

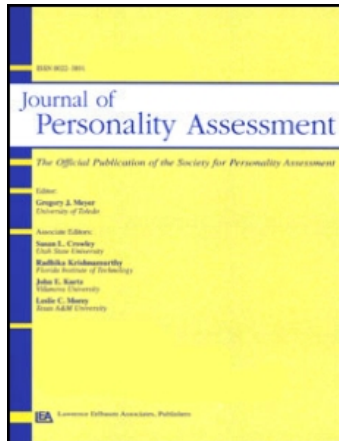
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Assessing Personality in the *DSM–5*: The Utility of Bipolar Constructs

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All previous editions of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM)* have described and assessed personality solely in terms of pathological categories. Nonetheless, there is compelling evidence that normal-range personality traits also provide clinically useful information, emphasizing the importance of thoroughly assessing both adaptive and maladaptive aspects of personality within a clinical context. The proposed inclusion of a dimensional trait model in the upcoming *DSM–5* represents an important shift in the understanding of personality pathology and provides an ideal opportunity to integrate the assessment of normal personality into clinical practice. Building on research conceptualizing personality disorders as maladaptive, extreme variants of general personality traits, it is proposed that both normal and abnormal personality can be assessed within the same dimensional model using bipolar constructs. The inclusion of bipolar traits, such as a continuum ranging from introversion to extraversion, would hold numerous advantages for a dimensional model. These benefits include a strong foundation of existing validity research, comprehensive coverage of personality pathology, and the ability to provide useful information about all individuals. Despite potential complexities, the adoption of bipolar constructs within *DSM–5*'s dimensional model presents the greatest opportunity to maximize efficiency, validity, and clinical utility.

Despite dramatic changes in their assessment and diagnosis, personality disorders (PDs) have been defined as categorical constructs since the American Psychiatric Association published the first *Diagnostic and Statistical Manual of Mental Disorders* in 1952. The diagnostic labels associated with these categorical constructs provide relatively straightforward and rapid communication about a person (Frances, 1993). Additionally, many of the categorical constructs have relatively lengthy histories and are quite familiar to clinicians. Another potential advantage of diagnostic categories is stimulating research and generating specific treatment recommendations. Although this has not occurred for a majority of the disorders (Blashfield & Intocchia, 2000), there are certain PD categories (e.g., borderline, antisocial, schizotypal, narcissistic, and dependent) that are being actively studied.

Nonetheless, there are also numerous disadvantages to the current categorical approach including excessive diagnostic cooccurrence, inadequate coverage, excessive heterogeneity within categories, lack of a meaningful or well-validated boundary between normal and disordered personality, and dissatisfaction among the clinicians who use it (Clark, 2007; Trull & Durrett, 2005; Widiger & Samuel, 2005). Based in part on these limitations, there is increasing consensus among researchers that a dimensional trait model can more validly represent personality pathology (Widiger & Simonsen, 2005). Accordingly, the *DSM–5* Personality and Personality Disorders Work Group (2010) proposed the inclusion of such a model in the upcoming revision of the diagnostic manual.

The trait model proposed by the *DSM–5* Personality and Personality Disorders Work Group (2010) includes six domains labeled negative emotionality, introversion, antagonism, compulsivity, disinhibition, and schizotypy. Four to 10 subtraits, or facets, that provide further description and differentiation, underlie these higher order constructs. The inclusion of a dimensional trait model is an important step in clarifying our understanding of personality pathology. However, it also presents a momentous opportunity to translate basic science into clinical practice by integrating well-established findings from normal personality research into the psychiatric nomenclature. Unfortunately, this opportunity is not realized as the current *DSM–5* proposal indicates that the “traits will be unipolar, with definitions indicating maladaptive functioning” (Skodol, 2009). In other words, they will focus on only one tail of the underlying latent trait distribution. Practically this means that an elevated score for introversion indicates that an individual has a pathological level of this trait, whereas a low score will simply indicate the absence of maladaptive introversion.

The proposal to adopt a unipolar trait paradigm fails to capitalize on the promise of a dimensional system and has three important consequences that might limit the ultimate validity and utility of the model. These include (a) producing a factor structure that is inconsistent with previously published research, (b) failing to capture comprehensively the range of personality pathology, and (c) eliminating the ability to integrate normal and adaptive personality traits. I detail each of these concerns and contend that altering this model to include bipolar traits would greatly increase the utility and efficiency of the resulting system. Specifically, I propose the adoption of a model that would encompass the full range of both normal and abnormal personality functioning. Like others (Clark, 2005; Trull & Durrett, 2005; Widiger & Trull, 2007), I argue that both adaptive personality traits and PD pathology can be effectively and efficiently assessed within the same integrative model through the

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use of bipolar constructs that acknowledge the possibility of maladaptivity at both ends of a trait.

PITFALLS OF UNIPOLARITY

Factor Structure Inconsistent with Previous Research

A central question for any dimensional model of personality pathology is how many higher order domains it should include. Fortunately, a great deal of research has examined the factor structure that underlies personality disorder (e.g., Clark, 1993; Clark, Livesley, Schroeder, & Irish, 1996; Livesley & Jackson, 2009; O'Connor, 2005). Markon, Krueger, and Watson (2005) nicely summarized and extended this research in a seminal analysis that concluded five factors best captured the variation and that this was the "crucial level of analysis" for psychopathology research (p. 154).

In this respect, perhaps the most noticeable aspect of the proposed *DSM-5* trait model is the inclusion of six higher order domains rather than the five dimensions of personality pathology indicated by previous research (e.g., Clark et al., 1996; Markon et al., 2005). Nonetheless, the model does share many similarities with other dimensional models of PD (Widiger & Simonsen, 2005). In particular, the proposed *DSM-5* domains of emotional dysregulation, introversion, and antagonism are largely equivalent to domains that have emerged from reviews of the literature (e.g., Trull & Durrett, 2005; Widiger & Simonsen, 2005). For example, negative emotionality is quite similar to the domain Trull and Durrett (2005) labeled negative affectivity/neuroticism/emotional dysregulation; *DSM-5* introversion is equivalent to low extraversion/positive emotionality; and *DSM-5* antagonism is comparable to dissocial/antagonism behavior. Additionally, although some have argued that *DSM-5* schizotypy is unrelated to other trait models (i.e., Watson, Clark, & Chmielewski, 2008), there is evidence to suggest that the cognitive-perceptual aberrations, magical thinking, and eccentricity associated with schizotypy are maladaptively high variants of a domain identified as openness to experience (e.g., Haigler & Widiger, 2001; Kwapił, Barrantes-Vidal, & Silvia, 2008; Lynam & Widiger, 2001; Piedmont, Sherman, Sherman, Dy-Liacco, & Williams, 2009; Ross, Lutz, & Bailey, 2002; Samuel & Widiger, 2004; Tackett, Silberschmidt, Krueger, & Sponheim, 2008; Wiggins & Pincus, 1989). Thus, it appears that despite semantic differences, four of the six domains proposed for *DSM-5* have obvious counterparts in existing trait models.

However, a primary divergence from the previous research is that the proposed *DSM-5* model separates the domains of compulsivity (encompassing traits such as perfectionism, perseverance, rigidity, orderliness, and risk aversion) and disinhibition (encompassing traits such as impulsivity, distractibility, recklessness, and irresponsibility). Within existing frameworks, compulsivity and disinhibition typically define opposite poles of a single latent dimension. In fact, Widiger and Simonsen's (2005) review of 13 dimensional trait models concluded that "all but a couple of the models also include a domain concerned with the control and regulation of behavior, referred to as constraint, compulsivity, or conscientiousness, or, when keyed in the opposite direction, impulsivity or disinhibition" (p. 116). Although Clark and Krueger (2010) did provide a brief rationale for the proposed six-factor model, justification for the separation of these traits is notably absent.

Indeed, quite the opposite conclusion appears warranted as a substantial empirical literature supports the conceptualization of compulsivity and disinhibition as contrasting poles of the same latent trait. In fact, two predominant dimensional measures of personality pathology are the Schedule for Non-adaptive and Adaptive Personality (SNAP; Clark, 1993) and the Dimensional Assessment of Personality Pathology–Basic Questionnaire (DAPP–BQ; Livesley & Jackson, 2009), which explicitly contain scales labeled disinhibition and compulsivity, respectively. Both instruments are authored by members of the *DSM-5* Work Group and correlational studies routinely demonstrate that these scales correlate negatively with one another (e.g., $-.51$ from Pryor, Miller, & Gaughn, 2009) and relate in opposite directions with the related trait of conscientiousness. For example, the Revised NEO Personality Inventory (NEO PI–R; Costa & McCrae, 1992) Conscientiousness scale correlated $-.59$ with SNAP disinhibition (Clark, 1993) and $.63$ with DAPP–BQ compulsivity (Samuel & Widiger, in press).

Perhaps even more compelling support is provided by numerous factor analyses that suggest these traits fall at opposite ends of a common construct. For instance, Clark and colleagues (1996) conducted a joint factor analysis of the DAPP–BQ and SNAP and found that one factor was "most strongly marked by SNAP Impulsivity and Disinhibition, versus DAPP–BQ Compulsivity" and "can be identified with (low) conscientiousness" (p. 297). Additionally, a factor identified by Markon and colleagues (2005) was defined by positive loadings for Five-factor model (FFM) conscientiousness and SNAP workaholism as well as negative loadings for SNAP disinhibition and impulsivity. In fact, similar findings have been repeated throughout the factor analytic literature (e.g., Clark, 1993; O'Connor, 2005; Watson et al., 2008) and there does not appear to be a single published study that would support disinhibition and compulsivity as separate dimensions.

Failure to Capture Adequately the Range of Personality Pathology

Another potential hazard of a unipolar model is the failure to appreciate the potential for maladaptivity at the "opposite" end of a given trait. For example, the proposed *DSM-5* trait model includes a domain of introversion that contains a reasonably comprehensive set of subtraits (e.g., social withdrawal and intimacy avoidance) that elaborate the more specific problematic aspects associated with this domain. Nonetheless, such a domain is limited in that a low standing indicates only the absence of introversion and does not provide information about the equally problematic aspects associated with the opposite end of the trait (e.g., extraversion). Maladaptive expressions of high extraversion have lengthy precedents within the psychiatric nomenclature, as Millon's (1981) original description of histrionic PD was the "gregarious pattern" (p. 131). Aspects of excessive extraversion continue to appear in dimensional models of personality disorder, such as the Exhibitionism scale from the SNAP, which falls beneath the domain of positive emotionality and loads opposite of a trait labeled detachment (Clark, 1993).

Similar arguments can also be made for other domains. For instance, the failure to include a maladaptive variant of low antagonism (i.e., compliance or agreeableness) reduces the proposed model's ability to account for traits such as excessive

gullibility and self-sacrifice. Indeed, high agreeableness can be maladaptive as others can routinely victimize an individual who is overly agreeable (Pincus, 2002).

In this sense, one might actually argue that the inclusion of both compulsivity and disinhibition is a strength of the proposed *DSM-5* model because it allows a more thorough assessment of what research indicates are opposite poles of the same construct. It is the only one of the five domains identified by Markon and colleagues (2005) for which the proposed *DSM-5* trait model acknowledges both maladaptively high and low standings. It is conceivable that one could similarly divide the other constructs, such as including separate assessments of introversion and a domain that could be labeled exhibitionism or extraversion. Of course, this solution would be particularly inefficient, as it would require the separate assessment of highly negatively correlated traits, unnecessarily doubling the time needed for an assessment and creating an unwieldy model with up to 10 dimensions.

In addition, even if such a model were adopted, much time would be spent assessing specific traits that will be largely irrelevant to a given person. For example, it is unlikely that any individual could be considered to have high standings on all facets of both introversion and extraversion. This is, of course, not to suggest that individuals will never behave in ways that are at odds with their overall level of a trait. Indeed, even someone with particularly high levels on the trait of exhibitionism will be likely to sit quietly and keep to himself or herself during a lecture or religious service. In addition, some persons can be elevated on certain facets of introversion and elevated on other facets of extraversion. This will not happen frequently, but can occur. However, a model that includes all of the relevant facets of introversion and extraversion in a unipolar format would require a clinician to assess both poles for all of the facets in all persons, which would typically involve a considerable waste of time. For example, it is rather inefficient to assess an individual for the trait of exhibitionism after already ascertaining him or her to be high on the trait of social withdrawal. It seems likely that similarly strange situations might emerge for the assessments of compulsivity and disinhibition with the proposed *DSM-5* trait model.

Eliminates the Assessment of Normal or Adaptive Personality

As indicated by its title, the *DSM-5* Personality and Personality Disorders Work Group appears to have been designed with the intention of including normative, or adaptive, personality traits as well as defining personality pathology. Such a goal is a notable shift from previous editions of the *DSM* and highlights the increasing recognition that personality traits have profound public health significance (e.g., Lahey, 2009) and meaningfully relate to numerous clinically relevant outcomes (e.g., Hopwood et al., 2009; Ozer & Benet-Martinez, 2006). Unfortunately, the current proposal, which is confined to maladaptive functioning, does not realize this goal.

The inclusion of a method for assessing normal or adaptive personality would be quite valuable. Ozer and Benet-Martinez (2006) systematically reviewed the literature and concluded that personality traits are linked to a wide variety of important life outcomes, including subjective well-being, supportive family and peer relationships, and successful romantic relationships. In a clinical context, these traits can be highly informative both

for their ability to predict dysfunction in a variety of life arenas (e.g., Hopwood et al., 2009) and to identify an individual's strengths that might be adaptive within the therapeutic setting (Costa, 2008). For example, an adaptive standing on a trait such as conscientiousness would be quite advantageous for an individual engaged in cognitive behavioral therapy, which requires the completion of tracking sheets and other weekly homework assignments. Likewise, traits such as extraversion and agreeableness might facilitate entry and engagement in a group therapy modality (Sanderson & Clarkin, 2002). The inclusion of adaptive traits within a clinical assessment can also hold benefits, as this feedback might be more acceptable to the client, aid his or her self-understanding, or provide clues for coping with maladaptive traits. Finally, the formal recognition of one's strengths or beneficial characteristics by a therapist could also increase rapport.

It does appear that the committee considered the inclusion of adaptive or normal traits, but as a separate list rather than as an integrated component of the model (Skodol, 2009). Ultimately, however, no such list of adaptive traits appears in the official proposal and one must assume this effort was abandoned. This is perhaps understandable as it might be unreasonably cumbersome for clinicians to first assess 37 maladaptive traits and then another 20 or so adaptive traits. Not only would this create an additional burden on clinicians, making a thorough assessment unlikely, but it would amplify the concerns that the currently proposed model is already too complex (First, 2010).

One might also question whether any traits are purely adaptive. The progress report from the Work Group (Skodol, 2009) provides the example of optimism as an adaptive trait. There is certainly ample evidence to suggest that optimism is quite beneficial (Carver, Scheier, & Segerstrom, 2010); however, research has also indicated that extremely high levels relate to negative consequences (Dillard, Midboe, & Klein, 2009). Indeed, it seems possible to have "too much of a good thing" and that almost any trait or characteristic can be maladaptive at certain levels. As such, rather than specifying a priori which traits are adaptive and which are maladaptive, it might be more fruitful to identify a comprehensive list of important personality traits and then determine empirically at which levels, and in which situational contexts, these traits lead to impaired functioning.

BENEFITS OF BIPOLARITY

In light of these potential limitations of a model including unipolar traits, it is important to acknowledge that the model currently presented on the *DSM-5* Web site is only a proposal and not the final decision. It is formally noted, "The proposed trait set is provisional, and currently is being tested for its structural validity before finalizing the *DSM-V* proposal" (Clark & Krueger, 2010). In this sense, the committee members are commended for their openness in inviting comment on an unfinished product. Given the concerns I have presented, it is my sincere hope that there will be notable changes to the current model before it is finalized and that the Work Group is receptive to constructive suggestions for improvement.

One alternative to these potentially problematic consequences of unipolar traits would be the adoption of a model that encompasses the full range of personality variability and acknowledges the possibility of maladaptivity at either end of the spectrums. This type of system might be described as bipolar, in contrast to

the unipolar description of the current *DSM-5* proposal. Such a bipolar model, based on the dimensions that are common to both personality pathology and normal personality functioning, would have appreciable benefits. It would yield a cohesive model with a factor structure that extends comfortably and strongly from the existing research literature. Not only would this provide a more empirically sound foundation for the diagnostic nomenclature, but it also would embrace a factor structure that would be more replicable across future studies. For instance, it appears likely that further testing of the structural validity of the currently proposed model would evidence substantial overlap and covariance between disinhibition and compulsivity. Additionally, a bipolar model would comprehensively cover the range of possible personality pathology, including even those aspects not currently identified within the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [*DSM-IV*]; American Psychiatric Society, 1994) system (e.g., Piedmont et al., 2009). Finally, and perhaps most important, it would provide an efficient method of incorporating the assessment of normal personality traits into clinical practice.

A dimensional trait model that endorsed a bipolar perspective would likely resemble the FFM of general personality functioning (McCrae & Costa, 2008). The FFM is made up of five bipolar domains that have been labeled surgency or extraversion (vs. introversion), agreeableness (vs. antagonism), conscientiousness (vs. disinhibition), neuroticism (vs. emotional stability), and intellect or openness (vs. closedness to experience). Although alternative models of normal range personality exist, such as the HEXACO of Ashton and Lee (2007) or Cloninger's (2008) psychobiological theory, the FFM has succeeded well in integrating diverse personality models into a commonly understood framework and is considered the consensus model of normal personality (John, Naumann, & Soto, 2008). There is a substantial research literature supporting the validity of the FFM as it pertains to general personality functioning. This includes evidence concerning behavioral genetics (Krueger & Johnson, 2008; Yamagata et al., 2006), developmental antecedents (Caspi, Roberts, & Shiner, 2005; Widiger, De Clercq, & De Fruyt, 2009), universality across cultures (Allik, 2005; McCrae et al., 2005), and temporal stability (Roberts & DelVecchio, 2000).

In addition to FFM being considered the predominant model of general personality functioning, there have been two decades of research since the seminal paper by Wiggins and Pincus (1989) studying its links with personality pathology. Reviews, meta-analyses, and statistical evaluations of this literature have all converged on the conclusion that the *DSM-IV* PDs can be understood as maladaptive variants of the FFM (Clark, 2007; Samuel & Widiger, 2008). In other words, the difference between FFM neuroticism and the emotional dysregulation that characterizes borderline personality disorder is one of degree, rather than of kind (Samuel, Simms, Clark, Livesley, & Widiger, 2010).

Support for this viewpoint has been provided by Livesley (2001), who reviewed the literature and concluded that "multiple studies provide convincing evidence that the *DSM* personality disorder diagnoses show a systematic relationship to the five factors and that all categorical diagnoses of *DSM* can be accommodated within the five-factor framework" (p. 24). More recently, Clark (2007) agreed, "The five-factor model of personality is widely accepted as representing the higher-order structure of both normal and abnormal personality traits"

(p. 246). Systematic meta-analyses of correlations between FFM and PD measures have also reached similar conclusions. Saulsman and Page (2004) reviewed 12 published studies and determined that PDs obtained consistent and predictable relationships with the FFM. For example, the mean weighted correlation between borderline and neuroticism was .49. Samuel and Widiger (2008) later replicated these findings with a meta-analysis of an additional 15 studies. Finally, the link between adaptive and maladaptive personality has also been supported by studies suggesting that they share a common latent structure (Markon et al., 2005; O'Connor, 2005). Markon et al. (2005) combined 77 independent samples that studied the structural relationships between normal and abnormal personality instruments and factor analyzed the resultant meta-analyzed correlation matrix. From this procedure they concluded that "Our results reinforce the position that the Big Five represent a crucial level of analysis for normal personality research and extend this position to include psychopathology research as well" (p. 154). In sum, the FFM is not only the predominant model for describing normal personality, but it also has well-established links to the *DSM-IV* PD categories, making it an attractive choice should the *DSM-5* committee adopt a bipolar approach.

COMPLEXITIES OF BIPOLARITY

In addition to the benefits already discussed, there are complexities associated with the assessment and scoring of bipolar constructs. One assessment challenge is providing a comprehensive coverage of the relevant traits. Whereas unipolar constructs make fine distinctions within a narrow range of relatively specific traits, bipolar constructs discriminate among individuals across the full spectrum. Additionally, unipolar constructs are relatively uncomplicated in that they tend to maintain convenient linear relationships with indicators of dysfunction. However, on a conceptual level, bipolar constructs can be somewhat more complex in that they do not presume purely linear relationships with indicators of pathology. This can be illustrated by the example of body mass index (BMI), which is the ratio of one's weight to height.

Higher BMIs are diagnostic of obesity and are associated with negative health outcomes, including heart failure (Lavie, Milani, & Ventura, 2009). However, the World Health Organization (WHO) also classifies those with a BMI under a certain threshold as "underweight," which indicates that the lower end of this dimension is also potentially problematic in terms of one's health. Because both ends of this dimension are maladaptive, a correlation between BMI and pathology might not provide a complete picture. Nearly 70% of adult Americans are considered "overweight" or "obese" (Flegal, Carroll, Ogden, & Johnson, 2002) by the World Health Organization standards, and accordingly BMI correlates negatively with a variety of health outcomes at the population level.

It is important to note that although the overall relationship between BMI and health is negative, this relationship is reversed when considering only those individuals at the lowest extremes of the BMI distribution. Indeed, having a low BMI is often used to make psychiatric treatment decisions, including hospitalization, among individuals being treated for eating disorders (Golden, Jacobson, Sterling, & Hertz, 2008). In addition, Tesfaye and colleagues (2007) showed that among Ethiopian men (a country in which malnutrition is more prevalent than

obesity) the risk for hypertension was higher for men at the lowest levels of BMI than for those closer to the mean. Thus, the overall relationship between BMI and physical health might theoretically look something like an inverted U. In short, although BMI correlates negatively with health outcomes at the population level in the United States, this does not indicate that decreasing scores are universally adaptive for all individuals.

It seems likely that similar logic applies to personality, such that although certain traits relate to adaptive functioning across the population, particularly high scores are not necessarily adaptive. This becomes even more complicated for personality traits in that their assessment is based on instruments with limited bandwidth to cover the full range of the possible trait. Whereas BMI has a potentially unlimited distribution, personality traits are limited by the range of scores possible on a given measure.

Conscientiousness, for example, relates to a variety of positive life outcomes including familial satisfaction, career success, reduction of risky behavior, and longevity (Ozer & Benet-Martinez, 2006). Given the strong associations with positive outcomes, it is somewhat difficult for the same measures to evince correlations with impairment. Perhaps then, it is not surprising that the relationship between conscientiousness and obsessive-compulsive personality disorder (OCPD) has been among the least consistent relationships in studies correlating measures of the FFM with the *DSM-IV* PDs. For example, two meta-analyses have estimated that the correlation between these constructs is .23 (Saulsman & Page, 2004) and .24 (Samuel & Widiger, 2008). Although notable, this correlation is lower in magnitude than those between other PDs and domains of normal personality functioning.

This is likely attributable to the fact that instruments used to assess conscientiousness are generally restricted to the low to normal range of the trait. In fact, only a fraction of the items on most personality instruments assess the range of conscientiousness that can be problematically high. Haigler and Widiger (2001), for example, found that only 10% of the conscientiousness items from the NEO PI-R (Costa & McCrae, 1992) were coded such that low scores were more adaptive than high scores. Haigler and Widiger then experimentally manipulated those items to ensure that they assessed the more maladaptive aspects of high conscientiousness, such as by including the words *excessively* or *too much*. After doing so, they found the resulting scale obtained much higher correlations (e.g., median of .69) with three measures of OCPD. This suggested that just as the range of BMIs studied dictates its relationship with health outcomes such as hypertension, the range of conscientiousness being studied also dictates the relationship with OCPD.

Overcoming this measurement challenge is not necessarily difficult, as what is needed is an assessment that comprehensively covers the entire range of the trait distribution. Similar to BMI, personality scientists should develop assessments that capture all possible variability on the trait from the lowest to the highest levels (i.e., minimal floor or ceiling effects). Modern assessments of intellectual functioning, which provide reliable IQ estimates across quite a large range of the population, provide an example of this approach. More important, intellectual assessments are required for making discriminations and diagnostic decisions at the lowest levels of the trait (e.g., mental retardation), but are equally adept at identifying individuals at the uppermost levels (e.g., giftedness). Similarly, a dimensional

model of personality requires a complete assessment of the complete range of traits.

Given an instrument with the requisite bandwidth, research should determine at which points problematic functioning becomes more likely. Accordingly, the assessment should provide the greatest fidelity for assessing those levels of the traits where differentiation among individuals is most crucial for specific purposes. In the case of personality pathology, it seems likely this would be at either extreme of the distribution as the ability to discriminate among individuals within normal ranges of traits would not be particularly important for most clinical purposes. Fine distinctions, however, would be necessary at those points along the distribution where diagnostic decisions are relevant.

A PROPOSAL FOR BIPOLAR CONSTRUCTS

There have been several proposals as to how one might effectively implement a diagnostic system with traits that acknowledge maladaptivity associated with high or low standings (e.g., Widiger, Costa, & McCrae, 2002; Widiger, Livesley, & Clark, 2009), and it is beyond the scope of this article to repeat these suggestions in detail. However, at the broad level, such a system would involve a series of iterative steps. The first of these is the assessment of broad domains that are common to normal and abnormal personality functioning. When individuals fall within the normal/adaptive range, the assessment ends and the clinician then records a descriptor (e.g., low conscientiousness). However, scores beyond certain cutpoints (determined empirically) in either direction would prompt the assessment of several narrow traits that more clearly define the specific and maladaptive aspects of that pole. For example, a low score on a trait labeled conscientiousness might elicit an assessment of the traits that define the disinhibition domain of the current *DSM-5* proposal (i.e., impulsivity, distractibility, recklessness, and irresponsibility). Similarly, a high score on the general domain of conscientiousness would prompt the assessment of the compulsivity pole (e.g., perfectionism, rigidity, and orderliness). In this way, a detailed assessment of the specific lower order traits is provided only for those individuals for whom it is relevant. This is based on the understanding that an individual who is high on conscientiousness (e.g., organized, methodical, and punctual) is unlikely to exhibit maladaptive levels of traits such as impulsivity, recklessness, or irresponsibility. Nonetheless, the assessment of the domain of conscientiousness would include the assessment of individual facets and could then accommodate individuals who are low on some facets but high on others.

The "tailored" testing approach that characterizes these steps could be implemented efficiently in a computerized adaptive testing (CAT) format. Using advances from item response theory, items and or diagnostic indicators could be written that effectively discriminate across the range of the personality traits and help pinpoint an individual's standing much more efficiently. Such an approach is now widely used within educational and achievement testing (e.g., the Graduate Record Examination) and has already been applied to measures of personality pathology (Simms & Clark, 2005). Simms and Clark (2005) demonstrated that a CAT version of the SNAP (Clark, 1993) obtained psychometric properties roughly equivalent to the traditional version, yet the administration was nearly 60% faster. A CAT approach holds great promise for providing a similarly efficient assessment of a revised *DSM-5* trait model that

included bipolar traits. Simms et al. (2011/this issue), in fact, are currently developing a CAT-based instrument of a trait model of personality and personality pathology that seems potentially quite useful. It is unclear whether this instrument will include bipolar traits and how closely its structure will resemble the ultimate *DSM-5* trait model.

Importantly, maladaptivity or pathology would not be synonymous with trait extremity, as clinicians would also assess the degree to which the individual evidences impairments secondary to his or her extreme standing on the traits (e.g., Widiger et al., 2002). Thus, an elevated trait standing would not be sufficient for a diagnosis of personality pathology. Instead, general diagnostic criteria, such as the set offered by the *DSM-5* Work Group, would be consulted to determine if PD is present. This is precisely the system that is used for the diagnosis of mental retardation, whereby an IQ less than 70 is necessary, but not sufficient. To qualify for the diagnosis, an individual must also demonstrate clinically significant impairment in functioning. Although the cutscore is arbitrary in the sense that it does not identify a discrete break in the distribution, it is a well-reasoned and defensible selection that was informed by the impairments in functioning commonly associated with an IQ of 70 or lower (Zachar, 2000). Similar work is needed to identify the levels of individual personality traits that are commonly associated with impairment. Additionally, it is also possible that certain organizations or combinations of traits are particularly problematic or maladaptive. Indeed, Lynam and Widiger (2001) suggested that the long-standing interest in studying antisocial PD and psychopathy results from the fact that the specific combination of impulsiveness, antagonism, anger, and thrill seeking is so particularly insidious within organized society.

Areas for Further Study

A relevant question for any dimensional model, whether bipolar or unipolar, is how to assess it within clinical practice. Implementing an adaptive assessment of personality will likely be most efficient if it were developed as a questionnaire and completed by the patient (i.e., self-report). Indeed, the research supporting the validity of trait models relies heavily, but not exclusively, on self-report data. However, a self-report questionnaire is not the only possible solution. A clinician can also complete a questionnaire based on his or her experiences with the individual or the patient's responses to standardized stimuli. There have only been a few studies that have examined clinicians' descriptions of their patients using dimensional trait models (e.g., Blais, 1997) and this research has indicated that clinicians' ratings often are quite divergent from those provided by self-report or even semistructured interview (Samuel & Widiger, 2010). Another alternative is to develop a standardized, semistructured interview that can be administered by a clinician or another trained professional. Such an interview could also be adaptive in that responses to given stimuli would determine which additional items are administered. Again, this type of approach could be modeled after intellectual functioning assessments, such as the Wechsler Adult Intelligence Scale (Wechsler, 2008), which clearly specifies discontinuation rules that depend on the performance of the individual being assessed. Future research that continues to clarify the feasibility, reliability, and validity of these alternative assessment approaches, particularly clinician descriptions, is highly warranted.

Although existing nomothetic research suggests that opposite poles of trait spectra, such as compulsivity and disinhibition, are inversely related to one another, this is not always true idiographically (e.g., Villemarette-Pittman, Stanford, Greve, Houston, & Mathias, 2004). When this occurs, it is likely due to different elevations on different facets within the same domain. It would appear nonintuitive that a person could be described as both rigid and spontaneous, but it is theoretically possible that an individual could score highly on both traits if they were assessed separately (in fact, the Millon Index of Personality Styles includes unipolar scales to assess bipolar traits precisely for this purpose; Millon, Weiss, & Millon, 2004). Research that investigates this possibility is necessary. If such situations were discovered to be common, then clinicians and researchers might also want to consider intraindividual variability for each trait (Tellegen, 1998).

Finally, additional research is needed to specify whether the traits relevant for describing personality pathology can be accommodated within a bipolar framework. Specifically, this would entail investigating whether both ends of the traits can, in fact, be maladaptive in some contexts. Consider, for example, the domain of negative emotionality, which is clearly maladaptive at the highest end. Although extremely low scores on this domain could lead to problematic functioning in concept (i.e., the absence of negative emotions such as anger, sadness, or fear might lead to impairment), it is not clear how prevalent such low scores are in the population. However, even here it is suggested that some of these low scores can involve the maladaptively low anxiousness, glib charm, and fearlessness seen in psychopathic persons (Lynam & Widiger, 2007).

CONCLUSIONS AND RECOMMENDATIONS

The *DSM-5* Personality and Personality Disorders Work Group stands poised to revolutionize the assessment and diagnosis of personality pathology by including a dimensional trait model. They have an additional opportunity to take the historic step of integrating general personality traits into the clinical nomenclature. It is also possible for the committee to use a large body of empirical research on categorical and dimensional personality models to inform its deliberation. The current *DSM-5* trait proposal risks failure on both points, but this can be remedied by the inclusion of bipolar traits that recognize the sizable research literature suggesting that personality pathology can be understood as maladaptive variants of the same traits that define general personality. Such an integrated model would hold numerous advantages in terms of efficiency. A unipolar model would ostensibly require separate assessments of both maladaptive extremes of a given trait (e.g., disinhibition and compulsivity) as well as the normative or adaptive aspects of the trait (e.g., conscientiousness). In contrast, a system that acknowledges these traits as different levels of a bipolar continuum needs only to assess those levels that are relevant to a given individual. The result is an assessment that is twice as efficient for assessing pathology and potentially three times more efficient if one also assesses normal traits separately. A bipolar system that integrates adaptive personality would also be considerably more useful to clinicians, as it would provide clinically relevant information about all individuals. For example, the current unipolar *DSM-5* proposal would provide virtually no information about an individual within the adaptive range of extraversion, other

than that he or she was not introverted. In contrast, a bipolar system might recognize the individual as sociable, outgoing, and assertive and suggest meaningful ways to utilize these attributes therapeutically.

In summary, reconfiguring the current *DSM-5* proposal to reflect bipolarity would not only overcome potential limitations of the model (e.g., factor structure incongruous with previous research and incomplete coverage of personality pathology), but it would also hold numerous advantages. Perhaps most notable of these would be the formal integration of general personality assessment into the clinical context.

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