08	0.10	0.37
Total assaults	3.08	3.04	2.60	1.70

Personality Questionnaires in the Assessment of Offenders

Although many psychologists continue to be sceptical about the utility of personality trait description, there is now ample evidence that personality is a risk factor for both antisocial behaviour (Andrews & Wormith, 1989; Blackburn, 1993) and psychopathology (Krueger et al., 1996). In the light of recent developments in personality research, it has also been suggested that personality trait assessment should be a required component of any clinical evaluation (Harkness & Lillienfeld, 1997). However, several practical and theoretical issues need to be considered in assessing personality in offenders.

The first is the *context* of assessment. Offenders are not voluntary clients and forensic assessment is usually undertaken for the benefit of society rather than the individual offender. Violent and sexual offenders in particular frequently deny their offence or minimise its consequences, and are reluctant to become engaged in assessment or clinical intervention. Effective assessment therefore requires the development of trust between psychologist and offender. The interpretation of assessment data also needs to take account of the pressures on an offender to avoid disclosure of deviant attributes. For example, assessment of suitability for parole or release from detention is more likely to elicit defensive denial or impression management than is assessment undertaken for treatment planning or research purposes.

A second issue is the choice of *method* of personality assessment. Psychologists have traditionally relied most commonly on self-report questionnaires, but recent interest in the identification of personality disorders has led to the development of a number of structured interviews for

assessing personality deviation (Zimmerman, 1994). Assessment of psychopathy with Hare's PCL-R also takes this form. Because structured interviews are more flexible and permit more in-depth probing of an individual's history, it is sometimes assumed that they provide more valid assessments of personality than questionnaires. However, interviews are subject to problems of interviewer bias and halo effects, and in relying on self-reports, they share methodological problems with questionnaires arising from an interviewee's defensiveness or poor self awareness.

It is also sometimes argued that offenders cannot be trusted to answer self-reports honestly (e.g., Hare, 1991). However, there is little evidence that this is invariably a problem or that interviews successfully detect dissimulation. The assumption that people have a "true" personality that can be detected more readily by observers than by the self is also questionable on both methodological and philosophical grounds. Personality assessment through self-report is concerned less with eliciting verifiable facts than with beliefs about the sort of person one is, and is dependent on a person's self-concept and self-presentation (Costa & McCrae, 1992; Hogan & Nicholson, 1988). Given that the demands of personality questionnaires and interviews are similar in this respect, there seems no reason why offenders should present themselves differently in response to one rather than the other. Nevertheless, except for research purposes, personality questionnaires should not be relied on as the sole source of assessment. They should normally form part of a multimethod battery of measures which includes interview data and observations by others, such as rating scales completed by staff (e.g., Blackburn & Renwick, 1996).

One further issue is the inherent limitation of trait assessment in explaining and predicting behaviour. Traits are summary descriptions of tendencies or dispositions which are likely to be manifest in average or typical behaviours across time and relevant settings. Knowledge of a person's dispositions provides clues as to person variables (e.g., generalised expectations, attitudes towards self and others, coping styles or strategies) that mediate reactions to particular events or which generate problematic interactions. However, they permit only probabilistic statements about future behaviour, and whether dispositions are realised in specific acts depends on the situation and the person's current state. In predicting violence, for example, we may at best judge the strength of an aggressive disposition, and can rarely forecast the situational contexts in which that disposition may eventuate in an extreme act of aggression (Blackburn, 1993). The identification of an individual's predominant traits is therefore simply a first step in understanding their behaviour.

Conclusions

Although the APQ is a relatively new instrument, its scales represent psychometrically refined versions of the earlier SHAPS scales, and the APQ retains the dimensional structure of the SHAPS. Findings from research with the SHAPS should therefore be generalisable to the APQ. For example, the correlations of the APQ I and W factor scales with the main factors of personality disorder in the MCMI-1 (.75 and .81) are virtually identical to those of the SHAPS B and W factor scales (.77 and .80), despite a number of changes in item content. It is reasonable to expect that the significant correlation of the SHAPS B scale with the PCL-R will similarly be reproduced by the APQ I scale. At the same time, the greater homogeneity of the APQ scales is likely to improve validity. For example, the correlation of the APQ Aggression scale with observer ratings of coercive interpersonal style is substantially higher than that of the SHAPS equivalent (.41, $p < .0001$, vs .21, $p < .05$, $N = 100$).

Data obtained to date indicate that the APQ scales provide a valid basis for inferring significant intrapersonal and interpersonal characteristics among offenders. They may therefore aid the formulation of an individual's problems, identify targets of intervention, such as social anxiety, aggression or hostile attributions, provide a baseline against which to evaluate change, and contribute to the prediction of future behaviour. The four profile patterns identified previously in the SHAPS, and reproduced by the APQ, are also relevant to differential classification (Andrews, Bonta, & Hoge, 1990). While further research is needed to establish the generalisability of the APQ to different offender populations, such as women and adolescents, the utility of the questionnaire for forensic assessment seems promising.

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