

A Step Toward DSM-V: Cataloguing Personality-Related Problems in Living

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Abstract

Intractable problems with DSM-IV's Axis II mandate an entirely new approach to the diagnosis of personality-related pathology. The Five-Factor Model of personality provides a scientifically grounded basis for personality assessment, and Five-Factor Theory postulates that personality pathology is to be found in characteristic maladaptations that are shaped by both traits and environment. A four-step process of personality disorder (PD) diagnosis is proposed, in which clinicians assess personality, problems in living, clinical severity, and, optionally, PD patterns. We examine item content in five problem checklists to update the list of personality-related problems used in Step 2 of the four-step process. Problems were reliably assigned to relevant factors and facets, and a number of additions were made to an earlier catalogue. The four-step process can be used by clinicians, and may be incorporated in a future DSM. This article is a U.S. government publication and is in the public domain in the United States.

INTRODUCTION

Axis II of the *DSM* (American Psychiatric Association, 1987, 1994) system embodies the insight that some psychiatric problems are not acute episodes of mental disorder caused by life stress or organic illness; instead, they are more-or-less chronic difficulties in living that are manifestations of enduring dispositions in the individual. This general principle is one of the chief merits of the *DSMs*. However, its operationalization in the categories and criteria of *DSM-IV* personality disorders (PDs) leaves much to be desired. Among the long-noted problems are the lack of empirical basis for the disorders selected (Livesley & Jackson, 1986), the artificiality of the diagnostic thresholds (Widiger & Frances, 1994), serious comorbidity with other Axis II and Axis I disorders (Widiger et al., 1991), poor interjudge and inter-instrument reliability (Clark, Livesley, & Morey, 1997), and temporal instability (Shea et al., 2002).

Rather than attempt to patch up this system, it might be more profitable to begin anew—an approach advocated by McCrae (1994) and elaborated by Widiger, Costa, and McCrae

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(2002) as a four-step process. If Axis II psychopathology is supposed to be a reflection of personality, then it would seem logical to base its classification on the structure of personality itself. In fairness to the authors of the *DSMs*, there was no consensus on what that structure was until the early 1990s (Digman, 1990; Goldberg, 1993), too late to influence even the *DSM-IV*. Today, however, there are several compelling reasons to adopt the Five-Factor Model (FFM; McCrae & John, 1992) as the foundation of Axis II diagnosis:

- (1) *The FFM is comprehensive.* The FFM originated in studies of lay terms extracted exhaustively from the dictionary (John, Angleitner, & Ostendorf, 1988), but its real appeal to psychologists came from a series of studies showing that it included virtually all the personality constructs identified by other models of personality (Markon, Krueger, & Watson, 2005; O'Connor, 2002). Particularly as fleshed out by the inclusion of more specific facets that define each factor, the FFM provides a very broad basis for describing personality traits, and thus a framework for systematic and thorough diagnosis of personality pathology.
- (2) *Its developmental course is known.* The whole point of distinguishing Axis I from Axis II is to identify relatively chronic problems. Chronic problems could not be personality-related unless personality itself were stable, and there is ample evidence that traits of the FFM are relatively stable, especially after age 30 (McCrae & Costa, 2003; Roberts & DelVecchio, 2000). There are also small but predictable changes in trait levels with aging; knowing these changes allows us to make predictions about the changing prevalence of personality-related problems (Costa, McCrae, & Siegler, 1999).
- (3) *Its origins are known.* There is clear evidence that much, perhaps most, of the variance in adult personality traits is genetic in origin (Bouchard & Loehlin, 2001; Riemann, Angleitner, & Strelau, 1997). This fact is of most interest to biologically oriented psychiatrists and neuroscientists, who hope to identify relevant genes and their operation in the brain, but it is also important to anyone who deals with personality-related problems in living, because it points to their ultimate origins. Psychotherapy intended to uncover the sources of adult pathology in childhood experience is probably not promising for Axis II conditions.
- (4) *It is universal.* Ideally, the diagnostic system of the *DSM* should parallel the system found in the *International Classification of Diseases*, but that is only possible if psychopathology is a universal of human nature. It is clear that problems in living vary, sometimes dramatically, across cultures—consider, e.g., the ‘loss of soul’ treated by shamans or the *shenjing shuairuo* (neurasthenia) listed in the *Chinese Classification of Mental Disorders* (Psychiatric Division, Chinese Medical Association, 1992). However, the traits of the FFM are themselves universal, having been found in recognizable form in every culture in which they have been sought (McCrae, 2002; Paunonen et al., 1996). Fundamentally, then, a *DSM* based on the FFM would be compatible with worldwide diagnostic criteria.
- (5) *It can be validly assessed by multiple methods.* In developing *DSM-IV*, extensive field trials were conducted to assess ‘the reliability and performance characteristics of each criteria set’ (American Psychiatric Association, 1994, p. xix). The reliability and validity of a number of measures of the FFM are already established (De Raad & Perugini, 2002). In addition, the FFM can be assessed by self-report, observer rating, or even the analysis of sentence completions (McCrae & Costa, 1988), and these

alternative methods give convergent (although not identical) results (McCrae et al., 2004).

For all these reasons, the FFM is fully prepared to serve as the basis of a reformulated Axis II for *DSM-V*. If we wish for a more fine-grained description of personality (and there are many reasons to make differentiations within the five factors; see Paunonen & Ashton, 2001), the situation is somewhat less clear. Shedler and Westen (2004) have argued that ‘Researchers have made the Five-Factor Model more useful for describing PDs by focusing on subfactors or “facets” of the factors. However, this is no longer the Five-Factor Model that has been so well validated and replicated, and investigators can no longer claim the same advantages of universality, reproducibility, and cross-cultural relevance’ (p. 1744). However, at least one set of facets—those of the Revised NEO Personality Inventory (Costa & McCrae, 1992)—can in fact claim stability, heritability, universality, and reproducibility across methods (Costa, Herbst, McCrae, & Siegler, 2000; Jang, McCrae, Angleitner, Riemann, & Livesley, 1998; McCrae & Costa, 1997; McCrae et al., 2004). The 30 facets of the NEO-PI-R cannot and do not claim to be a comprehensive listing of traits (Costa & McCrae, 1995), but its facets do assess distinct traits (McCrae & Costa, 1992) that have proven to be serviceable in describing personality and predicting its pathology (Reynolds & Clark, 2001).

Personality and personality disorders

In *DSM-IV*, a PD is defined as ‘an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, and leads to distress or impairment’ (American Psychiatric Association, 1994, p. 629). We believe this view is problematic, because it relies in part on an earlier formulation of PDs as extreme (‘deviates markedly’) and inflexible (‘pervasive and inflexible’) personality traits (‘enduring pattern of inner experience and behavior’). Extreme standing on the traits of the FFM can be defined statistically, but no one would claim that everyone scoring above, say, the 95th percentile on Extraversion has a disorder. ‘Inflexibility’ of traits is not assessed by standard measures of personality, so it appears to be some additional attribute that requires its own explanation. Most importantly, we do not believe that traits themselves are ever pathological. Some have supposed that PDs refer to a different class of traits—‘abnormal’ rather than ‘normal’ traits—but there is no evidence for a separate set of abnormal personality traits outside the FFM (O’Connor, 2002), and much evidence that clinical populations share the same structure of personality as ‘normal’ populations (Bagby et al., 1999; Yang et al., 1999). Thomas Widiger (personal communication, 18 July, 2003) has suggested that the traits of the FFM be described as ‘general traits’ precisely because they are common to all people, regardless of clinical status. We believe that the psychopathology of Axis II is associated with, but conceptually distinct from, these general traits.

McCrae and Costa (1999) have offered a theory of personality that facilitates the distinction between personality and the disorders to which it may give rise. The key elements of Five-Factor Theory (FFT) are represented in Figure 1. Of chief interest here are the boxes labelled *Basic Tendencies* and *Characteristic Adaptations*. Personality traits, at both the factor and facet levels, are considered to be Basic Tendencies, determined solely by biological factors such as genetics, disease, and pharmacological interventions. Characteristic Adaptations constitute a very broad class of psychological features that are developed as the person encounters his or her environment, and they reflect the influences

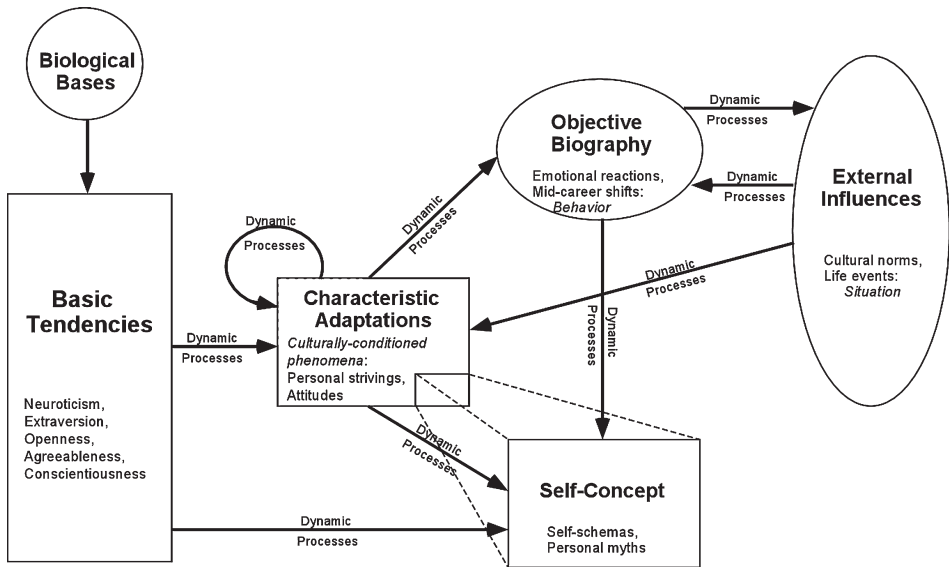


Figure 1. A schematic representation of the personality system, in which arrows indicate the direction of causal influences. Adapted from McCrae and Costa (1999).

of traits, the social environment, and their interaction (cf. Caspi et al., 2003, who show a similar interaction of Biological Bases with External Influences). Characteristic Adaptations include habits, attitudes, skills, roles, relationships, and the self-concept (shown separately because of its importance in many theories of personality). Although all of these acquired features are intended to help the individual adapt to the requirements and opportunities of the social environment, some of them are not adaptive. Postulate 2b of FFT, Maladjustment, states that 'At any one time, adaptations may not be optimal with regard to cultural values or personal goals' (McCrae & Costa, 1999, p. 145). Characteristic maladaptations—irrational beliefs, ineffective coping styles, deficient social skills, pernicious habits—give rise to personality-related problems, and, if these are sufficiently severe, may be considered a PD.

Basic Tendencies (including personality traits) are universal, because they are based on shared human biology; Characteristic Adaptations (and maladaptations) are shaped in part by culture. Consequently, anyone in the world might have an Extraversion-related PD, but the problem behaviours might be culture specific. Basing Axis II on FFT would offer a system that can meaningfully be used anywhere in the world.

Harkness and McNulty (2002) have pointed to an even more important implication of conceiving of PDs in terms of the constructs of FFT. Being rooted in biology, personality traits are difficult to change, at least by methods currently available. Characteristic Adaptations, by contrast, are all acquired, and could in principle be more easily modified. From this perspective, the goals of realistic therapy for PDs should not be to change personality, but to rechannel it into more socially acceptable and personally satisfying adaptations.

The four-step process

Widiger et al. (2002) have outlined a four-step process for diagnosing personality pathology. Step 1 is personality assessment, preferably at the facet level. Step 2 uses

personality information to identify likely problems in living, and then determines which of them are actually problematic for the individual. Step 3 (if one wishes to proceed) is an assessment of the severity of the problems, and thus of whether the patient merits a formal diagnosis of PD. The final, optional, Step 4 is to examine the profile of personality traits to see whether it fits a recognized pattern, such as one of the *DSM-IV* PDs, or other conditions such as psychopathy or authoritarianism.

Concretely, Step 2 consists of a review of problems to assess whether they should be considered as targets for therapeutic intervention. Like a review of bodily systems in a medical history, it aims for a systematic assessment of personality-related problems. It might appear that it would be possible to go directly to this step; why assess personality traits if treatment is directed solely at the problems? In fact, there are several reasons.

First, personality traits are more than simply a source of problems in living. They affect the client's attitude toward the therapist and thus the therapeutic alliance (Miller, 1991), and, in part, they determine responses to different forms of psychotherapy: Extraverts like talking about their problems, introverts may prefer medication (Shea, 1988). Any counsellor or clinician can benefit from an understanding of the individual's personality and the rapid rapport it facilitates (Mutén, 1991).

Second, it is not possible to determine whether a problem is personality related unless personality is assessed. A client who complains of being mistreated by a spouse may have an Agreeableness-related PD, because disagreeable people (especially those low in A1: Trust) often feel cheated and victimized (Widiger et al., 2002). But perhaps the spouse is in fact abusive, and this is a relationship-related, not a personality-related, problem. The clinician's understanding of the complaint needs to be informed by knowledge of personality.

Finally, personality assessment can streamline diagnosis by directing attention to likely problems. A client high in Conscientiousness is unlikely to be bothered by occupational and personal aimlessness, and there is little point in asking questions about such problems; instead, perfectionism and workaholism should be discussed. This focused questioning is not simply a time saver; it means that the client will be asked about issues that he or she will probably perceive as relevant, contributing to a therapeutic assessment.

Step 2 of the diagnosis can be formalized by using a checklist of problems associated with the poles of each factor and facet (Widiger et al., 2002). The clinician should inquire about all potential problems associated with any factor or facet score outside the average range (i.e. $T > 55$ or $T < 45$). This rule-of-thumb eliminates from direct consideration about two-thirds of potential problems for most patients. (Of course, clients must also be encouraged to mention any other issues they feel need attention; no pattern of personality scores guarantees immunity from a class of problems.)

It must be stressed that personality scores serve the function of identifying possible problems, but these should be regarded as hypotheses that must be individually assessed. Costa and McCrae (2005) present a case study of a woman low in Agreeableness by both self-report and spouse rating. The indifference toward others that this gave rise to alienated her spouse—a genuine problem for her—but it also enabled her to be effectively manipulative as a trial lawyer, which was an advantage. This case illustrates two points. First, not all the potential problems to which a patient is prone are actually problems; that question must be determined individually. Second, the personality pathology is found in the characteristic adaptations, not the basic tendencies. In this case, low Agreeableness led to some maladaptive features and some adaptive features, and therapy should focus on the former.

TOWARD A COMPREHENSIVE CATALOGUE OF PROBLEMS IN LIVING

Step 2 in the system of Widiger et al. (2002) requires that there be a list of problems associated with the poles of each factor and facet that can be used to guide systematic inquiry. For example, if a patient scores low in A4: Compliance, it would be appropriate to ask about problems with quarrels at work or at home, or about instances of physical violence—questions that need not be asked of a patient high in Compliance. McCrae (1994) provided such a list of problems relevant to the five factors, and Widiger et al. (2002), drawing on the work of Trull and Widiger (1997), provided problems relevant to each of the 30 facets.

These lists were generated rationally: the authors considered each pole of each trait in turn and proposed problems they believed would be commonly found in people with this characteristic. These rational decisions were, of course, based on a clear conceptualization of each trait and on a familiarity with the voluminous empirical literature on trait correlates that has appeared over the past 20 years. For example, Widiger et al. (2002) claimed that those high in E5: Excitement Seeking engage in ‘highly dangerous activities’, and it is known that Excitement Seeking is elevated among opioid users (Brunner, Schmidt, & Herbst, 2002). Again, Widiger et al. stated that people who score low on O6: Values may ‘be prejudiced and bigoted’, and there is evidence that prejudice is indeed related to low Openness (Ekehammar & Akrami, 2003). If an empirical study were carried out relating NEO-PI-R scores to endorsement of the problems listed by Widiger et al., it seems likely that the great majority would show the hypothesized associations.

However, even if the Widiger et al. catalogue is entirely correct, there is no evidence so far that it is comprehensive. It is possible that there are clinically significant problems related to personality traits that Widiger et al. simply overlooked. In this case, the search for comprehensiveness cannot be guided by the lexical hypothesis that was so useful in delineating the scope of personality traits (Norman, 1963), because no one has compiled a dictionary of problems in living. However, a number of researchers have attempted to develop lists of problems and psychiatric symptoms, and a comparison of their lists with that of Widiger et al. may give some idea of how complete the latter system is, and how it might be improved by the addition of new items.

This exercise is particularly useful because most other theorists have approached the task from quite different perspectives. McCullough, Farrell, and Longabaugh (1986) organized problems by area (*physical problems, life tasks, social support*), Shedler and Westen (1998) identified items in part from a consideration of *DSM* criteria, and Piedmont and Piedmont (1996) focused on issues faced by married couples. These diverse perspectives may point to sets of problems that were omitted by Widiger et al.

One issue that arises in creating lists of personality-related problems is overlap with personality assessment. As Figure 1 suggests, there is no direct way to assess personality traits: they can only be inferred from Characteristic Adaptations and the behaviours and experiences recorded in the Objective Biography. As a result, instruments such as the NEO-PI-R contain items (e.g. ‘I often get into arguments with my family and co-workers’) that might be interpreted as problems. Conceptually, traits are general and enduring, whereas problems are context specific and time bound—even chronic problems are likely to be recurrent rather than continuous. From a research perspective inclusion of problem-like trait indicators in a personality inventory can lead to criterion contamination (see Lengua, West, & Sandler, 1998, for a discussion and resolution of this problem), but from a clinical perspective this overlap entails only some harmless redundancy.

A sample of problem checklists

We chose a set of five instruments for examination that represented a range of perspectives and approaches to the tabulation of problems. Certainly, other instruments might have been used, including the Symptom Check List-90 (Derogatis, 1992), the Kennedy Axis V (Kennedy, 2003), or even the item pool of the Minnesota Multiphasic Personality Inventory—2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989). The research reported in this article is thus not definitive, but it should give a reasonable idea of how comprehensive the Widiger et al. list is, and whether the search for additional problems is worthwhile.

The Computerized Assessment System for Psychotherapy Evaluation and Research (CASPER; Farrell & McCullough, unpublished manual) is a computer-based interview assessing different functional domains ranging from physical problems to life satisfaction. Clients respond to 121 interview questions concerning the frequency (days per month) of a wide range of symptoms. Branching occurs to minimize irrelevant questions (e.g. single clients are not asked about their marriage). The 121 interview questions are linked to 62 target problems. If a client's pattern of responses indicates the presence of a particular problem, the interview branches to assess the severity, duration, and treatment priority of that problem.

The CASPER item pool was based on a content analysis of 25 common intake instruments (e.g. Minnesota Multiphasic Personality Inventory, Hathaway & McKinley, 1983; Beck Depression Inventory, Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) that identified 13 major problem categories (McCullough et al., 1986). The final CASPER items were selected by removing redundancies from the initial pool of 1000 items (McCullough, Longabaugh, & DePina, 1985).

Because our present analyses are concerned with problems in living, not psychopathological symptoms per se, we limited our analyses to the 62 target problems.

The Couples Critical Incidents Checklist (CCIC; Piedmont & Piedmont, 1996) is a screening measure identifying areas of conflict in close relationships. The 135 items describe specific behaviours and personal qualities of the partner (e.g. 'complains a lot', 'very pessimistic') and are grouped into six sections concerning different areas of conflict (e.g. emotional, interpersonal, personal reliability). Participants check all items that are perceived as sources of tension in their relationship.

The CCIC item pool was developed to reflect specific behavioural problems associated with high or low scores on the FFM personality factors. Consistent with this goal, empirical evidence suggests that spouses' CCIC ratings of a target person are moderately correlated with self- and observer-rated NEO-PI-R scores (Kosek, 1998).

For each of the six conflict areas, the CCIC contains one open-ended item on which participants can list additional concerns. Because these items do not describe any specific problems, they were excluded from our analyses.

The Inventory of Interpersonal Problems (IIP-64; Horowitz, Alden, Wiggins, & Pincus, 2000) is a self-report measure designed to screen for interpersonal problems and the level of distress associated with them. Items are grouped into six subscales assessing different domains of interpersonal functioning (e.g. assertiveness, sociability). On 39 of the 64 items, participants are asked to rate behaviours that are 'hard to do'; the remaining 25 items ask for interpersonal behaviours that the participants 'do too much'. Participants rate how much they experience each problem on a five-point scale.

The initial item pool was derived from clinical intake interviews with particular focus on inhibitions or skill deficits ('hard to do'/'can't do') and compulsions ('can't stop doing')

'do too much'). Item selection was guided by the interpersonal circumplex model (e.g. Pincus, 1994). Based on this model, multidimensional scaling was used to assign specific behaviours to one of two basic dimensions: affiliation/nurturance and control/dominance.

The Personal Problems Checklist for Adults (PPCA; Schinka, 1985) assesses clinically relevant problems in everyday functioning. The 208 items are grouped into 13 areas of functioning (e.g. social, vocational, relationships) and briefly describe concrete problems (e.g. 'not having a job', 'getting too emotional'). Clients check all items that trouble them and also circle the most important problems.

The PPCA items were selected by a panel of expert judges with the goal of covering a wide range of clinically relevant problems in everyday functioning. In spite of this atheoretical approach to scale generation, the PPCA has good psychometric properties (Piedmont, Sherman, & Barrickman, 2000).

The Shedler–Westen Assessment Procedure (SWAP-200; Shedler & Westen, 1998) is a set of person-descriptive statements designed to help clinicians describe the personality of their clients. Clinicians sort 200 Q-sort type items into eight categories from '0 = not descriptive' to '7 = highly descriptive' (category size descends from 100 cards for '0' to eight cards for '7'). The descriptions of individual patients can be compared with composite prototypes based on clinicians' ratings of hypothetical patients with a specific PD.

The initial item pool was derived from a range of sources including the *DSM* (American Psychiatric Association, 1987, 1994), the FFM, and the clinical literature on PDs (for details see Shedler & Westen, 1998). The final pool of items was selected with the goals of reducing ambiguity, minimizing item overlap, and maximizing variance.

Because the SWAP-200 was designed to assess personality in general, it includes 23 items that would generally be considered strengths rather than problems (e.g. 'enjoys challenges; take pleasure in accomplishing things'). For the present purposes, these items were reflected and treated as problems ('does not enjoy challenges; takes no pleasure in accomplishing things').

Procedure and inter-rater reliability

A single rater (CEL), familiar with the descriptions of the factors and facets of the NEO-PI-R provided in the manual (Costa & McCrae, 1992), examined all 663 items in the five instruments. She first judged whether the item was relevant to personality or not, and then whether it was specific enough to be associated with a factor or facet. Eighty-one items such as 'being attacked by an animal' were discarded as not relevant to personality (12% of all items); 36 items such as 'acting in an immature way' were discarded as being too ambiguous to allow meaningful classification (five per cent of all items). Most of the items in all five inventories were, however, classifiable (CASPER, 85%; CCIC, 98%; IIP-64, 100%; PPCA, 61%; SWAP-200, 93%). Items were first assigned to the low or high pole of a factor, and then, if possible, to the low or high pole of a specific facet. Sixty-three items were judged to be relevant to two different factors or facets; these were coded as an optional second classification. When second classifications were included, this process yielded 92 classifications on the domain level and 516 classifications on both domain and facet levels.

Inter-rater reliability was assessed for two instruments, the CASPER and the SWAP-200, based on independent ratings made by a second rater (RRM). For the CASPER, the two raters agreed significantly ($\kappa = 0.38, p < 0.001$) on which items were directly relevant to personality. Of the 36 items both considered relevant, they agreed on the most relevant factor in 29 cases (81%; $\kappa = 0.66, p < 0.001$), and agreed in direction in all these cases.

Further, in three additional cases, the first factor choice of one rater agreed with an optional second choice factor in the other. Of the 27 items for which both gave a facet assignment, there was agreement in 22 cases (81%; $\chi^2 = 204.7$, $p < 0.001$) on the facet and direction. In one additional case, the first facet choice of one rater agreed with an optional second choice facet of the other.

Of the 142 SWAP-200 items that both raters deemed relevant to personality, there was agreement on 115 (81%; $\kappa = 0.75$, $p < 0.001$) with regard to the first choice of factor; for 10 more items, the first choice of one rater matched the optional second choice of the other. At the facet level, raters agreed in 68 of 105 cases (65%; $\chi^2 = 1582.4$, $p < 0.001$); in addition, the first choice of one rater matched the second choice of the other for eight other items. For both instruments, agreement was found across all five factors and most of the individual facets. The first rater's judgments on all five instruments were used for all subsequent analyses.

The distribution of problems in five instruments

Table 1 reports the number of items, as either first or second choice, classified at each pole of each factor and facet. Because 92 items were only assigned to a factor, and not to a facet, reports for the factor level are based on 608 classifications and reports for the facet level are based on 516 classifications.

The results make sense in terms of the origins of the instruments. The CCIC and SWAP-200 were derived in part from a consideration of the five factors, and both have items representing the full range of traits. By contrast, the IIP-64 was based on the interpersonal circumplex, whose dimensions are most strongly related to the Extraversion and Agreeableness factors (McCrae & Costa, 1989), and most of its items are classified there.

Most informative are the last three columns of Table 1, which summarize data from all five instruments. These values give some notion of the density of problems in living associated with each factor. High Neuroticism is associated with more than ten times as many problems as low Neuroticism, and low Agreeableness is associated with nearly three times as many problems as high Agreeableness. Both poles of the remaining three factors show a substantial number of related problems. All facets except O2: Aesthetics have at least two associated problems, although low A4: Compliance (which includes aggression and interpersonal conflict) stands out as particularly problem prone. Note, however, that there may be redundancies within and across the five instruments that exaggerate the number of distinct problems.

An examination of the Widiger et al. charts suggests approximately equal numbers of problems per facet, which resulted from a conscious decision to identify the major problems associated with each. One might argue that the lists of associated problems ought to differ by facet, because some facets are more problem-prone than others. Conversely, one might argue that the lop-sided distribution of problems seen in Table 1 reflects clinical training and biases. Researchers in abnormal psychology have historically paid more attention to problems with mood and with interpersonal conflict than to problems with the processing of experience, and the list of Widiger et al. may call attention to overlooked issues.¹

Evaluating and augmenting the catalogue

¹A striking instance of this phenomenon is found in studies of the personality correlates of Alzheimer's disease. Prior to 1991, there were hundreds of studies relating Alzheimer's disease to depression, but none relating it to (low) Conscientiousness. Subsequent work based on the FFM (Costa & McCrae, 2000; Siegler et al., 1991) has shown that changes in Conscientiousness are among the most dramatic consequences of Alzheimer's.

Table 1. Frequency of problems from five checklists associated with high and low poles of NEO-PI-R factors and facets

Factor/facet	CASPER		CCIC		IIP-64		PPCA		SWAP		Total		Grand total
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	
N: Neuroticism		24	5	18		8		47	8	59	13	156	169
E: Extraversion	7	5	17	13	14	10	6	3	19	12	63	43	106
O: Openness	2	4	15	6	2		13	10	15	13	47	33	80
A: Agreeableness	11		25	12	17	20	27	3	39	8	119	43	162
C: Conscientiousness	7	2	13	10			25	4	15	15	60	31	91
N1: Anxiety		5		2		1		12		8	0	28	28
N2: Angry Hostility		3	1	5				1	3	5	4	14	18
N3: Depression		7	1	3				12		19	1	41	42
N4: Self-Consciousness		2	1	1		7		8		8	1	26	27
N5: Impulsiveness		5		3				10	3	6	3	24	27
N6: Vulnerability		1		4					1	4	1	9	10
E1: Warmth	4	1	8	3	7	4	2		7	4	28	12	40
E2: Gregariousness		1	2	2	1	1		1	2	1	5	6	11
E3: Assertiveness	1	1	3	4	6	4			3	2	13	11	24
E4: Activity	2	1	1	1				1	2	1	6	3	9
E5: Excitement Seeking		1	1	3				2		1	1	7	8
E6: Positive Emotions			1			1			3		4	1	5
O1: Fantasy		4		1						5	0	10	10
O2: Aesthetics											0	0	0
O3: Feelings	2		4		1				6		13	0	13
O4: Actions			1				1				2	0	2
O5: Ideas			1	2			1		1		3	2	5
O6: Values			6	3	1		5	1	2	1	14	5	19
A1: Trust	3		2	3	2	2	2	1	3	1	12	7	19
A2: Straightforwardness			3		1		1		7		12	0	12
A3: Altruism			3		5	6			5	5	13	11	24
A4: Compliance	2		12	9	7	11	20	1	11	2	52	23	75
A5: Modesty			5		1				9		15	0	15
A6: Tender-Mindedness					1	1			2		3	1	4
C1: Competence									2	2	2	2	4
C2: Order			3	3			3		2	3	8	6	14
C3: Dutifulness									2	2	2	2	4
C4: Achievement Striving		1	1	4				2	3	3	4	10	14
C5: Self-Discipline	3		7	1			8		3	1	21	2	23
C6: Deliberation		1	1				3	2		3	4	6	10

CASPER = Computerized Assessment System for Psychotherapy Evaluation and Research. CCIC = Couples Critical Incidents Checklist. IIP-64 = Inventory of Interpersonal Problems. PPCA = Personal Problems Checklist for Adults. SWAP = Shedler-Westen Assessment Procedure.

The next step involved a comparison of the newly classified items from the five instruments with the problems listed by Widiger et al. (2002). The initial assessment was conducted by the first rater. Many of the new items essentially duplicated content already included. For each domain or facet, the second column of Table 2 gives the percentages of the newly classified items that overlapped with the list of Widiger et al. The items with novel content were examined, and, when redundant, combined into a single problem. Nine of the items were novel, but so specific or unusual that all three authors agreed that they did

Table 2. Comparison of newly classified items with the problems listed by Widiger et al. (2002)

Factor/facet	Previously classified (%)	Excluded (%)	Potential additions
N: Neuroticism	68.0	2.4	Low: ● too much emotional control High: ● cannot accept criticism ● not emotionally balanced, unstable mood ● unstable relationships
N1: Anxiety	92.9		High: ● decisions and actions influenced by efforts to avoid dangers
N2: Angry Hostility	100.0		
N3: Depression	61.9	7.1	High: ● complains a lot ● is self-punitive ● feels lonely, lacks social support ● lacks satisfaction or meaning in life ● flees depressive feelings through excessive optimism and activity
N4: Self-Consciousness	55.6		High: ● avoids social situations ● has poor social skills ● has distorted body image ● feels like an imposter, not like his/her true self
N5: Impulsiveness	66.7	3.7	High: ● sexually promiscuous ● smokes ● unable to modify behaviour regardless of consequences
N6: Vulnerability	40.0		High: ● emotionally unstable ● needy or dependent ● psychosomatic complaints
E: Extraversion	56.5		Low: ● does not have an active and satisfying sexual life
E1: Warmth	45.0		High: ● sexually promiscuous Low: ● detached or indifferent ● difficulty expressing feelings ● lack of personal interest in others ● lack of social support High: ● emotionally intrusive ● excessive self-disclosure ● sexually seductive or provocative
E2: Gregariousness	81.8		High: ● excessive involvement with extended family
E3: Assertiveness	58.3		Low: ● difficulty assuming leadership roles ● difficulty expressing wishes and setting limits ● passive and unassertive High: ● cannot take instructions
E4: Activity	100.0		
E5: Excitement Seeking	50.0		High: ● easily bored ● excessive thrill seeker
E6: Positive Emotions	80.0		Low: ● pessimistic
O: Openness	65.9	2.5	Low: ● stereotypical beliefs and expectations ● uncreative, unimaginative ● does not have an active and satisfying sexual life High: ● social network does not share interests, feels like outsider
O1: Fantasy	90.0		High: ● superstitious

Continues

Table 2. Continued

Factor/facet	Previously classified (%)	Excluded (%)	Potential additions
O2: Aesthetics	N/A		
O3: Feelings	92.3		Low: ● overly rational
O4: Actions	50.0		Low: ● does not have hobbies
O5: Ideas	20.0		Low: ● lacks intellectual curiosity
			High: ● overly theoretical and abstract
O6: Values	89.5		Low: ● overly conventional
A: Agreeableness	67.9	0.6	
A1: Trust	84.2		Low: ● sexually possessive or jealous
A2: Straightforwardness	75.0		Low: ● unfaithful
A3: Altruism	50.0		Low: ● envious
			● insensitive of other's needs and feelings
			● self centred
			High: ● assumes too much responsibility for others' well-being
A4: Compliance	56.0		Low: ● generally does not get along with others
			● dislikes others
			● elicits dislike or animosity in others
			● competitive
			● stubborn
			● unforgiving, vengeful
			High: ● difficulty expressing aggression/anger
			● lacks assertiveness
			● unable to set limits
A5: Modesty	93.3	6.7	
A6: Tender-Mindedness	100.0		
C: Conscientiousness	67.0	2.2	Low: ● financial problems
			● problematic health habits lead to medical problems
C1: Competence	75.0		Low: ● does not enjoy challenges and accomplishments
C2: Order	100.0		
C3: Dutifulness	100.0		
C4: Achievement Striving	78.6	7.1	High: ● sets unrealistically high standards for self
C5: Self-Discipline	17.4	4.3	Low: ● difficulty concentrating and maintaining attention
			● difficulty budgeting money
			● poor health habits
			● unable to change maladaptive behaviours
			● unrestricted use of alcohol, nicotine, or other drugs
			High: ● overly restrictive with regard to food, money, etc.
C6: Deliberation	100.0		
Total	67.4	1.4	

Row percentages are based on the total number of items classified under each domain or facet (see Grand Total, Table 1). Previously classified = percentage of items that duplicate content of Widiger et al.'s problem list. Excluded = percentage of novel items with content that was too specific to be included in a general problem list.

not seem to merit inclusion in a problem list—for example, the SWAP-200 item 'Tends to draw others into scenarios or "pull" them into roles that feel alien or unfamiliar'. For each domain or facet, the third column of Table 2 gives the percentage of novel items that were excluded for this reason.

Column 3 lists potential additions to the list of Widiger et al. Many of these are, in retrospect, obvious candidates: 'feels lonely' is a well known accompaniment to depression (N3), and, in intimate relationships, individuals who are low in trust (A1) may easily become 'sexually possessive or jealous'. At first glance, some of the additions may seem redundant. For example, the problem 'does not have an active and satisfying sexual life' is added at the domain level for both E and O. However, the goal of the problem list is to identify the specific problems associated with each of the factors and facets, and because some problems may be associated with more than one personality trait a certain degree of redundancy is to be expected.

Overall, the number of additions is relatively small; combined with the large percentages of overlap shown in the second column of Table 2, this suggests that Widiger et al. did a reasonably thorough job of identifying personality-related problems.

We also examined the pool of items that were initially discarded as 'not relevant for personality' or 'too ambiguous', to see what the four-step assessment missed. Twenty per cent of the discarded items described problems associated with the behaviour or well-being of others (e.g. 'friend or family member attempting suicide', 'child running away from home'), 18% described health and physical problems (e.g. 'having a physical handicap', 'having chronic illness'), 13% described problematic situations (e.g. 'working in unsafe conditions', 'living in a bad neighbourhood'), and eight per cent were concerned with legal problems (e.g. 'needing legal advice', 'being on parole'). The remainder included problems with low education, sexual orientation, finances, and religious matters. Although these are certainly real problems to which personality traits may in some cases have contributed (as when low Conscientiousness leads to poor money management, or low Agreeableness aggravates the problem behaviour of family members), it would generally not be useful to diagnose a PD on the basis of such problems. Instead, Axis IV of the *DSM-IV* is available to code such problems.

The next steps for Step 2

Further attempts to identify problems missing from a comprehensive catalogue might be fruitful, particularly if carried out by independent teams of researchers who might take a somewhat different perspective on the scope of problems such a list should include, but the original list of Widiger et al., particularly as expanded by the items in Table 2, appears to provide a clinically rich catalogue of problems in living that are likely to be related to personality. The next step in research on this process is empirical documentation that these problems are indeed related to the hypothesized factors and facets. The lists of problems could be formatted as a checklist and completed by clinicians for a large clinical sample who has also completed the NEO-PI-R. Because the insight of clinical patients is sometimes limited, it would be particularly useful to supplement these self-report data with informant reports of both problems and personality traits. Further, although the traits of the FFM appear to be a human universal (McCrae, 2002), this may not be the case for associated problems in living. It is therefore advisable to gather data across a range of different cultures to ensure worldwide applicability or allow local modifications.

Analysis of these data would focus on two issues: the correlations of the problems with the intended factor and facet (as well as the other factors and facets), and the base rate of occurrence. In general, it is not cost effective to assess problems that are very rarely found, but some thought would also need to be given to the seriousness of the problem. Suicidal intentions are presumably rare, but no clinician would want to overlook them if they are present, so they should be included on the final list.

Steps 3 and 4

The Kennedy Axis V (Kennedy, 2003) represents another approach to the assessment of problems, one which is tied directly to Axis V of the *DSM-IV*, global assessment of functioning, rather than to personality assessment. That approach is geared to determine whether problems are sufficiently serious to warrant a formal diagnosis of a PD. Although the *DSM-IV* provides some guidance in this regard, this is ultimately a clinical judgment at Step 3. A single problem, such as the inability to hold down a job, might in itself merit a diagnosis of PD, but so might a long litany of more mundane problems that seem to tax the patient's ability to cope. In whichever way the clinician reaches a judgment, the form of the diagnosis is prescribed by the four-step process: Patients may be said to have a High-Neuroticism-Related PD, a Low-Neuroticism-Related PD, a High-Extraversion-Related PD, or any of the seven remaining FFM-related PDs. In principle, a single patient might be given as many as five PD diagnoses (although this would be rare, because the orthogonal factors of the FFM minimize comorbidity).

Step 4, which is optional, allows the clinician to characterize the personality profile as a whole in terms of some larger syndrome. The existing *DSM* categories could be used to describe patients, although within the four-step process this description depends entirely on the personality profile, not on the criteria listed in the *DSM-IV* (Costa & McCrae, 2005). The NEO-PI-R Software System (Costa, McCrae & PAR Staff, 1994) provides hypotheses about *DSM-IV* PDs; under the process envisioned here, these hypotheses would automatically constitute formal characterizations of PD patterns. For example, individuals who scored high on N2: Angry Hostility and low on A1: Trust, A2: Straightforwardness, and A4: Compliance would be deemed to have a Paranoid PD Pattern. PD patterns might also be based on prototypes generated by expert consensus (Miller, Pilkonis, & Morse, 2004) for *DSM* PDs or for other clinically meaningful syndromes, such as psychopathy (Miller, Lynam, Widiger, & Leukefeld, 2001) or authoritarianism.

CONCLUSION

Psychiatrists and clinical psychologists have had a long and ambivalent relationship with the PDs. On the one hand, it is obvious through experience that some people have clinically relevant problems that seem to reflect long-standing and deep-seated features of the person. On the other hand, the PD categories and criteria of the *DSM* are neither clinically apt (Westen & Arkowitz-Westen, 1998) nor scientifically well founded. The evolutionary strategy of successive versions of the *DSM* has been to try to refine the existing system. Here we propose a revolutionary strategy, in which the pages of *DSM-V* devoted to Axis II would consist of a description of the FFM and a list of associated problems in living, with traditional categories reduced to the role of optional descriptive patterns. As radical as this change may seem, it is well founded. The FFM is familiar and provides a sound scientific basis for personality description. The enumeration of problems in living and their assessment in clinical settings has gone on for years, as the instruments examined here attest. Clinicians routinely make the judgment that individual patients have a mental disorder. All that is really needed to adopt the four-step process for Axis-II assessment is acceptance by the American Psychiatric Association.

That appears unlikely, at least for the next edition of the *DSM*, but counsellors, clinical psychologists, and psychiatrists can still benefit from use of the four-step process, if not for

official diagnosis, then for understanding their patients and guiding treatment. The four-step process of assessment will not, of course, uncover all the individual's problems, or all the circumstances of life in which they are problematic, but it can give a systematic preview of the patient and his or her problems that facilitates deeper clinical probing.

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