## Challenges in the study of personality and psychopathology

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T. Widiger presents three well-known ways of conceptualizing the relationship between personality and psychopathol-

ogy. First, a *pathoplastic* relationship indicates that each may have an influence on the presentation or manifestation of the other. When personality features and psychopathology co-occur within the same person, the resulting clinical picture will look different than cases of

these personality traits or of this vein of psychopathology appearing in isolation. A second form of relationship is a *spectrum* relationship. Here, certain personality traits and forms of psychopathology are viewed as existing on the same spectrum of functioning. A dimension of functioning may exist in which personality traits "bleed into" psychopathology as we move along a dimension in the direction of dysfunction. Finally, personality and psychopathology may be *causally* related to each other.

Despite years of research attempting to disentangle and elucidate the nature of the relationship between personality and psychopathology, this remains a challenging task. As a starting point, one must demonstrate a relationship between personality and psychopathology. The observation that personality traits and psychopathology co-occur frequently within individuals raises multiple possibilities (1,2). First, the association between certain personality traits and certain forms of psychopathology may be artifactual because of measurement or design confounds. For example, substance use problems are considered to be one example of personality trait of impulsivity, ensuring some degree of overlap between this personality trait and substance use disorder diagnoses. Similarly, a number of behavioral indicators of impulsivity or of aggressiveness can be substance-related (e.g., driving while intoxicated, substance-related violence).

Concerning design confounds, most studies of the personality-psychopathology relationships are cross-sectional, and many are conducted on patients who are either currently in or recently ending an active phase of their Axis I disorder. For example, substance use can contribute to problems of affective instability (or negative affectivity) and impulsivity which are major personality traits (2). Although one might attempt to circumvent this potential confound by having patients report only those personality traits or features that were present when not using substances, the reliability and validity of these retrospective reports remains unclear.

It is also possible that an unmeasured third variable, related to both personality

traits and to psychopathology, is responsible for their association in a given study. Such a third variable may or may not be etiologically relevant. For example, age is not etiologically important, in the causal sense, but may make it more likely that a personality-psychopathology relationship is found. Younger adults are more likely to be impulsive and are also more likely to abuse substances. In contrast, a third variable like a common genetic diathesis is etiologically important (3).

It is also possible that the personalitypsychopathology relationship is a causal one. Conceptually, the template for temperament and personality appears to be laid in place at an early age and would seem to have ontological priority. Longitudinal, prospective studies suggest the influence of temperament/personality features on later development and mental health (4). Furthermore, there is good evidence that personality is associated with later important life outcomes (5,6), reinforcing this causal direction. On the other hand, personality features may be a consequence of the experience of psychopathology or vice versa. For example, chronic, excessive alcohol consumption may result in serotonin depletion that, in turn, can lead to impulsive behavior.

In conclusion, the three models are helpful but only as a starting point. There are many complexities both in the way constructs are conceptualized as well as in the way studies in this area are designed and implemented. Major challenges for the future study of personality-psychopathology include the following:

Defining what is personality and what constitutes personality change. Some of the symptoms/indicators for psychopathology are directly related to personality traits whereas others seem less so. Concerning personality change, mean levels of personality traits change across the lifespan, naturally (7,8). Therefore, simply demonstrating changes in mean personality trait scores over time does not necessarily indicate "personality change" due to the experience of psychopathology. However, the personality structure within an individual (e.g., the factor structure of personality traits) may be a better indicator of personality change due to the

experience of psychopathology.

The need for good prospective studies that examine personality-psychopathology relations within a long-term, developmental framework. Most studies of the personality-psychopathology relations have largely ignored the effects of development (indexed by age) on personality and on psychopathology. Further cross-sectional studies will never be able to fully explain these relations. This is not to say that only studies starting with a birth-cohort and extending into old age are valuable. Rather, depending on the form of psychopathology (taking into account the periods of risk and age-related manifestations of the disorder) and on the personality traits in question, "shorter" longitudinal studies can be informative.

The influence of genes, the environment, and interactions. Ground-breaking, longitudinal studies that analyze genetic influences on traits, behavior, and the environment across the life span suggest that the answers to our questions about personality-psychopathology relations are likely to be quite complex (9). Findings suggesting the role of gene-environment correlations, gene-environment interactions, and epigenetics in the development of psychopathology should alert us to the myriad of possibilities when describing personality-psychopathology relations and help us begin to focus on mechanisms (10).

## References

- Sher KJ, Trull TJ, Bartholow BD et al. Personality and alcoholism: issues, methods, and etiological processes. In: Leonard KE, Blane HT (eds). Psychological theories of drinking and alcoholism, 2nd ed. New York: Guilford, 1999:54-105.
- Trull TJ, Sher KJ, Minks-Brown C et al. Borderline personality disorder and substance use disorders: a review and integration. Clin Psychol Rev 2000;20:235-53.
- Distel MA, Trull TJ, Willemsen G et al. The five factor model of personality and borderline personality disorder: a genetic analysis of comorbidity. Biol Psychiatry 2009;66:1131-8.
- Hampson SE, Goldberg LR, Vogt TM et al. Forty years on: teachers' assessments of children's personality traits predict selfreported health behaviors and outcomes at midlife. Health Psychol 2006;25:57-64.
- 5. Ozer D, Benet-Martínez V. Personality and

- prediction of consequential outcomes. Ann Rev Psychol 2006;57:401-21.
- 6. Roberts BW, Kuncel N, Shiner RN et al. The power of personality: the comparative validity of personality traits, socio-economic status, and cognitive ability for predicting important life outcomes. Perspectives in Psychological Science 2007;2:313-45.
- 7. Caspi A, Roberts BW, Shiner RL. Personality development: stability and change. Ann Rev Psychol 2005;56:453-84.
- 8. Roberts BW, Walton KE, Viechtbauer W. Patterns of mean-level change in personality traits across the life course: a meta-analysis of longitudinal studies. Psychol Bull 2006;132:1-25.
- Moffitt TE, Caspi A, Rutter M. Strategy for investigating interactions between measured genes and measured environments. Arch Gen Psychiatry 2005;62:473-81.
- Hampson SE. Mechanisms by which childhood personality traits influence adult wellbeing. Current Directions in Psychological Science 2008;17:264-8.