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The *DSM* and Professional Practice: Research, Clinical, and Institutional Perspectives

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Abstract

How mental illnesses are defined has significant ramifications, given the substantial social and individual repercussions of these conditions. Using actor–network theory, I analyze how mental health professionals use the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) in their work. Drawing on observations of a neuropsychological laboratory and interviews with 27 professionals (i.e., psychiatrists, psychologists), I investigate how the *DSM* is used in research, clinical, and institutional work. In research, the *DSM* influences study design and exclusion/inclusion criteria. In the clinic, the *DSM* influences how disorders are conceptualized and diagnosed. Institutionally, the *DSM* aligns the patient–professional encounter to insurance and pharmaceutical interests. I conclude that the *DSM* operates as multiple, context-specific taxonomies that pervasively influence professional practices, such that all possible actions must orient to *DSM* criteria, with professionals both a source and an object of institutionalized gaze.

Mental illness has substantial social and individual repercussions. Nearly one in five American adults have a mental illness and these conditions account for a third of Years Lived with Disability (YLDs) (Substance Abuse and Mental Health Services Administration [SAMHSA] 2013; Vos et al. 2012). Mental illness also has significant economic consequences, with costs surpassing $300 billion annually (Insel 2008). Individually, mental illness is associated with isolation (Thoits 2011), diminished physical health (De Hert et al. 2011), and poverty (Turney, Kissane, and Edin 2013). Furthermore, suicide, which can be associated with mental illness, is the fourth leading cause of death among Americans ages 18 to 65 (National Institute of Mental Health [NIMH] N.d.-a).

Given the pervasiveness of mental illness, how disorders are defined, diagnosed, and reimbursed has significant ramifications. For example, the legitimation of posttraumatic stress disorder (Scott 1990), which was previously perceived as malingering, facilitated care for a condition estimated to affect 6.8% of Americans (Veterans Affairs 2014). With the

release of the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*; American Psychiatric Association 2013), diagnoses of major depressive disorder (MDD), which already impact 16 million Americans (SAMHSA 2013), are likely to increase as individuals experiencing bereavement are no longer exempt from diagnosis (American Psychiatric Association 2013). Similarly, the 100 million Americans suffering from chronic pain (Institute of Medicine 2011) might be affected by the new *DSM-5* category of somatic symptom disorder, which applies to individuals "distressed" by their physical symptoms (American Psychiatric Association 2013) and has been critiqued for having a "ridiculously high false-positive rate" (Frances 2013).

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To understand the definition, diagnosis, and reimbursement of mental illness, it is necessary to analyze the *DSM*, the taxonomy of all recognized mental pathologies in North America. The *DSM* is published by the American Psychiatric Association and authored by task forces of mental health professionals. While initially based in psychodynamic psychiatry, the *DSM* has become increasingly biomedical since the 1980 release of the *DSM-III* (Mayes and Horwitz 2005). The *DSM* was created to serve two explicit functions: (1) to provide reliable diagnostic categories, ensuring clinicians are discussing the same pathology, and (2) to provide researchers with operational definitions of disorders (American Psychiatric Association 1952). The categories and codes in the *DSM* are also institutional tools, used by insurance companies and hospitals.

In 2013, the American Psychiatric Association released *DSM-5*, which, as with previous editions, received critical attention (e.g., Frances 2013). Originally slated to provide substantial conceptual reorganization, the actual alterations were considerably more modest (Whooley 2014; Whooley and Horwitz 2013). For instance, *DSM-5* was to replace the categorical model of psychopathology with a dimensional model. While a categorical model evaluates patients for presence/absence of symptoms, with diagnosis conferred if the patient passes a specific symptom threshold (e.g., 6 out 10 possible symptoms), a dimensional model assesses patients along continua of symptoms. In theory, the dimensional model would permit more refined patient assessments, more nuanced epidemiology, and personalized treatment (Bender 2014).

Arguing that "patients with mental disorders deserve better" than *DSM-5*, NIMH director Tom Insel (2013) announced the Research and Domain Criteria Initiative (RDoC). Insel (2013) situates RDoC as a plan to transform clinical practice by supporting a "new generation of research," stating that "a diagnostic approach based on biology . . . must not be constrained by the current DSM categories." Specifically, rather than investigating *DSM*-defined disorders, RDoC targets normal and abnormal function of "domains," such as the arousal and regulatory systems and negative valence systems (NIMH N.d.-b). Domains can be investigated via eight "units of analysis," including genetics, neurophysiology, and behavior (NIMH N.d.-b). Although RDoC aims to generate a "new nosology" of mental illness (Insel 2013), research on *DSM* categories remains eligible for RDoC-related funding. Accordingly, while Insel situates

RDoC as both *DSM* competitor (Insel 2013) and companion (Insel 2014), the *DSM* nonetheless remains central in research, clinical, and institutional practices.

Previous *DSM* analyses predominately address the creation and consequences of diagnostic categories (Conrad 2005, 2007; Horwitz 2001) or how professionals employ the text in their work (Smith 2014; Whooley 2010). Although informed by both perspectives, my study focuses on professionals' use of the text, and unlike previous studies that exclusively investigate treatment settings, I provide the first multisite analysis of the *DSM*, analyzing how the text is used in research, clinical, and institutional contexts. Specifically, I draw on actor–network theory (Callon 1986; Latour 2005; Mol 2002) to detail how 27 professionals (i.e., psychologists, psychiatrists) engaged in both research and clinical work use the *DSM*.

Following the *DSM* and mental health professionals across three settings (i.e., research, clinical, and institutional) demonstrates how it shapes the logic of mental health research and the diagnosis of patients and how it links professional practices to the commercial logic of insurance and pharmaceutical industries. While providing novel analyses of the *DSM* as a research and institutional tool, my clinical analysis builds on, and contrasts with, previous research. Specifically, prior studies describe how mental health professionals mitigate the influence of the *DSM* by working around the text (Koehne et al. 2013; Whooley 2010). However, I argue that institutionally based professionals *work within* rather than *work around* the text, providing *DSM*-aligned diagnoses that can exceed the precision required by the text. Drawing on Mol (2002) and Whooley (2010), I conclude that the *DSM* operates as multiple, context-specific taxonomies that construct different subjects, produce different diagnostic processes, and achieve different outcomes. Furthermore, analyzing the *DSM* across research, clinical, and institutional settings demonstrates the omnipresent influence of the text, with mental health professionals both a source and an object of institutionalized gaze.

BACKGROUND

There is extensive dialogue between sociology and the mental health disciplines. Sociologists investigate the lived-experience of mental disorders (Pavalko, Harding, and Pescosolido 2007), criticize the social control aspects of mental health (Foucault 1973; Zola 1972), and employ psychiatric conceptualizations of disorder (Eaton 1978; Kessler and Magee 1994).

Here, I will focus on two elements of this literature central to the *DSM*, loosely referred to as the constructionist perspective and the practice perspective.

The constructionist perspective on psychopathologies investigates the definition, creation, and consequences of psychiatric disorders. A primary contribution of the constructivist perspective is the study of medicalization, the process by which social or individual problems are defined as medical issues and medical interventions are posited as solutions (Conrad 2005; Zola 1972). For instance, Conrad (1975) describes how childhood deviance became reframed as the psychiatric condition attention-deficit/hyperactive disorder (ADHD), turning behaviors into a medical issue. Additionally, Barker and Galardi (2015) analyze online discussions about the elimination of Asperger's syndrome from *DSM-5*, arguing that community dissatisfaction with this diagnostic contraction is a countermeasure to demedicalization. Other researchers use the medicalization frame to critique the expanding mandate of the mental health professions (e.g., Timimi 2014), with psychiatrists reacting to medicalization research with both agreement (Frances 2013) and critique (Pies 2013).

Horwitz (2001) also argues that normal behaviors are increasingly identified as pathological, specifically emphasizing how normal stress, sadness, and social disadvantage are incorporated into *DSM* definitions of psychopathology. Kutchins and Kirk (2003) describe how *DSM* categories pathologize normal stress responses and how *DSM* categories reflect racist and sexist assumptions. Other researchers make similar critiques vis-à-vis specific diagnostic labels, with Hooker (1957) and Lane (2008) interrogating the pathologization of homosexuality and shyness, respectively.

While the constructionist perspective analyzes *DSM* content and its implications, what I refer to as the practice perspective (e.g., Brown 1987) addresses how professionals use the text. For instance, Whooley (2010) argues that the *DSM* is not a monolithic taxonomy and is employed selectively by professionals. Whooley describes how professionals both "fudge" diagnostic labels to ensure their patients receive insurance benefits and negotiate diagnoses with patients. Koehne and colleagues (2013) document a similar phenomena vis-à-vis borderline personality disorder, wherein professionals avoid conferring diagnosis to protect patients from stigmatization. Additionally, Smith's (2014) interviews with psychoanalysts detail concerns over medicalization and increasing pressure to prescribe pharmaceuticals. Research from the practice perspective also articulates how professionals produce the *DSM*, with Godderis (2013) detailing the iterative process of debate between researchers and clinicians leading to the exclusion of postpartum depression from *DSM-IV*.

Accordingly, while the constructionist perspective critiques the expanding purview of the mental health disciplines and details potential social ramifications, the practice perspective articulates how professionals use the *DSM*. While some practice perspective studies (e.g., Smith 2014) demonstrate how constructivist concepts (e.g., medicalization) manifest in professional work, other studies (e.g., Godderis 2013; Whooley 2010) pose questions for constructivist perspectives by demonstrating how professionals mitigate the influence of the *DSM* via selective employment of the text and exercising diagnostic agency.

This article aims to (1) describe how professionals use the *DSM* in their research, clinical, and institutional work and (2) document their evaluations of the text. My analysis of institutionally based professionals complements previous investigations of private-practice psychiatrists (Whooley 2010) and psychoanalysts (Smith 2014) by detailing how managers and bureaucratic requirements link professional activities to pharmaceutical and insurance companies. Furthermore, I argue that extending analysis beyond treatment settings (e.g., Koehne et al. 2013; Smith 2014; Whooley 2010) and investigating professionals' use of the text in their research, clinical, and institutional work reveals novel connections between the text and professional practices. Specifically, building on both actor–network theory (Mol 2002) and Whooley's (2010) observation that the *DSM* is not a monolithic taxonomy, I argue that the *DSM* operates as multiple taxonomies, producing context-specific diagnostic styles, subjects (i.e., patient, research subject, customer), and outcomes (e.g., treatment, reimbursement). The multiple, context-specific employments of the *DSM* demonstrate how the text comprehensively influences professional activities (e.g., operational definitions of pathology, case conceptualizations, selection of diagnoses). I draw on both the constructionist and practice perspectives, discussing how professionals are limited to selecting only *DSM*-aligned options, which, despite their reflexivity, binds their work to phenomena such as medicalization and the proliferation of psychiatric categories.

DATA AND METHODS

This study draws on observational and interview data. First, I conducted ethnographic observations at the

"Becking Laboratory," a psychologist-led neuroscientific laboratory located at a midwestern university. The laboratory had more than 50 members from multidisciplinary backgrounds (e.g., psychiatry, neuroscience, statistics) and maintains exclusive access to a functional magnetic resonance imaging machine. I predominantly observed data collection and analysis practices of a longitudinal study on the development of mental disorders and psychiatric symptoms. The laboratory had an extensive record of funding success and was actively pursuing an RDoC Request for Funding Application (RFA). I also observed the 167th meeting of the American Psychiatric Association and the 69th meeting of the Society for Biological Psychiatry (SOBP). American Psychiatric Association sessions covered a range of topics (e.g., measurement, personality disorders), while SOBP sessions focused on biological psychiatry (e.g., genetics, neuroscience). I attended 58 individual sessions across both conferences. I additionally observed a voluntary, all-day seminar introducing *DSM-5* to psychiatrists, psychologists, social workers, and counselors. The seminar was American Psychiatric Association certified to provide continuing education credits and reviewed differences between *DSM-IV* and *DSM-5*. I also attended a four-session *DSM-5* webinar series targeting numerous professionals (e.g., psychiatrists, social workers), operated by a nonprofit organization. The series features presentations from both prominent critics (e.g., Allen Frances) and supporters (e.g., Darrel Regier) of *DSM-5*.

While observing, I took detailed field notes of conversations, presentations, question-and-answer sessions, research activities, and social settings. Initial field notes were refined and expanded on immediately after observations were completed; however, by observing academic practices and consequently having the liberty of using a laptop computer, my initial field notes were extensive and detailed, often including direct quotations. By observing laboratory research, training seminars, and professional conferences, I was able to document in situ debates about *DSM-5* as well as interprofessional discussions of how the text operated as a research, clinical, and institutional tool.

Second, in-depth interviews were conducted with 27 psychiatrists and psychologists. All participants were employed at public hospitals, veterans' administration hospitals, academic medical centers, or outpatient mental health clinics. None of the participants operated a private practice. Participants worked in multidisciplinary units alongside other mental health professionals (e.g., social workers, neurologists). While experienced in talk therapy

(e.g., cognitive behavioral therapy), participants were not psychoanalytically trained. All participants were engaged in both research and clinical work, actively maintaining a client load and research program. Specifically, participants conducted clinical work three to four days per week, with the remaining days reserved for research, which is reflective of the scientist-practitioner model of training used at many universities. My sample of institutionally based researcher-clinicians contrasts with both Whooley's (2010) study of private-practice psychiatrists and Smith's (2014) study of psychoanalysts, while my analysis of research, clinical, and institutional work contrasts with Whooley's (2010) and Smith's (2014) exclusive focus on treatment contexts.

Semistructured interviews addressed daily activities, interactions with other professionals, diagnostics practices, and perspectives on both the *DSM* and RDoC. Follow-up interviews were conducted with participants interviewed before *DSM-5* was released. Participants were recruited via study flyers distributed over departmental listservs and network sampling. Interviews lasted between 60 and 120 minutes. All interviews were digitally recorded and transcribed verbatim.

Analysis occurred in the context of an ongoing study on neuroscience and mental illness. Analysis was informed by grounded theory (Charmaz 2006). Latour's (2005) notions of following actors, actors accounting for their own practices, and connecting sites were used as sensitizing concepts for coding (Charmaz 2006), along with the research question asking, "How do professionals use the *DSM* across different sites?" Interview and observation data were recorded under the following codes: *DSM*, RDoC, research, clinic, institutions, insurance, pharmaceuticals, and accounting for practices. I then employed actor–network theory (Callon 1986; Latour 2005; Mol 2002) as a theoretical framework (Charmaz 2006). Specifically, I used Latour's (2005) concept of following actors and connecting sites while also drawing on Mol's (2002) assertion that practices (what she calls enactments) will vary between sites and multiple enactments will produce an object (e.g., the *DSM*) with multiple versions. Accordingly, analysis focused on variability in professional enactments vis-à-vis the *DSM* across multiple sites of action. After describing how participants use the *DSM*, I argue that the text operates as multiple, context-specific taxonomies, pervasively influencing professional practices.

Thematic analysis was complemented by case comparison analysis (Miles and Huberman 1994)

comparing individual cases and professional cohorts. For example, given differences between disciplines, pedagogy, and therapeutic approaches, I compared the accounts of psychiatrists and psychologists to one another to ensure themes were broadly reflective of the entire sample rather than endemic to a subsample (e.g., psychologists). Observed similarity between subsamples is discussed below in relation to institutional standardization (see "*DSM* as Institutional Tool").

RESULTS

DSM as Research Tool

This section details how the *DSM* pervasively influences the enactment (Mol 2002) of mental health research by informing the operationalization of disorders and inclusion/exclusion criteria, as well as by constructing and reifying ideal-typical (Weber 2004) versions of pathology and normalcy. Although participants critiqued the poor construct validity of *DSM* categories and lauded RDoC as improving mental heath research, I argue that the *DSM* will continue to influence research practices, as RDoC inherits (Timmermans and Berg 1997) *DSM* infrastructure.

Beginning with operationalization, the *DSM* defined pathologies across a breadth of research practices, including grant applications, ethics protocols, and manuscripts. The *DSM* also determined participants' conceptualization of disorders in actual analyses. For example, I observed a Becking Laboratory meeting wherein a research team divided data for analysis. One researcher intended to investigate "individual differences in depression" in relation to self-reports and brain measures. She hypothesized that because depression "creates cognitive distortions," there should be substantive neurological differences between "depressed" and "nondepressed" subjects. Her analysis used the *DSM-5* criteria for MDD to define what counted as "depression."

The *DSM* also determined inclusion/exclusion criteria for research. For example, the Becking Laboratory researcher described above stated she would use subjects' responses to the Structured Clinical Interview for *DSM* (SCID; First et al. 2002) to determine "whether or not" they had depression. The SCID is an approximately 100-page document that takes two to three hours to complete and provides a thorough evaluation of an individual in reference to every *DSM* disorder, allowing researchers to know which, if any, *DSM*

pathologies are present in a subject. One psychiatrist described using the SCID to select subjects for a schizophrenia study:

> And then we start with the SCID. . . . So we start out with depression . . . and then we do the same for mania and then we move into the psychosis module, which is pretty comprehensive. . . . And then we make our differential diagnosis. So if they don't meet criteria for any mood symptom, but they do meet criteria for psychosis then its schizophrenia. . . . And then we go into things like substance use, any sort of abuse or dependence, past or present. Anxiety disorders, so things like social phobia, panic disorder, PTSD [posttraumatic stress disorder] and then we kind of go into any eating related problems. . . . So the whole process takes two to three hours, depending on how chatty each person is. . . . And I score it afterwards and the assessment confirms if they are eligible for the schizophrenia study.

This participant described using the SCID to enroll subjects with, and only with, schizophrenia. Subjects were ineligible if they had schizophrenia with any other disorder (e.g., eating disorder), while subjects with other psychotic disorders (e.g., schizoaffective disorder) "were not the ones that we want." Accordingly, after completing the SCID, subjects became analytic cases of single, specific *DSM*-defined disorder. Using the SCID to construct subjects as analytic cases of a specific *DSM* pathology was standard research practice among interviewees and presentations at both American Psychiatric Association and SOBP meetings.

While the *DSM* was used to construct pathology in the enactment of research, it was also used to construct normalcy. Specifically, participants used the *DSM* and SCID to identify individuals who could serve as "normal" or "healthy" controls. Participants defined "normal" controls as individuals who did not meet criteria for any *DSM* disorder. As indicated by the literature on the pervasiveness of psychopathology (Conrad 2007; Horwitz 2001; Lane 2008), obtaining "normal" controls was exceedingly difficult:

> Even though we screen them for normalcy, there is a questionnaire and they only get accepted as a possibility if they haven't had convulsions, injuries, etc., even migraines we exclude. And then they go through these questionnaires of *DSM* criteria for psychiatric disorders, the basic

personality inventory and IQ. So if anything is abnormal there they get excluded. So even though one cannot be more rigorous in screening for normalcy in control groups, even then we found some 20% to 30% we had to exclude because unbeknownst to themselves they had social phobia or phobic anxiety, because these are quite common but people don't realize that it can be an illness. So if you're normal, you're not really normal [*laughs*]. It turns out that only 15% to 19% of our normals are truly normal. . . . So the few in whom it doesn't emerge are called "supernormal" [*laughs*] (Psychiatrist).

This psychiatrist described how the *DSM*, SCID, and a host of additional measures are used to identify "normal" controls in his research. Numerous potential controls were eliminated via *DSM*-related self-report measures (e.g., Beck Depression Inventory), with an additional 20% to 30% eliminated because they qualify for disorders (e.g., social phobia) that are difficult to self-assess. The remaining controls, or "supernormals," constituted a small proportion of the general population and, in a way, were also psychiatrically deviant. Accordingly, in establishing the construct validity of their research, participants used the *DSM* to produce and reify ideal-typical (Weber 2004) versions of normalcy and pathology, wherein controls were "supernormals" and analytic cases were exemplars of a single *DSM* disorder.

While I have thus far described how the *DSM* pervasively influences the enactment (Mol 2002) of research, participants were both reflexive and critical of the text. Specifically, participants frequently criticized the construct validity of *DSM* categories, despite using these categories for research. Participants argued disorders were insufficiently operationalized, redundant with other diagnoses, and lacking in clarity. For instance, one psychiatrist who studies *DSM*-defined schizophrenia argued,

Schizophrenia simply doesn't exist. People believe in it because we have given it a name. Schizophrenia is a syndrome. A syndrome implies that it doesn't have a single etiology. So it's like a cough. A cough can be the result of many things: nervousness, pneumonia, bronchitis, asthma, a lung tumor. In the same way, schizophrenia is the end result of many different things.

Although this psychiatrist used the *DSM* to operationalize schizophrenia in his own research, he argued that the diagnosis merely labeled a collection of symptoms and did not represent a real disorder. Likewise, a psychologist observed, "In my department, there aren't really any defenders of the *DSM*," further stating, "I'm sure all these researchers can look back on their careers and at least anecdotally say to themselves, 'Yeah, depression isn't really depression, is it?' So clearly we are not capturing one disorder." Accordingly, while the *DSM* was used to operationalize pathology in the enactment of research, participants viewed *DSM* categories as deeply flawed due to poor construct validity.

Although participants critiqued *DSM* constructs, they did not critique the enactment of mental health research that emphasized precise measurement and thorough, fine-grained assessment. In this context, the *DSM* was simply a flawed research tool, with RDoC positioned as a means to replace *DSM* categories with "objective" and "science-based" neurophysiological descriptions of pathology. For instance, at the American Psychiatric Association meeting, NIMH Director Insel (2014) argued that while the *DSM* provided highly reliable constructs useful for interprofessional communication and billing, RDoC would elucidate the mechanisms of psychopathology, finally allowing psychiatry to curb morbidity and mortality rates. Likewise, in his American Psychiatric Association presidential address, Jeffrey Lieberman (2014) argued that RDoC would allow psychiatry to cease being a "Rodney Dangerfield" discipline that "can't get respect" by producing research breakthroughs and Nobel prizes. Participants were similarly enthusiastic about the promise of RDoC, with one psychologist stating that the "dream of RDoC" was a future whereby "you'd have an amygdala clinic, a prefrontal clinic, an a hippocampal clinic, that could treat your disorder because what you have is a disordered brain region." Participants thereby situated RDoC as saving construct validity in mental health research and producing efficacious therapies. Furthermore, in contrast to Kirk and Kutchins's (1992) description of researchers leveraging statistical reliability to change *DSM-III*, here construct validity is employed to advocate for taxonomic alterations.

Returning to the enactment of research, despite participant enthusiasm for RDoC, the ability to circumvent the *DSM* was difficult in practice. Timmermans and Berg (1997) argue that new standards inherit preexisting infrastructure from previous standards. Such a process was occurring with RDoC, imprinting the *DSM*'s influence on RDoC-aligned projects. For example, NIMH (Insel 2013) still funds research employing *DSM* categories as long as researchers also analyze within-group (e.g.,

comparing severely and moderately depressed subjects) or between-group (e.g., panic disorder and social phobia) differences. Becking Laboratory researchers employed precisely this strategy while applying for RDoC-related funding. Researchers closely communicated with NIMH about RDoC standards and were informed that their research could use *DSM* categories as long as they sampled for heterogeneity within disorders. That is, they were not eligible for funding if they compared "depressed" to "nondepressed" individuals but were eligible if they also included people with "subclinical depression." The laboratory made modest alterations to their research design, maintained *DSM*-associated measures (e.g., SCID), and submitted a competitive grant to NIMH. Therefore, while participants situated RDoC as transforming mental health research practices, the *DSM* nevertheless continues to influence research as RDoC-aligned studies inherit (Timmermans and Berg 1997) *DSM* categories and constructs.

DSM as Clinical Tool

This section details how the *DSM* pervasively influences the enactment (Mol 2002) of clinical work. Participants internalized *DSM* criteria, with the text comprehensively informing their diagnostic practices. Participants *worked with* rather than *worked around* (Whooley 2010) the *DSM*, describing how they used the text to produce evolving diagnoses that operated as individualized conceptualizations of pathology ("case conceptualizations"), surpassing the diagnostic precision required by the *DSM*. However, similar to previous studies (e.g., Smith 2014; Whooley 2010), participants critiqued the *DSM* and argued that increasing construct validity and categorical precision were disconnected from therapeutic work.

From the initial clinical encounter, participants described using the *DSM* to assess patients. Participants stated they were "so familiar with the criteria" that they "don't open the book and check it every time," predominately conducting assessments from rote memory. Participants' confidence was indicative of extensive training rather than a lackadaisical attitude, as professionals who indulged my spot-checking of their knowledge of random *DSM* disorders were able to recite diagnostic criteria. For instance, one participant described somatic symptom disorder, a condition she had not diagnosed in "at least three to six months":

> Um, first thing is you need to have the presence of a somatic symptom of some sort, it doesn't

necessarily need to have a clear medical diagnosis or not. It needs to be present for at least six months. Um, the state of being symptomatic is present for six months, it doesn't necessarily have to be the same present symptom across the six month period. And the biggest thing is not that the symptom is present but that it is dealt with in a maladaptive way. So, I believe it needs to be two of the following three: persistent anxiety about the symptom, excessive amounts of time dedicated to the symptom, or managing it, or a significant amount of distress about the symptom, above and beyond what is considered to be normal (Psychologist).

The *DSM* was thereby an internalized heuristic, with participants continuously interpreting patients' symptoms within the *DSM* framework. When participants physically consulted the *DSM*, it was to review differential diagnosis (i.e., eliminate similar disorders) or double-check the elements of a particularly rare disorder.

Regardless of whether the *DSM* was physically consulted, the text shaped the enactment of clinical work, supplying a diagnostic label for every patient:

> I use the *DSM* on virtually every case that I see. [For example] although I get very few cases of first episode psychosis, when I do they are usually not well enough defined for me to be able to categorically diagnose them. Most of them I wind up calling it psychotic illness NOS/NEC [not otherwise specified/not elsewhere classified] or list the differential that includes schizophrenia or substance abuse and submit them for diagnostic clarification (Psychiatrist).

This psychiatrist described using the *DSM* on "virtually every case" clinically. Patients presenting with a symptom (psychosis) could be suffering from schizophrenia, delirium, or drug overdose. He argued it was not possible to apply a decisive diagnosis until patients were medically stabilized and provided a general NOS/NEC diagnosis to be reevaluated once the patient stabilized.

While the quote above demonstrates how the *DSM* influences the enactment (Mol 2002) of clinical work, it also identifies an important contrast between clinical and laboratory usage of the *DSM*. Specifically, while assessment of research subjects was a thorough, front-end process, assessment of patients was iterative and evolving. During each interaction, professionals learned new details about

patients' lives that might inform, mitigate, or alter diagnoses, necessitating continuous dialogue between the *DSM*, the professional, and the patient:

> I'll put a formal diagnosis in the report. And that will probably change as we go on. But we don't have to formally change it for insurance. [For example] I had a kid that was 17 and met criteria for borderline personality disorder. He was also severely anxious and he had a history of abuse. And I said, "I think this guy fits into the reactive attachment disorder diagnosis." So I opened up the *DSM* and I went through and just said, "Yeah he fits that criteria, that criteria and that criteria." And then I said, "Alright, he meets that and I'll put it into my report" (Psychologist).

This participant expected diagnoses to evolve over the course of therapy. He provided an example of such evolution, describing how a 17-year-old patient who initially presented with borderline personality disorder was later also diagnosed with reactive attachment disorder. Although the diagnosis did not change on the patient's insurance forms, the psychologist updated his clinical notes and altered his treatment orientation. Participants argued that good diagnoses followed a similar logic, wherein a professional continuously updated his or her case conceptualization based on new information and *DSM* criteria remained continuously relevant.

One reason for the iterative, evolving dialogue between professional, patient, and *DSM* was that the majority of patients suffered from multiple psychopathologies. A patient might present seeking assistance for anxiety only for his or her anxiety to be related to another disorder. That most patients met criteria for multiple disorders was well known among professionals. At the American Psychiatric Association meeting, it was frequently repeated that the "modal patient" suffers from three "comorbid" *DSM* disorders. While the modal patient would be excluded from research studies, participants frequently encountered such complex patients in the clinic, arguing that each patient needed to be assessed as a potentially unique manifestation of pathology:

> You need to understand each person's symptoms. One individual with a schizoaffective disorder is very different from the next individual who has a schizoaffective disorder. And a patient with a bipolar 1 disorder is very different from another

patient with a bipolar 1 disorder. . . . You have to get a really personal understanding of everybody. You might get a report of schizophrenia or bipolar but that patient's main issues may just be cluster B [a group of personality traits] difficulties, right? And you might miss out on that when you just go on that [initial] diagnosis in front of you. [The *DSM*] gives you specification but no context (Psychiatrist).

The enactment of clinical work involved combining the specific manifestations and combinations of *DSM* categories in a patient's biography to produce a personalized case conceptualization that informed treatment. While Whooley's (2010) participants "worked around" the *DSM*, participants in the present study used the *DSM* on every case to provide an initial diagnostic structure, or "snapshot," and later produced case conceptualizations surpassing the diagnostic precision required by the *DSM*.

While I have thus far detailed how the *DSM* impacts the enactment (Mol 2002) of clinical work, similar to previous studies (Koehne et al. 2013; Smith 2014; Whooley 2010), participants were critical of the text as a clinical tool. Specifically, while participants lauded increased construct validity for their laboratory work, they argued that increasing diagnostic precision was largely disconnected from improving patient care. For instance, a psychiatrist who was initially involved with *DSM-5* stated,

> We're creating some new categories, which I think is great for companies but not necessarily good for the overall management and treatment of patients. I think the *DSM-5* is still an attempt to try and create very specific diagnoses that have a very specific epidemiology, very specific pattern and hopefully very specific treatment. But I think we're still splitting hairs with what's going on in *DSM-5*. And at the end of the day is it going to be helpful for patients? And is it really going to impact the way we treat these individuals? I don't think so. . . . Moving some things from anxiety spectrum disorders to other things, is that going to make a difference? No. I think it's conceptually not bad in some areas, but is it really going to alter the way that I practice? I don't think so.

Refining diagnostic categories might facilitate increased construct validity and better conceptualizations of disorders, but, unlike the individualized precision achieved from case conceptualizations,

increased precision in *DSM* categories was distant from the pragmatic work of clinical treatment. Although much of the rhetoric around RDoC emphasized the connection between increased construct validity and therapeutic efficacy (see above, "*DSM* as Research Tool"; Insel 2013), here participants situated improved construct validity as a conceptual project providing little utility for clinical work. Instead, participants emphasized the importance of a clinical version of ecological validity, where diagnosis matched patients' experiences.

In extending analysis of the clinical use of the *DSM* beyond a single disorder (Koehne et al. 2013) and private practice psychiatrists (Whooley 2010), my analysis of institutionally based professionals provides novel details on how the *DSM* influences clinical practices. Specifically, in contrast to previous investigations (Koehne et al. 2013; Whooley 2010), study participants *worked with*, rather than *worked around*, the *DSM* in their enactment of clinical work. Indeed, following diagnostic activity over the course of the patient encounter reveals that professionals employ the *DSM* to produce refined, often personalized, conceptualizations of pathology. Participants also reported internalizing *DSM* criteria, with the text providing a heuristic that organized diagnostic activity. Although the *DSM* pervasively influenced the enactment (Mol 2002) of clinical work, participants' critiques of the text resonated with previous studies. Specifically, combining these findings with previous studies suggests that clinical dissatisfaction with the *DSM* applies to the practices of private-practice psychiatrists (Whooley 2010) and institutionally located mental health professionals as well as psychoanalytic-trained psychiatrists (Smith 2014) and non-psychoanalytic mental health professionals.

DSM as Institutional Tool

This section details how the *DSM* operates as an institutional tool, comprehensively influencing the enactment (Mol 2002) of professionals' work. Intra-institutionally, the *DSM* operated as an obligatory passage point (Callon 1986) through which department managers could enforce standards and shape professional activities. Inter-institutionally, the *DSM* connected professional practices to insurance and pharmaceutical companies.

Intra-institutionally, the *DSM* and bureaucratic forms were used to process patients, with professionals using *DSM* numeric codes and diagnoses to label every patient's paperwork. Coding patients with the *DSM* was mandatory unless there was a reason for temporarily deferring diagnosis or patients did not meet criteria for a disorder (i.e., were healthy). The institutional importance of paperwork was underscored by the fact that several sites I visited did not transfer to *DSM-5* until almost a year after its release, so that institutional software and forms could be updated accordingly.

As the mandatory usage of the text indicates, the *DSM*, similar to other standardization tools (Timmermans and Berg 1997; Timmermans and Epstein 2010), was connected to a system of discipline. Specifically, managers employed the *DSM* to influence the enactment (Mol 2002) of professional practices. One psychiatrist described how managers used the text to influence diagnoses:

> The trajectory is ADHD, ODD [oppositional defiant disorder], conduct disorder, and then antisocial [personality disorder]. So I often have a hesitancy of putting that label on, because it's like, "Oh your kid's a sociopath." There's a fear that these diagnoses can put people on a track. With conduct disorder, I mean you need like three things and then you have conduct disorder. And I did my residency in [city] and just with gang involvement there's going to be a lot of kids who have [*pantomimes quotation marks*] conduct disorder. But in that residential setting they were like, "You have to label it. You have to put that label on if it is there."

This psychiatrist recounted her concern that a literal interpretation of the *DSM* was being used to label a minority population living in a high-crime neighborhood. Echoing Wakefield, Horwitz, and Schmitz's (2005) critiques of the pathologization of social disadvantage, she stated the violence experienced by her patients resulted from social problems rather than psychopathology. She argued her patients should instead be diagnosed with anxiety, if they were to be diagnosed at all. Her supervisors, using a literal interpretation of the *DSM*, disagreed and instructed her to apply a diagnosis of conduct disorder, which she felt placed her patients at risk for future forensic intervention.

As suggested above, the *DSM* was used intra-institutionally to standardize practices. While participants (i.e., psychologists and psychiatrists) provide different treatments (e.g., therapy, medications) and receive different training, they work alongside one another within institutions and are expected to produce comparable enactments (Mol 2002). One psychiatrist I interviewed, who was

internationally regarded, discussed how administrators constrained his use of the *DSM*. After he described his preference for *DSM-III*, which he used in a longitudinal research study, he stated, "Clinically, I use *DSM-5* because it's the most recent one [*laughs*] and because I bought it [*laughs*]. And because I'd be a pain in the ass for the bosses if I didn't: 'What is Dr. [name] doing? Putting all his diagnoses in *DSM-III*!?' [*laughs*]." Although initially joking about his use of *DSM-5*, he reported that administrative oversight ensured his compliance with the text.

The *DSM* operated intra-institutionally as an obligatory passage point (Callon 1986), a mandatory feature of a network through which all actors must pass. In combination with management surveillance and bureaucratic paperwork, the *DSM* funneled professional enactments toward institutional standards. Here, it was not professional differences (i.e., psychology vs. psychiatry) that were salient; rather, both groups, being institutionally based employees, were expected to provide standardized care services. Consequently, institutional use of the *DSM* necessitated standardized enactments across disciplinary boundaries, ensuring professionals produced similar codes, descriptions, and diagnoses.

The *DSM* also operated inter-institutionally, connecting sites (Latour 2005) and coordinating enactments (Mol 2002) with external institutions, specifically, insurance and pharmaceutical companies. Beginning with insurance companies, the *DSM* was a billing tool linking participants' patient encounters to the hospital–insurer relationship. Professionals ubiquitously emphasized that billing was a primary function of the *DSM*. One psychiatrist stated, "We have to adhere to the *DSM* for billing and to justify treatment," while others stated that "the *DSM* has to be there for billing purposes" and "[it is] most important for insurance forms."

In this context, the *DSM* was used to produce receipts following a service interaction. Specifically, a patient would visit a professional in relation to a psychiatric issue (e.g., depression), and the professional would provide a treatment (e.g., psychopharmaceuticals). Professionals would then use the *DSM* to code this interaction, ensuring their host-institution, and by extension the professional, would be paid and the patient would be billed. As one participant stated, "You have to diagnose to bill. . . . I have to give a diagnosis, period. So that's a pressure, it's a job requirement, period." In contrast to Smith's (2014:80) psychoanalysts, who

"[did] not generally rely on reimbursement," study participants' needed to maximize billing:

> It's an informal, but well-known, set of rules. Which is, every quarter, we get our numbers, which include how much we billed, how much money we got back and then compares that to our wages, expenses, benefits, and cost of our assistant. . . . So we are supposed to make *at least* enough in terms of billing to cover our salary, benefits, et cetera. But it's preferred, of course, that we actually bring in a profit (Psychologist; participant's emphasis).

The pressure to maximize revenue was directly connected to the proliferation of psychiatric diagnoses (Conrad 2005; Horwitz 2001) and the application of psychiatric labels. For instance, the psychologist quoted above was employed as a health psychologist, meaning she could bill patients under either physical "health and behavior codes" or *DSM* mental health codes. She described how billing pressures were connected to selecting the *DSM* codes:

> I have a choice on how I bill . . . and what we did find out is that, with Medicare, that more money can be made billing under mental health codes [i.e., *DSM*] than their medical diagnosis, so that's one thing that's been strongly encouraged: "If there is a mental health diagnosis to be had, bill them with that instead of their medical diagnosis."

When asked if the pressure from billing comes from administration, she responded,

> Yes. But it's not even just up above. As a service, we are at risk if we don't continue at least breaking even. And if you are going to make 30 bucks more a session for someone with a mental health diagnosis than a medical diagnosis, *that adds up* (participant's emphasis).

Although she stated, "I like to not have to label them with a mental health diagnosis" and was able to select between physical and mental health codes, this psychologist was pressured to apply the latter codes to maximize revenue. Similarly, when I asked a psychiatrist what happened when she assessed someone who was "actually healthy," she stated, "This is going to sound awful, but a lot of times you can't let a patient walk out of your office without a

diagnosis," adding that "without a diagnosis, insurance is not going to cover the visit." Through the *DSM*, the financial interests of hospitals and insurance companies were directly inserted into the enactment (Mol 2002) of clinical care, with the *DSM* translating professionals into a product and patients into customers, creating a service that could be monetized by both the host-institution and insurance providers. While participant accounts contrast with Smith's (2014) study, their descriptions resonate with Kirk and Kutchins's (1992) assertion that the *DSM* is primarily a billing tool, with institutions' commodification of their employees' services further connected to medicalization and the proliferation of psychiatric labels (Conrad 2005; Horwitz 2001).

Inter-institutionally, the *DSM* also linked the enactment of professional practices to pharmaceutical companies. Similar to many social scientists (Abraham 2010; Lane 2008), participants argued that pharmaceutical interests influenced *DSM* categories. Indeed, one psychiatrist stated that the "central problem" of the *DSM* was that it was "constantly under indirect pressure from the pharmaceutical industry, which influences decisions and invents entities for which medication can be sold to treat." Participants specifically targeted personality disorders, somatic symptom disorder, and anxiety disorders but were most critical of the removal of the bereavement exclusion for MDD from *DSM-5*. The exclusion omitted individuals suffering from some form of grief from a diagnosis of MDD. Participants argued the revision turned grief from a "normal experience" into a "mental disorder," with a psychologist adding, "[Grief] is not a diagnostic category, it is part of life. It's not a mental disorder. . . . [Treatment is for] people beyond normalized experience."

While the paragraph above indicates how the *DSM* connected pharmaceutical interests to the professional–patient encounter, the influence of pharmaceutical interests was similarly apparent vis-à-vis research. A pharmaceutical company researcher I interviewed stated that companies were struggling to find another "hit drug" and were relegated to expanding the use of current products, such as employing atypical antipsychotics for depression, because they "didn't have any better options." In this context of financial hardship, pharmaceutical companies attempted to influence the construction of the *DSM*, with the researcher stating they had "dozens and dozens of drugs" that worked on subsamples of subjects but "washed out" for the entire study cohort. For example, in a study of schizophrenia, a drug might be highly effective for a subsample of subjects but have no significant impact when considered within the larger study sample. In such cases, the participant stated that while the drug arguably had therapeutic efficacy for a subsection of the population, it had a negligible effect for whole population and would not be released. He then argued that pharmaceutical companies were advocating for the redefinition of psychopathology, such as that provided by RDoC or the dimensional model of *DSM-5*, to facilitate research highlighting the efficacy of these unreleased drugs and to legitimate their distribution.

Despite rhetoric around the research potential of RDoC, the imprint of pharmaceutical interests on the initiative was also evident at the American Psychiatric Association meeting. Echoing the claims of the researcher above, NIMH Director Insel (2014) stated that "most drugs only work for 50% of a cohort" because *DSM*-defined groups "are quite heterogeneous." He envisioned RDoC as encouraging the pharmaceutical industry to return to psychiatry and release new compounds not constrained by the *DSM-5*'s categorical descriptions, noting that dimensional descriptions were superior "from a drug hunter's perspective." Likewise, another NIMH-affiliated speaker stated that RDoC would help pharmaceutical companies, as "industry does not want to be bound by the *DSM*." After noting that the Food and Drug Administration was content to "do whatever academics wanted to do," this speaker stated that RDoC was now the "big hope [for] creating a new paradigm." Accordingly, while study participants and NIMH argued RDoC would increase construct validity and improve the quality of mental health research, participants also suggested RDoC was intertwined with pharmaceutical business interests.

DISCUSSION

By analyzing enactments (Mol 2002) of researcher-clinicians across different sites of action (Latour 2005), this article demonstrates that the *DSM* pervasively influences numerous professional practices. The *DSM* comprehensively impacts the logic of mental health research and, clinically, is an internalized heuristic informing diagnosis. Institutionally, the text constrains and standardizes professional work while linking practices to insurance providers and pharmaceutical companies. Combining analyses of how the *DSM* influences the enactment of research, clinical, and institutional work reveals that the text operates as multiple, context-specific

taxonomies. In Mol's (2002) terms, the *DSM* is a "multiple object," as it is a singular entity enacted differently across sites. The multiple taxonomies of the *DSM* construct different subjects, produce different diagnostic processes, and achieve different outcomes. Specifically, the *DSM as research tool* constructs an ideal-typical "research subject" via precise and thorough assessments, producing data on psychopathologies or interventions. The *DSM as clinical tool* constructs "the patient," a specific manifestation of pathology, drawn from an iterative diagnostic process resulting in treatment. The *DSM as institutional tool* constructs a "customer" via institutional processes aligning professional practices with insurance and pharmaceutical companies, producing receipts, reimbursement, and revenues. As Whooley (2010) asserts, the *DSM* is not a monolithic taxonomy; instead, as the present study suggests, the *DSM* is multiple, context-specific taxonomies. The omnipresent influence of the *DSM* across different contexts and practices emphasizes the continued importance of investigating both the text's content (e.g., Horwitz 2001; Lane 2008) and employment (Smith 2014; Whooley 2010).

This study also indicates how and where phenomena like medicalization might manifest in professional practices. Conrad (2005) suggests the role of health care professionals in advancing medicalization has diminished. My analysis aligns with Conrad's observation, given that professionals are both aware and critical of the proliferation of psychiatric categories, particularly in regard to what they perceive as "normal experience." In their research and clinical activities, professionals provide nuanced and context-sensitive views of psychopathology. For instance, participants critique using "supernormals" as case controls in research while also criticizing the low ecological validity of the *DSM*, or its failure to realistically describe mental illness as it manifested "in the wild." Sensitivity to context was irrelevant at the institutional level, where professionals are pressured to apply certain labels and required to translate therapeutic encounters into billable services. Accordingly, while Smith (2014) describes psychoanalysts' resistance to medicalization as cognitive rather than active, I argue that institutional constraints connect professional practices to medicalization. Building on Conrad (2005), my analysis therefore suggests that future investigations of the ramifications of psychiatric categories address how the professional–patient encounter is beholden to institutional requirements.

Study findings are also relevant to theories on medical and institutional power. For instance,

Foucault's (1973, 2006) analyses of medicine and psychiatry direct us to the medical or psychiatric gaze, emphasizing the importance of the clinic and the application of a professional gaze to a patient. While the clinical encounter remains important, as highlighted by work in the sociology of diagnosis (e.g., Jutel and Nettleton 2011), this study, resonant with Latour's (2005) concept of oligopticons, or the multitude of domain-specific centers of observation, suggests multiple additional gazes pertinent to the exercise of power. Findings are indicative of an "administrative gaze" constraining the practices of professionals, a "monetized gaze" commodifying the therapeutic encounter, and a "pharmacological gaze" connecting taxonomy and professional practices to pharmaceuticalization (Abraham 2010). In this sense, the professional is both a source of a clinical gaze and the object, along with the patient or research subject, to institutional-level gaze. While the present study focuses on professionals who were objects of these various gazes via *DSM* influence, future research should address how different actors, interests, and power relations produce the text that heavily mediates professional activity. Particularly necessary is an "insider" analysis documenting how the *DSM* might be designed to advance the interests of corporations and select experts.

This analysis connects work on how the *DSM* is used (Smith 2014; Whooley 2010) to literature on medicalization and the proliferation of disease categories (Conrad 2007; Horwitz 2001). As demonstrated in other studies on professional practices (e.g., Koehne et al. 2013), professionals were reflexive in their use of the *DSM* and provided critical assessments of the text. However, the *DSM* nevertheless permeates their activities. Professionals encounter a problem of limited selection akin to a Hobson's choice, defined as a scenario wherein there is free choice but only one option is offered. Professionals are able to select from a variety of diagnostic categories to apply to patients and subjects yet are limited to only *DSM*-aligned options. With the *DSM* functioning as an obligatory passage point (Callon 1986) at the institutional level, professional practice is connected to medicalization, pharmaceuticalization, and the expansion of psychiatric categories (Abraham 2010; Bell and Figet 2012; Conrad 2005; Horwitz 2001). The *DSM* therefore remains an important site of contestation vis-à-vis the legitimation, construction, and treatment of mental health disorders.

Professionals' Hobson's choice and the influence of institutions described in this study are

complimentary to Dorothy Smith's (2005) work on institutional ethnography. Despite professionals' reflexivity, they translate their practices to meet institutional standards, whether that demands sampling a deviant form of normalcy or diagnosing patients to connect psychopathology to an institutional billing apparatus. Here, as Dorothy Smith suggests, text operates as the lacuna of power, with the *DSM* mediating the activities of professionals and linking their everyday work (e.g., research) to ruling relations (e.g., "Big Pharma"). Employing Dorothy Smith's perspective also helps elucidate a shared social problematic among professionals and sociologists. Like sociologists, professionals express concerns about medicalization (Conrad 2005), the pathologization of normal experience (Horwitz 2001), and context-blind diagnostic categories (Koehne et al. 2013; Whooley 2014). Counter to antipsychiatry perspectives, this shared orientation suggests the potential for cross-disciplinary investigations into the social repercussions of mental health categorization.

Analysis also provides insights for sociologists studying mental disorders (Barker and Galardi 2015; Eaton 1978; Kessler and Magee 1994; Pavalko et al. 2007; Thoits 2011). Specifically, as the *DSM* constructs mental illness in multiple ways, knowing whom (i.e., research subject, patient, customer) sociological studies describe provides additional clarity to claims while improving *DSM* analyses. For example, illness experience research might document the narratives of patients or customers but not address the research subject, while analyses of hospital records might capture the customer but omit patient experiences. Articulating which *DSM* enactments are salient to a specific sociological study provides additional analytic precision on the uses and ramifications of the text.

Any discussion of how the *DSM* influences professional enactments is bracketed by the potential implications of RDoC. Although NIMH Director Insel situates RDoC as both a competitor (Insel 2013) and complement (Insel 2014) to the *DSM*, RDoC is advertised as a neuroscientific paradigm shift for psychiatry, aiming to redescribe psychopathology from "genome to syndrome." Whooley (2014) cautions that RDoC might extenuate the decontextualizing of psychopathology, a perspective that appears evident in terminating investigations at the "syndrome" level of analysis. Indeed, it is difficult to discern how clinicians, or those without access to biological data, might be able to maintain participation in category construction (see Godderis 2013). However, it remains unclear to what extent RDoC will supplant the *DSM*, particularly as new standards must deal with existing infrastructure and power relations (Timmermans and Berg 1997; Timmermans and Epstein 2010). The revolutionary impact of RDoC therefore remains an open question.

The present study describes how the *DSM* pervasively influences the enactment of professional work. One limitation is the sample of "front-line" professionals, omitting the perspectives of elite researchers who might provide insights on how, and for what ends, the *DSM* is constructed. Additionally, while the sample of researcher-clinicians is complementary to previous studies, it cannot speak to the experiences of other professionals (e.g., family physicians). As Timmermans and Epstein (2010) note, standardization tools, such as the *DSM*, can facilitate a soft stratification, elevating some groups at the expense of others. Accordingly, other professional groups might employ, and have their actions regulated by, the *DSM* in markedly different ways and under different institutional arrangements. Further research is necessary to detail how the *DSM* mediates the activities of these groups.

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