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Toward A Concept of Instrumental Validity: Implications for Psychiatric Diagnosis

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Let's begin by imagining a hypothetical psychotic illness called "Schneider's Disease" (SD), recognized for over 100 years. Let's assume there has been great controversy as regards the "most valid" set of diagnostic criteria for SD. Two main camps have sprung up, each defining SD in a different way:

"Schneider's Disease A" (SD-A) is defined by the presence of four necessary and sufficient features: auditory hallucinations, loose associations, abnormal affect, and paranoid or grandiose delusions. SD-A has been conclusively linked to an abnormal form of a gene (allele) on chromosome 16, mediating the formation of NMDA receptors. Use of the SD-A criteria has been correlated with course and outcome of the illness, as well as yielding excellent "separation" of SD from other major psychiatric conditions. The SD-A construct criteria also show a strong correlation with the patient's family history of SD, and with specific psychometric findings. Unfortunately, the SD "A" construct has led to neither useful pharmacotherapy nor to effective psychosocial treatment for SD, despite more than 50 years of research and attempted treatments.

"Schneider's Disease B" (SD-B) is a construct that lacks any necessary and sufficient features; rather, it is expressed as a "prototype", based on the patient's phenomenology (conscious experience of self and world). Thus, the SD-B prototype notes that patients "… typically feel that they lack a coherent "self"; experience the world as a threatening or hostile place; find it difficult to form intimate relationships; and frequently become demoralized or depressed". The SD-B construct has not shown any significant association with biomarkers or genotypes, nor does it result in a sharp "separation" of SD from other psychiatric illnesses. Neither does the SD-B construct correlate well with the patient's family history, or with psychometric measures. However, use of the SD-B construct has led to the development of an interpersonal form of psychotherapy that dramatically reduces the patient's suffering and incapacity, improves long-term outcome, and reduces frequency of hospitalization.

Now: which diagnostic category - SD-A or SD-B - has greater "validity"? Length constraints limit a full discussion of this question, according to the views of Robins and Guze, Kendler, Andreasen, and Kendell & Jablensky (e.g. Kendell & Jablensky, 2003). However, the thoughtful essay by Rodrigues and Banzato (2010) is instructive. While emphasizing the "epistemological" character of validity, the authors also observe that:
1) a given diagnostic category may be "… valid in some ways, but not others …";
2) "… validity assessment must have pragmatic constraints …";
3) "… many valid propositions about a given diagnostic category are irrelevant to psychiatric nosology".

As I interpret these claims, Rodriques & Banzato are implicitly laying the groundwork for what I call *instrumental validity*.

I would contrast this with what I would call *etiological validity*, which, in recent years, has often been the focus of proposals for modifying psychiatric nosology; e.g., by classifying disorders according to putative "aberrant neurocircuitry". This is not the position of Kendell and Jablensky, who argue that the crucial determinant of validity is *not* an understanding of etiology, but rather "… the existence of clear bound-

aries" between diagnostic categories (Kendell and Jablensky, 2003). They also insist on distinguishing the constructs of *validity* and *utility*. I do not find this distinction as clear or as crucial as do Kendell and Jablensky; moreover, I would suggest that the construct of *instrumental validity* serves as a useful "bridge" between the concepts of *validity* and *utility.*

Following the pragmatic tradition of William James and John Dewey, I define "instrumental validity" as *that property of a diagnostic criteria set which bears on how fully it achieves a particular aim or goal*. Now - to hyper-condense a long argument - I believe that the fundamental goal of general medicine and psychiatry is to *reduce certain kinds of human suffering and incapacity* (Pies, 2008). Indeed, I believe that without this ethical-historical foundation, any definition of "validity" loses its pragmatic *raison d'être***.** It follows from this that, in the context of general medicine and psychiatry, *a set of diagnostic criteria possesses instrumental validity in so far as its use leads to reduced human suffering and incapacity*.

In the case of our hypothetical "Schneider's Disease", it seems clear that the SD-B criteria have greater instrumental validity than the SD-A criteria - notwithstanding the very impressive "successes" the SD-A criteria have yielded, in terms of identifying biogenetic etiology, course of illness, etc. To be clear: I do not want to discourage psychiatry's search for biomarkers and endophenotypes as ancillary data in support of its diagnostic categories; on the contrary, such investigations may someday yield treatments that greatly enhance our patients' lives. Indeed, the *overall validity* of our diagnostic categories is enhanced when they partake of *both* etiological *and* instrumental validity (Pies, 2008). However, I believe our primary concern as clinicians ought to be the instrumental validity of our diagnostic categories - the degree to which they help us reduce human suffering and incapacity. I believe this is consonant with Rodrigues & Banzato's allusion to the "useful and meaningful" aspects of our diagnostic categories.

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