DSM-5 and the Path Toward Empirically Based and Clinically Useful Conceptualization of Personality and Psychopathology

Robert F. Krueger, Department of Psychology, University of Minnesota
Christopher J. Hopwood, Department of Psychology, Michigan State University
Aidan G. C. Wright, Department of Psychology, University of Pittsburgh
Kristian E. Markon, Department of Psychology, University of Iowa

The DSM-5 represents a watershed in the history of mental disorder classification systems because it is the first DSM to incorporate an approach to clinical personality description tied directly to the empirical structure of personality. Personality disorder (PD) constructs in previous editions of the DSM were produced on the basis of putative authority, as opposed to being based on research on the way personality is organized in nature. By contrast, DSM-5 contains elements that were developed using data, such as a model of clinically relevant dimensional personality specifiers that constitutes part of a DSM-5 Section III PD diagnosis. In this article, we review the DSM-5 Section III PD model, focusing on how it contrasts with the DSM-IV PD model (reprinted in Section II of DSM-5). We conclude that personality science is leading research and practice in clinical psychology because it provides an evidence-based approach to comprehensive classification of psychopathology.

Key words: categories, classification, dimensions, mental disorder, nosology, personality disorder. [Clin Psychol Sci Prac 21:245–261, 2014]
we mean that all mental disorders in *DSM-IV* were presumed, on an a priori basis, to be categories. For example, using the *DSM-IV* system, disorders such as borderline PD and antisocial PD are dichotomous; a patient either has the diagnosis or he or she does not. By *polythetic*, we mean that a variety of combinations of criteria can justify the same categorical label. For example, in *DSM-IV*, obsessive-compulsive PD (OCPD) was conceptualized in terms of eight criteria, and any four of those eight criteria were deemed sufficient for a diagnosis. A patient who shows the first four of eight criteria would be considered diagnostically equivalent to a patient who shows the last four of eight criteria, even though those two patients have zero criteria in common. Indeed, very little emphasis was placed on using empirical criteria for establishing the thresholds for the *DSM-IV* PDs (e.g., four of eight criteria required for OCPD). Specifically, efforts were made during the development of *DSM-III* to identify thresholds only for borderline and schizotypal PD, with the aim of producing rates similar to those gleaned from clinical impressions (Spitzer, Endicott, & Gibbon, 1979), with thresholds for the other PDs appearing to be entirely arbitrary (Widiger, 2001). Moreover, the criteria for PDs changed somewhat from *DSM-III* to *DSM-IV*, with no corresponding attempt we are aware of to provide an empirical basis for any of the *DSM-IV* thresholds (albeit Widiger et al., 1996, describe workgroup deliberations associated with examining field trial data and adjusting thresholds for *DSM-IV* antisocial PD to be consistent with *DSM-III-R*). Numerous problems result from having arbitrary thresholds; for example, Cooper and Balsis (2009) studied schizoid PD criteria and showed that many patterns of endorsement corresponding with three criteria (one below the diagnostic threshold) were indicative of greater severity than patterns of endorsement corresponding with four criteria (the diagnostic threshold).

The *DSM-IV* PD system is not different in fundamental ways from either *DSM-III* or *DSM-III-R*, and *DSM-III* was published in 1980 (for simplicity, we will refer to these systems collectively as “the categorical *DSM PD system*” from this point forward). An extensive series of literature reviews were conducted for *DSM-IV* (Gunderson, 1996), but these were constrained on an a priori basis by the unquestioned assumption that the 10 *DSM-IV* PD categories provided an accurate structural framework for understanding PD. Indeed, over 30 years have elapsed since the publication of the categorical *DSM PD system*, providing ample opportunity for empirical study. The literature on this system is very clear in showing that it is fundamentally broken. Here, we briefly consider the clinically salient issues of *comorbidity*, within-category *heterogeneity*, and the empirical *continuity versus discontinuity* of specific PDs (evidence on whether *DSM PDs* are categories in nature). We focus on these issues because they are part and parcel of routine clinical activity, and considering them together clearly illustrates why and how the categorical *DSM PD system* has little to no basis in data and is also unworkable in the clinic (Verheul, 2005).

**Comorbidity**

Comorbidity is an appropriate term when distinguishable disorders (e.g., in the sense of having distinguishable pathophysiology or etiology) co-occur in the same person (Lilienfeld & Waldman, 2004). Nevertheless, the term has also been used to describe the tendency for *DSM*-defined disorders to co-occur at greater than chance levels in a sample of persons from a defined population. Levels of comorbidity (understood as greater than chance co-occurrence) among categorical *DSM PDs* are high enough that assigning a “single best focal diagnosis” is typically impossible in practice. Interestingly, this evidence was summarized in the *DSM-IV Sourcebook* (Gunderson, 1996). Specifically, the Sourcebook notes, “The average number of PD diagnoses per patient in inpatient samples has ranged from 2.8 (Zanarini et al., 1987) to 4.6 (Skodol et al., 1988). The weak evidentiary base for the existing definitions and the documentation of problems with overlap and coverage were reasons for the committee to consider making radical changes” (Gunderson, 1996, p. 648). In essence, when the modal number of disorders for a given patient is four or so, meaningful case conceptualization in terms of *DSM PDs* becomes difficult at best. If the modal patient has a “quadrimorbid” PD diagnostic profile, should we attempt to provide four distinguishable interventions tailored to each putative category? Such an endeavor would be challenging not just from a case conceptualization standpoint, but also because there is little to no
research to guide efforts to intervene with most DSM-IV-defined PDs, because the vast majority of treatment research has focused solely on borderline PD (Matu-}

## Within-Category Heterogeneity

In addition to the problem of comorbidity, groups of persons who meet criteria for a specific DSM PD are heterogeneous in important respects. One way in which this happens stems directly from the comorbidity phenomenon. If the modal number of PD diagnoses is around four, members of a specific category are heterogeneous simply by virtue of the comorbid diagnoses that cloud the diagnostic picture.

Heterogeneity is also apparent when persons meeting criteria for a specific DSM PD are systematically studied. Borderline PD, for example, has been studied in this way, and numerous clinically important distinctions are seen within this group. Wright, Hallquist, et al. (2013), for example, identified six distinguishable subgroups within a group of patients who met criteria for borderline PD, differing notably in terms of such clinically consequential areas as antisocial behavior, self-injury, and past suicide attempts. The intent of assigning categorical PD labels to patients is presumably clinical communication, but the literature shows that important individual differences in consequential propensities (e.g., self-harm) exist within persons who meet criteria for a specific DSM-defined PD. The clinical utility of communicating in terms of specific DSM PD labels is thereby undermined not only because four or so labels are appropriate for most PD patients, but also because patients who qualify for any one of those labels differ markedly in clinically important features.

## Continuity Versus Discontinuity of DSM PDs

Problems such as comorbidity and heterogeneity stem directly from imposing categorical distinctions where such distinctions may not exist in nature (Eaton, Krueger, South, Simms, & Clark, 2011; Walters & Ruscio, 2013). That is, the issue of whether PD is categorical versus continuous is amenable to empirical inquiry. Essentially, models positing either type of variation (e.g., latent class and latent trait models), and also a mix of both types of variation (hybrid models), can be fit to data to determine which model fits better. When this is done with data on PD and related psychopathology, models positing continuous variation tend to fit better (Conway, Hammen, & Brennan, 2012; Hallquist & Wright, 2014; Krueger, Markon, Patrick, & Iacono, 2005; Markon & Krueger, 2005). Related approaches such as Paul Meehl’s taxometric methods also rarely find evidence of replicable discrete PD groups, albeit evidence for taxonicity has sometimes been suggested in the realm of schizotypal phenomena (for a quantitative review, see Haslam, Holland, & Kuppens, 2012). Nevertheless, a recent study in two large epidemiological samples, using both taxometric and latent variable mixture modeling approaches, found little evidence to support discrete models of schizotypal PD and notably better validity for a dimensional model in predicting psychosis, intellectual functioning, disability, and treatment seeking (Ahmed et al., 2013).

The absence of evidence for discontinuities in extant data should not, however, be interpreted to mean that this matter is completely settled or that integrated accounts of both discrete and continuous aspects of human variation cannot be articulated (Hallquist & Wright, 2014; Wright & Hallquist, 2014). For example, much of the extant literature is limited to cross-sectional data obtained through self-reports or patient interviews (which are essentially self-reports, albeit filtered through the interview process). Novel longitudinal data, particularly of a fine-grained nature (e.g., data collected using ambulatory assessment; Trull & Ebner-Priemer, 2013), could, in theory, reveal meaningful patterns of both continuities and discontinuities. This is an open question because the technologies needed to study finer-grained personality processes as they unfold in daily life are newer than other assessment modalities (e.g., questionnaires and interviews). These newer methods have great potential to clarify our understanding of patterns of continuity and discontinuity in personality processes as they emerge in daily life.

The general point, however, is that classification rubrics are better derived from data, as opposed to being derived from a priori disciplinary preferences. Classification systems can be developed empirically, based on scientific inquiry into the nature of psychopathological variation. To date, little evidence for categorical variation has been adduced, and hence, any
classification system that purports to have a meaningful connection with the contemporary empirical literature should not be framed primarily by categorical concepts. Moreover, the disorders described in the DSM have not been shown to be categorical in nature, in spite of the DSM’s a priori imposition of categorical assumptions, placing DSM categories at odds with an extensive empirical literature.

Importantly, the phenomena described in the DSM are central to public health—no sensible person would question the reality and relevance of psychopathology in modern society, much less seriously debilitating forms such as PDs. For example, in a large sample of carefully assessed psychiatric outpatients, those who were evaluated as meeting one criterion from DSM-IV-defined borderline PD had significantly more suicide attempts, suicidal ideation at the time of evaluation, psychiatric hospitalizations, and time missed from work due to mental illness, compared with those evaluated as meeting none of the DSM-IV-defined borderline PD criteria (Zimmerman, Chelminski, Young, Dalrymple, & Martinez, 2012). In essence, psychopathology—even levels well below the arbitrary DSM-IV thresholds—is sufficiently important that its classification would be better informed by contemporary empirical and quantitative approaches, as opposed to being derived through committee deliberations conjoined with political processes and research constrained by untested assumptions, such as the assumption that arbitrary thresholds on criterion counts delineate categories in nature (the traditional DSM approach to classification).

Nevertheless, although evolution is needed, this evolution would be impossible without building on and respecting the extensive effort devoted to the construction of previous classification systems, such as DSM-IV. The value of earlier efforts is readily apparent because, without data on the PD constructs of prior editions of the DSM, there would be no basis for identifying limitations and, therefore, opportunities for improvement. The sociopolitical challenge in the field is that the limitations of the DSM-IV PD system are abundantly clear, yet some scholars whose careers were closely connected with the DSM-IV paradigm remain wedded to that paradigm. Nevertheless, in light of the evidence reviewed above, viewing DSM-IV as sacrosanct is not in the best interests of the field or our patients. Challenges such as comorbidity, heterogeneity, and the dimensional nature of psychopathology—revealed through fundamentally valuable research on DSM-IV constructs conducted by numerous and diverse investigators—must now be surmounted. As emphasized by DSM-5 PD workgroup chair Andrew Skodol (Skodol, Morey, Bender, & Oldham, 2013), and also by former NIMH director Steven Hyman (2010) with respect to the reification of DSM-IV categories more broadly, “it is time to move on.”

PERSONALITY AND PDs IN DSM-5
Because the categorical DSM system for PD diagnosis is fundamentally broken, the DSM-5 process began from a different starting point than DSM-IV. Importantly, the above observations about PDs are not limited to PD and pertain essentially to the entire DSM approach to mental disorder classification. That is, problems with comorbidity, heterogeneity, and categorical assumptions that do not accord with the evidence occur throughout the entire DSM (e.g., as noted by Hyman, 2010). Indeed, NIMH has now parted ways with the American Psychiatric Association (publishers of the DSM) and seeks to develop its own dimensional and neuroscientific approach to studying psychopathology, the Research Domain Criteria Initiative (RDoC; see MacDonald & Krueger, 2013, for a recent special section of the Journal of Abnormal Psychology focused on RDoC and Maj, 2014, for an RDoC-focused special section of the journal World Psychiatry).

Recognizing the fundamentally broken nature of DSM-IV, the DSM-5 construction process began from a stance of openness to new ideas about classification, particularly dimensional ideas. For example, DSM leadership worked to develop dimensional assessment tools for DSM-5: “The cross-cutting symptom measures tested in the DSM-5 Field Trials represent a first step in moving psychiatric diagnosis away from solely categorical descriptions toward assessments that recognize different levels of symptom frequency and intensity” (Narrow et al., 2013, p. 80). In addition, the DSM-5 Task Force cochairs (Drs. Kupfer and Regier) clearly recognize how psychiatry is out of step with modern medicine, for example, in the way other specialties have embraced the clinical utility of dimensions:
“Many of the revisions in DSM-5 will help psychiatry better resemble the rest of medicine, including the use of dimensional (e.g., quantitative) approaches” (Kupfer, Kuhl, & Regier, 2013, p. E1).

Nevertheless, in spite of the tireless efforts of Drs. Regier and Kupfer, the DSM-5 construction process became increasingly conservative and reactionary as it iterated forward, resulting in the final DSM-5 being split into two distinguishable sections. Section II, labeled “diagnostic criteria and codes,” perpetuates the categorical DSM-IV paradigm, whereas Section III, labeled “emerging measures and models,” presents a series of dimensional alternatives to traditional DSM categories (e.g., the aforementioned cross-cutting assessment tools). The more dimensionally oriented PD system developed for DSM-5 was caught in this cross fire (Skodol et al., 2013). For example, it was approved for inclusion in DSM-5 Section II by the DSM-5 Task Force, but not by the American Psychiatric Association’s Board of Trustees. As a result of these complex political dynamics, the DSM-5 PD model appears in Section III (referred to hereafter as the DSM-5 Section III PD system), whereas the categorical DSM-IV PD system is reprinted essentially verbatim in Section II (with only minor changes to accommodate DSM-5 conventions; for example, PD not otherwise specified, the most common diagnosis in DSM-IV, appears as unspecified or other specified PD).

The DSM-5 Section III PD System
The DSM-5 Section III PD system contains three basic elements. First, this system contains a dimensional model of pathological personality specifiers that was developed empirically. Briefly, much discussion in the PD workgroup centered on the characteristics of patients with psychopathological tendencies that fell within the workgroup’s bailiwick. Traditionally, in the DSM construction process, these sorts of discussions are used to develop criteria sets directly. Workgroups assemble their discussions into criteria sets on a rational basis, and those criteria sets are reviewed by other committees in a political process that eventuates in a published nosology. That is, traditionally, the DSM was developed through a process of clinical authority, under the a priori assumptions that all mental disorders are dichotomous and polythetic (or monothetic; i.e., for some disorders, all criteria are considered necessary and sufficient to justify a specific diagnosis). Literature reviews and field trials are also conducted. Indeed, the DSM-IV literature reviews were an extensive element of the DSM-IV revision effort (Gunderson, 1998) and more scholarly and comprehensive than the web postings that occurred during the construction of DSM-5 (as emphasized by Blashfield & Reynolds, 2012, and Krueger, 2013). However, DSM-IV efforts were constrained by unevaluated assumptions that do not accord with the contemporary scientific literature (e.g., the assumption that mental disorders are dichotomies, conjoined with the imposition of arbitrary thresholds on criterion counts to delineate these putative dichotomies). By contrast, the model of pathological personality specifiers in DSM-5 Section III was developed using data obtained from persons who sought mental health services, without the a priori imposition of the assumption of dichotomous diagnoses, nor an attempt to impose arbitrary thresholds on continuous clinical phenomena.

Second, the DSM-5 Section III PD system encompasses an overall dimension of personality functioning, ranging from little to no impairment, to extreme personality impairment. Third, it recreates DSM-IV PD categories from mixtures of impairment (Criterion A for specific PDs) and specifiers (Criterion B for specific PDs). For example, DSM-IV-defined borderline PD can be reconstructed by noting that this diagnosis encompasses significant impairment in functioning (Criterion A), accompanied by specific pathological personality variants (tendencies to display specific negative emotions and disinhibited behaviors and to act toward others in an antagonistic fashion, that is, specific Criterion B specifiers). These specifiers are often referred to as “traits” because they resemble constructs from the extensive empirical literature on the organization of human personality traits (Costa & Widiger, 2012); indeed, even the text of DSM-IV-TR describes its approach to PDs as based on traits (APA, 2000, p. 686). However, it is important to emphasize that they differ in important ways from human physical traits such as height that are difficult to modify on an individual basis. For example, population variation in these domains results from a constant interplay of both genetic and environmental forces (Krueger, South,
Johnson, & Iacono, 2008), and, moreover, psychological “traits” are not fixed and unchanging in specific individuals. For example, the domain of negative emotions or neuroticism is clearly amenable to both psychosocial and psychopharmacologic interventions (Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2013; Tang et al., 2009).

The dimensional model of pathological personality variants in DSM-5 (Criterion B) is particularly unique relative to traditional DSM rubrics because it was developed through a process of empirical research (as opposed to being developed through a process of clinical authority). Workgroup members and consultants provided ideas about the characteristics of PD patients, and the relevant literature was also reviewed, along with ensuring that the resulting list of characteristics covered the criteria for DSM-IV PDs (for details, see Krueger, Derringer, Markon, Watson, & Skodol, 2012). These ideas were then operationalized, such that their patterning could be studied. The empirical model that resulted from this effort closely resembled other empirical models of clinically relevant personality variation, but not the DSM-IV categorical model (which is not surprising inasmuch as the DSM-IV model was not developed on an empirical basis). Empirical models were summarized early in the DSM-5 process by Widiger and Simonsen (2005), and these models as well as the DSM-5 model converge around five broad domains of personality variation: (a) a tendency to experience diverse negative emotions versus being emotionally stable; (b) a tendency to withdraw from social contact versus being socially engaged; (c) a tendency to behave antagonistically toward others versus being more agreeable; (d) a tendency toward disinhibited expression of impulses versus being more planful; and (e) a tendency toward cognitive dysregulation and problems with reality testing versus lucidity in thought content and process.

These domains also coalesce into more inclusive spectra of variation at higher levels of a comprehensive hierarchy of personality and psychopathology, which we describe in greater detail below. For example, the internalizing spectrum encompasses negative emotions and social withdrawal, and the externalizing spectrum encompasses antagonistic and disinhibited tendencies. These larger spectra can also be discerned from patterns of comorbidity among DSM-defined mental disorders that are common in the general population (Kendler & Myers, 2014).

The Personality Inventory for DSM-5 (PID-5; Krueger et al., 2012) was created to operationalize the DSM-5 model of pathological personality variants. The American Psychiatric Association has made the PID-5 freely available to interested clinicians and researchers (at http://www.psychiatry.org/practice/dsm/dsm5/online-assessment-measures#Personality). It is available in both self-report and informant report versions and has been deemed acceptable for use with adolescents as well. More broadly, readers are encouraged to consult DSM-5 directly for a complete description of the DSM-5 Section III PD system (pp. 761–781). We turn now to provide a brief review of emerging research on the DSM-5 Section III PD system.

**RESEARCH ON COMPONENTS OF THE DSM-5 SECTION III PD SYSTEM**

**Criterion A: Levels of Personality Functioning**

Authors from various theoretical perspectives have emphasized the importance of distinguishing diagnostic severity, or the overall level of personality pathology, from the stylistic manner with which that severity is expressed (Livesley & Jang, 2000; Parker et al., 2004; Pincus, 2005; Tyrer, 2005). Although these features are conflated in the DSM-5 Section II representation of PD (Parker et al., 2004; Tyrer et al., 2011), they have different clinical implications. For instance, a better definition of the severity of personality pathology would help distinguish individuals with PDs from those with other forms of psychopathology or without psychopathology. Explicitly assessing severity would also help clinicians make more reliable determinations regarding the level of care that is appropriate for a given patient (e.g., monthly medication management versus intensive psychotherapy versus inpatient admission). Conversely, a more valid representation of style would also help clinicians make more reliable determinations regarding the level of care that is appropriate for a given patient (e.g., insight-oriented versus behavioral) that is likely to be most effective for a given patient.

A number of assessment methods have been developed to measure general personality pathology as
distinct from PD style (Blatt, Wein, Chevron, & Quinlan, 1979; Bornstein, 1998; Fonagy, Target, Steele, & Steele, 1998; Livesley, 2006; Verheul et al., 2008; Zimmermann et al., 2012). Based on a review of existing measures and theories of personality dysfunction, Bender, Morey, and Skodol (2011) developed the Levels of Personality Functioning Scale (LPFS) to define and assess the severity of personality pathology for DSM-5 Section III. The LPFS is structured by two overall domains involving self and other dysfunction. The self-domain is characterized by capacity for socially appropriate self-directed behavior and integrated identity, and the interpersonal domain by capacity for intimacy and empathy. In the DSM-5, these Criterion A features serve two functions: (a) They describe what is common to all PDs (i.e., they provide a general definition of personality pathology) and (b) symptomatic features of individual PDs are articulated in terms of deficits in one of the LPFS domains (i.e., disorder-specific impairment markers). Morey et al. (2011) describe the development of a self-report scale to index overall level of personality functioning in a manner consistent with the DSM-5 conceptualization.

Emerging research suggests that clinicians can achieve acceptable levels of reliability in assessing LPFS domains (Few et al., 2013; Skodol et al., 2013; Zimmermann et al., 2014). Morey, Bender, and Skodol (2013) showed that clinician ratings of moderate or greater dysfunction on the LPFS were both sensitive and specific to the presence of DSM-IV PD. In this study, the LPFS was rated by practicing clinicians as being at least as useful as the 10 PD categories and was a more valid predictor of measures of personality pathology and dysfunction than DSM-5 Section II PD categories. Morey and Skodol (2013) also showed that decision rules based on Criterion A features of each specific PD could be used to calibrate diagnostic rates between the Section II and Section III models at levels that are closer than was the case in the transition from DSM-III to DSM-III-R. Zimmermann et al. (2014) found that the LPFS variables significantly correlate with PD features as well. However, Few et al. (2013) found that, while the LPFS does predict PDs and other forms of dysfunction in their data, associations with PDs become nonsignificant when pathological traits are also entered as predictors. We revisit the issue of overlap between DSM-5 Section III A and B criteria below.

A significant advantage of the LPFS model is its links to several two-dimensional models of the interpersonal aspects of personality functioning in the clinical and empirical literature (Blatt & Lerner, 1983; Hopwood, Wright, Ansell, & Pincus, 2013). As such, the LPFS maps onto systems that are commonly used among clinicians to conceptualize personality dysfunction. However, continued empirical research is needed, particularly on fundamental issues such as the structure of personality dysfunction as represented by the LPFS and other measures. For instance, some authors (Bornstein, 1998; Morey et al., 2011) hypothesize that a single dimension can account for the important variance in personality dysfunction, suggesting that the differentiation in the LPFS between self and interpersonal dysfunction may not be entirely necessary. In addition, other studies that have examined multiscale measures of personality dysfunction have not been consistent with the LPFS structure. Specifically, some studies have indicated that there are three domains of dysfunction (e.g., of self, of relations with others, and of the capacity for prosocial functioning; Berghuis, Kamphuis, & Verheul, 2012) or add a new dimension involving basic functions (e.g., self-care, physical health) to the self and interpersonal domains (Clark & Ro, 2014; Ro & Clark, 2013). Overall, the extensive theorizing on how to conceptualize the severity of personality pathology will need to be complemented by empirical research on the assessment of personality dysfunction in order to facilitate the clinical assessment of DSM-5 Section III Criterion A features.

Criterion B: Pathological Personality Specifiers

The intent of pathological personality specifiers is to capture individual differences in the stylistic manifestation of PD. Accordingly, these specifiers constitute Criterion B of a PD diagnosis in the DSM-5 Section III PD model. There are 25 specifiers that, as described above, delineate five higher-order domains of clinically relevant personality variation (Negative Affectivity versus Emotional Stability, Detachment versus Extraversion, Antagonism versus Agreeableness, Disinhibition versus Conscientiousness, and Psychoticism versus Lucidity). These domains bear a strong resemblance to
the domains of Harkness’ Personality Psychopathology-Five model (PSY-5; Harkness & McNulty, 1994), and also to maladaptive variants of the domains of the Five-Factor Model (FFM; Costa & Widiger, 2012). This set of specifiers (both the 25 individual specifiers or “traits,” as well as the higher-order domains they delineate) can be assessed by the PID-5.

Research on the DSM-5 personality trait model has been accumulating at a brisk pace and was reviewed in detail by Krueger and Markon (2014). Not surprisingly, the majority of this research has involved the PID-5. Early work demonstrated that the self-report PID-5 structure replicates across samples and countries (De Fruyt et al., 2013; Fossati, Krueger, Markon, Borroni, & Maffei, 2013; Wright, Thomas, et al., 2012) and, furthermore, that the trait structure generalizes to clinician ratings of patients (Morey, Krueger, & Skodol, 2013). Importantly, the DSM-5 Section III traits can account for the majority of the reliable variance in the Section II PD constructs, whether assessed via self-report (Fossati et al., 2013; Hopwood, Thomas, Mar- kon, Wright, & Krueger, 2012) or interview (Few et al., 2013). Indeed, Morey and Skodol (2013) provide evidence that diagnostic rules for DSM-5 PDs result in greater correspondence between DSM-IV-TR and DSM-5 than was observed between DSM-III and DSM-III-R. Although this is encouraging, and undoubtedly is required as prima facie evidence for those expressing a reluctance to drop the old system, using the Section II PDs as a validity criterion for any investigation has long been criticized (Wiggins & Pincus, 1989). That is, replication of the constructs of a broken system (DSM-IV) is arguably less important than moving toward a more valid, empirically based system.

Along these lines, comparisons of the Section III system to other evidence-based systems of personality and its pathology also support the model. For instance, conjoint analyses of the PID-5 and existing inventories of normal range and pathological personality traits align in theoretically expectable ways (De Fruyt et al., 2013; Gore & Widiger, 2013; Thomas et al., 2013). Moreover, the content validity of the PID-5 has received substantial support (Anderson et al., 2013; Ashton, Lee, de Vries, Hendrickse, & Born, 2012; Hopwood, Schade, Krueger, Wright, & Markon, 2013; Quilty, Ayearst, Chmielewski, Pollock, & Bagby, 2013; Watson, Stasik, Ro, & Clark, 2013; Wright, Pincus, et al., 2012). In addition, concurrent validity for key clinical personality constructs not well conceptualized in DSM-IV also appears strong; pathological narcissism, including both more vulnerable and more grandiose aspects (Miller, Gentile, Wilson, & Campbell, 2013; Wright, Pincus, et al., 2013), and psychopathy (Fossati et al., 2013; Strickland, Drislane, Lucy, Krueger, & Patrick, 2013) are reasonably well captured by the DSM-5 traits. Thus, the DSM-5 trait model appears to be on solid conceptual and empirical footing. Moreover, there is emerging evidence that the model also has clinical utility. For example, Morey, Skodol, and Oldham (2013) report results of a survey of clinicians indicating that the DSM-5 trait model was seen as more clinically useful than DSM-IV-TR PDs (by psychiatrists as well as by psychologists).

Nevertheless, although the literature suggests the DSM-5 Section III traits are reasonably comprehensive, there is room for principled expansion based on the emerging corpus of findings. For example, there may be room to expand the model to have better representation of more diverse forms of maladaptive affiliation (Wright, Pincus, et al., 2012) and more detailed coverage of multiple aspects of compulsivity, for example, as described by the obsessive–compulsive PD criteria of DSM-IV (Few et al., 2013; Hopwood et al., 2012). Continued research directed at refining and expanding the current group of traits will be valuable because such research provides a principled and empirical basis for continued development of the DSM.

Integrating A and B Criteria in the Section III Model
A central issue with respect to refinement of the DSM-5 Section III model involves the balance between coverage and complexity within Criterion A features, within Criterion B features, and in the integration of these features. A specific concern with respect to the integration of A and B Criteria is the degree to which there is redundancy between psychometric representations of severity (i.e., dysfunction) and style (i.e., traits). Two empirical approaches have been taken to examine this issue. In the first approach, trait and dysfunction indicators are subjected to conjoint factor analyses to test whether distinct functioning and trait factors emerge. Berghuis et al. (2012) factor-analyzed normal
traits as measured by the Revised NEO Personality Inventory with two multiscale measures of personality dysfunction. These authors identified seven factors, three of which corresponded mostly to dysfunction (self/identity, prosocial, and relational) and four of which corresponded mostly to traits (inactivity, obliging, conscientiousness, and openness). Based on these findings, Berghuis et al. (2012) concluded that traits and dysfunction are distinguishable. However, Ro and Clark (2013; Clark & Ro, 2014) have concluded based on similar analyses that pathological traits and dysfunction overlap substantially in the form of five factors (internalizing/self-pathology, externalizing/interpersonal dysfunction, disinhibition, basic functioning, and goal engagement).

A second approach involves examining the incremental validity of trait and dysfunction indicators in terms of their associations with external variables. Such studies generally find that these domains provide incremental information, but that the increment is weak (Hopwood et al., 2011, 2012; Morey & Skodol, 2013). In fact, in the only study so far to use the DSM-5 framework to predict clinically relevant criterion variables in patients, Criterion A features were unable to provide incremental information over Criterion B traits (Few et al., 2013).

A potential confounding issue in this research involves the use of normal as opposed to pathological traits. For instance, a possible resolution to the discrepancy between the factor-analytic findings described above may lie in the fact that Berghuis et al. (2012) focused on normal range traits, whereas Ro and Clark (2013) focused on pathological traits. While pathological traits are likely to be relatively stronger indicators of clinically relevant behavior (e.g., psychopathology and dysfunction), normal traits are likely to achieve relatively stronger discriminant validity with respect to dysfunction (Hopwood, 2011). Similarly, greater incremental validity is likely to be achieved between personality traits and dysfunction when traits are normal range than when they are pathological. At the same time, to the degree that there is redundancy between pathological traits and personality dysfunction, perhaps PD diagnosis can be restricted to a single domain of pathological features (i.e., the distinction in the DSM-5 Section III PD model between functioning and traits may be unnecessary).

One obstacle to answering these kinds of important questions stems from limitations in the methods currently available for research on DSM-5 Section III constructs. Thus, an important direction for further research is to develop assessment approaches that encompass the entire model, purposefully combining personality traits and dysfunction. Up to this point, such measures have been created independently, and thus it is likely that insufficient attention has been paid to the overlap of these domains in operationalizations of severity (Criterion A) and style (Criterion B). A standardized interview-based method for the conjunctive assessment of traits and dysfunction, corresponding directly with the DSM-5 Section III PD model, would be especially useful.

CURRENT AND FUTURE DIRECTIONS
A "Third Stream": The ICD-11 PD Proposal
In many ways, the DSM-5 Section III model can be seen as a sort of middle ground between the PD model in DSM-5 Section II (aka DSM-IV and also similar to ICD-10) and the PD model being proposed for ICD-11 (Tyrer et al., 2011). Perhaps the most radical aspect of the ICD-11 proposal is the complete elimination of PD categories. In contrast, PD categories are retained in DSM-5 Section III. Even if they are somewhat superfluous relative to the more elemental assessments of traits and dysfunction, the PD categories of DSM-5 Section III do provide transitional objects as the field moves from the broken DSM-IV model toward a more empirical approach.

Tyrer et al. (2011) emphasize that, rather than determining the presence of various PD syndromes, the focus of the ICD-11 model is on establishing the severity of PD. Essentially, there is one PD diagnosis in the ICD-11 proposal, and that PD can have different flavors depending on the individual’s trait profile. The assessment of severity is demarcated into five ordinal levels: no PD (no personality-related disturbance), personality difficulty (some personality problems in certain situations), PD (the cut point for diagnosis; definite personality problems across situations), complex PD (definite personality problems across domains of personality and situations), and severe PD (complex personality problems that lead to significant risk for self or others). Tyrer et al. (2011) note the similarity
between this approach and general medical assessments of dimensional variables such as blood pressure or obesity as a virtue of this system. These authors also note that the ICD-11 is intentionally less complex than the DSM-5 Section III, in that it is unidimensional and focuses particularly on social aspects of personality pathology, which are thought to be relatively less abstract than, for example, self-pathology and thus more straightforward to assess.

Another departure from ICD-10/DSM-5 Section II is that the assessment of individual differences in stylistic expression (i.e., different traits or disorders) is emphasized less. In fact, Tyrer et al. (2011) proposed that the articulation of trait features beyond a general diagnosis of PD severity would be optional in ICD-11. As with the severity assessment, the trait model is also less detailed than in DSM-5 Section III, in that it includes five higher-order traits but no lower-order facets. The trait domains are mostly similar to, but also slightly different from, those of the DSM-5. Four traits—antagonism, disinhibition, detachment, and negative affectivity—appear to be quite similar across the DSM-5 and ICD-11 models. However, the ICD-11 eschews the assessment of psychotic content as an element of personality pathology (although Tyrer et al., 2011, acknowledge that traits involving psychoticism are under consideration), but adds a fifth trait involving emotional instability, which can be conceptualized as a mix of impulsivity and negative affectivity, making this domain particularly relevant to constructs such as borderline PD.

In sum, both the ICD-11 and DSM-5 Section III models are key signposts along the road to more empirical approaches to PD in official nosologies. In this regard, their similarities reflect fundamental aspects of the way PD nosology is evolving. Specifically, there is significant momentum in both systems to (a) demarcate the severity of personality functioning from the stylistic manner in which the pathology is expressed and (b) use empirically substantiated individual difference models rather than politically based committee deliberations to articulate the features of personality pathology. In contrast, the differences between the ICD-11 and DSM-5 Section III models point to the major challenges for the field moving forward. For instance, a major theme will continue to be the balance between coverage and complexity. Whereas the DSM-5 Section III model is relatively more detailed and thus risks being inefficient, the ICD-11 model is relatively more efficient and risks missing detailed features of PD. These systems will thus provide a testing ground for optimizing the assessment of clinically important personality features.

Recognizing the Broad Relevance of Personality Constructs to Effective Clinical Practice: Can Official Nosologies Help?

Ultimately, it would be good for official nosologies to provide useful and empirically based models of clinically relevant personality variation. The limited clinical utility of the categorical DSM-IV/DSM-5 Section II PD model is well known. In addition, emerging research suggests that practicing clinicians rate the DSM-5 Section III traits as more easily applied to patients, more useful for communicating with patients, and more useful for comprehensively describing global personality and personality problems, as well as for formulating an effective intervention, compared with the DSM-5 Section II (aka DSM-IV) criteria (Morey, Skodol, et al., 2013).

These findings, underscoring the limited utility of DSM-IV, provide a key impetus for developing a better approach. For example, by treating personality only as a finite set of categorical PDs, DSM-IV provides no direct means of conceptualizing the relevance of continuous personality variation to key clinical phenomena such as psychosocial functioning, treatment utilization, prognosis, and the future expression of disorders. Space limitations preclude a full review of the rich literature documenting these important linkages, but we highlight here a number of summaries and meta-analyses that have been published in recent years, supporting the broad relevance of personality for clinical practice. For example, due to its strong link to common mental disorders, particular attention has been paid to neuroticism/negative affect (Lahey, 2009; Ormel et al., 2013), and research has shown that neuroticism is predictive of the future development (i.e., first episode) of various mental disorders, treatment utilization, and treatment outcome. Moreover, broad personality domains in many cases demonstrate even stronger relationships to clinical syndromes than they do to PDs (Kotov et al., 2010). In part this is because the DSM-IV PD criteria are heterogeneous in their content, such that
associations with other variables are attenuated, but, in addition, the relationship of personality with clinical syndromes is also strikingly strong (Kotov et al., 2010). As we describe below, a large and growing body of research supports the contention that same structure serves to organize personality and psychopathology. Also worth noting is that personality is not only directly related to diverse mental disorders, but it also has been shown to modify or moderate their expression and course. For instance, interpersonal traits influence the length and severity of depression (Cain et al., 2012) and modify treatment response in social phobia (Cain, Pincus, & Grosse Holtforth, 2010).

Moreover, all of the major personality trait dimensions predict a host of functioning and life outcome variables (e.g., well-being, relationship qualities, and occupational functioning) that are routinely a consideration in treatment (Ozer & Benet-Martinez, 2006). Importantly, multiple major trait dimensions are predictive of a variety of health, morbidity, and physical diseases (Deary, Weiss, & Batty, 2010). The list of significant associations includes major public health concerns such as cardio-metabolic outcomes (e.g., obesity, coronary heart disease, hypertension; Phillips et al., 2010). Some research also suggests that personality may affect the course of diseases for which a causal link has not been established (e.g., cancer, HIV; Ironson, O’Cleirigh, Weiss, Schneiderman, & Costa, 2008). Ultimately, multiple personality domains have been empirically linked with mortality (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). The personality and health literature presents a strong argument for the importance of personality and for its routine assessment in not only psychiatric, but also in primary care settings. Additionally, personality provides an important bridge, if not the key, to linking psychiatry to health sciences and medicine writ large.

It is worth considering all of this research at this juncture because, as reviewed above, the maladaptive trait aspect of the DSM-5 Section III PD model converges directly with the structure and content of normative personality traits (Gore & Widiger, 2013; Wright & Simms, 2014). Accordingly, this model can provide a framework for assessing, diagnosing, summarizing, and noting (e.g., in a chart) a patient’s personality traits that have important significance for prognosis and treatment planning in routine psychiatric practice. Moreover, given the links between personality and physical health, it would allow for the communication of important clinical information in multidisciplinary coordinated care, thereby directly increasing the relevance of the psychiatric aspects of an integrated medical record. This would also help in conveying a more holistic, person-centered understanding of the patient to anyone who reviews the patient’s chart.

Recognizing the Broad Relevance of Personality Constructs to Psychopathology Research

Continuity between normative personality and pathological personality (e.g., as instantiated in DSM-5) links the former to the latter not only in terms of the dimensions they comprise, but also in terms of the implied scope of relevant theory and research. Dimensions of personality represent broad, basic individual difference variables that have fundamental relevance across numerous domains of psychology, including psychopathology research. In this regard, the DSM-5 trait model links psychopathology research to the basic science of differential psychology and provides scaffolding for the representation and conceptualization of broad forms of psychopathology in general.

It is no accident that similar dimensions have repeatedly been observed across different domains, starting from different assumptions and methods. As noted earlier, different measures of pathological personality, including the DSM-5 model as well as others, generally converge with one another and with normative models in identifying five major dimensions of individual variation (De Fruyt et al., 2013; Gore & Widiger, 2013; Thomas et al., 2013; Wright & Simms, 2014). It is striking, moreover, that measures of psychopathology, often developed independently of one another and with no intent to represent personality variables, manifest broad dimensions strongly resembling those observed in the personality literature. For example, dimensions representing negative affect, disinhibition, and detachment or pathological introversion are readily observable in measures of normal as well as abnormal personality (Markon, Krueger, & Watson, 2005), psychopathology symptoms (Markon, 2010), and DSM diagnoses (Kotov et al., 2011). Dimensions identified in personality models such as the DSM-5 trait model
and the normative FFM, moreover, both strongly resemble consensus domains proposed by NIMH to frame their Research Domain Criteria or RDoC initiative (Trull & Widiger, 2013). The processes underlying neuroticism connect with RDoC negative valence systems; the RDoC effortful control systems are similar to those proposed to undergird traits such as disinhibition, conscientiousness, or impulsivity; and the RDoC positive valence and social processes domains map onto those discussed in the literature on extraversion, especially when subordinate traits such as surgency and sociability are considered.

Although the RDoC constructs as articulated in the matrix on the NIMH’s website (http://www.nimh.nih.gov/research-priorities/rdoc/nimh-research-domain-criteria-rdoc.shtml#toc_matrix) are somewhat distal from clinical manifestations of psychopathology per se, being grounded in areas such as cognitive neuroscience (e.g., working memory) or learning theory (e.g., frustrative nonreward), we would contend that the success of RDoC will hinge on the ability to ultimately connect these constructs with clinical symptomatology. Broad individual difference dimensions such as those framing the DSM-5 trait model provide exactly this kind of bridge because they connect specific areas of clinical symptomatology (e.g., psychoticism) with fundamental psychological processes delineated in the RDoC matrix (e.g., visual and auditory perception).

This consilience underscores the role of these traits not only as fundamental personality variables, but also as fundamental psychopathology and individual difference variables that are evident in numerous contexts. As such, they represent orienting landmarks for researchers and theorists navigating across different domains of individual differences. Structural research aimed at identifying major dimensions can be found within many domains of psychopathology (e.g., dimensions of negative, positive, and disorganized psychosis, or aggressive and delinquent forms of externalizing); personality psychology provides a broad integrative perspective across these domains. This breadth of perspective is critical in understanding situations where variables identified within domains may be better understood in terms of variables from other domains (e.g., as in the case of impulsivity, where different impulsivity factors can sometimes be understood as reflecting negative versus positive emotionality; Sharma, Markon, & Clark, 2014).

CONCLUSIONS

The DSM-5 Section III PD model contains a number of forward-thinking elements, including a conceptualization of the overall extent of personality psychopathology in the domains of self and interpersonal functioning that distinguish personality pathology from health and other classes of disorder, as well as an empirically based model of pathological personality traits with the potential to provide a structure for reorganizing psychopathology more generally. These aspects of the model have attracted interest in the research community, and although there are issues still to resolve (e.g., the overlap between functioning and traits), some key aspects of the model appear to work well (e.g., the DSM-5 personality trait model appears to have good content coverage, reliability, and validity). At this point, the exact ways in which the DSM will evolve are not entirely clear. Nevertheless, what is clear is that the study of PDs is at the vanguard of meaningful evolution in conceptualizing psychopathology (Krueger, 2013). Continued efforts to better incorporate dimensional elements such as personality functioning and traits into the DSM should result in a manual with both enhanced clinical utility and a better degree of connection with the empirical literature.

REFERENCES


Zimmerman, M., Chelminski, I., Young, D., Dalrymple, K., & Martinez, J. (2012). Does the presence of one feature of borderline personality disorder have clinical significance? Implications for dimensional ratings of personality disorders. *Journal of Clinical Psychiatry, 73*, 8–12. doi:10.4088/JCP.10m0784


Received November 26, 2013; revised March 31, 2014; accepted April 1, 2014.