



OXFORD LIBRARY OF PSYCHOLOGY

Editor in Chief PETER E. NATHAN

The Oxford Handbook of Personality Disorders

Edited by

Thomas A. Widiger

OXFORD
UNIVERSITY PRESS

The Schedule for Nonadaptive and Adaptive Personality: A Useful Tool for Diagnosis and Classification of Personality Disorder

Eunyoe Ro, Deborah Stringer, and Lee Anna Clark

Abstract

This chapter discusses new theoretical and research developments related to the Schedule for Adaptive and Nonadaptive Personality-2 (SNAP-2; Clark, Simms, Wu, & Casillas, in press) in the context of the forthcoming *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, particularly regarding personality disorder (PD). The theoretical underpinnings of dimensional taxonomies of personality traits and PD, and between personality and psychosocial functioning, are considered first. Next, recent SNAP-2 research is reviewed, most notably in the areas of dependency, impulsivity, and schizotypy. In aggregate, the findings suggest that existing SNAP-2 scales cover significant variance in these content domains, but that a SNAP-3 would benefit by increased coverage of each, specifically active/emotional dependency, carefree/-less behavior, and schizotypal disorganization. Information about additional SNAP versions for informant ratings and adolescent personality/PD, respectively, is provided. Finally, the utility of a program of research elucidating relations between personality and functioning is presented.

Key Words: SNAP, SNAP-2, DSM-5, personality traits, personality disorder, psychosocial functioning, dependency, impulsivity, schizotypy, informant ratings, adolescent personality

As is well known, a pivotal event in the history of the diagnosis of personality disorder (PD) was the publication of the *Diagnostic and Statistical Manual of Mental Disorders*, third edition (*DSM-III*; American Psychiatric Association, 1980), which adopted a multiaxial classification system that placed PD on a separate "Axis II," distinct from "Axis I" clinical syndromes (e.g., schizophrenia, depression and anxiety disorders, and substance abuse). PD was conceptualized as a finite set of distinct categorical entities (although the inclusion of a PD–Not Otherwise Specified diagnosis actually allowed for infinite variation), which carried the implication that the diagnoses were internally homogenous natural categories, and that meaningful cross-category distinctions could be made. To

their credit, the framers of the *DSM-III* PD diagnoses acknowledged that this was not entirely true, noting that, frequently, finding "a single, specific Personality Disorder that adequately describes the individual's disturbed personality functioning... can be done only with difficulty, since many individuals exhibit features that are not limited to a single Personality Disorder" (APA, 1980, p. 306); accordingly, multiple PD diagnoses were to be made if the diagnostic criteria were met for each.

The placement of PD on a separate axis in *DSM-III* clearly had some important positive effects. In particular, more clinicians and researchers in both psychology and psychiatry became interested in personality pathology in its own right, and knowledge about PD increased dramatically over the

next 30 years. Professional and lay societies devoted to the advancement of knowledge about PD and its treatment sprung up and thrived and, for example, a conference in Berlin focused on borderline PD drew over a 1,000 attendees from around the world in 2010.

However, as a result of this explosion of knowledge, considerable evidence now challenges several key tenets of the *DSM* system: (1) That comorbidity of PD within its own Axis and with Axis I pathology are roughly equal (Clark, 2005b) challenges the notion that PD is qualitatively distinct from Axis I clinical syndromes. (2) The high degree of change found in *DSM* PD diagnoses over 2- and 4-year periods (Grilo et al., 2004; Shea et al., 2002) challenges the simple view of PD as highly stable. Perhaps most important, (3) the validity of the *DSM* PD categorical diagnoses is challenged by several robust findings: (a) There is considerable heterogeneity among individuals in each PD category and (b) within-PD comorbidity is rampant (e.g., Clark, 2007; Dolan, Evans, & Norton, 1995; Fossati et al., 2000; Widiger & Trull, 2007). (c) With the possible exception of schizotypal PD, taxometric research has found the *DSM* PDs to be dimensional rather than taxonic (Haslam, in press), and (d) sophisticated latent class analyses on a large and diverse dataset did not reveal robust PD entities (Eaton, Krueger, South, Simms, & Clark, 2011) either within or outside the *DSM* system.

Fortunately, the expansion of PD research over the past three decades also has provided information useful in developing an empirically based trait-dimensional PD diagnostic system. For example, we now know that PD can be well modeled by the same set of traits and trait structure that comprise normal range personality (see Samuel & Widiger, 2008, for a metaanalytic review), that personality and psychopathology are inherently interrelated (see Krueger & Tackett, 2006, for a review), and that both can be fit into a single integrated structure (although, admittedly, many details of the latter are yet unknown; Clark, 2005b). However, it also became clear that there were important conceptual and empirical issues that needed to be addressed in the process of implementing a fully dimensional trait-based model. We discuss each of these briefly, and then devote the rest of the chapter to describing the Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993) and its second edition, SNAP-2 (Clark, Simms, Wu, & Casillas, in press), a dimensional measure of personality traits relevant to PD.¹

Issues That Need to Be Addressed by Any Personality Disorder Model

A number of issues need to be addressed by any model for assessing PD. Whereas all of these issues encompass both conceptual and empirical aspects, we divide them for the purposes of our discussion, based on the degree of conceptual clarity and the status of measurement in the field. When the conceptual aspects of an issue remain relatively unclear and the measurement issues relatively undeveloped, we consider them conceptual challenges, whereas when the primary challenges are measurement based, we discuss them as empirical challenges.

Conceptual Challenges

PERSONALITY FUNCTIONING AND CORE PERSONALITY DISORDER PATHOLOGY

Allport (1937) theorized that “personality ‘is’ something and personality ‘does’ something” (p. 48). In the 75 years since then, work in what personality “is” (e.g., trait structural models) has dominated the field. Recently, however, interest has emerged in understanding in what personality “does,” that is, the *function* of personality and *how* personality serves to adapt individuals’ behaviors to their situations (Parker et al., 2002; Ro & Clark, 2009). The “does” aspect of personality is particularly important as there now is widespread agreement that the existence of maladaptive traits alone is insufficient for conceptualizing personality pathology (see Clark, 2007). At least three measures of personality functioning have been developed (Livesley, 2010; Parker et al., 2004; Verheul et al., 2008), but research in this area is still in its infancy, including how personality functioning relates to other kinds of psychosocial functioning and to personality traits (Ro & Clark, 2009).

The question of what constitutes personality dysfunction arises naturally upon considering the function of personality, and current conceptualizations and operationalizations of PD, including the *DSM-IV*, are inadequate with regard to the core dysfunction of PD (Livesley, Schroeder, Jackson, & Jang, 1994; Livesley, 1998). A consistent theme in the literature is that personality pathology reflects dysfunction in both the self-system and in relationships with other individuals and society in general (e.g., APA, 1994; Bender, Morey, & Skodol, 2011; Parker et al., 2002, 2004; Verheul et al., 2008), but relatively little empirical work has been done on the issue of core PD dysfunction. Moreover, although the issues of core PD dysfunction and personality traits are clearly intertwined, to date the former has been considered primarily conceptually and

the latter by empirical researchers who have largely ignored core PD dysfunction except as it is inherent in extreme traits. As a result, we lack a full understanding of—including how to assess—the fundamental, common elements that characterize malfunctioning personality in general, distinct from maladaptive-range traits, about which we know a great deal from abundant research into their empirical assessment.

Taking an evolutionary perspective, Livesley and Jang (2000) theorized that severe personality pathology reflects a tripartite failure of three adaptive systems: a “self-system” (i.e., development of a stable concept of self and, correspondingly, of others), and two “other-systems”—the capacity for close personal relations and intimacy, and the ability to function effectively at a societal level—which together lead to inability to handle major life tasks. Milder forms of personality pathology may represent either lesser degrees of dysfunction in these systems and/or dysfunction in only one or two systems rather than all three. This formulation provides a theoretical basis for linking the *functional* aspect of personality (what personality *does*) with the descriptive aspect of personality (what personality *is*, i.e., personality traits). Specifically, we can postulate that the self- and other-systems describe the functional aspect of personality, and that adaptive-range personality traits evolved evolutionarily to fulfill the functions of modulating healthy self-systems and interpersonal/social systems to develop a sense of personal cohesion and goal-oriented behavior, to form meaningful relationships, and to function at a societal level—in effect, Freud’s “lieben und arbeiten,” to love and to work.

Maladaptive-range traits interfere with successful development and thus may signal dysfunction in self and interpersonal systems. However, under certain environmental conditions, a person may develop functional self and interpersonal systems despite having maladaptive-range traits. Thus, although extreme traits are always abnormal in a statistical sense, they do not per se constitute PD, so a determination of PD requires a two-pronged assessment of personality pathology, including both maladaptive-range personality traits and impaired personality functioning (see also Livesley, 1998; Livesley et al., 1994). Given our current relatively low-level state of both conceptualization and measurement of personality (dys)function per se, attempts to work within this framework necessarily will be crude. Nonetheless, the *DSM-5* Personality and PD Work Group has incorporated this theoretical framework

into their proposed reformulation of PD diagnosis by requiring both adaptive failure in self and interpersonal domains and maladaptive traits for a PD diagnosis.

Note that this conceptualization is consistent with Wakefield’s concept of *harmful dysfunction* (Wakefield, 1992), which also takes an evolutionary perspective. In addition to such dysfunction (i.e., personality pathology characterized by maladaptive traits and personality dysfunction), Wakefield’s definition of a disorder posits that a dysfunction must also be *harmful*, meaning that it must “impinge harmfully on the person’s well-being as defined by social values and meanings” (Wakefield, 1992, p. 373). How to assess the degree of *harmfulness* is a daunting question, but one possibility is how the dysfunction is reflected in the level of individuals’ *disability*. This conceptualization aligns with another “paradigm shift” that is occurring in relation to *DSM-5*: separating assessment of psychopathology per se (i.e., dysfunction within the individual reflected in symptoms—in the case of PD, in dysfunctional self and interpersonal systems) from that of its consequences, assessed as disability.

Although information about both disability as well as symptoms may be needed for clinical decision making, confounding these two domains of individual difficulties, as they have been in *DSM-III* through *DSM-IV*, has impeded progress in understanding the underlying processes and mechanisms through which psychopathology develops and is maintained. Thus, separating their assessment is an important development in *DSM-5*. Whether both should be required for a diagnosis of disorder, as postulated by Wakefield and as is the case currently in the *DSM*, or whether disorder should be diagnosed only on the basis of dysfunction with information about harmfulness/disability used to determine the level and type of care remains an open question.

STABILITY AND INSTABILITY

Emerging empirical evidence suggests that PD may encompass not only more stable traits but also more changeable, that is, “state” elements, and both may need to be accounted for to characterize PD completely (e.g., Clark, 2007, 2009; McGlashan et al., 2005; Verheul et al., 2008; Zanarini, Frankenburg, Hennen, Reich, & Silk, 2005). However, we still lack both theoretical and measurement models for these unstable elements that may be an aspect of PD. That is, we do not yet have either a coherent conceptualization of PD that accounts for the observed instability or instruments

designed to measure these more transient elements, other than those developed to measure "Axis I" symptomatology. It may be that the instability observed in individuals with PD is epiphenomenal, for example, reflecting comorbid symptoms that are not inherent to PD, or it may be simply the result of unreliable measurement instruments. The latter possibility is suggested by the fact that, although individuals' PD diagnoses have been shown to be unstable (McGlashan et al., 2005; Shea et al., 2002; Zanarini et al., 2005), their psychosocial functioning is highly stable (Skodol, Pagano et al., 2005; see also Clark, 2009).

PERSONALITY IN RELATION TO OTHER TYPES OF PSYCHOPATHOLOGY

As mentioned earlier, it is now well established that personality can be conceptualized as foundational for a great deal of psychopathology (e.g., Clark, 2005b; Krueger & Tackett, 2006). Trait neuroticism is an extremely important personality trait, in that it is nearly a universal dimension underlying mental disorders (Lahey, 2009). Thus, it is likely that at some future point, we will develop a "grand unified theory," to borrow a term from the physicists, encompassing these interrelated domains. This future is contemplated in considerations of the "metastructure" of *DSM-5* (see Andrews et al., 2009), and it is mentioned here only to note that developing a trait-dimensional model for PD may be only the beginning of a much broader paradigm shift, so it will serve the field well to be mindful of this fact as we move forward in developing a new model for diagnosing PD.

One possibility that is suggested by juxtaposing the issue of PD stability/instability and a larger personality-psychopathology integration is that a key difference between PD and other types of psychopathology may be more quantitative than qualitative, specifically, the *relative* importance of stable personality dimensions and more transient symptoms, respectively.

MISALIGNMENT OF DSM'S PERSONALITY DISORDER DEFINITION VIA TRAITS AND DIAGNOSIS VIA CRITERIA

Many researchers have advocated replacing the current PD diagnostic system with a dimensional, trait-based system, which has been equated to a seismic shift (Widiger & Trull, 2007). However, it is interesting and important to note that, beginning with *DSM-III*, PD actually *has* been defined via personality traits—"enduring patterns of perceiving,

relating to, and thinking about the environment and oneself [that] are exhibited in a wide range of important social and personal contexts" (APA, 1980, p. 305)—a definition that would not be out of place in a personality psychology textbook. Specifically, a PD was to be diagnosed when the individual's traits "are inflexible and maladaptive...cause either significant impairment in social or occupational functioning or subjective distress...are typical of the individual's long-term functioning, and are not limited to discrete episodes of illness" (APA, 1980, p. 305).

Thus, the magnitude of a shift to a trait-based dimensional system logically would appear to lie not with the trait-based aspect per se, but with either the *particular* trait-based system to be used and/or *how* traits were used to diagnose PD. Importantly, the way in which PD has been diagnosed since *DSM-III* is not well aligned with its trait-based definition: Although recent *DSMs* defined PD via traits, they operationalized PD diagnosis using the same *criterion*-based system that is used for "Axis I" clinical syndromes. However, criterion-based measures are better suited to categorical than dimensional measurement models and, importantly, are inconsistent with typical trait dimensional measurement models, which rely on sampling reliably from the universe of potential exemplars of the target trait. Moreover, the mapping between the traits that conceptually defined varieties of PD and the diagnostic criteria that operationalized them was quite inconsistent, both within a given *DSM* version and over time across versions.

Specifically, in *DSM-III*, the traits that comprised each of what were considered individual disorders were provided only for some PDs (e.g., Paranoid), whereas for others (e.g., Dependent), they had to be inferred from the criteria. Beginning in *DSM-III-R*, the traits characteristic of each specific PD were listed before each criterion set and, further, *DSM-IV* made greater use of terminology consistent with personality-trait research. For example, *DSM-III-R* and *DSM-IV*, respectively, characterized Paranoid PD as a "tendency...to interpret the actions of people as deliberately demeaning and threatening" (APA, 1987, p. 339), and as "distrust and suspiciousness of others such that their motives are interpreted as malevolent" (APA, 2000, retrieved from online version), the latter thus using well-researched trait language that could facilitate linkage between PD and personality research. Although each new version clearly took a positive step in the direction of aligning the definition and operationalization of PD, the

alignment remains incomplete, which we consider here as a conceptual challenge. However, this issue has empirical aspects as well, to which we now turn.

Empirical Challenges

CRITERION-BASED MEASUREMENT

Since *DSM-III-R*, all PDs have been diagnosed polythetically, meaning that only a subset of the criteria (e.g., five of nine) are required for diagnosis. However, there are three empirical difficulties with this system. First, if the pattern comprising a PD contains only one element, as in Paranoid PD, then the criterion set functions like a trait scale, such that making a diagnosis of Paranoid PD is equivalent to saying that individuals endorsing four to seven (out of seven) items on the listed personality-trait scale have Paranoid PD. Typically in personality assessment, an individual's scale score must be 1.5 to 2 standard deviations above the population mean to be considered a high score, but seven-to-nine-item scales are of insufficient length to establish such cut points with adequate precision (i.e., confidence intervals) for effective clinical decision making. Moreover, the *DSM* PD cut points have been set without any reference to population norms.

Second, the characteristic pattern of most *DSM*-defined PD types encompasses multiple elements, yet individuals may be diagnosed with those PDs without exhibiting all their elements. For example, schizotypal PD includes "social and interpersonal deficits," "cognitive or perceptual distortions," and "eccentricities of behavior," yet a person can be diagnosed with this PD type through meeting criteria that characterize only the latter two traits, that is, without meeting any of the criteria that reflect social and interpersonal deficits. This is one aspect of the *DSM* system that allows the well-documented heterogeneity within a given PD diagnosis. Furthermore, the problem of measurement imprecision discussed earlier is exacerbated if the pattern comprising a particular PD type has several traits, resulting in "scales" of only two to three items per trait. Even if an individual meets the *DSM* criteria for all relevant traits, the diagnosis is based on a highly unreliable and imprecise measure.

Third, not all PD criteria are clear manifestations of the defining pattern. For example, paranoid PD's criterion 5—"bears grudges, i.e., is unforgiving of insults, injuries, or slights"—is not clearly and directly related to distrust and suspiciousness. Similarly, it is not clear how both "displays rapidly shifting and shallow expression of emotions" and "shows...exaggerated expression of emotion"

can be manifestations of "excessive emotionality." Typically, personality scale development involves several rounds of (1) trait conceptualization, (2) operationalization, and (3) data collection, analysis, and revision to create homogeneous measures of the target trait (Clark & Watson, 1995). The heterogeneity of many of the *DSM-IV* PD criterion sets suggests that the requisite research was not conducted, again contributing to the oft-observed heterogeneity within PD diagnoses. Thus, even if the *DSM-IV* diagnoses were continued in *DSM-5* with their current defining patterns and still used a criterion-based system for PD diagnosis, considerable work is needed (a) to align the criteria with the traits they are supposed to assess, (b) to ensure that an individual diagnosed with a given PD manifests *all* its component traits, and (c) to ensure reliable and valid measurement of all traits via the criteria.

INADEQUATE RANGE AND CONTENT

Owing to dissatisfaction with the inadequacies of *DSM-III* through *DSM-IV*, researchers who advocated development of a dimensional trait-based PD diagnostic system using well-established trait measurement models started exploring alternatives, including both consideration of existing dimensional approaches as well as developing potentially viable alternatives. The most widely studied and advocated existing personality trait model is the "Big Five" or Five-Factor Model (FFM), which is operationalized in two research streams: the seminal "lexical tradition," championed by John and Goldberg, and the work of Costa and McCrae (see McCrae & John, 1992, for overviews and history of both).

However, it has become clear that these models, developed to assess normal-range personality, do not—in their current forms—reflect the full range of PD-relevant personality traits in terms of either severity or content (e.g., Krueger, Eaton, Clark et al., 2011; Watson, Clark, & Chmielewski, 2008). Given the dominance of the FFM and current instruments used to assess it, one reason for the apparent reluctance of some clinicians to embrace trait-dimensional models of PD may be concern that certain clinically relevant traits (e.g., dependency) are not well represented in normal-range personality trait models. Thus, adopting such a model without modification could reduce the clinical utility of the domain.

However, it has been argued cogently that trait models that were developed originally to assess the normal range of personality could be extended in

both range and content (e.g., Widiger & Mullins-Sweatt, 2009). Indeed, the latest *DSM-5* proposal—discussed further subsequently—which was developed explicitly to focus on the maladaptive range of personality traits, arguably can be characterized as an exemplar of the FFM (Krueger, Eaton, Derringer et al., 2011). Moreover, other researchers have developed alternative instruments specifically to assess traits in the maladaptive range and, although these other measures were not developed within the FFM tradition, they have been shown to be compatible with the FFM (e.g., Clark & Livesley, 2002; Clark, Livesley, Schroeder, & Irish, 1996; Samuel, Simms, Clark, Livesley, & Widiger, 2010; Widiger, Livesley, & Clark, 2009). These include the SNAP, the measure that is the focus of this chapter and discussed subsequently in more detail. Widiger and Simonsen (2005) provide an excellent overview of all of the field's existing models and measures.

NATURE OF THE DIMENSIONALITY OF TRAITS

Another empirical measurement issue that has confronted PD assessment researchers is the nature of the dimensionality of traits comprising the model, of which there are at least five possibilities conceptually, although we are unaware of any examples of the final two (see also Krueger, Eaton, Clark et al., 2011). (1) Traits may be bipolar with regard to maladaptivity, ranging from one type of maladaptivity at one extreme through normality to another type of maladaptivity at the other extreme (e.g., a dimension ranging from extreme impulsivity through normality to extreme inhibition). (2) Traits may be bipolar in nature but unipolar with regard to maladaptivity, ranging from maladaptivity at one extreme through normality to highly adaptive (i.e., "supernormal") at the other extreme (e.g., ranging from extreme rigidity through normality to highly adaptive to changing circumstances at the other extreme). (3) Traits may be essentially unipolar in nature, ranging only from extreme maladaptivity to normality (e.g., ranging from extreme suicidality to the normal lack of suicidal ideation or impulses). We are unaware of empirical exemplars of the remaining two possibilities, so we offer them only for the sake of completeness and do not discuss them further. (4) Traits may be bipolar in nature, ranging from highly adaptive at one extreme through normality to a different kind of high adaptivity at the other extreme. (5) Traits may be unipolar in nature, ranging only from extreme high adaptivity to normality.

Conscientiousness (C) is an example of when the empirical dimensionality of a trait is

consequential. If conscientiousness fit the first model, then it would range from extreme, maladaptive "overconscientiousness"—for example, rigid perfectionism or compulsivity—through the normal range of high to low conscientiousness, and on to extreme, maladaptive "underconscientiousness," that is, irresponsible, rash behavior. In contrast, if conscientiousness fit the second model, then it would range from extreme and highly *adaptive* conscientiousness to extreme and highly *maladaptive* lack of conscientiousness (again, irresponsibility), and perfectionism/compulsivity then would represent a *different* dimension that was not simply the opposite of irresponsibility and that would have to be measured separately.

Conscientiousness might also fit the third model, ranging from extreme lack of conscientiousness (irresponsibility) up to the "normal range" of high conscientiousness, meaning that it is impossible to find indicators of very high conscientiousness (i.e., beyond 2 SDs above the population mean) *that lie on the same dimension* as extremely low and normal-range conscientiousness. In such a case, compulsivity again would have to be measured as a separate dimension.² Similar possibilities exist for the FFM domains of neuroticism, extraversion, and agreeableness, whereas evidence suggests that Openness fits the third model. Specifically, the postulation that extreme Openness is part of schizotypy has not been supported empirically. Rather, schizotypy is a sixth dimension that must be added to the FFM for comprehensive assessment of normal- and maladaptive-range personality (Watson et al., 2008).

Research into the nature of personality trait dimensionality requires using item response theory (IRT)-based approaches and is in its relative infancy. The first study of this type that we are aware of (Simms & Clark, 2005) was published only a few years ago. Simms now has a large National Institute of Mental Health-funded research grant to apply an IRT-based approach on a major scale to the full range of normal to maladaptive traits, and reports finding, to date, that most traits are *not* fully bipolar, that is, ranging from either one maladaptive pole to another, or from one type of super-normality to another. Rather, it seems that most traits have only one clearly maladaptive end, with the opposite end reaching only to low (or high—depending on the trait's valence) normalcy. Importantly, research into traits in the highly adaptive and maladaptive ranges, respectively, has been conducted largely independently, although each has been studied in relation to the normal range, so the question of whether all of the dimensional possibilities discussed earlier

exist—and which type of dimensionality characterizes which traits—remains to be explicated fully.

The SNAP

The SNAP/SNAP-2 (Clark, 1993; Clark et al., in press) is a self-report measure assessing personality traits across the adaptive-to-maladaptive range to capture personality pathology in a dimensional manner. The instrument consists of 390 items with 7 validity indices to identify response biases and other types of invalid responding, 15 trait dimensional scales that form a three-factor higher order structure of Negative Emotionality (NE; aka neuroticism)—negative temperament, mistrust, manipulateness, aggression, self-harm, eccentric perceptions, and dependency; Positive Emotionality (PE; aka extraversion)—positive temperament, exhibitionism, and entitlement versus detachment; and Disinhibition versus Constraint (DvC)—dishinhibition and impulsivity versus propriety and workaholism—as well as 10 scales to assess the *DSM-IV* PD diagnoses, scored three ways: dimensionally, by number of criteria, and dichotomously. Table 4.1 provides a brief description of each validity and trait scale. We focus only on the trait scales in this chapter.

The SNAP was developed using a “bottom-up” approach, that is, without a priori determination of the instrument’s lower or higher order dimensions, guided instead by reiterated rounds of item-pool development and empirical testing that led to item-pool revision, and so on. The original basis for scale development was trait descriptors derived from *DSM-III* and *DSM-III-R*, as well as from the clinical literature on personality pathology (see Clark, 1990), which led ultimately to 15 lower order scales. When these had been finalized, factor analyses revealed the three higher order factors named earlier. These factors have replicated clearly in college-student, community, military, and patient samples (total $N = 8,690$; Eaton et al., 2011). Thus, the SNAP corresponds well to the “Big Three” model of Eysenck (1990) and Tellegen (1985), while clarifying component lower order dimensions of these three broad higher order traits.

Simms and Clark (2006) provided a detailed introduction of the SNAP-2 (Clark et al., in press), so rather than reiterating this material, we provide this summary introduction, followed by a discussion of the SNAP in the context of the proposed *DSM-5* PD diagnostic system, and then focus on developments since the previous chapter. Specifically, we discuss recent research in our lab that was

conducted for the purpose of clarifying and furthering our understanding of the lower order facets of trait dependency (Morgan & Clark, 2010), impulsivity (Sharma, Morgan, Kohl, & Clark, unpublished data), and oddity/schizotypy/psychoticism (Stringer, Kotov, Robels, Schmidt, Watson, & Clark, unpublished data). Also, because understanding personality pathology in both developmental and interpersonal contexts is critical, we discuss two versions of the SNAP-2: The Youth version (SNAP-Y; Linde, 2001) and the Other Description Rating Form (SNAP-ORF; Harlan & Clark, 1999; Ready & Clark, 2002; Ready, Watson, & Clark, 2002) for use by informants (e.g., a spouse or friend).

Psychometric Properties

The SNAP trait scales’ internal consistency coefficients show them to be quite reliable in college, community, and patient samples, averaging .80 to .84, with ranges from .76 (manipulativeness) to .92 (negative temperament). Further, retest correlations show them to be appropriately stable: In college samples with 1–2 month retest intervals, reliability averaged .80; in community adults with retest intervals from 7 days to 4.5 months, the average was .87; short-term retest in patients was .81, whereas pre-post treatment retest correlations, averaging .70, indicated moderate change.

Gender differences that are robust across various patient and nonpatient samples have been found on negative temperament (women higher), plus disinhibition and manipulateness (men higher). In addition, community and patient women score higher on dependency and propriety, whereas community and college men score higher on impulsivity. Effect sizes are small, however, except for a medium effect size on disinhibition. Other gender differences have not replicated across sample type, but four small effects replicated in two college samples: men score higher on aggression, low self-esteem, and detachment, and lower on positive temperament.

SNAP and Dimensional Assessment of Personality Pathology in Relation to the *DSM-5*

The current *DSM-5* proposal is for five trait domains (i.e., Negative Affectivity, Detachment, Antagonism, Disinhibition vs. Compulsivity, and Psychoticism) represented by 25 trait facets (e.g., emotional lability, restricted affectivity, callousness, impulsivity, and eccentricity, respectively) as part of a more generally dimensional approach to PD diagnosis (see Skodol, Chapter 3, this volume).

Table 4.1 The SNAP-2 Trait and Validity Scale Names, Abbreviations, and Descriptions

Negative Temperament (NT)	Tendency to experience a wide range of negative emotions and to overreact to the minor stresses of daily life
Mistrust (MST)	Pervasive suspicious and cynical attitude toward other people
Manipulativeness (MAN)	Egocentric willingness to use people and to manipulate systems for personal gain without regard for others' rights or feelings
Aggression (AGG)	Frequency and intensity of anger and its behavioral expression in aggression
Self-Harm (SFH)	Two strongly related subscales: low self-esteem and suicide proneness
Eccentric Perceptions (EP)	Unusual cognitions, somatosensory perceptions, and beliefs
Dependency (DEP)	Lack of self-reliance, low self-confidence in decision-making, and preference for external locus of control
Positive Temperament (PT)	Tendency to experience a wide variety of positive emotions and to be pleasurable, actively, and effectively involved in one's life
Exhibitionism (EXH)	Overt attention seeking versus withdrawal from others' attention
Entitlement (ENT)	Unrealistically positive self-regard; the belief that one is—and should be treated as—a special person
Detachment (DET)	Emotional and interpersonal distance
Disinhibition (DvC)	Tendency to behave in an under- vs. overcontrolled manner
Impulsivity (IMP)	The specific tendency to act on a momentary basis without an overall plan
Propriety (PRO)	Preference for traditional, conservative morality vs. rejection of social rules and convention
Workaholism (WRK)	Preference for work over leisure time; perfectionism; self-imposed demands for excellence
<i>Validity Indices</i>	
Variable Response Inconsistency (VRIN)	Inconsistency related to random responding, carelessness, poor reading ability, etc.
True Response Inconsistency (TRIN)	Acquiescence vs. denial; tendency to respond "True" vs. "False," regardless of the content
Desirable Response Inconsistency (DRIN)	Tendency to respond to items on the basis of their social desirability features rather than their content
Rare Virtues (RV)	Self-presentation in a unrealistically favorable manner
Deviance (DEV)	Self-presentation as broadly deviant
Invalidity Index (II)	Overall index of profile invalidity based on five scale scores above
Back Deviance (BDEV; SNAP-2 only)	Careless, inconsistent, or deviant responding on the test's second half

Although the *DSM-5* trait set has not been finalized, its broad outlines have emerged, and, as shown in Table 4.2, the SNAP maps well onto the current proposal. Specifically, close matches exist for 21 of the 25 proposed facets, and existing SNAP scales have similar content—and are likely, therefore, to correlate moderately with—three others. Thus, the SNAP lacks only one proposed facet, Separation Insecurity, and, interestingly, this lacuna also was revealed in our own research, discussed later (Morgan & Clark, 2010).

In this context, the SNAP is one of the most comprehensive existing measures of maladaptive-range personality traits. It has strong, theory-based relations with other dimensional measures such as the Dimensional Assessment of Personality Pathology-Basic Questionnaire (DAPP-BQ; Livesley & Jackson, 2010), the MMPI-2, and different measures of the FFM (see Clark et al., in press). For example, factor analytic studies have shown that both the SNAP and DAPP-BQ correspond well to four domains (i.e., Neuroticism, Extraversion, Agreeableness, & Conscientiousness) of the FFM (Clark et al., in press; Schroeder, Wormworth, & Livesley, 1992) and that the SNAP and DAPP-BQ also overlap significantly in these four domains (Clark & Livesley, 2002; Clark, Livesley, Schroeder, & Irish, 1996; Markon, Krueger, & Watson, 2005).

In one of the most extensive PD research projects ever—the Collaborative Longitudinal Personality Study (CLPS; Gunderson et al., 2000)—the SNAP's stability and ability to predict functional outcomes was compared to that of *DSM-IV* categorical diagnoses, *DSM-IV* dimensional assessment via criteria counts, and the domains and facets of the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992). The CLPS followed patients with at least one of four major *DSM-IV* PD diagnoses (i.e., Borderline, Avoidant, Schizotypal, and Obsessive Compulsive), as well as patients diagnosed with major depressive disorder but no PD, for 10 years, repeatedly assessing personality traits (both adaptive and maladaptive-range traits), psychosocial functioning outcomes (the Global Assessment of Functioning [GAF; APA, 2000], Longitudinal Interval Follow-up Evaluation's psychosocial functioning domain, LIFE-RIFT; Keller et al., 1987), and other meaningful outcomes (e.g., depressive symptoms).

Results strongly support the SNAP's utility in this context. First, concurrently, the SNAP dimensions explained unique aspects of specific PDs (e.g., self-harm, negative temperament, and impulsivity related to Borderline PD; mistrust and eccentric perceptions

to Schizotypal PD; Morey et al., 2003). Second, the SNAP scales showed strong 10-year stability correlations, corrected for short-term dependability, ranging from .57 (Dependency) to .97 (Disinhibition) with a mean stability coefficient of .73, exactly the same as that of the NEO PI-R (Costa & McCrae, 1992). Regarding predictive validity, at 4 years post baseline, the SNAP predicted functional outcomes (the average of the GAF, LIFE-RIFT, and other indices) as well or better than either the categorical or dimensional *DSM* assessment methods or the FFM model (both domain and facet levels), and significantly incremented the explanatory power of the FFM (Morey et al., 2007). Finally, at 6, 8, and 10 years post baseline, the SNAP predicted functional outcomes as well as the *DSM* and FFM models combined (hybrid model; Morey et al., 2011).

Thus, the SNAP is one of the strongest available measures of maladaptive-range personality traits that could be used to assess the trait domains and facet dimensions proposed by the *DSM-5*. Nonetheless, it is not without limitations. For example, its facet-level coverage is comprehensive, but not complete. Moreover, it assesses only maladaptive range traits, not personality functioning per se, nor disability. In the remainder of this chapter, we describe recent research findings that help clarify what is needed at the facet level, introduce alternative versions of the SNAP, and discuss what more is needed to advance PD assessment using the SNAP.

Recent Research Findings on the SNAP

The higher order (domain) structure of personality is well understood and highly robust (e.g., Markon et al., 2005; Widiger & Simonsen, 2005), but far less is known about the lower order (facet) level, yet trait facets differentiate among various PD presentations better than do trait domains (e.g., Reynolds & Clark, 2001; Morey et al., 2002) and, accordingly, facet-level information has been shown to have greater clinical utility than the *DSM-IV* categories or domain-level traits (Samuel & Widiger, 2006; Sprock, 2002). Thus, to advance the use of traits within a PD diagnostic system, understanding and developing a comprehensive set of trait facets is a pressing need (Clark, 2007). Later we describe several studies that were conducted in this regard to clarify the SNAP's facet-level structure in trait dependency, impulsivity, and oddity.

Dependency

Dependency is a common concept among both lay people (e.g., I am dependent on her; he needs

Table 4.2 Mapping of SNAP Scales With Proposed *DSM-5* Trait Scales (as of May 2012; *DSM-5* Model Subject to Change)

SNAP Scale	<i>DSM-5</i> Domains/ Facets (<i>r</i>)	Brief Facet Definitions
Negative Affectivity		
NT	Emotional Lability (.74)	Gets very emotional easily; mood changes often without good reason
NT	Anxiousness (.79)	Worries about everything; often on edge, fears that bad things will happen
NT/ DEP	Separation Insecurity (.54/ .42)	Cannot stand being alone; fears being alone more than anything
— ^a	Perseveration	Has difficulty changing approach to tasks, even when it is not working
DEP	Submissiveness (.52)	Does whatever others say they should do
AGG	Hostility ^b (.80)	Has a very short temper, easily becomes enraged
Detachment		
DET	Restricted Affectivity ^c (.48)	Does not get emotional; any emotional reactions are brief
Self-harm	Depressivity (.77)	Feels worthless/useless, hopeless; feels life is pointless
MIS	Suspiciousness ^c (.80)	Feels like always getting a raw deal, feels betrayed, even by friends
DET	Withdrawal (.82)	Dislikes being around or spending time with others
PT	Anhedonia (-.64)	Does not enjoy life; finds nothing interesting
(DET)	Intimacy Avoidance (.42)	Is not interested in and avoids intimate, romantic relationships
Antagonism		
MAN	Manipulativeness (.63)	Sees self as good at conning others or otherwise making them do what they want
MAN/DvC	Deceitfulness (.70/ .66)	Willing to lie or cheat to get ahead or what they want
ENT	Grandiosity (.54)	Feels superior to and more important than others
EXH	Attention Seeking (.71)	Likes to draw attention, be noticed, stand out in a crowd
AGG/ DvC/ MAN	Callousness (.57/ .57/ .55)	Does not care if hurts others or their feelings
Disinhibition		
IMP/ DvC	Irresponsibility (.59/ .58)	Careless with own and others' property, does not follow through on obligations
IMP	Impulsivity (.72)	Acts on impulse without considering the consequences
WRK	Rigid Perfectionism (.53)	Insists on absolute perfection in everything, extreme orderliness
— ^a	Distractibility	Has trouble focusing on tasks; cannot concentrate
DvC/IMP	Risk Taking (.59, .55)	Likes taking risks; does dangerous things without concern

(continued)

Table 4.2 (continued)

SNAP Scale	DSM-5 Domains/ Facets (<i>r</i>)	Brief Facet Definitions
Psychoticism		
EP	Unusual Beliefs and Experiences (.73)	Sees or senses people and things that are not present and/or other paranormal experiences
EP	Cognitive/Perceptual Dysregulation (.76)	Has depersonalization, derealization, and other unusual perceptual experiences
EP	Eccentricity (.68)	Thoughts are strange and unpredictable; others find them odd or unusual

Notes: Mapping based on a combination of item content and the strongest correlations in a sample of psychiatric outpatients ($N = 202$) who completed a 25-item short form of the *Personality Inventory for DSM-5* (PID-5; Krueger, Derringer, Markon, Watson, & Skodol, 2011) at Time 1 and the full PID-5 at Time 2, 2–4 weeks later. SNAP scales in parentheses indicate similar, but not exact, content overlap. Facets in italics load the low end of the dimension. Superscripts: ^aNo direct content overlap with any one scale; negative temperament is the strongest correlate ($r = .57$ in both cases, plus mistrust correlates .58 with Perseveration). ^bDSM-5 model proposes split with antagonism; DSM-5 model proposes split with negative affectivity. AGG, aggression; DEP, dependency; DET, detachment; DvC, disinhibition versus constraint; ENT, entitlement; EXH, exhibitionism; EP, eccentric perceptions; IMP, impulsiveness; MAN, manipulativeness; MIS, mistrust; NT, negative temperament; PT, positive temperament; SE, self-esteem; WRK, workaholism.

to become more independent) and clinicians (e.g., She has dependency issues; treatment has helped him become less dependent). It also emerges as a critical component of several *DSM-IV* defined types of personality pathology (e.g., dependent PD, avoidant PD, borderline PD). However, despite the familiarity/common use of the construct, it has not been studied widely and more research is needed to understand this construct fully. Literature reviews indicate that trait dependency is subsumed most frequently under the higher order construct of Neuroticism/Negative Emotionality (N/NE; Clark et al., in press; Harkness & McNulty, 1994; Morgan & Clark, 2010). However, it relates only moderately (.40–.50) to N/NE in patient samples, with a secondary (–.20–.30) relation to Positive Emotionality/Extraversion, and relates even less strongly (–.25–.30) to N/NE in community or college samples, with no relation to PE/E. Such mild-to-moderate and differential relations across varying psychopathology levels suggest there is a great deal of specific variance in dependency that may be comprehended better by examining the trait more closely and on its own, rather than in the context of higher order factors.

Indeed, as discussed further subsequently, researchers have found evidence for lower order facets when they analyzed dependency measures alone (Morgan & Clark, in press). However, various researchers (e.g., Bornstein, 1993; Livesley & Jackson, 2010; Pincus & Wilson, 2001) have suggested multiple models of dependency that need to be reconciled in an overarching model. It also is

important to explicate the low end of the dependency continuum. For example, does a low score on dependency indicate aloofness and detachment, healthy interdependence, hostile assertion of independence, or something else?

To explicate these issues, Morgan and Clark (2010) administered six dependency measures and the SNAP to 322 college students. Factor analysis of the measures' scales and subscales identified a three-factor solution explaining 86% of the common variance, which they called Passive-Submissive Dependency (P-Submissive), Active-Emotional Dependency (A-Emotional), and Autonomy/Detachment factors. The P-Submissive factor was strongly characterized by low self-confidence and submissiveness, A-Emotional factor by emotional reliance and attachment, and Autonomy/Detachment by maladaptive detachment and strong self-sufficiency. When the factors were correlated after partialling out the SNAP Negative Temperament to remove overlap due to a general neuroticism factor, P-Submissive and A-Emotional were moderately related ($r = .41$) but largely independent of Autonomy/Detachment ($r = -.22$ and $-.26$, respectively), indicating that trait dependency has two facets, with Autonomy/Detachment a distinct dimension.

SNAP Dependency loaded the strongest on P-Submissive Dependency (.77), moderately on Autonomy/Detachment (–.33), and was basically unrelated to A-Emotional Dependency (.00). These findings indicate that SNAP-2 Dependency captures submissiveness and low self-confidence

well but lacks emotional attachment variance. Importantly, examination of the three factors' correlations with other SNAP scales revealed meaningful differential relations. P-Submissive correlated .40 with low self-esteem, $-.41$ with positive temperament, and $.38$ with negative temperament, whereas A-Emotional correlated *only* with negative temperament ($r = .50$), and Autonomy/Detachment related the most strongly with SNAP detachment ($r = .55$) and mistrust ($r = .36$) which, respectively, mark the (low) PE and NE factors.

Thus, both structural analysis of the dependency construct and differential observed correlation patterns with other traits indicate that dependency is a two-dimensional construct, with P-Submissive and A-Emotional as facets (given their moderate association after controlling NT), that the P-submissiveness component accounts for dependency's relation with higher order PE/E, and that Autonomy/Detachment is a distinct dimension. In terms of the *DSM-5* PD proposed criteria, dependency's facets P-Submissive and A-Emotional correspond to the Emotional Dysregulation facets of Submissiveness and Separation Insecurity, respectively, and Autonomy/Detachment would be a facet of higher order Detachment. These analyses also indicate that the SNAP assesses the P-Submissive facet of dependency well, and adequately covers the distinct dimension of Automomy/Detachment, but does not assess dependency's A-Emotional facet. Thus, the SNAP needs an additional scale to assess A-Emotional Dependence, and this has been added to the SNAP's future agenda.

Impulsivity

Impulsivity is one of the most frequently discussed traits among personality and psychopathology researchers. Yet the construct is still not well understood in many regards. For example, it has been considered a coherent midlevel trait dimension with various lower order facets within the broad higher order domain of disinhibition (e.g., Dickman, 1990; Patton, Stanford, & Barratt, 1995), but more recently it has been criticized as a term applied somewhat uncritically to an amalgamation of unrelated traits, each of which can be expressed as some form of impulsive behavior (e.g., Smith et al., 2007; Whiteside, Lynam, Miller, & Reynolds, 2005).

To complicate matters, whereas self-reported impulsivity measures often are bipolar, with planful behaviors marking the opposite end of the dimension, prospectively assessed impulsive and planful

behaviors themselves form separate factors (Wu & Clark, 2003). Furthermore, such clinically relevant behaviors as self-harm, binge drinking, polysubstance use, and sexual promiscuity, to name a few, commonly are considered manifestations of an individual's impulsivity. Finally, the term *impulsivity* also is used by cognitive psychologists to refer to a particular response style on neuropsychological tests, and yet scores on such tests are weakly correlated with self-reported impulsivity (White, Moffitt, Caspi, & Bartusch, 1994). Thus, the nature of impulsivity is concealed by the field's heterogeneous use of the term, so it remains a loosely defined construct with an unclear boundary and structure (e.g., Sharma, Markon, & Clark, unpublished data).

Impulsivity has been placed variously within each dimension of the "Big Three": PE/E (e.g., Eysenck & Eysenck, 1968; Guilford & Zimmerman, 1949), NE/N (e.g., Costa & McCrae, 1992), and Psychoticism/Disinhibition (e.g., Eysenck & Eysenck, 1975). That there are such varied perspectives on the construct is support for the view that the term likely is being used to denote a variety of impulsive behaviors that have distinct underlying bases. Most typically, "impulsive" behaviors are linked to disinhibition—acting on the spur of the moment in response to immediate environmental cues, without consideration of either future negative consequences or potential loss of greater rewards. Sensation seeking—the pursuit of such activities as skydiving, bungee jumping, or rock climbing—also has been studied as "impulsive" behavior. However, when considered separately from other types of "impulsive" behaviors, these behaviors are shown actually not to be impulsive, but rather often to require careful planning, and pure measures of this construct show the strongest link with positive temperament. In contrast, the tendency to engage in the clinically relevant "impulsive" behaviors mentioned earlier (e.g., self-harm, binge drinking, or substance use), which often are driven by emotional dysregulation or to ease pain or discomfort, shows the strongest correlation with NE/N.

To understand further the structure of trait and behavioral impulsivity/impulsive behaviors and their relations with other traits and types of behaviors, Sharma, Morgan, Kohl, & Clark (unpublished data) examined multiple self-reported impulsivity measures, along with a comprehensive battery of other traits, a wide range of both retrospective and prospective self-reported behaviors ranging from normal (e.g., impulse buying; arguing) to pathological (e.g., vandalism; drunken driving), and two

unobtrusive behavioral measures: noncompletion and time to completion of the study.

The findings were illuminating. First, as hypothesized, three independent trait dimensions emerged that they termed Behavioral (Dys)Control (inhibition vs. disinhibited-type impulsivity), Distractibility/Urgency (cognitive/emotionally dysregulated type impulsivity), and Sensation Seeking (risk-taking behaviors that may or may not be impulsive). Second, and not surprisingly, when these dimensions were factor analyzed together with the SNAP scales, they showed unique relational patterns with the SNAP's three higher order personality factors: Behavioral (Dys)control formed a factor with SNAP disinhibition, Distractibility/Urgency with SNAP NT, and Sensation Seeking with SNAP PT.

Furthermore, prospectively assessed behaviors yielded two factors: Carefree/-less behaviors (e.g., impulse buying, making a public scene, getting into arguments) and Planful/Organized behaviors (e.g., organizing things for tomorrow; picking up one's work/living space), whereas retrospectively assessed behaviors formed a single factor of Risky/Externalizing behaviors (e.g., damaging property; starting a fight). Finally, the three trait impulsivity dimensions formed a relatively clean convergent-discriminant pattern with the three behavioral factors: Behavioral (Dys)control and Planful/Organized behavior each correlated most strongly with each other ($r = .32$); Distractibility/Urgency and Carefree/-less behaviors each correlated modestly but most strongly with each other ($r = .23$); and Sensation-Seeking and Risky/Externalizing behaviors were each other's strongest correlates ($r = .37$). These results thus simultaneously support the three-factor structure of the SNAP and of impulsive behaviors.

The study findings also contributed to the ongoing construct validation of the SNAP's scales. Specifically, scales in the PE/E domain (positive temperament and exhibitionism vs. detachment) and also those marking Constraint (workaholicism and propriety) correlated most strongly with the Planful/Organized behavior factor, and negative temperament correlated most strongly with the Carefree/-less behavior factors, whereas Disinhibition domain scales (e.g., impulsivity) or those that split between NT/N and Disinhibition (e.g., manipulateness, aggression) correlated most strongly with the Risky/Externalizing behaviors, as well as, in some cases, the Carefree/-less behavior factor. The generally less strong associations of the SNAP scales with the Carefree/-less behaviors may be because the SNAP's

focus is on maladaptive-range traits, whereas the Carefree/-less behaviors were at the high end of the normal range.

It is noteworthy that the proposed, *DSM-5* structure's higher order dimension of Disinhibition includes all the facets that the Sharma, Morgan, Kohl, & Clark (unpublished data) results show can be distinguished: (1) impulsivity and irresponsibility, (2) risk taking versus (3) rigid perfectionism corresponding, respectively, with Carefree/-less, Risk-taking/Externalizing, and Planful/Organized behaviors. It will be interesting to investigate whether the proposed facets of Disinhibition in the *DSM-5* show the same differential behavioral correlates as does the SNAP.

Oddity/Schizotypy

A Big-Four model of maladaptive personality traits similar to that described by Watson, Clark, and Harkness (1994) has gained wide acceptance among clinical personologists including NE/N, low PE/E, Antagonism/low Agreeableness (A), and Disinhibition/low Conscientiousness (C) (see Tackett, Silberschmidt, Krueger, & Sponheim, 2008, and Watson, Clark, & Chmielewski, 2008 for recent discussions). As these researchers have noted, however, the Big-Four model does not include content directly related to the perceptual oddities and magical thinking that characterize *DSM-IV* cluster A PDs, especially schizotypal PD.

Using a mixed sample of community adults and relatives of probands with bipolar disorder or schizophrenia, Tackett, Silberschmidt, and colleagues (2008) assessed the Big-Four model using the DAPP-BQ and assessed traits related to schizotypal PD using several additional measures related to cluster A, including odd perceptual experiences, magical thinking, suspiciousness, disorganized behavior, social anxiety, and lack of pleasure in social interactions and physical sensations (Tackett, Silberschmidt, et al., 2008). A factor analysis yielded a five-factor solution; three of which reflected maladaptive Big Four domains, which they labeled introversion (low PE/E; detachment), emotional dysregulation (N), and antagonism. The remaining factors were a singlet, DAPP-BQ compulsivity, and one they labeled "peculiarity," marked by material related to magical thinking, perceptual oddities, referential suspiciousness, and unusual behavior (Tackett, Silberschmidt, et al., 2008, p. 454). We have referred to a very similar trait as "oddity" (p. 1545) and use this term hereafter. Some cluster A content did not load on this dimension, however; material related to social

anxiety loaded on emotional dysregulation and introversion, and material related to lack of pleasure in physical and social experiences loaded on introversion (Tackett, Silberschmidt, et al., 2008).

Chmielewski and Watson (2008) found conceptually compatible results regarding the oddity construct. In an item-level factor analysis of the Schizotypal Personality Questionnaire (Raine, 1991), they extracted five modestly to moderately intercorrelated factors: social anhedonia, social anxiety, eccentricity/oddity, mistrust, and unusual beliefs and experiences that correlated only minimally to moderately with Big Five domains: Social anxiety was related to both N and E ($r = .46$ and $-.61$, respectively), mistrust was related to N ($r = .38$), eccentricity/oddity's strongest correlate was low C ($-.31$), and unusual beliefs/experiences' strongest correlate was Openness ($r = .15$) (Chmielewski & Watson, 2008). Thus, it appears that whereas broader aspects of Cluster A pathology may be assessed adequately by the Big Four or Five, the oddity component per se is not. Indeed, when Watson et al. (2008) factor analyzed a comprehensive battery of trait scales, including multiple markers of the Big Five and also oddity, a six-factor solution—the FFM + oddity—fit best.

As part of the proposed *DSM-5* system of PD trait domains, content that is related to oddity is subsumed by the "psychoticism" dimension (Krueger, Eaton, Derringer et al., 2011), with three facets: unusual beliefs and experience, cognitive and dysregulation, and eccentricity (see Table 4.2). However, as is true of other traits as well, the role of oddity may not be limited to PD. In a recent combined analysis of Axis I and Axis II symptom markers, Markon (2010) found a "thought disorder" (p. 273) factor that combined oddity with detachment, inflexibility, disorganized attachment, and hostility content. Moreover, magical thinking and odd perceptual experiences have been shown to have relations with trait dissociation and unusual sleep experiences (e.g., vivid dreams, blurring of the sleep-wake boundary; Watson, 2001) that are strong enough to suggest that they may form part of the same trait domain (e.g., Cicero & Kerns, 2010; Watson, 2001; see Koffel & Watson, 2009, for a review). Given the significant overlap between oddity and the proposed *DSM-5* psychoticism trait domain, as well as observed relations of oddity with other types of psychopathology, continued study of the structure and boundaries of this complex of correlated traits will be important for the empirical refinement of not only the domain of personality

and a PD taxonomy but also for understanding the broader structure of psychopathology.

STUDIES OF ODDITY/PECULIARITY WITH THE SNAP

Several studies have used the SNAP to assess oddity or to help establish the location of oddity in the full personality space. Eccentric Perceptions (EP) is the SNAP scale with content most directly related to the oddity construct. High scorers on EP endorse unusual sensory experiences (e.g., transient feelings that the body or environment is unusual; synesthesia) and unusual beliefs (e.g., endorsement of special abilities, such as ESP). Content related to suspiciousness, assessed by SNAP Mistrust (MST), also has been found repeatedly to characterize oddity factors (e.g., Chmielewski & Watson, 2008; Tackett, Silberschmidt, et al., 2008; Watson et al., 2008). High MST scorers endorse a reluctance to share their thoughts and feelings, a sense of alienation from others, including close friends, and an impression that they often are mistreated (Clark et al., in press). As noted earlier, social avoidance and limited affective range also characterize *DSM-IV* schizoid and schizotypal PDs, assessed in the SNAP by detachment and low positive temperament, respectively. This content is typically related to low PE/E, and its relation to a broader oddity (or thought disorder) factor appears to vary dependent on the level and breadth of analysis, and thus remains an open question (Chmielewski & Watson, 2008; Markon, 2010; Tackett, Silberschmidt, et al., 2008).

Watson and colleagues (2008) reported on a hierarchical exploratory factor reanalysis of one of Markon and colleagues' (2005) samples—which included a variety of Big Three and Big Five measures, including the full SNAP—plus measures of dissociation. The two-through-five-factor solutions were quite similar to those of Markon and colleagues (2005). In particular, the five-factor solution was parallel to the Big Five, including an openness-like factor, with all dissociation measures and SNAP EP loading on this factor. In the six-factor solution, however, dissociation and EP split from openness to form a separate oddity factor, and even when rotated obliquely, the oddity and openness factors correlated only minimally (i.e., $r = .14$). However, when the oddity and openness measures alone were examined in a confirmatory two-factor model, although all openness and oddity measures loaded on separate factors, respectively, the factors correlated moderately strongly ($r = .54$) (Watson et

al., 2008). The strongest marker of the oddity factor was EP, with MST a moderate marker, confirming empirically the content-based hypotheses we made earlier about relations between SNAP scales and the oddity domain.

Most recently, Stringer and colleagues (unpublished data) completed two studies of the oddity domain that included SNAP scales. In the first, a large sample of college students completed a large number of measures of magical thinking, unusual perceptions, dissociation (including unusual sleep experiences), suspiciousness, social anxiety, limited enjoyment of social interactions, limited subjective experience of affect, and obsessive compulsive symptoms, plus SNAP MST and EP. They fit a variety of confirmatory models to this content, and the best-fitting model had five factors: Suspiciousness, Positive Schizotypy, Obsessive-Compulsive Traits, Dissociation, and Negative Schizotypy. SNAP EP was a strong marker of Positive Schizotypy, MST was a strong marker of Suspiciousness, and DET was a strong marker of Negative Schizotypy. Dissociation and Positive Schizotypy were strongly correlated ($r > .80$) and appeared to form the core of an oddity domain, supporting Watson's (2001) results. Suspiciousness correlated strongly (r s in the .60s) with both Dissociation and Positive Schizotypy, supporting earlier results that suggested it is part of the oddity domain. Although Obsessive-Compulsive Traits and Negative Schizotypy each had one strong relation to an oddity construct, they appear more tangentially related to the domain. Thus, this study replicates Watson and colleagues' (2008) finding that EP and MST clearly mark aspects of the oddity domain.

In a second study of the oddity domain, Stringer and colleagues (unpublished data) performed a factor analysis of items that tapped magical thinking, perceptual oddities, cognitive disorganization, obsessive-compulsive traits, and openness to experience in a large undergraduate sample; a subsample completed the full SNAP. This item-level analysis yielded a four-factor solution: General Oddity (primarily magical thinking, perceptual oddity and dissociation content, plus openness items that assessed similar content), Checking (OCD obsessions and checking content), Distractibility (cognitive disorganization content), and Intellectual Interests (openness/intellectance content). When unit-weighted scales were derived from the items that loaded most strongly on each factor, the Distractibility and General Oddity scales correlated most strongly ($r = .55$), Checking was modestly to moderately related to both domains, and Intellectual Interests

was unrelated to the other scales except for a .35 correlation with Distractibility. Thus, it appeared that Distractibility and General Oddity formed the core of oddity in this study.

When the scales were factor-analyzed with the SNAP, the usual three-factor model emerged, with three oddity markers loading between .50 and .60 onto the NE factor, whereas Intellectual Interests loaded moderately on PE; none related to DvC. General Oddity correlated most strongly with EP, whereas Distractibility related most strongly to MST and Negative Temperament, again confirming Watson and colleagues' (2008) finding among the SNAP scales, that EP and MST measure content that is most related to the oddity domain.

Alternate Forms of the SNAP ***SNAP Informant Rating Form***

Personality pathology research commonly relies on participants' reports of their own feelings and behaviors. Self- and acquaintance report on personality traits, however, correlate at best moderately (e.g., Fiedler, Oltmanns, & Turkheimer, 2004; Klonsky, Oltmanns, & Turkheimer, 2002; Oltmanns & Turkheimer, 2006) and correlations between even spousal reports rarely exceed .60 (Watson, Hubbard, & Weise, 2000). Thus, informant ratings can provide distinct information about patients' personality and psychopathology that can improve diagnostic accuracy (e.g., Hill, Fudge, Harrington, Pickles, & Rutter, 1995; Zimmerman, Pfohl, Stangl, & Corenthal, 1986) and explain additional variance in outcomes (e.g., Oltmanns & Turkheimer, 2006; Ready, Watson, & Clark, 2002). Also, from a psychometric perspective, aggregation of multiple informant reports increases reliability (Oltmanns & Turkheimer, 2006; Vazire, 2006). Thus, for multiple reasons, it clearly is better to obtain information from multiple sources.

To obtain others' reports on individuals' personality traits, the SNAP Collateral Report Version (SNAP-CRV; Ready, Clark, Watson, & Westerhouse, 2000) was developed first. The SNAP-CRV was a direct "translation" of the original SNAP's 375 items, with items changed from first to third person and adjustments made so that items read naturally. The SNAP-CRV yielded agreement correlations with full SNAP self-reports ranging from .22 to .68 ($M_r = .47$). However, the SNAP-CRV may be too lengthy and time consuming for routine use, so an alternative format, the SNAP-Other-description Rating Form (SNAP-ORF; Harlan & Clark, 1999; Ready & Clark, 2002), was developed.

The SNAP-ORF consists of 33 items, with each being a brief paragraph containing descriptions of the high and low end of a trait dimension. Informants—typically a person who knows the target person well—rate the degree to which the ratee's personality fits the high or low end of each dimension using a Likert-type format (see Table 4.3 for sample items). Each SNAP scale is represented by two to three items, except eccentric perceptions, which has only one item. Given the smaller number of items, the scales are naturally less reliable than the full SNAP scales but still acceptable: Average coefficient α in a sample of friends/relatives of psychiatric patients was .74 (range = .44 to .86; Ready & Clark, 2002), and in a sample of college students' parents it was .67 (range = .44 to .77; Harlan & Clark, 1999). Interestingly, scale reliability for the students themselves, who completed the SNAP-Self-Description Rating Form (SNAP-SRF), a self-report version of the SNAP-ORF, was slightly lower: *Mean* α = .56, range = .44 to .76.

Self-informant agreement between the SNAP-ORF and SNAP averaged .35 (range = -.02 to .61)

in the psychiatric patient sample (Ready & Clark, 2002). Agreement was low for mistrust, manipulativeness, and entitlement, and high on aggression, positive temperament, and self-harm. Agreement was somewhat lower between the college students and their mothers: *M* = .23, range = .14 to .48, with, again, low agreement on mistrust and manipulativeness, and also negative temperament, and the highest agreement on exhibitionism, impulsivity, and workaholism (Harlan & Clark, 1999). This lower agreement level may indicate that parents are somewhat unaware of how their children's personalities may have evolved since leaving home for college, or it may be a function of the fact that the students' self-ratings were made on the SNAP-Self-Description Rating Form (SNAP-SRF), which is less reliable than the full SNAP, which the patients used.

The overlap in the scales with the least good agreement likely indicates traits that are difficult for observers to rate (e.g., mistrustful individuals may keep this information to themselves), whereas the differences in the samples' results regarding the

Table 4.3 Sample Items From the SNAP-Other-Description Rating Form (SNAP-ORF) and SNAP Abbreviated Self-Description Rating Form (SNAP-ASRF)

For both measures, the rating scale is as follows:

6	5	4	3	2	1
Very much like high end	Somewhat like high end	A little like high end	A little like low end	Somewhat like low end	Very much like low end

SNAP-ORF

3. Moodiness, a Facet of Negative Temperament

People HIGH on this trait are moody; they often feel angry, scared, nervous, or guilty without always knowing why. Their mood often changes quickly for no apparent reason.

People LOW on the trait are not at all moody; they are even-tempered people who rarely have strong negative feelings.

8. Attention Seeking, a Facet of Exhibitionism

People HIGH on this trait like being the center of attention. They dress to turn heads, act in ways that will get noticed, and like to be talked about.

People LOW on this trait prefer to be on the edge of things and to blend in with the crowd, so they behave in ways to avoid being noticed.

SNAP-ASRF

PEOPLE ON THE HIGH END OF TRAIT (ARE):			PEOPLE ON THE LOW END OF TRAIT (ARE):		
3	Very moody/ often angry, scared, guilty, and/or nervous	6 5 4 3 2 1	Even tempered/ rarely experience strong negative moods		
8	Attention seeking/ like the spotlight	6 5 4 3 2 1	Prefer to blend in with the crowd/ dislike being noticed		

scales with good agreement may reflect which traits are most salient—and show greater variation—in the rated population. That is, among patients, aggression, positive temperament, and self-harm are likely to vary widely and to be salient when high (or very low for positive temperament). In contrast, traits that can affect the quality of college students' school work, such as impulsivity and workaholism, are more likely salient, as well as widely varying, in that population. Furthermore, visible traits, such as exhibitionism, are known to have higher agreement (see Watson et al., 2000). Finally, an abbreviated form of the SNAP-SRF and –ORF has just been developed with a very brief description for each item (see Table 4.3 for sample items). Ongoing studies are evaluating the measure's psychometric properties and other aspects of construct validity.

SNAP-Youth Version

To adapt an adult personality instrument for adolescent use, it is necessary to ensure a degree of continuity between adolescent and adult personality. Recently, a great deal of research has been published on normative trajectories of personality development (e.g., Roberts, Walton, & Viechtbauer, 2006), the level stability of personality through the life course (e.g., Roberts & DelVecchio, 2000; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007), and the structure of personality in childhood and adolescence (e.g., Tackett, Krueger, Iacono, & McGue, 2008).

In parallel to adult findings, this emerging research indicates that adolescent personality has strong relations to psychopathology (e.g., De Bolle et al., 2009; De Clercq, Van Leeuwen, De Fruyt, Van Hiel, & Mervielde, 2008; De Clercq, Van Leeuwen, Van den Noortgate, De Bolle, & De Fruyt, 2009; Nigg et al., 2002; see De Pauw & Mervielde, 2010 and Tackett, 2006 for reviews) as well as being associated with other life outcomes (e.g., Dennissen, Asendorpf, & van Aken, 2007). Thus, child/adolescent personality should have utility for informing the diagnosis of PD and other psychopathology, as well as in predicting adaptation to adult roles.

Child and adolescent personality evinces moderate to strong rank-order stability (De Fruyt et al., 2006; Hampson, Andrews, Barckley, & Peterson, 2007; Roberts & DelVecchio, 2000). For example, parental ratings of children's personality at age 11 had theoretically expected convergent/discriminant relations with adolescent personality self-report at age 17 although, not unexpectedly, stability was somewhat attenuated by the use of a

cross-informant design (Tackett, Krueger, et al., 2008). Moreover, child and adolescent personality appear to be important predictors of adult personality (see Clark, 2005a, 2005b for reviews). A recent meta-analysis (Roberts et al., 2006) examined normative mean-level personality changes between adolescence and adulthood, and found significant, though small-effect, mean-level changes in personality during the adolescent years: Social dominance increased and neuroticism decreased. In addition to these nomothetic changes, however, a recent study found latent classes of personality trajectory in adolescent and young adult girls, highlighting that the course of personality development is not uniform for all individuals (Johnson, Hicks, McGue, & Iacono, 2007).

The personality structures that emerge in children and adolescents are highly similar to those of adults. In fact, the FFM itself was developed in large part based on ratings of children (see Digman, 1994, for a history). Although exceptions can be found (e.g., John, Caspi, Robins, Moffitt, & Stouthamer-Loeber, 1994, reported a seven-factor structure in maternal reports of adolescent male personality, with N and E each splitting into two smaller factors), in general the FFM is evident in adolescent self-reports as well as teacher and parent reports (e.g., Laidra, Allik, Harro, Merenäkk, & Harro, 2006; Soto, John, Gosling, & Potter, 2008). The reliability and validity of self-report in young adolescents has been questioned historically (see Hendriks, Kuyper, Offringa, & Van der Werf, 2008, and Soto et al., 2008 for reviews), but it appears that data from younger and also less intellectually able adolescents yields structures that are similar to those of older and more intellectually able adolescents, although the structure of the former youths' self-reports was somewhat less differentiated and internally consistent than the latter.

Furthermore, the hierarchical structure of maladaptive personality traits in children and adolescents (e.g., De Clercq, De Fruyt, Van Leeuwen, & Mervielde, 2006) largely—though not entirely—mirrors that found in adults (Markon et al., 2005). The structure was most similar to that found in adults at the four-factor level (e.g., see Watson, Clark, & Harkness' 1994 review): neuroticism, introversion, disagreeableness, and compulsivity (vs. irresponsibility). Tackett, Krueger, and colleagues (2008) performed a similar analysis with normal-range personality in 11-year-olds, with quite comparable results. Thus, with sensitivity to developmental issues, including language ability

and differing life circumstances, it appears that adult personality models can be applied informatively to adolescents. In this context we describe the development and initial validation of the Schedule for Nonadaptive and Adaptive Personality—Youth Version (SNAP-Y; Linde, 2001), an instrument for assessing adolescent personality based on the SNAP(-2).

DESCRIPTION

The SNAP-Y is an adaptation of the adult SNAP designed to measure the SNAP's trait dimensions and validity scales, in youth ages 12–18. The reading level of the adult SNAP is approximately sixth grade, so the language is accessible to most adolescents. Nonetheless, the word-choice and phrasing of some SNAP items were simplified; others were altered to explain idioms or referents, to make the items age-appropriate (e.g., substituting "at school" for "at work"), or to modify the time frame (e.g., "*As a kid*, I often *used* whatever I *could* find as a weapon" became "I often *use* whatever I *can* find as a weapon") (Linde, 2001).

SNAP-Y FINDINGS IN COMMUNITY YOUTH

Linde (2001) administered the SNAP-Y to 381 youth, aged 12 to 18 years, who were recruited from a middle school and high school in semirural Midwestern United States. Eleven to 12 days later, a subsample participated in a second testing session: 149 participants repeated the SNAP-Y and 140 participants took the MMPI-A (Butcher et al., 1992), an adaptation of the adult MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989). Data from 364 (204 female, 160 male) time 1 protocols were usable (others evidenced invalid response patterns or many missing items), 128 had valid MMPI-A results, and 144 produced usable SNAP-Y retests. Mean age was 14.5 ± 1.7 years; median grade in school was ninth.

The internal consistency of the SNAP-Y scales (median Cronbach's $\alpha = .83$; range = .73–.89; Linde, 2001) was comparable to the SNAP in, respectively, samples of high school ($\alpha = .81$, range = .76–.88, $N = 102$; Clark, 1993) and college students ($\alpha = .82$, range = .77–.91, $N = 3026$), and community adults ($\alpha = .83$, range = .76–.92; $N = 561$; Clark et al., in press). The short-term retest reliability of the SNAP-Y scales averaged .77 (range = .71–.86; Linde, 2001), which also is comparable to SNAP 1-month retest correlations in a college student sample (median $r = .81$; range .68–.91; $N = 63$; Clark, 1993).

Overall, adolescent means on the SNAP-Y scales were slightly deviant compared to community adults.

In female adolescents, average trait scores were within 1.0 standard deviation (SD) of adult SNAP norms (which are nongendered), whereas in male adolescents, three T -scores—manipulativeness, aggression, and disinhibition—were more than 1.0 SD higher than the corresponding adult norms. College student scale scores on the SNAP-Y followed a similar pattern relative to community adults, but, as might be expected, the magnitude of the difference between adults and college students is less than that between adults and youth. Overall, then, SNAP-Y results appear to document a trend toward maturation in mean-level trait scores from adolescence to young adulthood to community adult.

When the SNAP-Y trait and temperament scales were subjected to a principal factor analysis with varimax rotation, the usual SNAP three-factor solution emerged, although DvC emerged first, followed by NT/N and PT/E factor (Linde, 2001). Quantifying the similarity, convergent factor-score correlations ranged from .96 to .99 between college students and adolescents, and mean discriminant factor-score correlations all were $< |.10|$ (Linde, 2001).

To establish the SNAP-Y scale's external validity, the trait dimensions were analyzed in relation to the MMPI-A clinical scales. Consistent with theory, negative temperament and correlated trait scales (e.g., mistrust, manipulateness, aggression, and self-harm) accounted for most of the moderate-to-large correlations with the MMPI-A clinical scales, although disinhibition, detachment, and [low] positive temperament also related moderately to strongly to a number of MMPI-A clinical scales. In contrast, exhibitionism, entitlement, workaholism, and dependency correlated $< |.37|$ with all MMPI-A clinical scales, indicating they assess variance not tapped by these scales. In contrast, all MMPI-A clinical scales (except Masculinity-Femininity), correlated $\geq .40$ with at least three SNAP-Y trait and temperament scales. Thus, the SNAP-Y assesses a somewhat broader set of traits than the MMPI-A (Linde, 2001).

SNAP-Y FINDINGS IN CLINICAL YOUTH

The SNAP-Y clinical validation sample consisted of 103 youth (62 female, 41 male) who received services at a research and training clinic at a large public university in a small Midwestern city. As part of an intake evaluation, these youth completed the SNAP-Y and 97 also completed the MMPI-A (Linde, 2001).

Average age was 14.7 ± 1.4 years. Most of the sample (80.6%) was referred by Youth Homes, a local emergency shelter for youth with emotional or

behavioral problems and/or dangerous home situations. Additionally, the vast majority (93.2%) was referred for assessment or court-ordered evaluation rather than for treatment. A slight majority (55%) had previous documented mental health contact, and at least 12% had received psychiatric hospitalization at least once (due to inconsistent recording, actual percentages may be higher). Mean IQ score was 95.8, with no verbal–performance IQ difference (Linde, 2001).

Compared to the community adolescent norms, clinical boys had significantly higher scores on self-harm, and clinical girls had significantly higher scores on both aggression and self-harm, all with medium effect size. Moreover, the correlational structure of the trait scales in the clinical and community samples were comparable ($r = .93$; a factor analysis was not conducted on the clinical sample's data, given the small sample size). Overall, these results indicate that the clinical and community samples were broadly comparable on most SNAP-Y traits, although, unsurprisingly, the clinical sample scored somewhat higher on a few dimensions of nonadaptive personality (Linde, 2001).

As in the community sample, SNAP-Y trait dimensions were examined in relation to MMPI-A clinical scales and, again, the correlational pattern was quite similar to that in the community sample: All MMPI-A clinical scales (except Masculinity-Femininity) correlated moderately to highly with several SNAP-Y scales, whereas several SNAP-Y scales, including Exhibitionism, Entitlement, Propriety, and Workaholism, correlated $< .35$ with all MMPI-A clinical scales. In sum, the SNAP-Y functions similarly in community and clinical samples.

Conclusion

In this chapter, we have discussed the SNAP in the context of the *DSM* revision, for which a dimensional approach to PD diagnosis has been proposed. From our perspective, such change is a great improvement from previous versions of the *DSM*. The SNAP and other dimensional trait measures (e.g., DAPP-BQ, NEO PI-R) all contributed to this process by providing tools to map out trait dimensions that show general convergence with the Big Four higher order factors (Neuroticism, Extraversion, Agreeableness, and Conscientiousness). To move the field forward, however, it is now necessary to understand the lower order facets of these higher order traits. To this end, we have reviewed our efforts to clarify the facets—and their associations with other traits—of dependency (Morgan & Clark, 2010), impulsivity

(Sharma, Morgan, Kohl, & Clark, unpublished data), and oddity (Stringer et al., unpublished data). Each study methodically used existing measures of the target constructs and conducted exploratory and/or confirmatory factor analyses with and without the SNAP scales. Results help clarify and advance our understanding of personality's facet-level structure.

Specifically, (1) *dependency* has been shown to consist of two correlated factors: passive-submissive and active-emotional; (2) *impulsivity* has been found not to be a single personality dimension, but rather to reflect a variety of impulsive behaviors that stem from distinct underlying traits, specifically (a) disinhibition (reacting to environmental stimuli on the spur of the moment, without consideration of negative consequences or potential loss of rewards), (b) emotional dysregulation/negative emotionality that underlies clinically relevant behaviors such as self-harm or binge drinking, insofar as they represents attempts to regulate distressing emotions or to ease psychic pain and discomfort, and (c) extraverted sensation seeking that underlies risk-taking behavior; and (3) *oddity* has been shown to have core components of unusual perceptions and beliefs as well as mistrust and dissociative experiences, all of which are distinct from FFM Openness but are subsumed under the general domain of NE/N.

These studies are informative because the *DSM-5* Work Group proposal offers both higher order domain and lower order facets for consideration. The dependency, impulsivity, and oddity facets that emerged in our studies are to a certain degree consistent with those currently proposed in the *DSM-5*. Nonetheless, some content is not explicitly assessed by the SNAP. Specifically, the SNAP dependency scale assesses largely the passive-submissive facet, so a scale assessing the active-emotional facet is needed. SNAP impulsivity is largely related to disinhibition in the SNAP, whereas emotionally dysregulated impulsive behaviors and risky sensation seeking are assessed only indirectly and also need to be added for comprehensive coverage. Finally, whether all three facets proposed for the *DSM-5* Schizotypy domain are assessed by SNAP eccentric perceptions requires clarification.

Future Directions

Based on this review of the SNAP, particularly in the context of the *DSM-5*, we can delineate several important future research directions. First, a critical step is to move beyond trait structure and to clarify, identify, and develop assessments of the core

dysfunction in PD, distinct from both personality traits and disability (to use the terminology of the World Health Organization [WHO] in its International Classification of Functioning, Disability, and Health [ICF; WHO, 2001] with which the *DSM-5* is attempting to align). Our understanding—and ability to assess—core personality dysfunction is still rudimentary, and such assessment may need to be qualitatively different from measuring the core dysfunction of such common mental disorders as depression or anxiety, in which the dysfunction is manifested in symptoms. To date, personality dysfunction has been assessed primarily via extremity on trait dimensions, but, largely within the last decade, researchers have realized the need to differentiate maladaptive-range trait manifestations from core dysfunction. For example, an individual lacking social interactions will score low on commonly used measures of social disability that inquire about social activities, number of friends, and perhaps satisfaction with one's social life. However, to determine whether the lack of social interaction is related to the core dysfunction of personality pathology, we need to delve deeper: First, lack of social interaction also could be related to depression, severe drug abuse, or schizophrenia and, second, in the context of extreme traits, lack of social interaction may also emerge if the person has low social concordance (i.e., disagreeableness), high detachment, or disinhibition, alienating others through irresponsibility. However, the field is just beginning to ask what distinguishes extreme disagreeableness (or detachment, disinhibition, etc.) alone from personality pathology that is expressed through individuals' disagreeableness (or detachment, etc.).

Thus, personality pathology researchers are starting to undertake interesting and challenging research into how to assess impaired personality functioning distinct from personality traits per se. That is, PD researchers have begun to seek to develop *personality functioning* measures that assess not extreme traits, but the core of personality dysfunction itself. In the context of such efforts, several *personality functioning* measures have been developed and their construct validity is being explored, specifically the Measure of Disordered Personality Functioning (Parker et al., 2004), Severity Indices of Personality Pathology (Verheul et al., 2008), and General Assessment of Personality Dysfunction (GAPD; Livesley, 2010). To date, as far as we are aware, only two studies have been conducted, and only one published, that compare any two, let alone all three of these measures, as well as measure personality traits. Thus, future studies in this domain are critically necessary to learn

how to capture personality dysfunction per se, in addition to maladaptive traits.

In addition, an important challenge for the field is to demonstrate the clinical utility of dimensional assessments of trait and dysfunction, particularly in terms of generating clinically meaningful information but also considering their accessibility and ease of use for clinicians. Although dimensional assessments using facet-level information have been shown to provide useful clinical information (Samuel & Widiger, 2006; Sprock, 2002), ease of use is still a concern for many clinicians. Some of the uneasiness stems from unfamiliarity, which can be overcome with education. Criterion-based diagnosis was unfamiliar when *DSM-III* was published in 1980 and both APAs launched massive educational efforts for their constituents. Similar efforts will be needed if the dimensional revolution of *DSM-5* is to be successful.

However, it is also the case that these new PD dimensional models need testing and refinement. To this end, our lab is currently conducting a 5-year study that will (1) identify comprehensive sets of personality traits/facets and personality dysfunction required to assess PD, (2) explore how best to combine the trait and dysfunction information to derive PD diagnoses, (3) examine the role of disability in making PD diagnoses, and (4) examine the clinical utility of this multipronged assessment of PD by working with referring clinicians. We also will be assessing personality traits and dysfunction, and disability using both self- and informant ratings and exploring how best to integrate these different sources of information. Data collection on this project began in December 2010, but we are hopeful that preliminary study findings will be available to help guide PD diagnosis in *DSM-5.0*, and certainly will contribute to *DSM-5.1* and beyond.

Acknowledgments

Portions of work presented in this chapter were supported by grants from the University of Minnesota Press. We thank Theresa Morgan and Leigh Sharma for providing research findings covered herein.

Notes

1. Throughout this chapter, we refer to both versions as simply the SNAP, except where it is important to discriminate between them.

2. Theoretically, it also could fit the fifth model by ranging from extremely high, adaptive conscientiousness only to the normal range of low conscientiousness, in which case both extreme irresponsibility and compulsivity would represent

distinct dimensions that were not the opposite of either each other or of conscientiousness, but this has not proven to be the case empirically.

References

- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., text rev.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Andrews, G., Goldberg, D. P., Krueger, R. F., Carpenter, W. T., Jr., Hyman, S. E., Sachdev, P., & Pine, D. S. (2009). Exploring the feasibility of a meta-structure for DSM-5 and ICD-11: Could it improve utility and validity? *Psychological Medicine*, 39(12), 1993–2000.
- Bender, D. S., Morey, L. C., & Skodol, A. E. (2011). Toward a model for assessing level of personality functioning in DSM-5, Part I: A review of theory and Methods. *Journal of Personality Assessment*, 93, 332–346.
- Bornstein, R. F. (1993). *The dependent personality*. New York: Guilford Press.
- Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A., & Kaemmer, B. (1989). *Minnesota Multiphasic Personality Inventory-2 (MMPI-2): Manual for administration and scoring*. Minneapolis: University of Minnesota Press.
- Butcher, J. N., Williams, C. L., Graham, J. R., Archer, R. P., Tellegen, A., Ben-Porath, Y. S., & Kaemmer, B. (1992). *Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A): Manual for administration, scoring, and interpretation*. Minneapolis: University of Minnesota Press.
- Chmielewski, M., & Watson, D. (2008). The heterogeneous structure of schizotypal personality disorder: Item-level factors of the schizotypal personality questionnaire and their associations with obsessive-compulsive disorder symptoms, dissociative tendencies, and normal personality. *Journal of Abnormal Psychology*, 117, 364–376.
- Cicero, D. C., & Kerns, J. G. (2010). Can disorganized and positive schizotypy be discriminated from dissociation? *Journal of Personality*, 78, 1–32.
- Clark, L. A. (1990). Toward a consensual set of symptom clusters for assessment of personality disorder. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances in personality assessment* (Vol. 8, pp. 243–266). Hillsdale, NJ: Erlbaum.
- Clark, L. A. (1993). *Manual for the Schedule of Nonadaptive and Adaptive Personality*. Minneapolis: University of Minnesota Press.
- Clark, L. A. (2005a). Stability and change in personality pathology: Revelations of three longitudinal studies. Invited commentary, *Journal of Personality Disorder*, 19, 525–532.
- Clark, L. A. (2005b). Temperament as a unifying basis for personality and psychopathology. *Journal of Abnormal Psychology*, 114, 505–521.
- Clark, L. A. (2007). Assessment and diagnosis of personality disorder: Perennial issues and emerging conceptualization. *Annual Review of Psychology*, 58, 227–257.
- Clark, L. A. (2009). Stability and change in personality disorder. *Current Directions in Psychological Science*, 18(1), 27–31.
- Clark, L. A., & Livesley, W. J. (2002). Two approaches to identifying the dimensions of personality disorder: Convergence on the five-factor model. In P. T. Costa, Jr., & T. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (2nd ed., pp. 161–176). Washington, DC: American Psychological Association.
- Clark, L. A., Livesley, W. J., Schroeder, M. L., & Irish, S. L. (1996). Convergence of two systems for assessing specific traits of personality disorder. *Psychological Assessment*, 8, 294–303.
- Clark, L. A., Simms, L. J., Wu, K. D., & Casillas, A. (in press). *Schedule for Nonadaptive and Adaptive Personality-second edition (SNAP-2)*. Minneapolis: University of Minnesota Press.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309–319.
- Costa, P. T., & McCrae, R. R. (1992). *Professional Manual: Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.
- De Bolle, M., De Clercq, B., Van Leeuwen, K., Decuyper, M., Rosseel, Y., & De Fruyt, F. (2009). Personality and psychopathology in Flemish referred children: Five perspectives of continuity. *Child Psychiatry and Human Development*, 40, 269–285.
- De Clercq, B., De Fruyt, F., Van Leeuwen, K., & Mervielde, I. (2006). The structure of maladaptive personality traits in childhood: A step toward an integrative developmental perspective for DSM-V. *Journal of Abnormal Psychology*, 115, 639–657.
- De Clercq, B., Van Leeuwen, K. V., De Fruyt, F., Van Hiel, A., & Mervielde, I. (2008). Maladaptive personality traits and psychopathology in childhood and adolescence: The moderating effect of parenting. *Journal of Personality*, 76, 357–383.
- De Clercq, B., Van Leeuwen, K., Van den Noortgate, W., De Bolle, M., & De Fruyt, F. (2009). Childhood personality pathology: Dimensional stability and change. *Development and Psychopathology*, 21, 853–869.
- De Fruyt, F., Bartels, M., Van Leeuwen, K., De Clercq, B., Decuyper, M., & Mervielde, I. (2006). Five types of personality continuity in childhood and adolescence. *Journal of Personality and Social Psychology*, 91, 538–552.
- Dennissen, J. J. A., Asendorpf, J. B., & van Aken, M. A. G. (2007). Childhood personality predicts long-term trajectories of shyness and aggressiveness in the context of demographic transitions in emerging adulthood. *Journal of Personality*, 76, 67–100.
- De Pauw, S. S. W., & Mervielde, I. (2010). Temperament, personality and developmental psychopathology: A review based on the conceptual dimensions underlying childhood traits. *Child Psychiatry and Human Development*, 41, 313–329.
- Dickman, S. J. (1990). Functional and dysfunctional impulsivity: Personality and cognitive correlates. *Journal of Personality and Social Psychology*, 58, 95–102. begin_of_the_skype_highlighting
- Digman, J. M. (1994). Child personality and temperament: Does the five-factor model embrace both domains. In C. F. Halverson, G. A. Kohnstamm, A. Geldolph, & R. P. Martin

- (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 323–338). Hillsdale, NJ: Erlbaum.
- Dolan, B., Evans, C., & Norton, K. (1995). Multiple axis-II diagnoses of personality disorder. *British Journal of Psychiatry*, 166, 107–112.
- Eaton, N. R., Krueger, R. F., South, S. C., Simms, L. J., & Clark, L. A. (2011). Contrasting prototypes and dimensions in the classification of personality pathology: Evidence that dimensions, but not prototypes, are robust. *Psychological Medicine*, 41(4), 1151–1163.
- Eysenck, H. J. (1990). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 244–276). New York: Guilford Press.
- Eysenck, H. J., & Eysenck, S. B. G. (1968). *Manual of the Eysenck Personality Inventory*. London: University of London Press.
- Eysenck, S. B. G., & Eysenck, H. J. (1975). *Manual of the Eysenck Personality Questionnaire*. London: Hodder & Stoughton.
- Fiedler, E. R., Oltmanns, T. F., & Turkheimer, E. (2004). Traits associated with personality disorders and adjustment to military life: Predictive validity of self and peer reports. *Military Medicine*, 169, 207–211.
- Fossati, A., Maffei, C., Bagnato, M., Battaglia, M., Donati, D., Donini, M., ... Prolo, F. (2000). Patterns of covariation of DSM-IV personality disorders in a mixed psychiatric sample. *Comprehensive Psychiatry*, 41, 206–215.
- Grilo, C. M., Sanislow, C. A., Gunderson, J. G., Pagano, M. E., Yen, S., Zanarini, M., ... McGlashan, T. H. (2004). Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. *Journal of Consulting and Clinical Psychology*, 72, 767–775.
- Guilford, J. P., & Zimmerman, W. S. (1949). *The Guilford-Zimmerman Temperament Survey: Manual*. Beverly Hills, CA: Sheridan Supply.
- Gunderson, J. G., Shea, M. T., Skodol, A. E., McGlashan, T. H., Morey, L. C., Stout, R. L., ... Keller, M. B. (2000). The Collaborative Longitudinal Personality Disorders Study: Development, aims, design, and sample characteristics. *Journal of Personality Disorders*, 14, 300–315.
- Hampson, S. E., Andrews, J. A., Barckley, M., & Peterson, M. (2007). Trait stability and continuity in childhood: Relating sociability and hostility to the five-factor model of personality. *Journal of Research in Personality*, 41, 507–523.
- Harkness, A. R., & McNulty, J. L. (1994). The Personality Psychopathology Five (PSY-5): Issue from the pages of a diagnostic manual instead of a dictionary. In S. Strack & M. Lorr (Eds.), *Differentiating normal and abnormal personality* (pp. 291–315). New York: Springer.
- Harlan, E., & Clark, L. A. (1999). Short forms of the Schedule for Nonadaptive and Adaptive Personality (SNAP) for self and collateral ratings: Development, reliability, and validity. *Assessment*, 6, 131–145.
- Haslam, N. (in press). The latent structure of personality and psychopathology: A review of trends in taxometric research. *Scientific Review of Mental Health Practice*.
- Hendriks, A. A. J., Kuyper, H., Offringa, G. J., & Van der Werf, M. P. C. (2008). Assessing young adolescents' personality with the five-factor personality inventory. *Assessment*, 15, 304–316.
- Hill, J., Fudge, H., Harrington, R., Pickles, A., & Rutter, M. (1995). The Adult Personality Functioning Assessment (APFA): Factors influencing agreement between subject and informant. *Psychological Medicine*, 25, 263–275.
- John, O. P., Caspi, A., Robins, R. W., Moffitt, T. E., & Stouthamer-Loeber, M. (1994). The "little five": Exploring the nomological network of the five-factor model of personality in adolescent boys. *Child Development*, 65, 160–178.
- Johnson, W., Hicks, B. M., McGue, M., & Iacono, W. G. (2007). Most of the girls are alright, but some aren't: Personality trajectory groups from ages 14 to 24 and some associations with outcomes. *Journal of Personality and Social Psychology*, 93, 266–284.
- Keller, M. B., Lavori, P. W., Friedman, B., Nielsen, E., Endicott, J., McDonald-Scott, P., & Andreasen, N. C. (1987). The longitudinal interval follow-up evaluation: A comprehensive method for assessing outcome in prospective longitudinal studies. *Archives of General Psychiatry*, 44, 540–548.
- Klonsky, E. D., Oltmanns, T. F., & Turkheimer, E. (2002). Informant-reports of personality disorder: Relation to self-reports and future research directions. *Clinical Psychology: Science and Practice*, 9, 300–311.
- Koffel, E., & Watson, D. (2009). Unusual sleep experiences, dissociation, and schizotypy: Evidence for a common domain. *Clinical Psychology Review*, 29, 548–559.
- Krueger, R. F., & Tackett, J. L. (2006). *Personality and psychopathology*. New York: Guilford Press.
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2011). Initial development of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, doi:10.1017/S0033291711002674.
- Krueger, R. F., Eaton, N. R., Clark, L. A., Watson, D., & Markon, K. E., Derringer, J., ... Livesley, W. J. (2011). Deriving and empirical structure of personality pathology for DSM-5. *Journal of Personality Disorders*, 25(2), 170–190.
- Krueger, R. F., Eaton, N. R., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2011). Personality in DSM-5: Helping delineate personality disorder content and framing the meta-structure. *Journal of Personality Assessment*, 93(4), 325–331.
- Lahey, B. (2009). The public health significance of neuroticism. *American Psychologist*, 64(4), 241–256.
- Laidra, K., Allik, J., Harro, M., Merenäkk, L., & Harro, J. (2006). Agreement among adolescents, parents, and teachers on adolescent personality. *Assessment*, 13, 187–196.
- Linde, J. A. (2001). Validation of the Schedule for Nonadaptive and Adaptive Personality–Youth Version (SNAP-Y): Self and parent ratings of adolescent personality. *Dissertation Abstracts International*, 62(12-B), 5969B. (UMI No. AAI 3034123).
- Livesley, W. J. (1998). Suggestions for a framework for an empirically based classification of personality disorder. *Canadian Journal of Psychiatry*, 43, 137–147.
- Livesley, W. J. (2010). *General assessment of personality dysfunction*. Port Huron, MI: Sigma Assessments Systems.
- Livesley, W. J., & Jackson, D. N. (2010). *Manual for the Dimensional Assessment of Personality Pathology—Basic Questionnaire*. Port Huron, MI: Sigma Assessments Systems.
- Livesley, W. J., & Jang, K. L. (2000). Toward an empirically based classification of personality disorder. *Journal of Personality Disorders*, 14, 137–151.
- Livesley, W. J., Schroeder, M. L., Jackson, D. N., & Jang, K. L. (1994). Categorical distinctions in the study of personality disorder: Implications for classification. *Journal of Abnormal Psychology*, 103, 6–17.
- Markon, K. E. (2010). Modeling psychopathology structure: A symptom-level analysis of Axis I and II disorders. *Psychological Medicine*, 40, 273–288.

- Markon, K. E., Krueger, R. F., & Watson, D. (2005). Delineating the structure of normal and abnormal personality: An integrative hierarchical approach. *Journal of Personality and Social Psychology*, 88, 139–157.
- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60(2), 175–215.
- McGlashan, T. H., Grilo, C. M., Sanislow, C. A., Ralevski, E., Morey, L. C., Gunderson, J. G., ... Pagano, M. (2005). Two-year prevalence and stability of individual DSM-IV criteria for schizotypal borderline avoidant and obsessive-compulsive personality disorders: Toward a hybrid model of Axis II disorders. *American Journal of Psychiatry*, 162, 883–889.
- Morey, L. C., Gunderson, J. G., Quigley, B. D., Shea, M. T., Skodol, A. E., McGlashan, T. H., ... Zanarini, M. C. (2002). The representation of borderline, avoidant, obsessive-compulsive, and schizotypal personality disorders by the five-factor model. *Journal of Personality Disorders*, 16, 215–234.
- Morey, L. C., Hopwood, C. J., Gunderson, J. G., Skodol, A. E., Shea, M. T., Yen, S., ... McGlashan, T. H. (2007). Comparison of alternative models for personality disorders. *Psychological Medicine*, 37, 983–994.
- Morey, L. C., Hopwood, C. J., Markowitz, J. C., Gunderson, J. G., Grilo, C. M., McGlashan, T. H., ... Skodol, A. E. (2011). Comparison of alternative models for personality disorder, II: 6-, 8- and 10-year follow-up. *Psychological Medicine*. Advance online publication. doi:10.1017/S0033291711002601
- Morey, L. C., Warner, M. B., Shea, M. T., Gunderson, J. G., Sanislow, C. A., Grilo, C., ... McGlashan, T. H. (2003). The representation of four personality disorders by the Schedule for Nonadaptive and Adaptive Personality dimensional model of personality. *Psychological Assessment*, 15, 326–332.
- Morgan, T. A., & Clark, L. A. (2010). Passive-submissive and active-emotional trait dependency: Evidence for a two-factor model. *Journal of Personality*, 78, 1325–1352.
- Morgan, T. A., & Clark, L. A. (in press). Dependent personality (disorder). In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (2nd ed.). Oxford, England: Elsevier
- Nigg, J. T., John, O. P., Blaskey, L. G., Huang-Pollock, C. L., Willcutt, E. G., Hinshaw, S. P., & Pennington, B. (2002). Big Five dimensions and ADHD symptoms: Links between personality traits and clinical symptoms. *Journal of Personality and Social Psychology*, 83, 451–469.
- Oltmanns, T. F., & Turkheimer, E. (2006). Perceptions of self and others regarding pathological personality traits. In R. F. Krueger & J. L. Tackett (Eds.), *Personality and psychopathology* (pp. 71–111). New York: Guilford Press.
- Parker, G., Both, L., Olley, A., Hadzi-Pavlovic, D., Irvine, P., & Jacobs, G. (2002). Defining disordered personality functioning. *Journal Personality Disorders*, 16, 503–522.
- Parker, G., Hadzi-Pavlovic, D., Both, L., Kumar, S., Wilhelm, K., & Olley, A. (2004). Measuring disordered personality functioning: To love and to work revisited. *Acta Psychiatrica Scandinavica*, 110, 230–239.
- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51, 768–774.
- Pincus, A. L., & Wilson, K. R. (2001). Interpersonal variability in dependent personality. *Journal of Personality*, 69, 223–251.
- Raine, A. (1991). The SPQ: A scale for the assessment of schizotypal personality based on DSM-III-R criteria. *Schizophrenia Bulletin*, 17, 555–564.
- Ready, R. E., & Clark, L. A. (2002). Correspondence of psychiatric patient and informant ratings of personality traits, temperament, and interpersonal problems. *Psychological Assessment*, 14, 39–49.
- Ready, R. E., Clark, L. A., Watson, D. B., & Westerhouse, K. (2000). Self- and peer-reported personality: Agreement, trait ratatability, and the "self-based heuristic". *Journal of Research in Personality*, 34, 208–224.
- Ready, R. E., Watson, D. B., & Clark, L. A. (2002). Psychiatric patient- and informant-reported personality: Predicting concurrent and future behavior. *Assessment*, 9, 361–372.
- Reynolds, S. K., & Clark, L. A. (2001). Predicting personality disorder dimensions from domains and facets of the five-factor model. *Journal of Personality*, 69, 199–222.
- Ro, E., & Clark, L. A. (2009). Psychosocial functioning in the context of diagnosis: Assessment and theoretical issues. *Psychological Assessment*, 21(3), 313–324.
- Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, 126, 3–25.
- Roberts, B. W., Walton, K. E., Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 132, 1–25.
- Roberts, B. W., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science*, 2, 313–345.
- Samuel, D. B., Simms, L. J., Clark, L. A., Livesley, J. W., & Widiger, T. A. (2010). An item response theory integration of normal and abnormal personality scales. *Personality Disorders: Theory, Research and Treatment*, 1(1), 5–21.
- Samuel, D. B., & Widiger, T. A. (2006). Clinicians' judgments of clinical utility: A comparison of DSM-IV and Five Factor Models. *Journal of Abnormal Psychology*, 115, 298–308.
- Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review*, 28, 1326–1342.
- Schroeder, M. L., Wormsorth, J. A., & Livesley, W. J. (1992). Dimensions of personality disorder and their relationships to the Big Five dimensions of personality. *Psychological Assessment*, 4, 47–53.
- Shea, M. T., Stout, R., Gunderson, J. G., Morey, L. C., Grilo, C. M., McGlashan, T., ... Keller, M. B. (2002). Short-term diagnostic stability of schizotypal borderline avoidant and obsessive-compulsive personality disorders. *American Journal of Psychiatry*, 159, 2036–2041.
- Simms, L. J., & Clark, L. A. (2005). Validation of a computerized adaptive version of the Schedule for Nonadaptive and Adaptive Personality (SNAP). *Psychological Assessment*, 17, 28–43.
- Simms, L. J., & Clark, L. A. (2006). The Schedule for Nonadaptive and Adaptive Personality (SNAP): A dimensional measure of traits relevant to personality and personality pathology. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed., pp. 431–450). New York: Springer.

- Skodol, A. E., Pagano, M. A., Bender, D. S., Shea, M. T., Gunderson, J. G., Yen, S., ... McGlashan, T. H. (2005). Stability of functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder over two years. *Psychological Medicine*, 35, 443-451.
- Smith, G. T., Fischer, S., Cyders, M. A., Annus, A. M., Spillane, N. S., & McCarthy, D. M. (2007). On the validity and utility of discriminating among impulsive-like traits. *Assessment*, 14, 155-170.
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2008). The developmental psychometrics of big five self-reports: Acquiescence, factor structure, coherence, and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology*, 94, 718-737.
- Sprock, J. (2002). A comparative study of the dimensions and facets of the five-factor model in the diagnosis of cases of personality disorder. *Journal of Personality Disorders*, 16, 402-423.
- Tackett, J. L. (2006). Evaluating models of the personality-psychopathology relationship in children and adolescents. *Clinical Psychology Review*, 26, 584-599.
- Tackett, J. L., Krueger, R. F., Iacono, W. G., & McGue, M. (2008). Personality in middle childhood: A hierarchical structure and longitudinal connections with personality and late adolescence. *Journal of Research in Personality*, 42, 1456-1462.
- Tackett, J. L., Silberschmidt, A. L., Krueger, R. F., & Sponheim, S. R. (2008). A dimensional model of personality disorder: Incorporating DSM cluster A characteristics. *Journal of Abnormal Psychology*, 117, 454-459.
- Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681-706). Hillsdale, NJ: Erlbaum.
- Vazire, S. (2006). Informant reports: A cheap, fast, and easy method for personality assessment. *Journal of Research in Personality*, 40(5), 472-481.
- Verheul, R., Andrea, H., Berghout, C. C., Dolan, C., Busschbach, J. J. V., van der Kroft, P. J. A., ... Fonagy, P. (2008). Severity Indices of Personality Problems (SIPP-118): Development, factor structure, reliability, and validity. *Psychological Assessment*, 20, 23-34.
- Wakefield, J. C. (1992). The concept of mental disorder: On the boundary between biological facts and social values. *American Psychologist*, 47, 373-388.
- Watson, D. (2001). Dissociations of the night: Individual differences in sleep-related experiences and their relation to dissociation and schizotypy. *Journal of Abnormal Psychology*, 110, 526-535.
- Watson, D., Clark, L. A., & Chmielewski, M. (2008). Structures of personality and their relevance to psychopathology: II. Further articulation of a comprehensive unified trait structure. *Journal of Personality*, 76, 1545-1586.
- Watson, D., Clark, L. A., & Harkness, A. R. (1994). Structures of personality and their relevance to psychopathology. *Journal of Abnormal Psychology*, 103, 18-31.
- Watson, D., Hubbard, B., & Weise, D. (2000). Self-other agreement in personality and affectivity: The role of acquaintanceship, trait visibility, and assumed similarity. *Journal of Personality and Social Psychology*, 78(3), 546-558.
- White, J. L., Moffitt, T. E., Caspi, A., & Bartusch, D. (1994). Measuring impulsivity and examining its relationship to delinquency. *Journal of Abnormal Psychology*, 103(2), 192-205.
- Whiteside, S. P., Lynam, D. R., Miller, J. D., & Reynolds, S. K. (2005). Validation of the UPPS Impulsive Behaviour Scale: A four-factor model of impulsivity. *European Journal of Personality*, 19, 559-574.
- Widiger, T. A., Livesley, W. J., & Clark, L. A. (2009). An integrative dimensional classification of personality disorder. *Psychological Assessment*, 21(3), 243-255.
- Widiger, T. A., & Mullins-Sweatt, S. N. (2009). Five-factor model of personality disorder: A proposal for DSM-5. *Annual Review of Clinical Psychology*, 5, 197-220.
- Widiger, T. A., & Simonsen, E. (2005). Alternative dimensional models of personality disorder: Finding a common ground. *Journal of Personality Disorders*, 19, 110-130.
- Widiger, T. A., & Trull, T. J. (2007). Plate tectonics in the classification of personality disorder. *American Psychologist*, 62, 71-83.
- World Health Organization. (2001). *ICD: International classification of functioning, disability and health*. Geneva, Switzerland: World Health Organization.
- Wu, K. D., & Clark, L. A. (2003). Relations between personality traits and self-reports of daily behavior. *Journal of Research in Personality*, 37, 231-256.
- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, B., & Silk, K. R. (2005). The McLean study of adult development (MSAD): Overview and implications of the first six years of prospective follow-up. *Journal of Personality Disorders*, 19, 505-523.
- Zimmerman, M., Pfuhl, B., Stangl, D., & Corenthal, C. (1986). Assessment of DSM-III personality disorder: The importance of interviewing an informant. *Journal of Clinical Psychiatry*, 47, 261-263.