

A dimensional and categorical architecture for the classification of psychotic disorders

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Craddock and Owen's insightful review convincingly summarizes the many problems that have arisen by using a dichotomous classification of the psychotic illness. They go beyond simply identifying problems by also proposing realistic solutions based on the existing evidence, and conclude that there is an urgent need to change the current approach. We would add that this change needs to be a radical one.

An important and rather controversial feature of all psychiatric disorders, including psychotic disorders, is whether they are dimensional or categorical in nature. May be that this is a false debate, in that every psychiatric disorder is both, and the main question is not whether diagnosis is categorical or dimensional, but whether it should be categorical or dimensional in order to yield the best clinical and research results (1). In fact, there exists compelling evidence that past and current categorical classifications of psychotic disorders are the result of arbitrary class distinctions being imposed along a continuum of risk factors, neurobiological mechanisms, frequency and severity of symptoms and outcome (2-5). Furthermore, both schizophrenic (6) and affective (7) symptoms do not have a taxonic structure, and studies specifically comparing the validity of dimensional and categorical models to classify psychotic disorders have consistently shown the superiority of the former in several domains (6-9).

Organizing a dimensional approach, however, is a complex task. A dimensional model to describe psychotic disorders needs to be developed on a systematic and stepwise basis. First and foremost, because dimensional models involve a continuum by definition, it is imperative to develop new scales that can assess the entire range of the dimensions of interest. Item selection is perhaps the most important decision in the whole process (10). Particular attention should be paid to including items in a comprehensive and balanced way. For example, there has been an excessive emphasis on the assessment of reality-distortion and negative symptoms to the detriment of other psychotic manifestations such as cycloid, affective, motor and behavioral features, and this bias should be avoided in future developments.

The second level is represented by the natural grouping of symptoms into dimensional syndromes. There is some consensus about the existence of at least six nuclear syndromes within the psychoses: reality distortion, disorganization, negative, catatonia, mania and depression. However, depending on the number and type of symptoms considered, the number and composition of the resulting dimensions will vary accordingly. Comprehensive rating scales with many fine-grained symptoms typically result in complex dimensional structures of the psychotic illness, which may be organized in a tiered hierarchical way, from lower-order dimensions that are closer to the symptoms to higher-order dimensions that are closer to

the prototypical diagnostic categories of schizophrenia and manic-depressive illness (11). The question would arise as to the relative importance of the higher- vs. lower-order dimensions, in tandem with the caution that the future nosology should not become overly reductionistic. For example, although psychomotor poverty and asociality might be coherently integrated within a higher-order negative syndrome, differentiation may still be important, because these constructs provide more information about treatment planning regarding neurocognitive or psychosocial rehabilitation.

Given that classes and dimensions of psychotic disorders are highly dependent on the period considered to assess symptoms (9), there is also a need for taking into account a longitudinal perspective to rate dimensional syndromes. This can be done by making successive assessments across the different stages of the psychotic illness. Particularly relevant assessments would be those conducted at the height of the psychotic state and during a stabilization period, in order to maximize diagnostic and outcome value, respectively. Furthermore, a lifetime assessment should be ideally conducted for each dimension on the basis of the presence, frequency and severity of each constituting item. Of particular importance would be to rate the relationships between psychotic and mood symptoms by means of one or more scores reflecting their relative frequency, severity and temporal link, as exemplified by the Bipolar Affective Disorder Dimension Scale (12).

The third step consists of determining at what level dimensional syndromes are best incorporated into categorical diagnoses. The dimensional approach would help to generate the data needed to formulate a "bottom-up" structural organization for the diagnostic system,

in which categories of psychotic disorders can be derived from dimensions by setting some cutpoint to particular dimensions, or combination of them, forming a mixed categorical and dimensional nosology. In addition or alternatively to this dimensional-based categorization of psychotic disorders, other mixed approaches could be employed. For example, the existing classifications (historical, empirical or consensus) may be combined with the multidimensional approach, to examine relationships between alternative nosologies and dimensions and their differential validity.

Adopting a dimensional formulation of nosology is not necessarily inconsistent with subsequently generating a typology or with existing alternative categorizations of psychotic disorders, including the Krapelinian one. Interestingly, the highly differentiated Leonhard's nosology (13), by separating five big classes of psychotic disorders which in turn are further subdivided into subtypes, has provided us with a system that is very close to the dimensional approach, in that dimensions of psychopathology (negative, disorganization,

catatonia, reality-distortion, affective) can be traced across the subtypes of the major classes.

Indeed, categorical and dimensional models are two sides of the same coin, and thus they are not incompatible but complementary. Their integration is of particular relevance to the complete understanding of psychotic disorders.

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