

PERSONALITY THEORY AND PSYCHOPATHOLOGY

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Personality Theory and Psychopathology

Abstract

The connection between personality and psychopathology has been studied for centuries. In the current essay, we provide an overview of contemporary research in the field. We begin with a review of trait models of personality and the current psychopathology classification system in use. We discuss the link between normal personality traits and personality disorders and other types of psychopathology and conclude with a discussion of different theoretical perspectives explaining the personality-psychopathology connection.

The link between personality and psychopathology has been long-recognized, dating back to ancient Greece and Hippocrates' discussions of the four humors. The four essential fluids of the body - phlegm, blood, bile, and black bile - were thought to determine temperament. Depending on the dominant humor, one could be phlegmatic, sanguine, choleric, or melancholic, and each type had an accompanying set of attributes. An imbalance in these humors led to symptoms of illness, and therefore temperament was thought to be connected to all disease, physical or mental. Later, in the 19th century, Darwinian-influenced perspectives on the personality-psychopathology link arose. These were evolutionary perspectives, depicting mental illness as a genetically-based character deficiency. Stemming from this was Freud's influential theory of the stages of character development, from the primitive to the more complex, and associated psychopathology (Maher & Maher, 1994).

Contemporary psychologists and psychiatrists continue to explore this association, profiting from reliable and valid taxonomies of both personality and psychopathology. Trait models are contemporary models of personality that have gained consensus. These models emphasize traits as dimensions, covering the range from normal to disordered personality (vs. a categorical distinction between the two). We begin with an overview of these trait models of personality. Next, we review the status of personality traits and disorders in the most current nosology put forth by the American Psychiatric Association, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). We note that the World Health Organization provides a classification system separate from the American Psychiatric Association's DSM, the International Classification of Diseases, which is currently being revised. Preliminary proposed changes to the 11th edition, due for release in 2015, have not been made public; therefore, we limit our focus to the DSM. After reviewing

personality traits and disorders in the DSM, we then review literature linking personality traits and other mental disorders. Finally, we conclude with a discussion of different theoretical perspectives explaining the personality-psychopathology connection.

Personality Trait Models

Allport offered a coherent definition of personality, writing, “Personality is the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought” (1961, p. 28). Allport went on to elaborate on the key features of this definition, including the emphasis on individual differences. At the root of these individual differences are traits, dimensional tendencies to show consistent patterns of thoughts, feelings, and actions across time and situations. Further, personality traits are thought to be hierarchical, with broad traits subsuming more specific sub-facets. A long-standing goal of personality psychologists has been to develop a taxonomy to characterize these broad trait dimensions. Although there is recognition that these dimensional traits cover a broad spectrum from moderate (i.e., normal) to extreme (i.e., abnormal) personality, some models focus more on the normal range while others focus on the abnormal range of personality variation.

Models of Normal Range Personality

Though many have fallen out of favor, multiple normal personality trait taxonomies have been put forth with the number of key personality traits ranging from two (Block & Block, 1980) to as many as twenty (Gough, 1987). Today two models, the Big Three and the Big Five, receive the most attention in the literature. The three-factor model varies somewhat across researchers and measures in terms of trait labels, however the essence of the constructs is the same. The models include positive temperament, negative temperament, and constraint (vs. disinhibition;

Tellegen & Waller, 2008; Watson & Clark, 1993) or parallel constructs such as extraversion, neuroticism, and psychoticism (Eysenck & Eysenck, 1976).

The Big Five, born out of the lexical tradition, represents an expanded taxonomy. Beginning with Allport's efforts (Allport & Odbert, 1936) and continuing for a quarter of a century (Tupes & Christal, 1992), trait terms were amassed from the English language dictionary and were subsequently factor analyzed. Across different samples, five factors emerged. These include extraversion (positive affectivity), agreeableness (vs. antagonism), conscientiousness (constraint), emotional stability (vs. neuroticism or negative affectivity), and openness to experience (or intellect and unconventionality; Lynam & Widiger, 2001). Tremendous empirical support for the Big Five has surfaced in the past few decades, as the same five-factor structure is found in numerous populations and settings (Costa & McCrae, 1988; Costa & McCrae, 1994; De Raad et al., 1998; Halverson, Kohnstamm, & Martin, 1994; McCrae & Costa, 1990; McCrae & Costa, 2003; Van de Vijver & Valchev, in press).

Another strength of the Big Five model is that it captures commonalities among most existing trait taxonomies (for an overview of how the Big Five map onto other popular personality trait models, see John, Naumann, & Soto, 2008, p. 115). This hierarchical nature of personality traits allows us to reconcile seemingly distinct trait taxonomies, such as the Big Three and Five. For example, positive emotionality/temperament from the three-factor models is akin to extraversion, and negative emotionality/temperament is akin to neuroticism, while constraint (vs. disinhibition) subsumes agreeableness and conscientiousness (openness does not appear in the three-factor models reviewed here). The three-factor models emphasize what one might call superfactors, while the Big Five are an extension of these broad domains (Markon, Krueger, & Watson, 2005). Though some have criticized the Big Five model for diminishing the

complex schema of personality to only five traits, the purpose of the model is to “provide a scientifically compelling framework in which to organize the myriad individual differences that characterize humankind” (Goldberg, 1993, p.27).

We can garner a more nuanced view of one’s personality by considering the lower-order facets of the broad traits (Hong & Paunonen, in press). According to Costa and McCrae’s (1995) model of the Big Five, there are six facets within each of the five domains. For example, they suggest that the domain of neuroticism consists of the more specific facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and hostility. In this model, conscientiousness consists of competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Costa & McCrae, 1995). Different models may identify a different lower-order structure. In particular, much work has been carried out on the lower-order structure of conscientiousness. In one study integrating lexical and questionnaire studies, five facets of conscientiousness emerged including industriousness, orderliness, impulse control, reliability, and conventionality (Roberts et al., 2005). Developing a consensus of the lower-order structure of each of the Big Five is critical because facets have better predictive validity than broad traits (Paunonen & Aston, 2001), they show different developmental patterns (Jackson et al., 2009), and they can facilitate a better understanding of the client in clinical practice.

Models of Disordered Personality

Dimensional models of disordered personality have also been put forth. Two widely used measures of disordered personality traits are the Schedule for Nonadaptive and Adaptive Personality (Clark, 1993) and the Dimensional Assessment of Personality Pathology (Livesley & Jackson, 2009), consisting of 12 and 18 scales, respectively. Findings suggest these scales make

up four broad, higher-order traits, which are similar, yet not identical, to those found in models of normal personality. Emotional dysregulation, dissocial behavior, inhibition, and compulsivity resemble neuroticism, (dis)agreeableness, (lack of) extraversion, and conscientiousness, respectively (Livesley, Jang, & Vernon, 1998; O'Connor & Dyce, 1998; Widiger, 1998). There is a parallel to each of the Big Five except openness. In addition to these four pathological traits, it has been argued that a distinct fifth factor is necessary to account for the variance in pathological personality functioning. This fifth trait has been labeled oddity or peculiarity (Watson, Clark, & Chmielewski, 2008). Some have posited that models of normal and abnormal personality should be integrated into a single hierarchy (Markon, Krueger, & Watson, 2005). For example, Watson and colleagues (2008) proposed a Big Six model that includes both normal and abnormal traits, including the Big Five and oddity.

Personality Traits and Disorders in the DSM

As discussed, these models highlight the idea that traits are dimensional, with abnormal personality representing extreme variants of normal range traits. This counters the long-held categorical conceptualization of abnormal personality in the DSM. This perspective regards personality disorders (PDs) as “qualitatively distinct clinical syndromes” (American Psychiatric Association, 2013, p. 646). Ten specific PDs are defined, and these are split into three clusters based on descriptive similarities. Cluster A includes paranoid, schizoid, and schizotypal PDs, Cluster B includes antisocial, borderline, histrionic, and narcissistic PDs, and Cluster C includes avoidant, dependent, and obsessive-compulsive PDs. A specific number of criteria must be met in order for a PD to be diagnosed. For example, antisocial PD is diagnosed if a patient meets at least three of seven criteria, including failure to conform to social norms with respect to lawful

behaviors, deceitfulness, impulsivity, irritability and aggressiveness, reckless disregard for safety, consistent irresponsibility, and lack of remorse.

Each of these ten PDs has been linked with normal personality traits (Crego & Widiger, in press). Saulsman and Page (2004) offered a meta-analysis documenting the relationship between each PD and the Big Five. Some similarities among PDs were uncovered (e.g., high neuroticism and low agreeableness are characteristic of most PDs) yet they also concluded that most PDs have a distinct personality trait profile. For example, antisocial PD, characterized by a pervasive pattern of disregard for the rights of others, is marked by low agreeableness and conscientiousness. Extraversion also shows strong relationships with most PDs, though the direction of that relationship varies across PDs. Extraversion is positively related to histrionic and narcissistic PDs, as individuals with histrionic PD crave attention and are often flirtatious and dramatic, and those with narcissistic PD often demonstrate grandiosity in their beliefs and behavior. Extraversion is negatively related to schizoid, schizotypal, and avoidant PDs, on the other hand, as individuals with these PDs demonstrate a lack of interest in, or anxiety regarding, interpersonal contact and relationships. Conscientiousness shows some relations with PDs, though this finding is not as robust as for neuroticism, agreeableness, and extraversion, and openness shows no strong relationship with any PD. Samuel and Widiger (2008) extended this meta-analysis by concentrating on the specific facets of the broad traits and largely replicated the findings of Saulsman and Page.

Numerous problems with the categorical perspective have been cited repeatedly in the literature (e.g., Widiger, 2003). These include a lack of qualitative distinction between normal and abnormal personality, heterogeneity within diagnostic categories, and excessive comorbidity. Critics of the categorical perspective argue that normal-range personality traits and those specific

to PDs overlap considerably and share a parallel structure in genetic and environmental components (Livesley, Jang, & Vernon, 1998). They also contend that the categorical system's practice of using a subset of items to meet diagnostic threshold often results in incongruence between individuals who share the same diagnosis (Trull & Durrett, 2005). Two individuals meeting the diagnosis for antisocial PD, for example, may share all or no symptoms. Proponents of the dimensional system argue that the categorical system's difficulty with excessive comorbidity between PD diagnoses could be reproduced and better explained with a dimensional model. Clinicians would be better able to conceptualize their patients without the constraints of the DSM-defined PDs, and researchers would not need to unnecessarily exclude a majority of patients targeted to a study due to comorbidity (Krueger, 2013).

Given these criticisms and mounting support for integrative hierarchical models of personality dimensions, the authors of DSM-5 spent a great deal of time debating how to best conceptualize PDs and reflect that conceptualization in the diagnostic criteria. Many proposed replacing the categorical system with a dimensional model, but the authors were not able to arrive at a consensus approach on how best to do this (Krueger, 2013). Instead, DSM-5 offers an additional dimensional perspective of PDs in addition to the pre-existing categorical one from DSM-IV-TR (American Psychiatric Association, 2000). Inclusion of both models was done to maintain current clinical practice while offering an alternative that addresses the numerous problems with the prior diagnostic system (American Psychiatric Association, 2013, p. 761). Section II contains the same diagnostic criteria for ten specific PDs from DSM-IV-TR, while Section III contains the alternative dimensional model. In this model, "personality disorders are characterized by impairments in personality *functioning* and pathological personality *traits*" (p. 761; emphasis in original). While there are a few similarities across Sections II and III, such as

criteria including stability and pervasiveness across personal and social situations, two key changes are emphasized in Section III. First is the evaluation of disturbances in self and interpersonal functioning on a 5-point continuum ranging from no to extreme impairment. The second key change is the use of 25 specific pathological personality trait facets organized into five broad domains including negative affectivity, detachment, antagonism, disinhibition, and psychoticism. These five domains align, respectively, with the opposite poles of emotional stability, extraversion, agreeableness, and conscientiousness from the Big Five model, as well as the oddity/peculiarity trait from models of abnormal personality. These can be assessed with the Personality Inventory for DSM-5 (Krueger, Derringer, Markon, Watson, & Skodol, 2013) with self- or informant-reports. Section III recognizes six of the ten specific Section II disorders, including antisocial, avoidant, borderline, narcissistic, obsessive-compulsive, and schizotypal personality disorders. These six are differentiated according to the manner in which their disturbances in self and interpersonal functioning are manifest, as well as their defining pathological personality traits. That is, each disorder has a unique personality trait profile. Antisocial PD, for example, (in addition to impairment in personality functioning) is characterized by six out of seven pathological personality traits, including manipulativeness, callousness, deceitfulness, and hostility (all facets of antagonism), in addition to risk taking, impulsivity, and irresponsibility (all facets of disinhibition). Section III offers the first step towards adopting a complete dimensional perspective of PDs.

Personality and non-Personality Disorder Psychopathology

Although personality traits connect most obviously with PDs, there is a plethora of research indicating a link between personality and other types of psychopathology as well. Before delving into a review of this research, it is important to first discuss the organization of

(non-PD) mental disorders in the DSM-5, which will provide a framework to guide the discussion on the personality-psychopathology link. Unlike DSM-IV-TR, DSM-5 recognizes spectra of disorders that share common neural substrates, genetic and environmental risk factors, biomarkers, and temperamental antecedents, among other things (Andrews et al., 2009). Disorders within each spectra are situated in adjacent chapters. The spectra are also positioned to reflect developmental course, with disorders beginning in childhood (i.e., neurodevelopmental disorders, the schizophrenia spectrum, and other psychotic disorders) positioned first, and neurocognitive disorders, which have an onset of adulthood, falling at the end. Two clusters, internalizing and externalizing disorders, with adolescent or early adult onset lie in between. Internalizing disorders are those characterized by anxiety, depressive, and somatic symptoms, and externalizing disorders are those characterized by impulsive, disruptive conduct, substance use, and other addictive symptoms (American Psychiatric Association, 2013, p. 13). The ensuing discussion involves the connection between personality traits and internalizing and externalizing disorders.

There are a number of published studies documenting the relationship between specific mental disorders and personality traits in specific clinical samples. Given space limitations and our objective of presenting a comprehensive overview of the personality-psychopathology connection, we limit our review to meta-analyses and epidemiological studies of multiple disorders. Trull and Sher (1994) provided a first look at the connection between the Big Five and multiple (non-PD) disorders in a nonclinical sample. Individuals were assessed for multiple lifetime diagnoses including substance use disorders, several anxiety disorders, and major depression. In general, neuroticism, extraversion, and conscientiousness were the traits most highly related to the various disorders. Most substance use disorders were characterized by high

neuroticism and openness, and low extraversion, agreeableness, and conscientiousness. Anxiety disorders showed a similar personality profile as substance use disorders. Any lifetime anxiety disorder showed elevated neuroticism and openness, and low extraversion, agreeableness, and conscientiousness. More specific anxiety disorders showed a similar pattern, though in some cases, the effects were not significant (i.e., the diagnosed group was not significantly different from the non-diagnosed group). The one exception was simple phobia where no differences were observed between the diagnosed group and the non-diagnosed group. Major depression showed the same personality profile again; the diagnosed group had elevated levels of neuroticism and openness and lower levels of extraversion and conscientiousness. They were lower on agreeableness, though this difference was not statistically significant. In addition to documenting the personality profiles of diagnostic groups relative to those with no diagnoses, Trull and Sher confirmed that the Big Five provide clinically useful information by showing that Big Five scores accounted for a significant amount of variance in all diagnoses except simple phobia beyond that accounted for by a measure of psychopathology.

Krueger and colleagues extended the work of Trull and Sher (1994) with a longitudinal study of a representative birth cohort (Krueger, Caspi, Moffitt, Silva, & McGee, 1996). Age 18 Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 2008) personality profiles of members of four diagnostic groups (affective disorder, anxiety disorder, substance dependence disorder, and conduct disorder) were compared with a control group, individuals with no diagnoses. The disorders were assessed at ages 15, 18, and 21. At the broad factor level, compared with the control group, the affective disorder, substance dependence, and conduct disorder groups at age 18 scored low on positive emotionality and constraint, and high on negative emotionality (there was a greater distinction among the diagnostic groups at the level of

the more specific scales). The anxiety disorder group scored low on positive emotionality and high on negative emotionality. These correlations between the age 18 personality traits exhibited a consistent pattern with age 15, 18, and 21 mental disorders. Using the same longitudinal data set, Krueger (1999) followed up by examining whether the age 18 personality traits predicted age 21 diagnostic membership above and beyond age 18 diagnostic membership. Greater negative emotionality at age 18 increased the odds of being diagnosed with affective disorder at age 21. Greater negative emotionality and constraint increased the odds of an anxiety disorder diagnosis. Increased negative emotionality and decreased constraint increased the odds of substance dependence disorder as well as antisocial personality disorder.

Krueger and colleagues also examined the relationship between mental disorders and personality traits, again as measured by the MPQ, in a large population-based study (Krueger, McGue, & Iacono, 2001). In men and women, negative emotionality was positively correlated with an internalizing factor (including major depressive episode, panic disorder, simple phobia, and social phobia), and constraint was negatively correlated with an externalizing factor (including adult antisocial behavior, conduct disorder, alcohol dependence, and drug dependence). Positive emotionality had a negative correlation with the internalizing factor for women only.

Kotov and colleagues carried out a comprehensive meta-analysis of studies on the association between personality and internalizing and externalizing disorders, providing effect sizes to indicate the strength of relationship between them (Kotov, Gamez, Schmidt, & Watson, 2010). Specifically, they considered six broad personality traits, including extraversion/positive emotionality, agreeableness, conscientiousness, disinhibition, neuroticism/negative emotionality, and openness. Neuroticism showed the strongest association with mental disorders, with some

effect sizes exceeding 2.0, followed by low conscientiousness. Low extraversion was fairly consistent across disorders, though the magnitude of the effect was smaller than for neuroticism and conscientiousness. Disinhibition better distinguished among disorders; the strongest and most consistent association was with substance use disorders. Low agreeableness was also related to substance use disorders, though to a lesser degree than anticipated. Openness showed no strong pattern of association with mental disorders. Further, Kotov and colleagues examined the personality profiles of clusters of disorders, examining externalizing (substance use disorders) and two clusters of internalizing disorders, distress (depressive disorders) and fear (anxiety disorders). The distress and fear profiles were markedly similar, though the distress cluster scored slightly higher on all traits other than openness. The substance use disorder cluster exhibited a distinct profile with elevated levels of disinhibition and extraversion and lower levels of neuroticism and agreeableness.

In sum, high neuroticism (negative emotionality) and low conscientiousness and extraversion (positive emotionality) are overwhelmingly associated with most mental disorders. Externalizing disorders are typically set apart from internalizing disorders by increased disinhibition (low conscientiousness coupled with low agreeableness). These findings are robust, therefore the importance of personality traits in mental disorders cannot be ignored.

Explaining the Personality-Psychopathology Link

As evidenced by the collection of studies reviewed here, personality traits are closely linked with multiple types of mental disorders. In this next section, we consider six explanations for this relationship. Four models (vulnerability, pathoplasty, scar, and complication) consider personality and psychopathology as distinct constructs, while two models (common cause and

spectrum) treat them as having common underpinnings. We use the well-established connection between low conscientiousness (and its facets of industriousness, impulse control, orderliness, reliability, and conventionality; Roberts et al., 2005) and increased substance use to illustrate each (Kotov et al., 2010; Walton & Roberts, 2004).

The vulnerability model is a causal model, suggesting that premorbid personality traits can act as risk factors, predisposing an individual to mental disorder. For example, preexisting low conscientiousness puts one at risk for developing substance use disorders. Those low on impulse control might be more likely to engage in binge drinking. The pathoplastic relationship hypothesis suggests that personality traits influence mental disorder once the disorder is already developed. That is, the course of illness, its expression over time, and its response to treatment are susceptible to the influence of personality traits. For example, substance abuse problems might continue to worsen in individuals with low conscientiousness.

While the vulnerability and pathoplasty models consider the influence of personality on mental disorders, the scar and complication models consider the influence of mental disorders on personality. Like the vulnerability model, the scar model is causal, positing that mental disorders have a direct effect on personality traits. For example, those engaging in excessive substance use might exhibit decreased levels of key characteristics of conscientiousness, such as industriousness and reliability, as a result of their misuse. That is, they might be less likely to complete tasks, follow through with responsibilities, etc. The complication model follows from the scar model, but the effect of the disorder on personality traits is hypothesized to be temporary, lasting only the duration of the disorder. For example, individuals abusing alcohol or drugs would be much more likely to lack impulse control when their disorder expression is

heightened, but their impulse control levels would become more normative once the disorder was treated.

Finally, the common cause and spectrum models suggest that personality traits and psychopathology are not distinct constructs but instead share a common underpinning. The common cause model posits that personality and psychopathology share a single basis. A common root, such as a common genetic risk factor would explain the overlap in conscientiousness and substance use (Vrieze, McGue, Miller, Hicks, & Iacono, 2013). According to the spectrum model, personality and psychopathology are different manifestations of a common process. Some have argued that conscientiousness and substance use are part of an externalizing spectrum (Eaton, South, & Krueger, 2010).

It has been argued that these six hypotheses are not mutually exclusive and that more than one may appropriately describe the personality-psychopathology relationship (Andersen & Bienvenu, 2011; South, Eaton, & Krueger, 2010). The cause of the relationship could vary from person-to-person or from disorder-to-disorder. While there is some evidence supporting each model, further longitudinal data are necessary to distinguish among them. For example, we cannot appreciate the interplay between conscientiousness and substance use without tracking the lifetime course of one in light of the developmental course of the other. Nevertheless, we argue that the common cause and spectrum models are in line with the research reviewed in the sections above, demonstrating that there is no distinction between normal and abnormal functioning but rather they fall along a common continuum with abnormal functioning representing extreme expressions of normal personality traits (Widiger, 2011).

Conclusion

There is a large body of research describing the associations between personality and psychopathology, which has been facilitated by a growing consensus regarding personality and psychopathology taxonomies. Understanding these associations is important for several reasons. Research on the personality-psychopathology link has helped us understand comorbidity, and we have seen changes to classification systems as the result of this understanding. For example, in the DSM-5, we no longer see a divide between Axis I and Axis II disorders, there is greater appreciation for developmental continuity, and there is recognition of spectra of disorders. Continued research will not only help us refine our classification systems, but will help us gain insight into the etiology of psychiatric conditions and improve prevention and intervention efforts.

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