Psychiatric Progress and The Assumption of Diagnostic Discrimination

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Abstract: The failure of psychiatry to validate its diagnostic constructs is often attributed to the prioritizing of reliability over validity in the structure and content of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM). Here I argue that in fact what has retarded biomedical approaches to psychopathology is unwarranted optimism about *diagnostic discrimination*: the assumption that our diagnostic tests group patients together in ways that allow for relevant facts about mental disorder to be discovered. I consider the Research Domain Criteria (RDoC) framework as a new paradigm for classifying objects of psychiatric research that solves some of the challenges brought on by this assumption.

1. Introduction

The architects of the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (1980), a task force of the American Psychiatric Association (APA), are often held to have sacrificed validity for reliability in constructing the manual's categories (Sadler, Hulgus, and Agich 1994; Kendell and Jablensky 2003; Andreasen 2007). According to this view, the DSM went wrong when it adopted an operationalist stance focusing on atheoretical observational criteria, an ecumenical approach that made it easier to apply diagnoses consistently across practitioners and contexts. Without an understanding of etiology, the argument continues, the real contours of psychopathology have not been demarcated, and psychiatry has not been able to identify disease entities akin to those in the rest of medicine (Murphy 2006). This narrative implies that psychiatrists incorporated the operationalism of the DSM into their research methodology, and were accordingly inhibited or uninterested in the pursuit of causal explanations. The solution to psychiatry's validity crisis, it has been suggested, is to refocus psychiatric research on causal mechanisms (Murphy 2006; Kendler 2011; Kendler et al. 2010).

Here I argue that the DSM stands in the way of valid diagnostic categories not merely because it codifies test criteria that have not been validated, but also on account of its role in the research setting. Due to its widespread use in the framing of scientific hypotheses about mental disorder, the manual plays a central role in shaping the objects and methods of psychiatric inquiry. In particular, its diagnostic criteria are widely used to gather test populations for psychiatric studies. When the DSM is employed in this way, the implicit assumption is that the criteria for diagnosing clinical types can also successfully pick out populations about which relevant biomedical facts can be discovered. I will refer to this as the *assumption of diagnostic discrimination.* This assumption is only justified if there is reason to believe that patients meeting diagnostic criteria for a given disorder also share one or more experiential, neurological, genetic, or other abnormalities.

The first aim of this paper (constituting Section 2) is to make explicit the role of the assumption of diagnostic discrimination in psychiatric research, specifically when that research uses DSM criteria to gather test populations. I show that the assumption is implicitly rejected in the Research Domain Criteria (RDoC) project, a new classification tool for psychiatric researchers introduced by the National Institute for Mental Health (NIMH). My second aim is to argue a pessimistic view of diagnostic discrimination, on historical and methodological grounds (Section 3). Finally I consider possible rebuttals for three of my claims: that there are no *a priori* grounds for optimism about diagnostic discrimination; that an alternative classification method would mitigate its risks; and that the assumption is ultimately such a bad one for researchers to make.

2. What is the assumption of diagnostic discrimination?

While the absence of valid categories in psychiatry is often noted, there is little consensus about what the term "validity" means in the psychiatric context. Olbert (unpublished) has identified

fourteen distinct uses of the term in the literature, and suggests that there are significantly more in operation. The usage of the term in psychometrics, from which the psychiatric usage has been developed, is no less fraught; one study identified one hundred and twenty-two different subtypes of validity (Newton and Shaw 2013). The term was originally applied to psychological tests, and was used to calibrate how well a test measured what it was intended to measure. Validity was originally evaluated through the correlation of test scores with other criteria, such as alternative test outcomes. A list of criteria that could establish the validity of these inferences about psychiatric kinds was introduced in Robins and Guze (1970) and updated in Kendler (1980). Andreasen (1995) introduced a "second structural program for the validation of psychiatric diagnosis" which incorporated validators from neuroscience, genetics, and the biomedical sciences. Such validators range from characteristic course and family aggregation to genetic abnormalities and neural mechanisms.

Since diagnostic categories can be said to be measurement instruments in only a loosely analogous sense (Blashfield and Livesley 1991), psychiatrists tend to speak of validity instead as an attribute of the inferences made through diagnosis about purported disease entities. Here I follow psychiatrists themselves in employing the term "valid" to refer to psychiatric constructs that "approximate reality." Under the dominant biomedical paradigm in psychiatry, a valid diagnostic construct is one that categorizes patients who all share the same underlying physiological dysfunction. Critics of the DSM point out that none of the manual's categories have yet been validated in this sense, in so far as no account of a complete causal pathway to a mental disorder has been empirically demonstrated (Kapur et al. 2012).

My question here does not concern whether psychiatric kinds are valid, but rather whether the categories of the DSM, when used as instruments to collect test populations for research purposes, successfully congregate patients about whom relevant facts can be gathered. Optimists

about this question are often committed to what I term the *assumption of diagnostic discrimination*, that is, *the assumption that our diagnostic tests[1] group patients together in ways that allow for relevant facts about mental disorder to be discovered.* For the purposes of this discussion, *relevant* facts are those about the underlying mechanisms causing the signs and symptoms with which patients present. They are the sorts of facts that psychiatric researchers working in the biomedical sciences hope to find: genetic signatures, neurological or cognitive dysfunctions, focal brain lesions, and so forth. Diagnostic discrimination may be a more or less justified assumption for those interested in other sorts of inferences, as I will consider briefly in section 5.1.

I borrow the term "diagnostic discrimination" from psychometrics, where it is defined as the statistical assessment of how a diagnostic test compares with a gold standard, measured by the test's specificity, sensitivity, predictive value, and likelihood ratios (Knottnerus and Buntix 2009, 4). Discrimination in this sense is inapplicable in psychiatry, which lacks any authoritative tests that would allow for the assessment of the sensitivity or specificity of the DSM's categories. In my argument it is invoked as an aspirational term, signifying an ideal rather than a measure. I am interested in the particular epistemic stance that evinces optimism about whether our diagnostic categories effectively group together patients homogeneous for the real objects of interest for biomedical psychiatry. The extent the DSM's criteria are discriminative for the purposes of biomedical research is, of course, an empirical question, and diagnostic discrimination will surely vary across the manual's constructs. My aim is not primarily to offer any empirical assessments, but rather to raise some concerns about the warrant for *prima facie* optimism about discrimination.

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[1]By "tests" I refer to either the diagnostic criteria of the DSM itself or diagnostic screens based on these criteria. Obviously diagnostic discrimination could be proposed about other diagnostic methods (e.g., the *Psychodynamic Diagnostic Manual*) but my focus here is on the DSM.

Unfortunately, careful attention to the problem of validity is entirely compatible with a naive commitment to diagnostic discrimination. Study designs that use DSM criteria to select research samples may assume that those samples will be homogeneous for certain sorts of pathogenic mechanisms.[2] Even those profoundly dissatisfied with DSM categories may employ its criteria in order to locate latent constructs they hope to use to revise and perfect the manual. The DSM's central role in the research context, specifically in guiding the selection of test populations and establishing targets for explanation, is not only entrenched by historical precedent but also held firm by the hand of the biomedical marketplace; funding bodies have traditionally preferred research that is directly pertinent to perceived clinical needs. This has led to a focus on the iterative validation of diagnostic constructs, especially the search for the causal mechanisms that can undergird new therapies.

In the following section I explore the role of diagnostic discrimination in the history of psychiatric research, and suggest that this history should lead us to be pessimistic about the assumption's warrant. In my fourth section I will make the conceptual case against optimism about whether our diagnoses are discriminative, and consider an alternative tool for gathering test populations that does not rely on this risky assumption.

3. The case for pessimism: a historical argument

A valid taxonomy has historically been viewed as the first step in psychiatric research. Influential theorists of psychiatric validity have imagined a boot-strapping model, in which the first phase of achieving validity involves settling on a clinical description of diagnostic kinds (Kendell and

[2] Imagine a psychopharmaceutical study with a simple design in which drug response is tested in a clinical population of subjects sharing a diagnosis. If the assumption of diagnostic discrimination is in play, a 60% response rate will be interpreted as demonstrating that the drug is effective 60% of the time. Once the assumption is questioned, alternative hypotheses—such as that 60% of patients sharing a diagnosis share a specific underlying mechanism affected (with 100% efficacy) by the drug—can be considered.

Jablensky 2003). Andreasen, for example, writes that only "once a reliable method is applied to define symptoms or delineate a potential diagnostic category or dimension of psychopathology" can "these variables then be validated by examining their relationship to external measures" (1995, 162). The DSMs have, historically, provided the independent variable for studies attempting to validate psychiatric kinds.

However, the origins of today's diagnostic categories do not offer confidence that they will be discriminative in the relevant way. Despite the ideal of a scientifically objective system, psychiatric kinds are historically embedded concepts, traceable to different strata of the discipline's past. The aim of the first edition of the DSM, published in 1952, was to collect statistical information. Throughout the history of the manual, ambitious task forces have attempted to revise the DSM's categories on the basis of contemporary methods and knowledge, rather than in the terms of decades-old census projects and nineteenth-century theory. With somatic medicine as the benchmark, discriminative diagnoses were considered the ideal targets for validation by early advocates of the medical model in psychiatry (Klerman 1978); the architects of the DSM-III prioritized the construction of diagnostic categories based on "distilled clinical research experience" as the "first and crucial taxonomic step" (Feighner et al. 1972, 57) towards identifying valid constructs.

While Feighner et al. sought to reground psychiatric nosology on empirical foundations, their criteria (which formed the template for the DSM-III) were in fact an amalgam of data and received clinical intuition, with many of the basic taxonomic divisions being inherited unchallenged (Kendler 2009). Similarly, the main architects for the most recent revision, the DSM-5, announced the need to "transcend the limitations of the current DSM paradigm" so that the new DSM could provide research criteria "not constrained by the requirements of the neo-Kraepelinian categorical approach currently adopted" (Kupfer, First, and Regier 2008, xxii).

In the end, however, with some exceptions (such as the reconfiguration of subtypes of autism on a spectrum and the removal of subtypes for schizophrenia) the nosological structure remained relatively stable.

Since the DSM is primarily intended to serve a clinical population, it makes sense that latent constructs postulated but not demonstrated by biomedical researchers would be excluded. Until theories about underlying mechanisms can be correlated with signs and symptoms that present in the clinic (either behaviorally or as the result of testing), they are irrelevant to the task of diagnosing patients. As it stands, the biologization of psychiatric research has not led to the discovery of any laboratory markers for specific psychiatric conditions, and there remain no biological screens for psychopathology—only the checklists of the DSM itself, and the tests that are based on its operationalizations (Kapur 2012). Decades of research into psychiatric and behavioral genetics have failed to turn up genes specific to particular disorders (though the heritability of types of psychopathology has been demonstrated [Merikangas and Risch 2003]) or neurological markers (despite advances in our understanding of the neurological underpinnings of signs and symptoms [Gillihan and Parens 2011]). The pharmaceutical industry has capitalized on optimism about a one-to-one correspondence between diagnosis, condition, and treatment; notable here is the historic relabeling of treatments specific to symptoms (e.g., "tranquilizers") as treatments specific to purported disease entities (e.g., "antipsychotics"). In spite of this, the heterogeneity of diagnostic profiles is matched by the heterogeneity of patient response to treatment. Nearly all psychopharmaceutical interventions are nonspecific, and none come close to working for all patients sharing a diagnosis, which would allow the DSM to be redrawn along the lines of what Radden has called "drug cartography" (2003).

All in all, neither the history of the manual nor the current state of the art in biomedical psychiatry can support the assumption of diagnostic discrimination. In the next section I argue

that the structure of the DSM also gives reasons for pessimism, drawing on criticisms made by a growing number of psychiatric researchers that their disappointing failure to validate the DSM's constructs is due to the fact that there is nothing for them to validate. Or, to put these judgments about the ontology of psychiatric kinds in my own epistemological terms: the diagnostic tests for psychiatric constructs are not discriminative in the relevant sense, in so far as little of interest from the perspective of biomedicine can be discovered about patients sharing a diagnosis beyond the recognition that they all present with (some of) the very signs and symptoms that constitute their diagnosis.

4. The case for pessimism: a conceptual argument

The first thing to be noted about the DSM's structure is that if etiopathogenic facts about mental disorders are forthcoming, they will not stand in simple causal relationships to the signs and symptoms that act as diagnostic criteria. As of its third edition the DSM's categories have been polythetic, requiring patients to present with only *n* symptoms out of a longer list in order to meet the threshold for a given disorder. The diversity of patients within each class is increased further because screens for psychopathology tend to have low thresholds, since the cost of a false-negative (abandoning a patient in need of care) is viewed as higher than a false-positive (giving unneeded treatment) (Ross 2014). This has allowed diagnostic criteria to cast wider nets, and for reliability to be improved. But as a result, the DSM's criteria allow for incredible diversity. For example, the DSM-5 permits patients to be diagnosed with post-traumatic stress disorder if they present with any one of 636,120 possible combinations of symptoms (Olbert et al., 2014). This may mean that patients sharing diagnosis have a range of underlying pathologies that cause these related but distinct manifestations. Relevant facts will explain this diversity either by revealing homogeneity beneath promiscuous clinical descriptions, or by ultimately arriving at disjunctive accounts of the mechanisms that undergird them. The likelihood of the former across psychiatric

diagnoses is doubtful, given the relative rarity of single causes underlying distinct clinical presentations in somatic medicine (Olbert, unpublished). In cases of the latter, the heterogeneity of conspecifics that make up DSM-derived research samples could hamper progress towards a discovery of these diverse mechanisms.

Some amount of symptomatic variation is frequently found among patients sharing a diagnosis in other types of disease, such as cancer or lupus, so heterogeneity on its own does not prove that the DSM's diagnoses are not discriminative. But the lack of compelling confirmations of psychiatry's taxonomic boundaries by genetics, epidemiology, neurophysiology, and other allied sciences is worrying, raising the question of whether the manual is useful for anything more than identifying phenotypic clusters (Meehl 1986). Turning to the DSM's use in the research setting, initial hopes that "zones of rarity" among diagnoses would emerge through the discovery of underlying mechanisms have not yet been fulfilled (Kendell and Jablensky 2003). Taxometric and epidemiological studies reveal that the enormous heterogeneity in symptoms and course actually contain recognizable sub-types that appear more frequently than others; however, underlying differences in causal pathways or mechanisms that could explain these trends have not been found (Nandi, Beard, and Galea 2009).

Recently, a new round of critics has suggested that the heterogeneity of test populations collected on the basis of DSM diagnostic criteria undermines these sorts of discoveries in psychopathology. Some believe that the best response would be to do away with diagnostic constructs as targets for validation (Hyman and Fenton 2003; Merikangas and Risch 2003). Their view is that explanations that facilitate intervention and recovery are better found at other levels—for example, the level of the symptom, the gene, or the neural mechanism. Sanislow et al. have written that "dependence on conventional nosologies leaves the enterprise of understanding mechanisms of psychopathology in the awkward position of assuming the validity of single

disorders and organizing research accordingly" (Sanislow et al. 2010, 2). In fact, validity is not assumed in such cases—the soundness of inferences about the diagnostic construct is not taken for granted, but rather is the object of investigation. What Sanislow et al. are reacting to is the assumption of diagnostic discrimination—the assumption that populations delineated by DSM categories are ripe for validation according to current biomedical standards.

This line of criticism is a reaction to cases like that described by Steven Hyman who, as the director of the NIMH in the late 1990s, became aware of and increasingly frustrated by the lack of research into treatments for the cognitive deficits of schizophrenia, among the most difficult and damaging symptoms experienced by patients. Hyman describes realizing that the lack of interest in cognitive symptoms was due to the bottleneck put on research by the DSM's diagnostic criteria, since cognitive deficits were not included in the manual. "Given the status of the DSM-IV criteria as the community consensus," Hyman writes of that time, "the U.S. Food and Drug Administration (FDA) held that it could not, by itself, recognize the cognitive symptoms of schizophrenia as an indication for the development and approval of new treatments" (Hyman 2010, 157). Recently, the DSM-5 Task Force has justified the continued lack of inclusion of cognitive symptoms quite explicitly, on the grounds that "cognition may not be useful as a differential diagnosis tool."[3]

Hyman's worry is that a vicious cycle is produced by the role of the DSM in research, such that the exclusion of a symptom (like cognitive deficit) from the manual for clinical reasons leads to the suppression of precisely the kind of research that would make its saliency for psychiatric practice clear. With his colleagues at the NIMH, Hyman began to construct a classification system for *research* that would allow scientists to apply for funding from the Institute without structuring their studies around DSM categories. Under the Research Domain Criteria rubric,

[3] http://www.DSM5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=411#.

psychiatric investigators present their experiments as targeting fundamental components of mental functioning (or "research domains") that are drawn from allied sciences, instead of using DSM constructs. Research domains contribute one axis to the matrix that the NIMH has proposed for organizing psychiatric research, which is sub-divided into more specific "constructs"—for example, "reward valuation," "performance monitoring," or "attachment formation and maintenance." The other axis is "units of analysis," ranging from "genes" to "behavior."[4]

By encouraging the funding of research that investigates certain research domains at certain units of analysis, the RDoC changes the targets of validation from "clinical endpoints that have remained unchanged for decades" (Hyman and Fenton 2003, 351) to any sort of phenomenon relevant to psychopathology that may be viewed either as an extreme on a spectrum of human variation or as a dysfunctional structure or process. What is at stake with this new approach is the longstanding contention that psychiatry's scientific targets are best located through the same classificatory tools as those deployed in clinical practice. Rather than seeking to replace the DSM as a diagnostic manual, RDoC works as a classification protocol for researchers. It aims to encourage a profound shift in the way research samples are conceived of and assembled. In some cases, the translational approaches encouraged by the NIMH require the study of mechanisms that cut across traditional diagnostic categories. Now, instead of relying on DSM categories to gather research populations, RDoC researchers may gather whatever populations are pertinent to their domain of interest.

This method facilitates the roundabouts researchers have always used to precisify generic diagnostic screens to meet their own needs (Meehl 1986; Kutschenko 2011a). Test populations

[4] The matrix also includes a column for "paradigms," which are not units of analysis but rather scientific methods, frameworks, or tasks that are of use in the study of a particular construct.

need not even manifest homogeneous psychopathological symptoms, and indeed one of the aims of RDoC is to allow for the inclusion of patients typically ignored in research because they fall into a "not otherwise specified" category, as well as patients who show signs of mental distress but are below the threshold for diagnosis. So, for example, a group researching fear circuitry (*construct of interest*: fear/acute threat; *domain*: negative valence systems; *unit*: circuits) might use as their test population patients seeking medical help for anxiety, regardless of whether they meet any specific diagnostic criteria.[5]

The RDoC project avoids the pitfall of prematurely assuming diagnostic discrimination, although, as I discuss in Section 5.3, it still relies on other types of discrimination that may be faulty. Of interest here is that in order to liberate psychiatric research from the constraints of an unhelpful taxonomy, the NIMH has placed its bets for discrimination of research targets beyond the pages of the DSM. Debates over which sorts of objects are most worthy of study may continue to be played out under the RDoC through the distribution of funding dollars, but these judgments will be constrained by current epistemological and methodological commitments rather than nosological tradition. In contrast, when the DSM is used to design experimental protocols and present them to funding bodies it can act as a bottleneck, restricting research that cross-cuts or challenges existing diagnostic boundaries and excluding innovative explanatory approaches. If the DSM's categories are discriminative in the relevant sense, such a narrowing of focus is a boon to research. If not, the DSM is analogous to the lamppost in the tale of the man who makes the mistake of looking for his keys where the light is, instead of where he lost them.

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[5] This example is borrowed from the NIMH's online materials about the RDoC—see http://www.nimh.nih.gov/research-priorities/rdoc/nimh-research-domain-criteria-rdoc.shtml#toc_studies for the full example. Accessed 6/18/14.

5. In defense of optimism

I have argued that the DSM may retard progress in psychiatry not merely by codifying and enforcing diagnoses that may not be valid, but also by limiting the abilities of researchers to make original valid inferences about the nature of psychiatric disorder.[6] This effect is due to the widely-held but, I have argued, unjustified assumption in psychiatry that the manual's categories are the appropriate grounds on which to draw test populations for research purposes. In this section I consider three possible objections to my argument. The first is that if warrant for belief in diagnostic discrimination cannot be found in the DSM's history or biomedical psychiatry's track record, it can be found in clinical practice. The second is that *some* assumptions about discrimination must be made, and that the bottlenecking effects that these assumptions have on progress are a necessary cost of doing science. The third is that by giving up on validating the DSM's categories, psychiatry would lose track of its true targets, making the assumption of diagnostic discrimination a prerequisite for psychiatric research.

5.1 The Clinical Case for Diagnostic Discrimination

It has been assumed that if clinicians are able to separate patients into discrete kinds based on their symptomology there is good reason to anticipate that scientific validators will ultimately reinforce these divisions (Robins and Guze 1970). However, it seems that many clinicians themselves do not believe that the DSM accurately taxonomizes their patients. Studies of the actual usage of the manual suggest that clinicians find it primarily helpful for securing treatment options, and mostly ignore its complex polythetic structure (First and Westen 2007). Practitioners engage in diagnostic "bracket creep" to tweak coverage benefits and duck the restrictions that

[6] There are, of course, countless other powerful bottlenecks on psychiatric progress, among them that the brain is far more complex than other medical objects and that explanations of psychopathology from a biomedical perspective may well always be (to a greater degree than elsewhere in medicine) incomplete without contributions from psychology, the social sciences, and even the humanities.

insurance companies put on their ability to utilize their expert judgment (Bowker and Star 1999). Ethnographic research reveals that diagnoses often follow *after* treatment, rather than guiding it (Whooley 2010, 461). If the manual's ubiquity in clinical practice is due to its integral role in the larger machinery of industrial and corporate healthcare, rather than its accurate representation of clinical types, any argument for diagnostic discrimination on these grounds is unsound.

Further evidence that the manual's diagnostic constructs do not accurately represent clinical concepts of disorder comes from the widespread alarm over the deprecation of the experience of the patient due to the DSM's reductive approach to description (Andreasen 2007). The DSM's operationalized descriptions neglect the fact that "in addition to manifesting the relatively direct consequences of neurobiological abnormalities," patients "react to their abnormalities in all kinds of ways that may sometimes require the categories of meaning and experience in order to be understood or explained" (Sass, Parnas, and Zahavi 2011, 16). Some phenomenologically-oriented clinicians and philosophers of psychiatry have suggested that these experiential aspects of mental illness that should themselves be targets for validation (Mishara and Schwartz 2010). Ipseity disturbance, for example, has been used to differentiate schizophrenia-spectrum disorders from other forms of psychosis (Henriksen and Parnas 2012; Parnas et al. 2005). Taken together, these criticisms suggest that the DSM categories do not reflect the clinical picture sufficiently to justify optimism about their utility in the research setting.

5.2 The inevitability of diagnostic discrimination

Another possible objection is that the assumption of discrimination is inevitable in psychiatric investigation, and that the DSM is not (uniquely) culpable. Studies dividing subjects into groups must be always depend on tests assumed to be discriminative for the construct in question. Strategies like RDoC, it could be argued, simply replace the diagnostic constructs of the DSM with other sorts of constructs, in this case the sub-categories of its proposed domains. The validity

of these constructs can surely also be challenged, and the organization of research methods and practices in accordance with them could also be restrictive.

My aim is not to dismiss the importance of discrimination in psychiatric research, nor to suggest that psychiatry can or should do without constructs altogether, but rather to challenge the assumption that the DSM's criteria are discriminative for research purposes. While the RDoC also relies on constructs, its architects have emphasized that these constructs are, first, completely open to revision and, second, explicitly designed to be broad enough to include the major paradigms *currently at play* within psychiatric research today. If the NIMH does not fulfill its promise to amend and expand the matrix's research domain criteria in accordance with shifts in the field, it could well end up with calcified categories that restrict research in the way that the DSM's categories have.

Notably, RDoC does not limit the conceivable *objects* of psychiatric research, which are not the same as the loci on the matrix at which the research falls. Rather than taxonomizing objects for psychiatric investigation, RDoC arranges domains of functioning in which such objects are located, providing for each a consensus definition and orienting researchers towards the available measures or elements across the units of analysis that could be used as variables for gathering populations for studies.[7] Accordingly, researchers have a significant amount of autonomy in the design of their research. As in all scientific research, their choice of construct and the tests they use to measure for it should be scrutinized closely by their peers.

5.3 The value of diagnostic kinds for psychiatric research

A final objection worth considering is whether giving up on diagnostic kinds is worth it—whether the gains to research productivity that would come from having discriminative targets have too high an epistemological or ethical cost. It can be argued that keeping psychiatry focused on

[7] http://grants.nih.gov/grants/guide/notice-files/NOT-MH-11-005.html

diagnostic kinds is the best way to avoid the reduction of the mentally ill to their component parts, which neglects the phenomenological core of psychopathology (McLaren 2011; Walter 2013). Thus there is a risk that the NIMH's own assumptions about the proper targets for psychiatric explanation may be crippling, potentially becoming (in Hyman's evocative term for the DSM) another "unintended epistemic prison" (Hyman 2010, 157).

The NIMH has made little secret of its preference for analysis at the level of brain circuits, based on the reasoning that it is at this level that science is most rapidly gaining insight into the underlying correlates of behavior (Insel et al. 2010). However, this approach has garnered accusations that the RDoC is "mindless" (Frances 2013), that is, symptomatic of "the profession's intent to complete its abandonment of the mind as the localization and source of our suffering" (Greenberg 2013, 342). In response Bolton (2013) has argued that the NIMH's claim that "all mental diseases are brain diseases" need not be reductionistic insofar as the brain can be seen as integrated into a complex network of causal relations that extend beyond the individual. Other advocates of the RDoC framework suggest it might give empirical grounding to psychotherapeutic as well as pharmotherapeutic approaches (Morris and Cuthbert 2012, 31). However, especially in light the NIMH's increasingly enthusiastic pursuit of basic science even as "fundamental and important questions regarding health services, psychosocial treatments, conceptual issues, public health, and patient initiatives remain marginally funded" (Sadler 2013, 29), it remains to be seen whether the NIMH will be truly ecumenical in the distribution of research dollars across the columns of their matrix.

The RDoC project's purported reductionism differs in an important way from the epistemic bottleneck of the DSM, however, insofar as it increases the conceptual and methodological distance between the laboratory and the clinic rather than collapsing it. If the pretense is abandoned that psychiatry's scientific and practical objects are one and the same, the fits and

starts of the NIMH's descriptive project need not immediately impact clinical nosology, nor need its reductive approach be directly imported into clinical practice. Solomon has argued that while expert disagreement can be generative in science, the value of stable consensus is higher in medicine, where the loss of epistemological authority can be dangerous (Solomon 2014). Her claims are vindicated by the widely expressed view that even the minor modifications of diagnostic categories found in each new edition of the DSM can be greatly harmful to patients (Frances 2009). As Schaffner has suggested, clinical research might continue to make progress on refining our understanding of psychopathology at "higher levels of aggregation" while projects facilitated by the RDoC framework work to reveal the complex and diverse "many-many relations" that make validity such a challenge (Schaffner 2012, 184). However, if the DSM stops playing its role as an epistemic hub (Kutschenko 2011b), the integration of psychiatric knowledge into therapeutics will need to be re-imagined—a project well beyond the scope of this paper.

6. Conclusion: Implications for Philosophy of Psychiatry

Diverse metaphysical orientations about the nature of the kindhood of diagnostic kinds are compatible with the assumption of diagnostic discrimination. Debates among philosophers of psychiatry over psychiatric kinds have focused on appraising these possible metaphysical stances, and there has recently been much effort to resolve the metaphysical nature of psychiatric kinds (Kincaid and Sullivan 2014). Insofar as the objects of diagnostic tests can be seen as either theoretical constructs or real entities, both realists and instrumentalists can beg the question of whether the DSM's diagnostic criteria are indeed discriminative. This project has distracted philosophers from the fact that optimism about the discrimination of the diagnostic criteria may not, in some or all cases, be warranted. We have no reason to doubt that diagnostic discrimination varies across the DSM's categories, rendering as ill formed the question of whether psychiatric kinds are natural, human, practical, constructed, etc. Since psychiatrists are

increasingly pursuing piecemeal causal explanations about constructs below the level of the diagnostic construct, they should follow Kincaid (2008) in leaving the question of diagnostic kindhood behind. Instead, philosophers can investigate the ways in which psychiatry stabilizes its diverse objects of research across disciplinary boundaries in the absence of the DSM's authoritative voice (Sullivan 2014).

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