The Confusing World of Psychiatric Diagnoses: DSM, Research Domain Criteria, and Dimensions

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I have been thinking a lot about our struggles with understanding psychiatric diagnoses and their associated pathophysiology. Yes, we all know that the American Psychiatric Association's *Diagnostic and Statistical Manual* (*DSM*) is a product of consensus to have a shared language to make sure we are talking about the same things (reliability) and that these categorical diagnoses may or may not "carve nature at its joints" (validity).

Tom Insel, the former director of the National Institute of Mental Health (NIMH), along with Bruce Cuthbert, wanted to discard—or discount, remove, ignore, replace, or

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augment—the *DSM*, and instead use a more neurobehavioral translational bottom-up (biological), top-down (bureaucratic) paradigm: the research domain criteria (RDoC).[1] RDoC was initially a set of working groups to facilitate translational work from molecules to cells to animal models to people and then became, at least for a while, a requirement for NIMH grants. RDoC consists of five domains: cognition, negative valence, positive valence, systems for social processes, and arousal/modulatory systems.[1] The model presumes that all psychopathology is some mix of these domains (and what is the evidence for that?).

Now it is common in academic meetings to hear someone express some disdain for *DSM* categories (final common pathways for heterogenous multiple processes that do not reflect neurobiology) and a sense that we can someday have better biological subtypes (like cancer) with greater homogeneity and more specific treatments using something like, if not, RDoC. After what I would estimate has been a 10-year more than $100 million investment in RDoC, what have we learned? I must admit that I am confused about how RDoC supplants cat-

egorical diagnoses, in part, because the major advances in genetics show that many genes combined in a polygenic risk score based on categorical diagnoses have revealed multiple overlapping biological pathways within and across disorders.[2] What does this mean? Are the diagnoses irrelevant? Does it mean that, for example, although genes associated with schizophrenia overlap with bipolar disorder (with a group of genes distinct for each diagnosis), that these disorders are spectrums along the same neurobiological dysregulations?[3]

Longitudinal phenotypes would argue, however, for distinct courses for most people who meet diagnostic criteria. Do we now deconstruct each diagnosis and each person with the spectrum of RDoC dysregulations? Perhaps it would be useful to examine how longitudinal complex dynamic dimensions of behavior (including subjective experience) result in distress, dysfunction, and resilience map on to clinical categories—with the hope that biologically distinct subcategories can inform pathophysiology and treatment.

I do not know the best way forward but will speculate that the future will

bring insights that we cannot even begin to imagine.

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