LIKE ANY SCIENCE, MENTAL HEALTH PRACTICE DEPENDS ON AN ADEQUATE CLASSIFICATION OF ITS SUBJECT MATTER. THIS Requires AN UNDERSTANDING OF WHAT IS TO BE CLASSIFIED. IN THE DOMAIN OF MENTAL DISORDER, ARE THERE DISCRETE CLASSES INTO WHICH PEOPLE CLUSTER TOGETHER, OR ARE THE CATEGORIES USED BY SCIENTISTS AND PRACTITIONERS LITTLE MORE THAN A CONVENIENT FICTION THAT REFLECTS A HUMAN PREFERENCE FOR THINKING CATEGORICALLY? FOR EXAMPLE, ARE PSYCHOPATHS A DISTINCT GROUP OF PEOPLE WHO DIFFER QUALITATIVELY FROM NON-PSYCHOPATHS, OR DO INDIVIDUALS ACTUALLY DIFFER ALONG ONE OR MORE CONTINUA OF PSYCHOPATHIC TRAIT LEVELS? REGARDLESS OF HOW ONE PREFERENCES TO CONCEPTUALIZE OR MEASURE THIS CONSTRUCT, IN REALITY INDIVIDUAL DIFFERENCES IN PSYCHOPATHY ARE STRUCTURED EITHER CATEGORICALLY OR DIMENSIONALLY. EMPIRICALLY DETERMINING WHETHER A CATEGORICAL OR DIMENSIONAL MODEL BETTER REPRESENTS THE UNDERLYING, OR LATENT, STRUCTURE OF A CONSTRUCT HAS IMPORTANT IMPLICATIONS FOR A NUMBER OF THEORETICAL AND PRACTICAL ISSUES (MEEHL, 1992; RUSCIO, HASLAM, & RUSCIO, 2006), INCLUDING THE FOLLOWING:

1. **Causal theories.** Should we be trying to explain membership in groups or continuous variation along dimensions? All-or-nothing causal factors, such as a single dominant gene or a traumatic experience, might explain group membership. The additive effects of multiple causal factors—whether genetic, environmental, or based on the interaction of genes and environment—might explain continuous variation (Haslam, 1997; Meehl, 1977).

2. **Classification.** Should we assign people to groups or locate their positions along dimensions? A typology, such as the categories of mental disorder listed in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000), is very different from a dimensional system, such as the personality models that many psychologists would like to see extended to the classification of abnormal personality (Widiger & Trull, 2007).

3. **Assessment.** Should we measure variables with thresholds that identify group members or variables that help to locate individuals' positions along dimensions? A relatively small number of variables whose sensitivity is clustered near an important boundary might classify individuals into groups effectively, but a larger number of variables whose sensitivity is spread across the full range of trait levels might be...
required to assess dimensional variation (Ruscio & Ruscio, 2002).

4. **Research design.** Should we select individuals for study who clearly meet criteria for group membership or sample broadly along the full range of trait levels? Sampling from the extremes of measured score distributions can be a simple and effective way to construct groups for comparison, but if a construct is dimensional it can be important to include individuals spanning the full spectrum of trait levels to determine whether relationships with other variables are linear or nonlinear (A. M. Ruscio, Borkovec, & Ruscio, 2001).

5. **Data analysis.** Should we compare group means or perform correlational analyses based on the full range of trait levels? Provided that group members are identified validly, comparing group means on variables of interest can be an effective way to study categorical constructs. If the construct is dimensional, however, lumping people together into groups rather than retaining fully continuous measures can substantially reduce statistical power (MacCallum, Zhang, Preacher, & Rucker, 2002).

Because there are so many reasons to empirically evaluate the latent structure of a psychological construct, many methods have been devised to help distinguish categories and dimensions. Meehl (1995) and his colleagues (e.g., Waller & Meehl, 1998) have developed a taxometric method that includes a set of data-analytic procedures that appear to make the fundamental distinction between categorical and dimensional structures effectively. To implement the method, one submits variables representing distinct facets of a target construct to a series of data-analytic procedures to determine whether the results provide clear and consistent support for a categorical model or a dimensional model (Ruscio, Walters, Marcus, & Kaczetow, 2010). Details of taxometric methodology are beyond the scope of this special section, but interested readers can consult seminal works by Meehl (1995) or Waller and Meehl (1998), or broader and more recent overviews by Ruscio (2007) or Ruscio et al. (2006).

The two papers included in this special section focus on what we can learn from applications of the taxometric method to study personality and psychopathology. Marcus, Sanford, Edens, Knight, and Walters (2010) examine the implications of knowing whether or not a psychopathic sexuality taxon exists. (In the taxometric literature, “taxon” refers to the focal group of primary interest to the investigators, as contrasted with its “complement” of individuals who do not belong to the taxon.) Marcus et al. review and critique the taxometric evidence that others have marshaled in support of the existence of a psychopathic sexuality taxon. Their discussion highlights the importance of implementing the taxometric method and interpreting the results in accordance with the best available empirical guidelines. Marcus et al. then provide a thoughtful discussion of the implications of latent structure for causal theories. In particular, they question the extent to which the existence of a psychopathic sexuality taxon supports the claim that such a taxon is the product of natural selection. Even for those with no special interest in psychopathy or evolutionary theory, this paper provides an excellent illustration of the significant issues that can be addressed by empirically testing categorical and dimensional structural models and the special care that must be taken to draw sound conclusions.

Haslam (2010) presents a big-picture overview of trends in taxometric research, the majority of which has involved the study of constructs in personality and psychopathology. He begins by documenting the increase in the number and scholarly impact of taxometric studies over the past three decades. More than 100 peer-reviewed journal articles have been published, most of them very recently, and the number of citations these studies receive is accelerating at a comparable rate. Perhaps the most interesting finding is that whereas early taxometric studies usually supported categorical structural models, more recent studies support dimensional models at least as often as categorical models. Haslam discusses potential explanations for this shift. Though he considers the possibility that researchers now tend to focus their attention on constructs that happen to be dimensional, he believes the shift has more to do with improvements in taxometric practice that prevent the mistaken identification of spurious categories. Haslam summarizes the conclusions reached by investigators who have studied dozens of constructs in personality and psychopathology and reviews the implications of this body of research for our understanding and classification of these variables. Extensive references are provided to the original research, where interested readers can learn more about the questions that prompted these studies, the methodology used and how it has evolved over time, and the consensus—or lack thereof—regarding the structure of particular constructs.

**References**


