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DISORDERED PERSONALITIES AT WORK

BELINDA JANE BOARD* and KATARINA FRITZON

Department of Psychology, University of Surrey, Guildford, Surrey GU2 7XH, UK

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Current categorical classification systems of personality disorders (PDs) remain widely used amid growing evidence that argues against the conceptualisation of PDs as independent, discrete entities. Adopting the dimensional perspective of Morey *et al.* (*Journal of Personality Assessment*, **49**, 245–251, 1985), this study compared PD traits across forensic, psychiatric and "normal" senior business manager samples. There was particular interest in the relative representations of elements of PD closely associated with psychopathic PD because of research suggesting that some "psychopaths" operate within mainstream society, and links that have been made between elements of these so-called "successful" psychopaths, and characteristics associated with success in senior business management roles. The dimensional Minnesota Multiphasic Personality Inventory Scales for DSM III Personality Disorders (MMPI-PD) were shown to be internally consistent for the "normal" sample. Evidence for the qualitative equivalence of the four PD profiles emerged. The PD profile of the senior business manager sample was found to contain significant elements of PD, particularly those that have been referred to as the "emotional components" of psychopathic PD. The findings provide strong support for the continuous distribution of personality disordered traits.

Keywords: Personality Disorders; Senior Management; Forensic; Criminal; Dimensional; Categorical

INTRODUCTION

The categorical versus dimensional representations of personality disorders (PDs) are well rehearsed in the literature (e.g. Widiger, 1991, 1998; Widiger and Frances, 1994). The categorical view, which follows from a psychiatric model of disorders, holds that the characteristics of PDs are qualitatively distinct from normal behaviour (Millon, 1981; Widiger, 1991), while the dimensional view regards the characteristics of PDs to simply be extreme or exaggerated forms of normal behaviour (Costa and Widiger, 1994; Clark *et al.*, 1997).

Evidence for the dimensional approach has received prominence in recent years (Clark and Watson, 1999). Little has been found to indicate distinct distributions of PD criteria or different structural organisation of personality traits in offender, mentally disordered offender, psychiatric or "normal" populations. Few patients judged clinically to have abnormal personalities have been shown to fall uniformly into any of the customary categories; rather they have been found to exhibit a repertoire of recurrent behaviours that differ in some quantitative sense from what is deemed "normal" (Costa and McCrae, 1990). Despite this, there remains wide usage of the categorical approach, such as that of the

*Corresponding author. E-mail: b.board@surrey.ac.uk

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American Psychiatric Association, DSM-IV, which represents PDs as "qualitatively distinct clinical syndromes." (p. 633) (American Psychiatric Association, 1994).

With mounting evidence that strongly challenges the presumption that PDs represent discrete, natural classes, there are good grounds to argue for an approach that observes characteristics of PDs as simply exaggerated forms of normal behaviour. To this end, using the dimensional perspective of Morey *et al.* (1985) this research explores the equivalence of PD traits across forensic, psychiatric and senior business manager samples.

Manifestations of Personality Dimensions

If personality and its pathology is dimensional rather than categorical, varying by degree rather than type, there may be people with elements of PD who have avoided the label because they have not come to the notice of psychiatric or forensic services. PD tends to be a label that is given to people after they have had some contact with the mental health service (MHS) or the criminal justice system (CJS). Community surveys estimate that up to 11% of the adult population suffer from a PD (Zimmerman and Coryell, 1990; Ekselius *et al.*, 2001), while MHS rates range from 30 to 50% (Blackburn, 1999), and in the CJS, they go as high as 75% for offender populations (Levander *et al.*, 1997, cited in Rasmussen *et al.*, 1999), and 93% for "mentally disordered" populations (Coid, 1992).

Antisocial, borderline and narcissistic PDs are the most frequently diagnosed among offender and "mentally disordered" samples (Coid *et al.*, 1999). Antisocial PD concerns socially deviant behaviours. Offenders and mentally disordered offenders by definition have behaved antisocially (84% of the admissions to special hospitals in England and Wales between 1988 and 1994 resulted from criminal charges or convictions) (Coid *et al*., 1999). As a result of their behaviour these people have contact with either the CJS and/or the MHS and it is through such contact that PD labels are often ascribed, labels that are defined in terms of socially deviant behaviours. This circularity seriously confounds attempts to understand the personality characteristics underlying PD and the offending behaviour, and ensures its high prevalence rates in populations that are either incarcerated or compulsorily detained in special hospitals (Taylor, 1999; Blackburn, 1988).

Social deviance is found in conjunction with and without forms of personality deviation; it is neither fundamental nor sufficient to identify personality pathology (Blackburn, 1988). The lack of definitional independence between socially deviant behaviour and personality characteristics means there may be people in the community who also have elements of PD but have simply avoided detection (because of their lack of contact with the MHS or the CJS or because they channel their personality characteristics into socially acceptable endeavours). Millon (1981), for example, suggests that the histrionic personality in a mild form displays in many respects what is encouraged and rewarded in our society. Indeed, the histrionic personality has been referred to as the pathologic "gregarious pattern" (Millon *et al.*, 1996). Similarly, it has been noted that while a relatively small number of people demonstrate the "characteristic" socially deviant and criminal features of an antisocial personality, others with essentially the same raw personality traits may operate within mainstream society, demonstrating their characteristic features in socially acceptable ways (Millon, 1981).

There is some empirical support for this viewpoint, especially from recent investigations into the concept of "successful" psychopaths (Babiak, 1995, 1996; Lilienfeld, 1998). "Successful" psychopaths are said to be people with psychopathic PD patterns but without

the characteristic history of arrest and incarceration (Lynam *et al.*, 1999). Psychopathy, as initially described by Cleckley (1976), is a form of PD (although it has not featured in the last three versions of DSM). Psychopathic PD comprises two factors: "emotional detachment", which includes traits such as superficial charm, egocentricity, and remorseless use of others; and "antisocial behaviour", which includes socially deviant behaviours and weak behaviour controls (Harpur *et al.*, 1988, 1989).

Evidence for the existence of "successful" psychopaths is growing. In a study using university students, a number were found to have the characteristic features of psychopathic PD (Lynam *et al*., 1999). In a series of case studies looking at "industrial" psychopaths, several were found to be operating successfully within organisations (Babiak, 1995, 1996). Babiak found that, as predicted, the emotion factor (narcissistic PD) was higher than the deviant lifestyle factor (antisocial PD). It was concluded that "emotion" elements were likely to have contributed heavily to the finesse, "charming facade" and great skill at influencing people observed in the cases. Similarly, Doren (1987) observed in institutions the proficiency of "psychopaths" to seek out and develop relationships with people of the highest authority and to show tremendous skill at influencing them.

Elements of the narcissistic personality bare a striking resemblance to personality characteristics that have been implicated in aspects of organisational leadership behaviour. Successful business leaders have frequently been described in terms of aggressiveness, alertness, dominance, enthusiasm, extroversion, independence, creativity, personal integrity, self-confidence and socialising/networking (Stogdill, 1948; Yukl, 1981; Luthans and Lockwood, 1984; Quinn, 1984). The skilful use of influence tactics as a means of manipulating power within organisations has also been frequently implicated in managerial success (Kipnis *et al.*, 1980). Moreover, in a study of organisational leadership, Kets de Vries and Miller (1985) identified a group of leaders characterised by grandiosity, exhibitionism, self-centredness, and lacking of empathy.

It has been suggested that people driven by needs for power, dominance and prestige often seek and end up in leadership positions (Kernberg, 1979; Emmons, 1987). In many respects this seems entirely logical given the personality characteristics that have been found to be associated with many leaders and the fact that in many ways leadership positions involve the exertion of power and control over resources. Indeed, Millon (1981) reasoned that the characteristics of pathological personalities do not usually appear strikingly different from those seen among "normal" individuals.

In view of these findings, the aim of the present research was to investigate whether there was overlap between the PD profile of a "normal" population and the PD profiles of "clinical" populations known to have high base rates in PDs. In addition, to examine dimensional associations, differences in the degree of PD representations were explored. Using the dimensional approach of Morey *et al.* (1985) the PD profile of a senior business manager sample was compared with those of Mental Illness (MI) patient, Psychopathic Disorder (PPD)[1] patient, and Psychiatric patient samples. It was hypothesised that:

- There would be *qualitative equivalence* between the four PD profiles of MI patient, PPD patient, Psychiatric patient and senior business manager samples. This would be evidenced by the absence of discontinuities in the data and significant overlap between scores drawn from all sample populations, with a substantial number of those from the business population extending into the clinical distributions. Scores would be distributed such that there were no distinct points of demarcation between the groups, indicating a qualitative difference.

- There would be quantitative differences between the PD profile of the senior business manager sample and the PD profiles of MI, PPD and Psychiatric patient samples. In particular, there was interest in the relative representations of narcissistic, antisocial, histrionic, borderline, passive–aggressive, and paranoid PDs because of the demonstrated relationships between these dimensions and psychopathic PD (e.g. Blackburn and Coid, 1998) and the purported overlap between elements of psychopathic PD ("successful" psychopaths) and some of the key characteristics associated with success in senior management job roles (Kets de Vries and Miller, 1985; Babiak, 1995).

METHODS

Participants

Data were obtained from senior business managers and chief executives from leading UK British companies. The senior business manager sample contained 39 individuals. The sample was 100% male. The mean age for the sample was 35.92 (SD = 5.6). One hundred per cent of the sample had attained four or more secondary education O levels (mean = 8.43, SD = 1.94), 85% of the sample had attained one or more secondary education A levels (mean = 3, SD = 1.33), and 80% of the sample had attained a baccalaureate or higher degree. The mean length of employment in the current job role was 20 months, and the mean length of employment in the current organisation was 8.4 years. All participants were presently engaged in leadership roles, responsible for the performance of others. With respect to personal status, 51% were married and together, 29% were single, 15% were divorced and 5% were in long-term relationships. None of the participants received any rewards for participation.

Data for the mentally disordered offender sample were obtained from patients at Broadmoor Special Hospital, Berkshire, England. 1085 current and former male patients were selected and each had received a legal classification of either Mental Illness (MI) or Psychopathic Disorder (PPD). Females were excluded from the sample in order to match for subject sex in the business manager sample. The sample was divided into two sub-groups using the legal classification.

The Broadmoor MI sample comprised 768 patients. The mean age for the sample was 55.57 (SD = 30.65). Education and employment history were unobtainable, however full scale IQ data indicated that the sample range was 51 points to 139 points, with 34% of the sample having obtained a full scale IQ of < 100 and 25% of the sample obtained a full scale IQ of ≥ 100 (41% not known). With respect to personal status, 9% were married and together, 2% were married and separated, 58% were single, 10% were divorced and 21% were not known.

The Broadmoor PPD sample comprised 317 patients. The mean age for the sample was 50.30 (SD = 30.14). Education and employment history were unobtainable, however full scale IQ data indicated that the sample range was 52 points to 141 points, with 39% of the sample having obtained a full scale IQ of < 100 and 29% of the sample obtained a full scale IQ of ≥ 100 (32% not known). With respect to personal status, 5% were married and together, 3% were married and separated, 61% were single, 8% were divorced and 23% were not known.

Data for the psychiatric sample were obtained from the research of Morey *et al*. (1985). The sample contained 475 randomly selected psychiatric patients. The sample was 56% male.

The mean age for the sample was 37.5 (SD = 13.1). The mean years of education were 10.9 (SD = 4.8). With respect to personal status, 31% were married and together, 33% were divorced or separated and 4% were widowed.

Measures

The Minnesota Multiphasic Personality Inventory Scales for DSM III Personality Disorders (MMPI-PD) scales is a true/false self-report inventory that was developed by extracting 162 items from the item pool of the MMPI (Hathaway and McKinley, 1951) in order to derive 11 scales to tap the PDs of the DSM-III (Morey *et al*., 1985). The items consist of brief statements reflecting the main aspect of the corresponding criterion, and the respondent is asked to score the statement as true or false. Thirty-eight items are reversed in the sense that a "false" as a response indicates fulfilment of the corresponding criterion. Each item is scored 0 if the response does not fulfil the corresponding criterion, or 1 if it does. Therefore the higher the score on any scale the more indicative it is of the PD criterion it represents. A reprographic error resulted in one missing item for all participants in the senior business manager sample. The item was treated as missing data and given a value of 9. Demographic data were obtained from the senior business manager sample via a series of questions that served as a cover page to the MMPI-PD.

Procedure

Informal and business networks were used to make initial contact with senior business managers and chief executive officers of British Industry. Potential participants were briefed on the purpose of this study and invited to participate. A total of 51 senior business managers agreed to participate, but only 39 actually did. Participants were either seen at their offices and interviewed to obtain the demographic data and then invited to complete the MMPI-PD or they were contacted by letter and provided with the MMPI-PD and demographics sheet and asked to complete it and return it to the first author. All participants were told that their data would be treated in strictest confidence, that providing name details on the demographic sheet was optional, and that results would be analysed at aggregate level.

Data for the Broadmoor MI and PPD samples were obtained from an existing patient database at Broadmoor Hospital. Data extracted included Mental Health Act (MHA) legal classifications, mean scores for the 11 MMPI-PD scales for each of the two samples, and age, full scale IQ and personal status for each patient.

Data Analyses

Prior to the analyses all data were screened for normality of distributions. No violation of the relevant multivariate statistical assumptions was detected. Demographic descriptives for each sample were computed, including age, education or IQ (based on available data), and personal status.

Data collected from the senior business manager sample were analysed using the alpha model (Cronbach, 1951) to investigate the internal consistency of the MMPI-PD scales on a "normal" sample. Student's t-test was used to analyse the mean scale scores for each of the four groups. A Bonferroni adjustment was applied to take account of the multiple tests and a

probability value of < 0.0045 was considered statistically significant. Smallest Space Analysis (SSA) of the senior business manager data was computed and projected onto Leary's (1957) interpersonal circle (IPC) to explore the elements of PD and their linear positionings relative to the dimensions of personality. SSA transforms the associations between variables into linear distances and represents them in a geometric space (Brown, 1985). The stronger the association between variables, the shorter the distance between them. Statistical tests were performed in SPSS 10 for Windows except for the Student t-tests, which were computed on a bespoke computer program to accommodate the data format of the Broadmoor sample. The SSA was computed on the Broadmoor Scaling Package (© Hammond).

RESULTS AND DISCUSSION

Reliability

The MMPI-PD compares favourably with similar measures such as the widely used PDQ-R (Morey *et al*., 1985; Trull and Larson, 1994). However, because all scales developed for assessing PD (e.g. PDQ, MCMI, APQ, PAI), including the MMPI-PD, were developed for use with psychiatric cases it is necessary to show that for the "normal" senior business manager sample, the psychometric properties are firstly reasonable, and secondly, roughly equivalent to those of the test developer (Morey *et al*., 1985) and their sample of patients. If the item pools (traits) are just as salient to "normal" adults, the alpha coefficients should be equivalent to those observed in the Morey sample.

Table 1 shows the internal consistency of the 11 MMPI-PD scales: alpha coefficients (Cronbach, 1951) ranged from 0.53 to 0.87, with a median of 0.73. There is a degree of variability in the reliabilities, with some scales (Compulsive) being quite weak and others (e.g. Avoidant) being reasonably strong. This pattern of alphas coincides with other research findings including Morey *et al*. (1985), who found Compulsive to have one of the lowest alphas and Schizotypal and Avoidant to have among the highest. Widiger and colleagues

TABLE 1 Internal consistency of the 11 MMPI-PD scales for the Morey and senior business manager samples.

		Alpha coefficient	
Scale	*Number of items**	*Business managers*	*Morey*
Histrionic	20	0.741	0.761
Narcissistic	29	0.642	0.765
Antisocial	21	0.739	0.790
Borderline	22	0.785	0.712
Dependent	19	0.676	0.704
Compulsive	15	0.531	0.675
Passive–aggressive	14	0.651	0.737
Paranoid	21	0.626	0.812
Schizotypal	36	0.801	0.835
Schizoid	22	0.730	0.716
Avoidant	38	0.872	0.859

*The total number of items exceeds 162 because the derived scales contain several items common to more than one scale, reflecting the overlap in DSM criteria.

(1991) and Hyler and colleagues (1989) also obtained low alphas for the Compulsive scale. The repeated inconsistency of this scale across methods and populations suggests that the source of the problem resides in the measured construct, i.e. the DSM criteria for compulsive PD (Schotte *et al.*, 1998).

Overall, it can be concluded from these analyses that the MMPI-PD scales are essentially commensurate with expectations, being in line with previous findings and the fact that coefficients tend to be lower among "normals" than patients (Schotte *et al*., 1998; Blackburn and Fawcett, 1999). These findings add weight to the perspective that PDs may be measured as a constellation of traits rather than categorical or diagnostic states.

Comparing the Four Samples

Results of the *t*-tests shown in Table 2 are represented in Figure 1. Generally, the most significant group differences were between the senior business manager sample and the two special hospital samples, with fewer significant differences being found with the psychiatric sample. Perhaps the most striking result was the comparative mean scores for the histrionic scale. The mean scale score for the senior business manager sample was significantly higher compared with the three patient samples. In addition, on the narcissistic scale, while the differences failed to reach statistical significance, the senior business manager sample had a higher mean scale score than the PPD and MI patient samples. Similarly, on the compulsive scale, while the differences failed to reach statistical significance, the senior business manager sample had a higher mean scale score than the PPD and MI patient samples. On all other scales the PPD and MI sample means were significantly higher than those of the senior business manager sample, with similar but not always statistically significant trends in the psychiatric sample.

Qualitative Equivalence of the PD Profiles of the Four Samples

The distribution of scores across the PDs is remarkably similar. All four profile comparisons closely match, with few deviations from the predominant trend. *t*-test results confirm that the fully functioning "normals" in the present study had PD scores that extended into the clinical distributions. With the exception of the schizotypal scale (which had an overlap of slightly greater than 1 SD), all group distributions overlapped by a minimum of 15%, and considerably more in most cases. Distributions implied continuity, with no points of rarity being apparent to indicate where to make the distinction between normality and pathology. That continua exist, and that participants drawn from the non-clinical population had scores that merged undiscernibly with clinical distributions seriously challenges the categorical model. The evidence lends support to the dimensional perspective that the characteristics of PD are not qualitatively different from those of "normal" personality, but vary in degree.

Quantitative Differences Between the PD Profiles of the Four Samples

The lack of demarcation between "normal" and "disordered" samples on PDs has been reported frequently (e.g. Nestadt *et al.*, 1990; Livesley *et al*., 1992). What is especially interesting is the PD profile for the sample of senior business managers compared with the PD profiles of the other samples, particularly the PPD patient sample. The group's significantly higher mean scale score on histrionic, statistically equivalent mean scale scores on narcissistic and compulsive, and significantly lower mean scale scores on the remaining

TABLE 2 Comparison of the senior business manager sample MMPI-PD scale means with PD patient, MI patient and Psychiatric patient group MMPI-PD scale means.

	Business managers		*PPD patients*			*MI patients*			*Psychiatric patients*		
Scale	*Mean*	*SD*	*Mean*	*SD*	*p*	*Mean*	*SD*	*p*	*Mean*	*SD*	*p*
Histrionic	13.33	3.48	8.88	3.67	< 0.0045*	8.46	3.52	< 0.0045*	11.29	3.84	< 0.0045*
Narcissistic	15.58	3.72	14.54	4.42	NS	14.34	4.70	NS	15.85†	4.78	NS
Compulsive	7.35	2.43	6.92	3.38	NS	7.07	3.62	NS	8.59	2.96	NS
Antisocial	8.64	3.75	12.43	4.33	< 0.0045	13.80	4.65	< 0.0045	10.65†	4.42	< 0.0045
Borderline	9.23	4.09	15.77	3.82	< 0.0045	16.38	3.99	< 0.0045	9.66	3.95	NS
Dependent	5.92	2.98	12.06	3.77	< 0.0045	12.41	4.18	< 0.0045	7.96	3.58	< 0.0045
Passive–aggressive	5.56	2.78	7.87	3.64	< 0.0045	8.04	3.71	< 0.0045	6.25	3.01	NS
Paranoid	5.82	2.86	13.79	5.61	< 0.0045	13.70	5.57	< 0.0045	8.61	4.41	< 0.0045
Schizotypal	9.17	5.09	22.85	7.73	< 0.0045	22.70	7.79	< 0.0045	14.13	6.27	< 0.0045
Schizoid	6.61	3.48	12.82	4.58	< 0.0045	13.09	3.87	< 0.0045	7.96	3.84	NS
Avoidant	12.79	7.06	21.93	8.70	< 0.0045	22.53	8.41	< 0.0045	17.59	7.42	< 0.0045

*The senior business manager sample is significantly *higher* ($p < 0.0045$).
†Morey *et al*. (1985) reported significant sex effects for these scales and in these instances the **male** mean scale scores were used to match for subject sex in the other samples.

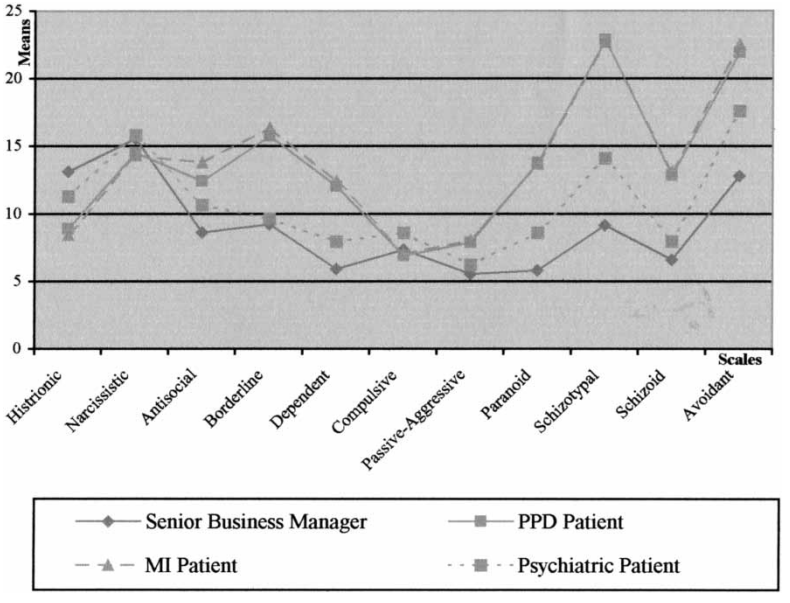

FIGURE 1 PD profile comparisons of the four samples.

scales compared with the PPD and MI patient samples, endorses a key line of inquiry of the present study.

Evidence was sought that some of the personality traits associated with psychopathic PD might be present in a sample of senior business managers but that other socially unacceptable features of psychopathy such as violence would not be. This was suggested because of the demonstrated relationships between narcissistic, antisocial, histrionic, borderline, passive–aggressive and paranoid PDs and psychopathic PD (e.g. Blackburn and Coid, 1998; Lynam *et al*., 1999), and the purported overlap between elements of psychopathic PD ("successful" psychopaths) and some of the key characteristics associated with success in senior management job roles (Kets de Vries and Miller, 1985; Babiak, 1995, 1996).

The results here confirm the presence of elements of PD in the senior business manager sample, and those most prominent are among those most associated with psychopathic PD (Blackburn and Coid, 1998). Relative to the three patient samples, particularly the PPD and MI patient samples, the senior business manager group is more likely to demonstrate the traits associated with histrionic PD, and equally likely to demonstrate the traits associated with narcissistic and compulsive PDs. At a descriptive level this translates to: superficial charm, insincerity, egocentricity, manipulativeness (*histrionic*), grandiosity, lack of empathy, exploitativeness, independence (*narcissistic*), perfectionism, excessive devotion to work, rigidity, stubbornness, and dictatorial tendencies (*compulsive*). Conversely, the senior business manager group is less likely to demonstrate physical aggression, consistent irresponsibility with work and finances, lack of remorse (*antisocial*), impulsivity, suicidal gestures, affective instability (*borderline*), mistrust (*paranoid*), and hostile defiance alternated with contrition (*passive–aggressive*) (Millon, 1981; Millon and Everly, 1985; Blackburn and Coid, 1998; American Psychiatric Association, 1994).

The emerging PD trait profile of the senior business manager sample is one that lends support to previous research that has identified PD attributes, especially those closely linked to psychopathy, in fully functioning people, for example, working successfully in organisations (Babiak, 1995, 1996), or studying at universities (Lynam *et al*., 1999; Levenson *et al.*, 1995). The mean scale score for narcissism is perhaps lower than others have found, notwithstanding the very different methodologies employed (e.g. Babiak, 1995, 1996). Assuming this is the case, one possibility is that the very high score on the histrionic scale is in part accounting for the lower narcissistic level. These two PDs are highly comorbid (e.g. Blashfield and Breen, 1989).

Another possibility is that characteristics of the histrionic scale *are* more in evidence compared with those of the narcissistic scale, and this may be because of their greater utility in the workplace. Successful business leaders have been described as being aggressive, dominant, extrovert, enthusiastic, charming, sociable, self-confident, independent, self-centred and influential, often seeking to exert authority and control over organisational resources (Patchen, 1974; Kernberg, 1979; Kipnis *et al*., 1980; Quinn, 1984; Emmons, 1987; Hogan *et al*., 1990). Descriptively, these appear to overlap more with histrionic PD, acknowledged for its manipulative, deceptive, self-centred and superficially sociable tendencies, although the independence of narcissism clearly has an important function in any senior management role. On balance it seems likely that the closely allied tendencies of these "categorical states", are indeed facets of the same domain.

In summary, the senior business manager group appears to possess, to a degree that is equivalent to and at times exceeds the PPD and MI patient groups, elements of psychopathic PD that have been referred to as the emotional components, and they closely resemble characteristics known to be beneficial to achieving in a senior management role. However, the group does not have, to a comparable degree, elements of psychopathic PD that have been referred to as the deviant lifestyle components, characteristics that perhaps reflect more of the impulsive acting out. Nor does the senior business manager group PD profile contain, to any relatively equivalent degree, elements associated with the schizotypal, schizoid, avoidant and dependent scales.

Accounting for the Senior Business Manager PD Profile

The present results lend support to the perspective that personality and its pathology are one and the same, continuously distributed throughout the population, with elements of PD existing without boundaries of distinction separating the clinical and non-clinical populations, with "abnormal" personalities being defined by their relative positionings on the dimensions of personality. To represent this visually, an SSA for the senior business managers was computed and then projected onto the interpersonal circle (IPC), developed out of Leary's (1957) original work (Wiggins, 1982; Kiesler, 1983). The relationship between interpersonal behaviours is represented by a circle around two orthogonal dimensions, Power/Control (dominant–submissive poles) and Affiliation (friendly–hostile poles). The circle is further divided by mid-points in each section to create the eight commonly used segments (Kiesler, 1983; Blackburn, 1989).

Figure 2 shows the projection of the PD profile of the senior business manager sample. Histrionic, antisocial and narcissistic are located in the Hostile–Dominant quadrant, passive–aggressive is located in the Hostile–Submissive quadrant, schizoid, schizotypal, avoidant and paranoid are all positioned in the Withdrawn Submissive octant and

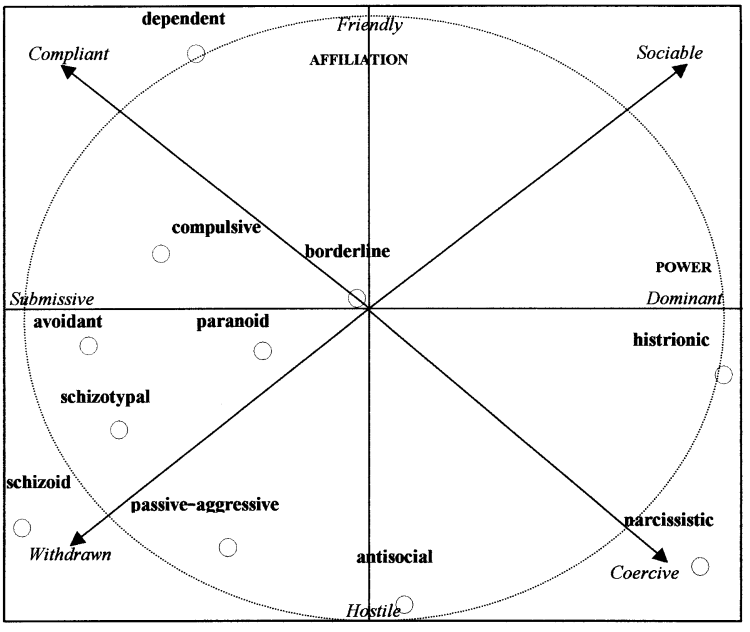

FIGURE 2 SSA of senior business manager data with two orthogonal dimensions.

compulsive and dependent lie in the Submissive–Friendly quadrant. Borderline lies almost at the epicentre of the circle and no PDs occupy the Friendly–Dominant quadrant.

This theoretical interpretation of the SSA accords with previous research. For example, in an adult male special hospital patient sample, Blackburn (1996, 1998a,b) found that antisocial, histrionic, narcissistic, paranoid and passive–aggressive PDs were represented in the Hostile–Dominant quadrant, with passive–aggressive lying just outside the Hostile Withdrawn octant; schizoid, avoidant and schizotypal were in the Withdrawn Submissive octant; compulsive and dependent projected onto the Friendly–Submissive quadrant; borderline was adjacent to the centre and no PDs resided in the Friendly–Dominant quadrant (Blackburn, 1998a). In terms of quadrant placements, these findings of Blackburn and others (e.g. Morey, 1985; Soldz *et al.*, 1993) support the structural concordance of the present data sets. Moreover, they suggest that the dimensions of Power and Affiliation may be key in helping to explain some of the relative differences in the PD profiles.

Considering the present results, the *Submissive–Withdrawn* domain does appear to play a key role. It features relatively little in the senior business manager profile, with the PPD and MI patient samples having vastly higher mean scale scores on the four PDs that reside there. One explanation for this difference may be that these represent a dimension of social withdrawal, reflecting some form of communication difficulty. Each of the PDs in this octant have been described as having cognitive features that could imply some form of thought complication (Millon and Everly, 1985; American Psychiatric Association, 1994; Widiger, 1998), and there is growing evidence to suggest that disturbances in thinking may be a significant risk factor for violence (Swanson *et al.*, 1998).

With respect to the *Submissive–Friendly* quadrant, the predominant interpersonal style represented here is one of compliance. While the mean scale score on the compulsive scale for the senior business manager sample was statistically equivalent to the patient samples, the

dependent mean scale score was significantly lower. Taken together, the results suggest that the senior business manager sample is significantly less represented in this interpersonal domain. This domain may be drawing on a naive underdeveloped pattern of thinking known to be associated with dependent PD, and perhaps is tapping into poor self-esteem, which presents as a vulnerability, an emotional impassivity. There is a vast literature linking passivity or unassertiveness with low self-esteem (Coopersmith, 1968), and recently Blackburn and Coid (1998) identified a similar "sensitivity" dimension, of which dependent PD was a major part.

Regarding the *Hostile–Dominant* quadrant, the borderline and passive–aggressive scales are included here because of their established relationship with violence (Blackburn, 1998b, Coid *et al*., 1999), borderline's central projection onto the IPC and evidence that passive–aggressive is significantly more aggressive than passive (Blackburn, 1998a). The mean scale scores for the senior business manager sample inform that while histrionic and narcissistic were higher than those for the patient samples, this group had significantly lower scores on passive–aggressive, borderline and antisocial. That the senior business manager sample had greater representation in the Coercive–Dominant domain, with a bias towards the Dominant pole, and the PPD and MI groups were far more represented in the Coercive–Hostile domain, with a bias towards the Hostile pole, may in part account for the presumed lack of violence and criminality in the senior business manager sample compared with the MI and PPD patient groups. Hostile–dominance has been shown to successfully predict aggressive behaviour (Aiyegbusi, 1996, cited in Blackburn, 2000) and antisocial and passive–aggressive PDs have been found to be more highly correlated with Hostility than PDs who are either histrionic or narcissistic (Blackburn, 1998a,b).

CONCLUSIONS

The present research achieved two significant findings. Firstly, it demonstrated that it is valid to measure PDs as a constellation of traits rather than categorical states (Morey *et al*., 1985). The MMPI-PD was shown to have adequate performance characteristics for a "normal", fully functioning sample, and it provided persuasive evidence for the continuous distribution of personality traits and its pathology.

Secondly, having established evidence for the dimensional perspective, it was confirmed that elements of PD were distributed across a fully functioning sample drawn from the non-clinical population. The PD profile for the senior business manager sample showed significant elements of PD, particularly some of those most associated with what has been referred to as the emotional component of psychopathic PD. Further, compared to the three patient groups, the PD profile for the senior business manager group was, to any comparable degree, absent of those elements of PD that are more associated with a socially deviant lifestyle, elements that perhaps reflect more of the impulsive acting out.

The reason why people with a PD profile such as that of the business manager sample progress to positions of legitimate power and authority, rather than some socially deviant alternative, remains perplexing. However, as a place of origin it seems erroneous to look to medical models of disease. There is an enormous weight of evidence that challenges the categorical perspective of PD "entities" (Clark *et al*., 1997) and for a number of reasons it seems timely that the focus be on a dimensional conceptualisation of personality and its pathology.

Firstly, all health professionals, especially those who have opportunity to impact the liberty of an individual, have a duty of care to use the most reliable and valid methods available to assess the risk of offenders. In addition to any moral reasoning, considerable persuasion is coming from various legal quarters to ensure such practices are met. For example, in the recent UK case of Regina (H) v Mental Health Review Tribunal (28 March 2001, *The Times* Law Reports, 2001), in consideration of the Human Rights Act (1998), the Court of Appeal ruled that patients should not have to prove they are fit for release and it should be for special hospitals to demonstrate the need for a patient's continued detainment. Courts and Mental Health Review Tribunals will expect experts to be able to confidently account for why an offender is deemed to be an ongoing risk, and thus able to be involuntarily detained. To answer this, a dimensional assessment of PD is vastly superior. It provides a more finely grained measurement than is possible with category membership, and is more flexible and accurate.

Secondly, more accurate and consistent measurement of PDs would greatly assist research. It has been plagued by a lack of common definitions, and incompatible and incomparable instruments. One line of research could focus on exploring the cognitive processes of people from the non-clinical population, such as those in the senior business manager sample. Understanding the cognitive dimensions of such groups and how they differ from each other and clinical samples could prove fruitful both in validating current Cognitive Behavioural Therapy (CBT) treatment trends in the MHS and in helping to clarify whether some extreme interpersonal styles are more dysfunctional. This information could also be very useful for identifying potential protective factors (Farrington *et al.*, 2000).

Although the current findings on the dimensionality of personality and its pathology are consistent with previously reported research, limitations of the present study must be noted. In particular, the relatively small size of the senior business manager sample brings into question the replicability of these results. Further, the senior business manager sample and the special hospital samples both represent extremes in the populations from which they come and as such, the extreme scores observed may be aberrations. Replication needs to include a larger number of business leaders, notwithstanding the difficulties in recruiting such individuals, to confirm the distribution of PD characteristics. Future research would also benefit from extending this research to include measures of cognitive and affective processes. Both are said to be intrinsically linked to interpersonal behaviour (Carson, 1970; Baldwin, 1992) and a developed knowledge of the interplay between these across "normal" and "clinical" populations would further advance our understanding and management of personality and its pathology.

In conclusion, the present results support a dimensional conception of personality and its pathology. In view of this, the adoption of a system that provides individual profiles rather than singleton labels is seen as a fundamental step forward, away from a convenience that in many ways can allow its users to become undisciplined in articulating the uniqueness of each case, and a step towards a theoretically more sound, robust and comprehensive approach. The act of labelling individuals has been shown to lead those individuals to adopt roles that reflect society's expectation of possessing that particular label, and in this sense, labels become a form of a self-fulfilling prophecy (Goffman, 1973; Scheff, 1973). In much the same way, PD labels, defined by their socially deviant behaviour, cease being descriptive and become explanations of the very behaviours they were intended to simply summarise.

Note

1. MI and PPD are legal terms given to mentally disordered offenders who are detained in special hospitals because of the risk they pose. The PPD term should not be confused with Cleckley's Psychopathic PD.

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