Rationale for the Proposed Changes to the Personality Disorders Classification in DSM-5

Part 1 - Reasons for the Changes

In the Introduction to <u>A Research Agenda for DSM-V</u>, Kupfer et al. (2002) questioned the validity of traditional categorical approaches to the diagnosis of mental disorders. Epidemiological and clinical studies showed high rates of co-morbidity between disorders and short-term diagnostic instability. No laboratory marker had been found to be specific for any DSM-defined syndrome and treatment specificity for different types of disorders was rare. Rounsaville et al. (2002) then explicitly focused on personality disorders (PDs): "There is a clear need for dimensional models to be developed and their utility compared with that of existing typologies in one or more limited fields, such as personality."

The fundamental problem with the PD diagnostic system in DSM-III, III-R, and -IV is that it takes an essentialist "top-down" approach (Kendler, 2009), based on the assumption that there are a small number of personality types, each of which has a fundamental nature. From an empirical point of view, no such set of types has been found, even in large, diverse samples, and using sophisticated statistical modeling strategies designed to reveal latent categories (e.g., Eaton et al., 2011; McCrae et al., 2006). Human personality varies continuously, emerging from the confluence of personality traits that form a robust, hierarchical dimensional structure (Markon et al., 2005) which, in its broad outlines, is culturally universal in both self (McCrae & Costa, 1997) and observer (McCrae et al., 2005) data, suggesting that fundamental biological processes underlie its component dimensions. Because it does not derive from data, critiques of the DSM's categorical approach to PD diagnosis appeared almost immediately after the publication of DSM-III in 1980 (Frances, 1980; 1982), and these issues were not addressed in the DSM-IV revision process. Since then, considerable research has detailed the nature of the problems inherent in this approach, the most frequent and well-documented of which follow.

Extensive co-occurrence among PDs. Most patients diagnosed with PD meet criteria for more than one (Grant et al., 2005; Oldham et al., 1992; Zimmerman et al., 2005). Given that individuals have but one personality, when that personality is disordered, they ipso facto should have a single personality disorder. That this is not the case using DSM-III through DSM-IV-TR reflects a fundamentally flawed system. In contrast, the DSM-5 PD proposal includes a system to describe individuals' personalities, highlighting those trait dimensions that are maladaptive in their extremity, and to represent personality disorders by a more restricted number of specific PDs defined by core impairments and pathological personality traits.

Extreme heterogeneity among patients receiving the same diagnosis. It is commonplace in the PD literature to affirm that there are 256 ways to meet DSM-IV-TR criteria for borderline PD (BPD) (Johansen et al., 2004). This is problematic because DSM-IV-TR PDs are heterogeneous manifestations of diverse traits. Individuals can meet the criteria for the same PD while having few and, in some cases (e.g., OCPD), no features in common and present clearly distinct clinical pictures. For example, one individual

may present with ideas of reference, odd beliefs or magical thinking, unusual perceptual experiences, odd thinking and speech, and paranoid ideation, whereas another may have excessive social anxiety, lack close friends, have odd appearance and constricted affect, and be suspicious, yet both individuals meet DSM-IV-TR criteria for schizotypal PD. Treatment implications are significantly different for these two individuals, questioning the utility of the diagnosis, as currently specified in DSM-IV-TR.

In contrast, in the DSM-5 PD proposal, the elevated traits of an individual are noted, so the degree of similarity and difference between individuals can be clearly specified. In the above example, the first individual would have elevated traits in the psychoticism domain, whereas the latter's prominent trait domains would be detachment and negative affectivity. Because prominent trait elevation is specified, DSM-5 PD diagnosis per se identifies primary targets for intervention (Widiger, 1997), as opposed to conflating distinct personality presentations within arbitrarily delineated categories.

Lack of synchrony with modern medical approaches to diagnostic thresholds. Use of severity dimensions in diagnosis is common in modern medicine (e.g., pre-hypertensive blood pressure, three classes of obesity, and multiple stages of cancer). In contrast, DSM-IV-TR PD diagnosis uses dichotomous classification with thresholds set arbitrarily at simply half or more of the criteria for even numbers of criteria, and more than half for odd numbers, rather than informed by data (for a review, see Skodol et al., 2002b). (As far as the DSM-5 Personality and Personality Disorders Work Group is aware, the threshold of 5 of 9 criteria needing to be present to diagnose BPD was set for DSM-IV-TR simply because 5 is more than half of 9.) The DSM-5 proposal instead reflects the practice in modern medicine of separating severity assessment (Criterion A) from that of the relative elevations of individuals' traits (Criterion B).

Temporal instability. The average short-term test-retest reliabilities of .54 for specific PDs and .56 for any PD (Zimmerman, 1994) suggest poor "dependability" (large transient error of measurement; Chmielewski & Watson, 2009) for even structured interviews. Longer term test-retest reliabilities of .51 for any PD and .34 for specific PDs, and the finding of significant diagnostic change over as little as 6 months (Shea et al., 2002), indicate diagnostic instability that is inconsistent with the relative stability of personality traits (Roberts & DelVecchio, 2000) and impairment in PD (Gunderson et al., 2011; Skodol et al., 2005b). By making PD diagnoses more trait-based, the DSM-5 proposal is expected to reduce temporal instability.

Poor coverage of personality psychopathology. A comprehensive meta-analysis (Verheul & Widiger, 2004) documented that personality disorder not otherwise specified (PDNOS) is one of the most common PD diagnoses in research settings and the most frequently diagnosed PD in clinical practice. Although officially used only "for disorders of personality functioning that do not meet criteria for any specific PD" (APA, 2000, p. 729), in practice it is applied in diverse ways, for example, to designate "mixed PD," that is, for an individual who exhibits features of more than one PD, but does not meet full criteria for any specific one; to indicate that an individual meets criteria for a PD that is not included in the official classification (e.g., depressive or passive-aggressive PDs); or to indicate that a person has a PD,

but limitations in information preclude further description (Verheul et al., 2007). Individuals with PDNOS have considerable impairment (Johnson et al., 2005; Verheul et al., 2007; Wilberg et al., 2008), but the diagnosis itself communicates no information about the nature of the personality dysfunction. In contrast, the DSM-5 proposal provides coverage for all individuals with personality dysfunction, even those not meeting criteria for one of the specific types, via its comprehensive personality functioning and trait system. Moreover, the specific nature of individuals' personality dysfunction is conveyed by noting their levels of personality functioning and their prominent trait elevations in the diagnosis of personality disorder-trait specified (PD-TS).

<u>Poor convergent validity</u>. Perhaps the most serious problem with the current PD diagnostic system is the difficulty in operationalization of the criteria, which has resulted in unacceptably low convergent validity across PD assessments. In an early study, the average kappa across specific PDs between an unstructured clinical interview and the Personality Disorder Questionnaire-Revised (Hyler & Rieder, 1987) was an abysmal .08 (Hyler et al., 1989), whereas a study comparing the LEAD (Longitudinal Evaluation of All Data; Spitzer, 1983) standard to two different structured assessments yielded an average kappa of .25 for *any PD*, that is, simply whether individuals did or did not have a PD (Pilkonis et al., 1991). Importantly, these are not isolated examples. Meta-analytic convergence between structured interviews, and between structured interviews and personality questionnaires, respectively, was .27 for specific PDs and .29 for any PD (Clark et al., 1997).

The importance of these findings cannot be overemphasized. These data mean that the entire PD literature is built upon shifting sands: had each of the thousands of PD studies been conducted with a different PD assessment, the study participants would have been a largely different set of individuals, thus yielding study results that would be different to an unknown degree. In contrast, the proposed DSM-5 personality trait set is based on an extensive research literature whose origins are more than half a century old (e.g., Cattell, 1946), culminating in recent years in a consensual, highly robust personality trait hierarchical structure (Markon et al., 2005) that has a high degree of convergent and discriminant validity across a wide range of measures, primarily questionnaires (O'Connor, 2002b), but also encompassing structured interviews (Stepp et al., 2005). Further, this structure has been shown to be invariant across clinical and non-clinical populations (O'Connor, 2002a), including being influenced by overlapping genetic and environmental factors (Markon et al., 2002), and to be sufficiently comprehensive as to capture the variance in—and thus to provide coverage for—personality disorders (Samuel & Widiger, 2008; Saulsman & Page, 2004).

Part 2 - Magnitude of the Change

Overall, the magnitude of the proposed changes is "substantial." Significant changes are being proposed in a diagnostic area of DSM-IV that has significant limitations in validity and clinical utility. The proposed DSM-5 model consists of two dimensional assessments: 1) a personality pathology severity scale, the Levels of Personality Functioning, and 2) a 5 domain/25 facet pathological personality trait assessment. Combined, these assessments redefine the core features of a PD and provide the

information needed to rate the major diagnostic inclusion criteria for six specific PD categories and for a diagnosis of personality disorder-trait specified (PD-TS) to replace PD not otherwise specified (PDNOS). The remaining four DSM-IV-TR PD diagnoses, and the two in the Appendix, also can be rendered using the DSM-5 model; how their criteria map onto the DSM-5 trait model may be included in Section III of DSM-5.

The revised general criteria for PD require significant impairment in personality functioning (criterion "A") and the presence of pathological personality traits (criterion "B"), that are relatively stable across time and consistent across situations, not within the normal range for a person's developmental stage or socio-cultural environment, and not due to a substance or a general medical condition. All DSM-5 PDs described by specific criterion sets and PD-TS are structured so that they will meet the general criteria. That is, the general criteria do not need to be assessed separately; nonetheless, they are provided because they describe succinctly what is common across all personality disorders.

Part 3 - Evidence for the Changes

The following sections highlight and summarize key evidence in support of the major changes proposed in the DSM-5 hybrid PD model: 1) adopting a hybrid dimensional-categorical model, 2) identifying core impairments in personality functioning and rating them on continuum of severity, 3) specifying an empirically-derived assessment of pathological personality traits, 4) describing with specific criteria only a subset of the DSM-IV-TR PDs, 5) revising the concept of stability with respect to personality pathology, 6) eliminating the adolescent conduct disorder requirement for antisocial PD, and 7) eliminating rule-outs for co-occurring other mental disorders, except for the direct effects of substances.

HYBRID MODEL OF PERSONALITY DISORDER

A hybrid dimensional-categorical model for personality and PD assessment and diagnosis is proposed for DSM-5. Hybrid models combining elements of dimensions and categories have been suggested by PD experts since before the publication of DSM-IV (Benjamin, 1993; Blashfield, 1993). In a recent survey of PD experts, Bernstein et al. (2007) found that a mixed system of categories and dimensions was the most frequently endorsed alternative system for PDs. A number of recent studies support a hybrid model of personality psychopathology consisting of ratings of both disorder and trait constructs, in that each appears to increase the value of the other in predicting important antecedent (e.g., family history, history of child abuse), concurrent (e.g., functional impairment, medication use), and predictive (e.g., functioning, hospitalization, suicide attempts) variables (Morey & Zanarini, 2000; Morey et al., 2007; Hopwood & Zanarini, 2010; Morey et al., in press).

Morey and Zanarini (2000) found that Five-Factor Model (FFM) domains captured substantial variance in the diagnosis of borderline PD with respect to its differentiation from non-borderline PDs, but also that residual variance not explained by the FFM was related significantly to important clinical correlates of BPD, such as childhood abuse history, family history of mood and substance use disorders,

concurrent (especially impulsive) symptoms, and 2- and 4-year outcomes. In the Collaborative Longitudinal Personality Disorders Study (CLPS), dimensional representations of DSM-IV-TR PD diagnoses (i.e., criterion counts) predicted concurrent functional impairment, but their predictive power diminished over time (Morey et al., 2007). In contrast, the FFM (assessed with the NEO PI-R; Costa & McCrae, 1992) provided less information about current behavior and functioning, but was more stable over time and more predictive of future outcomes. The Schedule for Non-Adaptive and Adaptive Personality (SNAP; Clark, 1993; Clark et al., in press) model performed the best, both at baseline and prospectively, because it combines the strengths of a pathological disorder diagnosis and more normal range personality traits by assessing personality traits across the normal-abnormal spectrum and by including clinically important trait dimensions (e.g., self-harm, dependency) that are not included in measures of normal-range personality. In fact, a hybrid model combining FFM and DSM-IV-TR constructs performed much like the SNAP. The results indicated that models of personality pathology that incorporate stable trait dispositions and dynamic, maladaptive manifestations are most clinically informative. Hopwood and Zanarini (2010) found that FFM extraversion and agreeableness were incrementally predictive (over a BPD diagnosis) of psychosocial functioning over a 10-year period and that borderline cognitive and impulse action features had incremental effects over FFM traits. They concluded that both BPD symptoms and personality traits are important long-term predictors of clinical functioning and supported the integration of traits and disorder in DSM-5. Morey et al. (in press) extended their earlier findings comparing the FFM, SNAP, and DSM-IV PDs in a 10-year follow-up of CLPS patients. Baseline data were used to predict long-term outcomes, including functioning, Axis I psychopathology, and medication use. Each model was significantly valid, predicting a host of important clinical outcomes. Overall, approaches that integrate normative traits and personality pathology proved to be most predictive, as the SNAP generally showed the largest validity coefficients overall, and the DSM-IV PD syndromes and FFM traits tended to provide substantial incremental information relative to one another. The results again indicated that DSM-5 PD assessment should involve an integration of characteristic PD features and personality traits, to maximize clinical utility.

CORE IMPAIRMENTS IN PERSONALITY FUNCTIONING

The proposal to change the basic definition of PD and the general criteria is based on observations that the DSM-IV-TR general criteria were not specific to PDs and were introduced into DSM-IV without any theoretical or empirical justification. Furthermore, there was no explicit connection between the general criteria and the criterion sets for individual PDs. Research indicates that generalized severity is the most important single predictor of concurrent and prospective dysfunction in assessing personality psychopathology and that PDs are optimally characterized by a generalized personality severity continuum with additional stylistic elements, derived from both PD symptom constellations (e.g., suicidality) and personality traits (Hopwood et al. 2011). There is wide consensus (e.g., Crawford et al., 2011; Parker et al. 2002, Pulay et al., 2008; Tyrer 2005; Wakefield 1992; 2008) that severity assessment is essential to any dimensional system for personality psychopathology. Moreover, the ICD-11

Personality Disorders Work Group has proposed severity as the central element of PD (Tyrer et al., 2011).

A literature review and secondary analyses revealed that PDs, in general, are associated with distorted and maladaptive thinking about oneself and others and that the components most central to effective personality functioning fall under the rubrics of *identity*, *self-direction*, *empathy*, and *intimacy* (Bender et al., 2011; Morey et al., 2011). The Levels of Personality Functioning Scale uses each of these elements to differentiate five levels of impairment on a continuum of severity ranging from no impairment, i.e., healthy functioning (Level = 0), to extreme impairment (Level = 4). Neither the DSM-IV-TR general severity specifiers nor its Axis V GAF Scale have sufficient specificity for personality psychopathology to be useful in measuring its severity.

A number of reliable and valid measures to assess personality functioning and psychopathology demonstrate that a self-other dimensional perspective has an empirical basis and significant clinical utility (for a review, see Bender et al, 2011). Reliable ratings can be made on a broad range of self-other constructs, such as identity and identity integration, agency, self-control, sense of relatedness, capacity for emotional investment in and maturity of relationships with others, responsibility, and social concordance. The most reliable (ICC \geq .75) dimensions among those found in the measures considered in the review were retained for the Levels of Personality Functioning Scale.

Criterion-level reliability studies have found that criteria related to self (e.g., chronic emptiness, identity disturbance) and interpersonal (e.g., unstable or stormy relationships) functioning are rated as or more reliably than other BPD criteria (e.g., affective instability, physically self-damaging acts) with no significant differences between self and interpersonal criteria (Gunderson et al., 1981; Frances et al., 1984; Pfohl et al., 1986, Zanarini et al., 2002; Zanarinin et al., 2003; Grilo et al., 2004; Grilo et al., 2007; Gamache et al., 2009). In the DSM-5 Field Trials, the Levels of Personality Functioning scale was rated with adequate test-retest reliability overall (ICC= .416) by untrained, though experienced, clinicians, and rated with higher reliability than a number of other DSM-5 dimensional measures. A two-item self-report measure (Level 1) of personality functioning had good test-retest reliability across four Field Trial sites (pooled ICC= .686).

Numerous studies using measures of self and interpersonal functioning have shown that a selfother approach is informative in determining both the type and the severity of personality pathology (for a review, see Bender et al., 2011). To determine the validity of the core dimensions of personality pathology measured by the Levels of Personality Functioning Scale, Morey et al. (2011) conducted secondary data analyses with over 3000 subjects who had received self-report measures of personality functioning, for example the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008), and semi-structured interview diagnoses of DSM-IV PDs. Item Response Theory (IRT) analyses characterized the types of problems associated with different levels of impairment. The results delineated a coherent global dimension of impairment in personality functioning that was related to the likelihood of

receiving any PD diagnosis, two or more PD diagnoses, and one of the more severe PDs (e.g., BPD or ASPD). Longitudinal follow-up also indicates that individual PDs become less differentiated over time, reflecting a shared base of pathology for chronic PDs (Sanislow et al., 2009). Studies using measures of self and interpersonal functioning have shown also that a self-other approach is informative in planning treatment interventions and in anticipating treatment course and outcome (Bender et al., 2011).

Impairment in self and interpersonal functioning is consistent with multiple theories of PD and their research bases, including cognitive/behavioral, interpersonal, psychodynamic, attachment, developmental, social cognitive, and evolutionary theories, and has been viewed as a key aspect of personality pathology in need of clinical attention (e.g., Clarkin & Huprich, 2011, Luyten & Blatt, 2011, Pincus, 2011). A factor analytic study of existing measures of psychosocial functioning found "self-mastery" and "interpersonal and social relationships" to be two of four major factors measured (Ro & Clark, 2009). Furthermore, the Levels of Personality Functioning Scale constructs align well with the NIMH Research Domain Criterion (RDoC) of "social processes" (Sanislow et al., 2010). The interpersonal dimension of personality pathology has been related to attachment and affiliative systems regulated by neuropeptides (Stanley & Siever, 2010), and variation in the encoding of receptors for these neuropeptides may contribute to variation in complex human social behavior and social cognition, such as trust, altruism, social bonding, and the ability to infer the emotional state of others (Donaldson & Young, 2008). Neural instantiations of the "self" and of empathy for others also have been linked to the medial prefrontal cortex (MPFC) and other cortical midline structures (CMS) – the sites of brain's so-called "default network" (Fair et al., 2008, Northoff et al., 2006, Preston et al., 2007).

PATHOLOGICAL PERSONALITY TRAITS

The proposed model represents an extension of the Five Factor Model (FFM; Costa & Widiger, 2002) of personality that specifically delineates and encompasses the more extreme and maladaptive personality variants necessary to capture dispositional features of PDs. The model includes five broad, higher-order personality trait domains – negative affectivity, detachment, antagonism, disinhibition, and psychoticism – each comprised of from 3 to 9 lower-order, more specific trait facets that help flesh out the domains (e.g., manipulativeness and callousness are specific facets in the antagonism domain; Krueger & Eaton, 2010; Krueger et al., 2011a; Krueger et al., 2011b; Krueger et al., in press; Wright et al., in press b). Trait domains and facets are rated by clinicians on 4-point dimensional scales of descriptiveness and patient-report and lay informant-report forms have also been developed. The structural validity of the original 37 trait model was tested in a three-wave community survey (Krueger et al. 2011b, Krueger et al., in press) and subsequently revised to yield the 5 domain/25 trait model on which the newly proposed diagnostic criteria for PDs are based.

Considerable evidence relates current DSM-IV PDs to the five-factor model (FFM) of personality in meaningful ways (O'Connor, 2005; Saulsman & Page, 2004; Samuel & Widiger, 2008). Indeed, the pathological extension of the FFM proposed for DSM-5 captures the reliable variation in DSM-IV PDs;

multiple correlations between the DSM-5 traits and DSM-IV PDs slated for retention in DSM-5 ranged from .62 to .75 (Hopwood et al., in press). In addition, the traits proposed for DSM-5 are consistently associated with generalized interpersonal dysfunction, underlining both their clinical relevance and their direct connection to the core interpersonal aspect of personality pathology. The proposed DSM-5 traits predict specific forms of interpersonal behavior in accordance with the rich clinical and empirical literature on individual differences in clinically relevant interpersonal problems (Wright et al., in press a).

A multi-dimensional system for the description of dispositions that underlie PDs helps to reduce or even resolve excessive comorbidity by acknowledging that individuals meet criteria for multiple PD diagnoses because the personality traits that make up PDs overlap across diagnoses. Traits can combine in any number of ways in specific patients. As a direct result, a PD diagnostic system that uses traits as a substantial component of the diagnostic criteria provides a means to describe the personality pathology of every patient, thus addressing the high prevalence of PDNOS diagnoses. The diagnostic category of PD-TS is designed to accommodate the naturally occurring heterogeneity of PDs, and the personality features within PD-TS can be fully specified.

A trait-based system for PD diagnosis also provides the beneficial option of assessing any patient's personality (i.e., not just those with PD). Insofar as personality has been shown to be an important modifier of a wide range of clinical phenomena and a source of dysfunction (e.g., Rapee, 2002; Roberts et al., 2007; Lahey, 2009), and is associated with economic costs exceeding those of many mental disorders themselves (Cuijpers et al., 2010), incorporating a dimensional trait model will strengthen not only PD diagnosis, but DSM-5-based assessment as a whole.

Both normal and abnormal personality trait domains are moderately heritable: estimates are usually around 50% (Bouchard & Loehlin, 2001; Jang et al., 1996), but slightly lower for trait facets (Livesley et al., 1993). Traits also show clear temperamental antecedents (Shiner, 2005). By school age, children's personality structure is similar to adults (Shiner, 2009; Tackett, Balsis, Oltmanns, & Krueger, 2009), and as early as age 3 years, personality traits are moderately stable and their stability increases across the lifespan until at least age 50 (Roberts & DelVecchio, 2000). Basing PD diagnostic criteria on more stable traits, and considering the more state-like features that occur in individuals with PD to be associated symptom expressions of underlying trait dispositions should help eliminate the conceptual-empirical gap in PD temporal stability (Grilo et al., 2004; Shea et al., 2002).

The personality trait domains all had very good test-retest reliability in the Field Trials, as measured by a 36-item self-report Patient Rated Personality Scale (ICCs as follows: negative affectivity= .842, antagonism= .765, detachment= .817, disinhibition= .810, compulsivity= .825, psychoticism= .822, overall score= .857).

PERSONALITY DISORDER TYPES

New diagnostic criteria are proposed for six specific personality disorder types: antisocial (ASPD), avoidant (AVPD), borderline (BPD), narcissistic (NPD), obsessive-compulsive (OCPD), and schizotypal (STPD). Each type is defined by typical impairments in personality functioning (criterion "A") and particular sets of pathological personality traits (criterion "B"). The other DSM-IV PDs (paranoid, schizoid, histrionic, and dependent), DSM Appendix PDs, and the residual category of PDNOS are diagnosed in the DSM-5 proposal with personality disorder-trait specified (PD-TS) (Skodol, in press), which is represented by significant impairment in personality functioning, combined with specification by pathological personality traits based on individuals' most prominent descriptive features.

Antisocial, borderline, and schizotypal PDs have the most extensive empirical evidence of validity and clinical utility (Blashfield & Intoccia, 2000, Morey & Stagner, in press). In contrast, there are almost no empirical studies focused explicitly on paranoid, schizoid, or histrionic PDs. The rationales for retaining most of the 6 out of 10 DSM-IV PDs (Skodol et al., 2011) were based on their prevalence (and its consistency) in community and clinical populations, associated functional impairment, treatment and prognostic significance, and for PDs where information is available, neurobiological and genetic studies. Moreover, the DSM-IV-TR PDs for which the P&PD WG elected not to provide full descriptions for these DSM-IV-TR diagnoses were characterized by the simplicity of their trait composition (e.g., the single trait facet of suspiciousness in the DSM-5 model captures all of the DSM-IV-TR paranoid PD criteria).

Avoidant personality disorder (AVPD) and obsessive-compulsive personality disorder (OCPD), are consistently among the most common in both epidemiological (Torgersen 2009) and clinical (Stuart et al. 1998, Zimmerman et al. 2005) samples. BPD has an average prevalence (among the DSM-IV PDs) in community studies, but is one of the most common in clinical settings. STPD has relatively low prevalence in both populations, but is highly impairing. ASPD is less common, but has considerable individual and collective impact on society and related relevance in forensic settings. NPD is among the less common PDs, but constructs of narcissism have utility in treatment planning.

All DSM-IV PDs have moderate heritability (Coolidge et al., 2001; Kendler et al., 2006; Reichborn-Kjennerud et al., 2007; Torgersen et al., 2000; 2008), however estimates are inconsistent across samples. Behavior genetics evidence supports at least 5 of the 6 PD types retained for DSM-5 (the exception being NPD). STPD has been found to have the strongest loadings on genetic and environmental risk factors among DSM-IV Cluster A PDs (Kendler et al., 2006); ASPD and BPD have a second genetic and non-shared environmental factor over and above the genetic factor influencing all Cluster B disorders (Torgersen et al., 2008); and in Cluster C, AVPD has been found to be more heritable than dependent PD and OCPD has disorder-specific genetic influence not found for the other two PDs (Reichborn-Kjennerud et al., 2007). The retained PD types also have been associated with increased rate of various types of abuse and neglect in both prospective (e.g., Johnson et al, 1999; Widom, 1989) and retrospective (e.g., Battle et al., 2004; Zanarini et al., 1997) studies. The PDs are associated with high and persistent degrees of functional impairment (Skodol et al., 2002; 2005) and many are associated with

an increased risk for suicidal behavior (Oldham, 2006). They also are associated with poorer outcomes of a range of mood, anxiety, and substance use disorders (Grilo et al., 2005; 2010; Skodol et al., 2011; Ansell et al., 2011; Hasin et al., 2011; Fenton et al., in press).

The new criteria for borderline PD were rated with moderately good reliability in the DSM-5 Field Trials (pooled interclass kappa = .582), despite a monothetic B criterion requiring 7 of 7 traits for a diagnosis. Subsequent analyses suggest that a polythetic rule for the B criterion requiring 4 or 5 or greater of the trait facets would improve reliability and increase correspondence with DSM-IV diagnosis. It is important to recognize that the DSM-5 proposal provides a scientifically-based framework in which DSM-IV PD concepts can be represented, meaning that validated aspects of these concepts will have continuity under the new system. As a demonstration, a field study is under way that systematically compares patients (using data provided by a national sample of clinicians) on all DSM-IV and DSM-5 specific PD criteria and dimensions. The correlations between rated criterion counts of DSM-IV and DSM-5 diagnostic concepts from the first 83 patients are as follows: borderline, .81; antisocial, .82, avoidant, .78, narcissistic, .67, obsessive-compulsive, .66, and schizotypal, .58 (the last lower correlation due to range restriction from the limited numbers of patients with schizotypal PD at this point in the study). In most instances, these values are comparable to the established joint interview reliabilities of these diagnoses under DSM-IV, suggesting that the agreement between DSM-IV and DSM-5 PD diagnoses is likely to be as high as the agreement between two diagnosticians on DSM-IV diagnosis. However, the difference is that, in DSM-5, a coherent framework for representing the potential underlying endophenotypic structure of the PDs is provided, in contrast to the mixed collection of signs, symptoms, traits, and behaviors that comprised the DSM-IV diagnostic criteria.

STABILITY OF PERSONALITY DISORDER

The revised criteria for PD require that the core impairments in personality functioning and the pathological personality traits are *relatively* stable across time and consistent across situations. This change from a concept of stability to relative stability is motivated by data from prospective follow-along studies in non-patient (Johnson et al., 2000; Lenzenweger, 1999; 2004) and patient studies (Zanarini et al., 2010; 2012; Gunderson et al., 2011) that consistently find that the stability of disorder constructs is considerably less than that implied by DSM-IV and that PDs have a clinical course that tends toward improvement or remission. In addition, both normal and pathological personality traits, while more stable than disorders, still change across the lifespan (Roberts & DelVecchio, 2000). Thus, although shifting to a more trait-based set of criteria is expected to increase stability (Zanarini et al., 2007; McGlashan et al., 2005; Morey et al., 2007; Morey et al., in press), allowing for some change is warranted.

ELIMINATING THE ADOLESCENT CONDUCT DISORDER REQUIREMENT FOR ANTISOCIAL PD

Although PDs in adolescence do not always persist into adulthood, there is substantial evidence that adolescent PDs are as stable as PDs in adulthood (Johnson et al., 2000) and are strong risk factors for later psychopathology, including PD, as well as a wide array of poor outcomes (Bernstein et al., 1993;

Crawford et al., 2005; Skodol et al., 2007). Because the general diagnostic criteria for all DSM-5 PDs require that the impairments in personality functioning and the individual's personality trait expression are relatively stable across time and consistent across situations, and because there is no evidence that antisocial PD is different from any other form of PD in terms of its psychopathological antecedents in childhood or adolescence (e.g., Kasen et al., 2001), there is no justification (other than "tradition") for a specific requirement for adolescent conduct disorder.

ELIMINATING THE AXIS I DISORDER EXCLUSION

The revised general (and specific) PD criteria do not require that the pattern of impairments and traits is "not better accounted for as a manifestation or consequence of another mental disorder." DSM-IV was inconsistent in requiring this across all PDs: paranoid, schizoid, schizotypal, and antisocial PDs were excluded by certain Axis I disorders, whereas the other 6 PDs were not. This change is motivated by the pragmatic observation that such attributions are not easily made, the extensive data on the comorbidity of Axis I and Axis II disorders (e.g., Zimmerman et al., 2005), and heterotypic disorder continuity over time (e.g., Johnson et al., 1999b; Kasen et al., 2001). Finally, in a 6-year longitudinal study of the state effects of major depressive disorder (MDD) on the course of PD diagnosed in the presence of MDD at the index evaluation, outcome was more similar to PD without MDD than to MDD without PD, suggesting that PD diagnoses established during depressive episodes are a valid reflection of personality pathology rather than an artifact of depressed mood (Morey et al., 2010).

Part 4 - Critiques of the Proposed Model and Their Impact on Model Evolution

A number of articles by Work Group members have been published on the proposed model at various stages of its development. Most of these articles have been accompanied by commentaries or critiques written by prominent members of the PD research and clinical communities. In the sections that follow, these critiques are summarized, along with brief accounts of how the critiques have or have not impacted the most recent version of the model as presented above (see also Skodol, 2012). As might be expected, there has been little consensus among those who have critiqued the model and sometimes their views have been diametrically opposed.

LEVELS OF PERSONALITY FUNCTIONING

Critiques of the originally proposed DSM-5 revision generally praised the Levels of Personality Functioning Scale as an advance over DSM-IV (e.g., Shedler et al. 2010, Ronningstam, 2011) and suggested that the presence of PD and its severity are the primary distinctions of importance for clinicians (Pilkonis et al. 2011). Some suggested even broader and more complex constructs for the Levels scale (Clarkin & Huprich 2011, Pilkonis et al. 2011) and separate ratings of all components (Pilkonis et al. 2011). The need for reliability testing was suggested (Pincus 2011). Balancing the need for parsimony for general clinical use against the potential added value of a more complex and potentially redundant set of indicators, the Work Group has simplified rather than elaborated on the Levels scale. A single global

rating of self and interpersonal functioning has been retained, rather than separate ratings, because of evidence of the close developmental and empirical relationships of these components of personality functioning (Luyten & Blatt 2011). The reliability of the rating has been tested in the DSM-5 Field Trials and found to be adequate (see above).

PERSONALITY DISORDER TYPES

Critiques of the DSM-5 proposal have almost universally been against the deletion of any of the DSM-IV PD types, arguing that existing types have clinical utility and treatment relevance (Gunderson 2010, Shedler et al. 2010) or have "heuristic value" (Costa & McCrae 2010; Pilkonis et al. 2011). The empirical basis for retaining vs. deleting types has been questioned (Pincus 2011, Widiger 2011a, Bornstein 2011, Clarkin & Huprich 2011) and it has been suggested that a limited research base does not mean a lack of utility (Gunderson 2010) and should not be a criterion for deletion (Shedler et al. 2010). Deletion of types is anticipated to result in loss of coverage of personality pathology (Widiger 2011a), make comparisons of specific types and trait-specified disorders difficult (Clarkin & Huprich 2011), and may lead to coding problems (Widiger 2011a, First 2010). By far the most support for a PD to be reintroduced into the system (including from the comments posted on the Website) has been for narcissistic PD (e.g., Pincus 2011, Ronningstam 2011), but dependent PD has also had advocates (Bornstein 2011), even though the evidence presented for the validity of both of these disorders has often been based on dimensional measures, rather than on the diagnostic category. Proponents for narcissistic PD agree, however, that its current representation in DSM-IV is inadequate and that a revised category should include both grandiose and vulnerable aspects. Pilkonis et al. (2011) argued for the inclusion in DSM-5 of PD types that have appeared in any DSM since DSM-III.

Work Group members have developed the strong, consensus opinion not to include all of the DSM-IV-TR PDs in the official DSM-5 classification. In fact, some members have persisted in wanting to replace all of the current disorders with a dimensional, trait-based model. The majority of the members believe that there are certain types that have particular clinical salience and evidence of validity as types and that other PDs with less evidence supporting them can be adequately represented by traits in combination with impairments in personality functioning, i.e., as PD-trait specified. This convention not only makes the question of inadequate coverage or "false negative" PD diagnoses moot, but also adds potentially useful clinical information about the nature of personality pathology for the prevalent diagnosis of PDNOS, which in DSM-IV-TR was unspecified. As mentioned above, however, a revised category of narcissistic PD has been reintroduced at the time of this writing, despite some ambiguity in the strength of the rationale for doing so. Criteria sets may be developed for other DSM-IV-TR PDs, using the core impairment/trait hybrid model, for DSM-5 Section III, in the hope that they will receive greater research attention in the future.

Reaction to the originally proposed shift from criterion-based to prototype-based diagnosis was more mixed. A number of reviewers supported the prototype approach because it is simple and more

familiar (types than traits) (First 2010), conforms to "what clinicians do" (Clarkin & Huprich 2011), and is judged to be more clinically useful than criterion-based or trait-based diagnosis (First 2010, Shedler et al. 2010), and have suggested that prototypes replace categories in DSM-5. Questions were raised about the reliability of prototype ratings, however, and further testing of their reliability and validity in field trials was recommended (Pilkonis et al.2011, Widiger 2011a, Zimmerman 2011). In a related vein, since there were originally no "criteria" per se for the PD types, their utility for research was questioned (Widiger 2011, Zimmerman 2011). The derivation of the type descriptions and their reliability to DSM-IV PD criteria sets have been questioned (Pilkonis et al. 2011), as was the impact of a shift to prototypes on prevalence and comorbidity of PDs (Zimmerman 2011).

Most critics believe that the originally proposed linking of traits to types was ambiguous and without an empirical basis and that traits should be rated separately from the types (Costa & McCrae 2010, Pincus 2011, Pilkonis et al. 2011). Some believe that trait ratings should be the basis for rating the types (Costa & McCrae 2010); some believe that the traits needed better "rule-based" methods for translating traits to types and that both types and traits should be "optional," finer-grained distinctions (after PD presence and severity) (Pilkonis et al. 2011), some suggest they be an optional rating on a separate axis (Axis II) (First 2010, Widiger 2011a), and some thought that they were not needed at all (Gunderson 2010, First 2010, Shedler et al. 2010).

Pilkonis et al. (2011) questioned whether the hybrid model (types and traits) was of limited value or, in fact, had the best potential for representing personality pathology (see also Hallquist & Pilkonis 2010). Livesley (2011) recently questioned whether the combination of categorical types and dimensional traits mixed incompatible approaches to classification. Historically, others (e.g., Benjamin 1993; Blashfield, 1993) have not seen the inconsistency and experts in personality disorder have explicitly endorsed such a model (Bernstein et al. 2007). PD types represent the confluence of clinically relevant personality characteristics – impairments in personality functioning and traits – that have come to facilitate communication between clinicians and have particular developmental, treatment, and prognostic significance.

In the most recent revision of the model, narrative prototypes have been replaced by diagnostic criteria sets, at the request of the DSM-5 Task Force. The new criteria sets incorporate trait ratings (with core impairments) based on empirical data linking traits to types (Samuel & Widiger 2008, Saulsman & Page 2004) and rational methods, which may delight some critics, while discouraging others. It remains possible that further revisions of the criteria sets will be indicated. Furthermore, scoring rules for the new criteria and diagnostic algorithms for the disorders need to be developed and their impact on the prevalence and reliability of the disorders assessed. Data has been and is being collected and analyzed to inform these decisions (see above).

PERSONALITY TRAITS

Published critiques of the originally proposed trait system were predominantly negative. According to Gunderson (2010), the 6 factor/37 facet trait system would be unfamiliar to clinicians and unlikely to be used because the traits lacked an experiential or empirical basis for clinical salience (Gunderson 2010). Although it may represent a factor structure that is scientific, he believed there was an insufficient research base regarding cut-points for diagnosis, the relationship of the model to other trait models, the delineation of the facet level traits, the mapping of the traits onto PDs, a consensus on the optimal number of traits and their definitions, and their use for making clinical inferences (Gunderson 2010). The traits were also criticized for being non-specific in that the same trait may apply to many types (First 2010, Paris 2011), inherently ambiguous, static (as opposed to dynamic) representations of personality, difficult to incorporate into coding systems, and of uncertain clinical utility (First 2010). Limited clinical utility was also raised as a problem by Shedler et al. (2010), who noted that clinicians judged dimensional trait systems as less useful than DSM-IV, and by Clarkin & Huprich (2011), who believed that clinicians do not assess traits and that traits would impede communication. Bornstein (2011) also bemoaned the loss of useful short-hand diagnostic labels.

Ronninstam (2011) found the trait representation of narcissistic PD to be scattered (across domains) in a way that interfered with the perception of an integrated, clinically meaningful concept, to be missing important traits, and to include facet traits with definitions that were neither clinically meaningful, nor empirically representative. Pincus (2011) echoed that the traits provided for narcissistic PD were too narrow, believed that some trait definitions were confounded with interpersonal elements, and noted that there was no empirical basis for reconstructing deleted types from traits. Shedler et al. (2010) also believed combinations of traits would not easily yield omitted PD types. The recommendation from First (2010) is that a variable-centered trait approach should not replace categories in DSM-5, but could be on a separate axis (Axis II). Costa & McCrae (2010) argued that the notion of personality dimensions as adjuncts to PD types is supported and that traits should be assessed in all patients, not just those with PDs.

Pilkonis et al. (2011) said that, although the emphasis on personality traits as a basis for diagnosis was well-founded, traits (and types) were "finer" distinctions that should be secondary (domain level first, followed by relevant trait facets) to establishing the presence of a PD and its severity. They also found the new trait system and the diagnosis of PD trait-specified to be "jarring." They found the trait definitions complex and inferential and believe that an assessment tool would be needed. They argued for a detailed translation of traits to types and that PD were not merely extreme traits.

Widiger (2011a) found that the trait definitions were cumbersome and suspected that they would not have official coding. He also argued that there is much redundancy in some of the proposed trait facets, while other key traits were missing, and that the definitions of the traits were very inconsistent, with some defined broadly and others narrowly (Widiger 2011). Both Widiger (2011b) and Shedler et al.

(2010) found the trait system too complex. Paris (2011) wrote that the traits do not map onto biological systems and ignore the emergent properties of cognitive, affective, and behavioral systems in PDs.

The basic structure of the proposed trait system was questioned by several authors. A number of commentators suggested that traits should be bipolar, not unipolar, because pathological personality characteristics exist at both ends of the domain spectra (Costa & McCrae 2010, Widiger 2011a, Widiger 2011b, Pilkonis et al. 2011). The lack of bipolarity to the traits leads to the omission of clinically relevant traits and misplaced (within domains) traits (Widiger 2011a; Widiger 2011b; Pilkonis et al. 2011). Several authors argue that the proposed trait structure does not correspond to the consensus "big 4" and that the domains of compulsivity and schizotypy are not needed (Pincus 2011, Widiger 2011a, Widiger 2011b). Several authors also argue for the importance of including both normal and abnormal traits in DSM-5 and believe that the FFM does a better job at representing important personality variation than the proposed new model (Costa & McCrae 2010, Widiger 2011a, Widiger 2011b). Finally, limitations and ambiguities in factor analytic methods to derive trait structures were mentioned by several authors (Hallquist & Pilkonis 2010, Clarkin & Huprich 2011).

The overall structure of the revised 5 domain/25 facet system does correspond to the "big-four" domains characterizing other trait models, with compulsivity representing the opposite pole of a bipolar domain of disinhibition. Several studies have demonstrated that psychoticism forms an important additional factor in analyses of both normal and abnormal personality (Chmielewski & Watson 2008, Harkness et al. 1995, Tackett et al. 2008, Watson et al. 2008). Therefore, a fifth trait domain was added to the trait model. That there are differences between extant models (including the DSM-5 model) at the facet level should come as no surprise, since there is little consensus on the facet structure of trait domains. Problems with the narcissistic trait representation have been addressed with the new criteria, which combine core "narcissistic" impairments in identity, self-direction, empathy, and intimacy that include both inflated (grandiose) and deflated (vulnerable) expressions and a revised trait of grandiosity that refers to either overt or covert manifestations. PDs are not represented solely by extreme traits in the revised model, since all of the disorder criteria, including those for PD-TS, require impairments in personality functioning as well as the presence of pathological personality traits.

The scoring of traits and diagnostic criteria are open issues. Within the criteria, it is possible that ratings of trait domains will supersede rating of trait facets for diagnostic purposes and that facet ratings will be for more "fine-grained" descriptions. In the Field Trials, raters were asked first to rate domains and only when a domain is rated as relevant are the component facets rated.

An assessment tool for rating DSM-5 personality traits by self-report has been developed: the Personality Inventory for DSM-5 (PID-5) (Krueger et al., in press). This 220-item questionnaire was developed in a three-wave community survey and is currently being tested by a number of research groups across the country. It remains to be seen, however, whether clinicians can rate these traits (and the disorders based on them) reliably and whether they are regarded by clinicians as useful. Both of

these questions are being addressed in the Field Trials. Undoubtedly, training and familiarity will improve reliability. Finally, the clinical salience and utility of pathological personality traits continues to be a topic of debate. Certainly, broad personality trait domains, such as neuroticism (negative affectivity in the DSM-5 proposal) have strong relationships to adverse physical health outcomes (Lahey 2009) and neuroticism, (dis)agreeableness (antagonism in DSM-5) (un)conscientiousness (disinhibition), and extraversion predict both negative and positive psychosocial (Ozer & Benet-Martinez 2006, Roberts et al. 2007) outcomes. Studies of hybrid models of personality disorders (see above) also show that traits increment disorders (and vice versa) in predicting important antecedent, concurrent, and predictive variables. The clinical value of assessing specific trait facets is less established, though theoretically appealing (Verheul, 2005).

GENERAL CRITERIA FOR PERSONALITY DISORDER

As indicated previously, feedback received on the Website posting indicated that these criteria were too complicated, without a sufficiently empirical basis, set at too severe a level of dysfunction, inconsistent with more recent views of personality pathology as developmental "delays" as opposed to "failures," and not integrated with the other parts of the proposed model. Therefore, these general criteria were simplified and empirically-based assessments of impairment in personality functioning were integrated with pathological personality traits into the new general and specific criteria sets. For all PDs, severity in core impairments can vary on the continuum of the Levels of Personality Functioning Scale. For PD-TS, "significant" impairment is required and a threshold on the Levels scale is being studied in the Field Trials and other data sets.

Integration of the general criteria for PD into the diagnostic process has been viewed as an advance, by distinguishing normality and abnormality separately from describing individual differences (Pincus 2011). The constructs embedded in the proposed general criteria for DSM-5 are consistent with research and many theories of PD, but will require training to be rated reliably. Costa & McCrae (2010) believed that the originally proposed definitions of impairment in self-identity, which emphasized the instability of "borderline" functioning, contradicted data on the internal consistency and stability of self-reported personality traits. All levels of personality functioning are now represented in the A criterion of the general criteria for PD.

Pilkonis and colleagues agreed that PDs should be defined by impairments in functioning and adaptation (not by extreme traits), but thought that the originally proposed criteria were too esoteric, inferential, and narrow (Pilkonis et al. 2011). They advocated for including constructs of agency, community, autonomy, achievement, self-definition (identity vs. confusion), capacity for attachment (intimacy vs. isolation), generativity, and prosocial engagement. Their proposal for general criteria would reflect 1) failure to achieve autonomy and self-direction (with objective markers) and inability to develop consistent and realistic representation of self, 2) failures in interpersonal relatedness manifest by inability to develop and maintain close relationships and general social integration; 3) failures in generativity

manifest by inability to engage with purpose beyond self-interest and imposition of distress on others. All of the above would be rated separately and the clinician should be able to stop an assessment after establishing presence and severity of PD. Clarkin & Huprich (2011) viewed the originally proposed general criteria as too onerous and lacking a coherent theme, but they believed that a more elaborated rating of severity of impairment in functioning combined with prototypes should be the core of clinical assessment. As in the case of the Levels of Personality Functioning, which now constitute the core impairments central to the personality disorder definition and are represented by the A criteria in the new general and specific diagnostic criteria, the majority of critics favored a simplified, rather than a more elaborated, definition and the empirical support for the four core self and interpersonal elements selected for the revised model has been described above.

FUTURE CHANGES

Following the development of criteria for field testing, no further changes to the model have been made, pending review of new data. Data from the Field Trials and other studies of the trait system and the criteria are now being reviewed with an eye toward "fine tuning" the model, such as by setting optimal and empirically-based thresholds for diagnosis and revisiting the composition of the "B criteria" trait facets for the PD types. This work will be concluded by mid-summer, so that final criteria sets will be available for review by the Task Force before its fall 2012 meeting.

CONCLUSION

The hybrid dimensional-categorical model for PDs proposed for DSM-5 and its components address existing problems with DSM-IV PDs, have considerable evidence supporting their validity, and can be expected to increase clinical utility and promote future research into etiology and treatment.

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