

Normal Negative Emotions and Mental Disorders

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Abstract

The basic goal of psychiatric diagnosis is to distinguish genuine mental dysfunctions from normal, albeit distressing, emotions. This task is especially difficult because, unlike other medical specialties, psychiatry does not have biological markers that can validate diagnoses of mental disorders. Therefore, diagnostic criteria have an outsized role in psychiatry compared to other medical fields. Until the development of the DSM-III in 1980, psychiatric diagnoses were general, continuous, and causal. In contrast, the diagnostic system that emerged in the DSM-III and that has remained basically intact until the present has been specific, categorical, and a causal. This type of classification, however, is prone to mistake contextually appropriate symptoms as indicators of mental disorders. Cutting-edge research incorporates the context in which symptoms emerge and persist to separate normal, distressing emotions from mental illnesses. It also develops alternatives to the DSM's categorical diagnoses. Other valuable studies try to differentiate conditions that stem from evolutionarily normal genes that no longer fit modern environments rather than from genetic or psychological dysfunctions within individuals. Going forward, research must attempt to use biological, psychological, and social factors to develop definitions that adequately distinguish normal responses to stressful environments, evolutionary mismatches, and mental disorders. It will also try to find biomarkers that can set appropriate boundaries between natural and pathological conditions. Finally, it will consider the best ways to optimize the balance between under- and over-diagnosing mental illnesses.

The central goal of psychiatric diagnosis is to distinguish mental disorders from normal, but distressing, conditions. This task is especially difficult because, unlike other medical specialties, psychiatry does not possess any biological markers that can validate diagnoses of mental disorders. Unlike, say, oncologists who use biopsies to validate a diagnosis of cancer, nephrologists who take X-rays to see the presence of a kidney stone, or cardiologists who employ PET scans to see if a heart has tissue damage, diagnostic criteria are the only resources that psychiatrists possess to support their judgments.

Therefore, these criteria have an outsized role in psychiatry compared to other medical fields.

The lack of any objective measures that could validate psychiatric diagnoses is particularly consequential because many common mental disorders such as depression and anxiety are symptomatically similar to normal, distressing emotions. While many psychiatrists are increasingly coming to recognize the inadequacies of its existing diagnostic system, the field has yet to develop a knowledge base that will allow it to overcome this problem. The most important future breakthroughs will occur when psychiatry comes to possess markers that can reliably distinguish disordered people from those who are distressed.

FOUNDATIONAL RESEARCH

Until fairly recently, psychiatrists and other mental health professionals had little need to separate distressing emotions such as depression and anxiety from mental disorders. Before the mid-twentieth century, diagnostic systems focused on classifying seriously mentally ill people who were housed in inpatient mental institutions. This population usually had severe and unusual symptoms that distinguished them from others. Once the mental health system turned from focusing on institutionalized patients toward treating less ill patients in outpatient settings, diagnostic criteria had to pay attention to a much broader range of conditions. The initial classification manuals of the American Psychiatric Association, the DSM-I (1952) and DSM-II (1968) focused on what were then called “psychoneurotic” conditions.

Nevertheless, clinicians in the post-World War II period did not require a fine-tuned diagnostic system. For one thing, the dominant psychodynamic theory at the time stressed the continuity, rather than the separation, of normal and mentally ill populations: most normal people had some degree of neurosis while most neurotics shared most features with the normal. That is, mental illness and normality were not distinct categories but different points on a continuum (Grob, 1991). In addition, because most outpatients at the time paid for their own treatment, no third party insurers—who would not pay for treatment unless the patient had some diagnosable disease—were involved in decision-making. Likewise, commercial interests such as drug companies were able to advertise their products more for the relief of general stress conditions than as treatments for specific types of mental illnesses. Thus, no professional, social, or economic pressures existed during the 1950s and 1960s that pushed psychiatrists to develop a diagnostic system that created distinct lines between normal and abnormal mental conditions.

This situation had dramatically changed by the 1970s (Horwitz, 2002). The casual approach to diagnosis found in the DSM-I and DSM-II became a professional liability. For one thing, psychiatry's medical credentials were questioned because the field was seen as dealing with general psychosocial problems and not legitimate diseases. There was nothing that psychiatrists were doing that other mental health professionals such as clinical psychologists, psychiatric social workers, nurses, and counselors could not do. For another, the absence of clear diagnostic criteria meant that psychiatrists could not conduct large, multisite research studies, which were becoming standard in other areas of medicine, because researchers had no common measures they could use. In addition, third party private and public insurance were coming to pay for most mental health therapy: these organizations would only pay for the treatment of some clearly defined mental illness. Finally, the Food and Drug Administration began to enforce its regulations that required drugs only be used to treat distinct illnesses rather than general problems of living. It was clear that psychiatry needed to develop new diagnostic criteria that would draw clear lines between what was mental illness and what was not.

The major source of the diagnostic criteria that eventually appeared in the DSM-III in 1980, and that in most respects have remained intact until the present, was the Feighner Criteria (Feighner *et al.*, 1972). A group of psychiatrists at Washington University, a medically minded outpost of empirical psychiatry that stood in opposition to the dominant psychodynamic thinking of the time, developed these 14 diagnoses. Unlike the DSM-I and DSM-II, they defined each condition on the basis of clearly defined criteria based on the specific symptoms patients presented. In addition, diagnoses were categorical not dimensional – one either had or did not have some mental illness. The Feighner Criteria also seemed ideal for research purposes because their symptomatic definitions did not seem to involve discretionary judgments so that they could be easily measured across different sites and diagnosticians. Moreover, in contrast to the extant DSM manual, observers didn't have to inquire about the causes of symptoms, which the designers of the Feighner Criteria assumed were not known at the time.

Since 1980, psychiatry has used the Feighner model, which relies on the presence and severity of symptom clusters, as the major way to separate disordered from natural emotions. For example, Major Depressive Disorder (MDD) in the DSM-III (which is virtually identical to the definition in the current DSM-5) required either a depressed mood or loss of interest or pleasure in usual activities. In addition at least four of the following symptoms must be present nearly every day for a period of at least 2 weeks: (i) poor appetite or significant change in weight; (ii) insomnia or hypersomnia; (iii) psychomotor agitation or retardation; (iv) decreased sexual drive; (v) fatigue or loss of

energy; (vi) feelings of worthlessness, self-reproach, or excessive or inappropriate guilt; (vii) diminished ability to think or concentrate or indecisiveness and (viii) recurrent thoughts of death or suicidal ideation or suicide attempt (APA, 1980, p. 213). The only exception was that recently bereaved people who met the diagnostic criteria would not receive a MDD diagnosis unless they had at least one especially severe symptom or their symptoms endured for a 2 month period. Aside from this bereavement exclusion, everyone who met the five symptom 2 week criteria would be considered to have major depression.

The other DSM-III diagnostic criteria sets were formulated in similar ways (Horwitz, 2002). They required that a certain number of symptoms be present for some defined period of time (which varied according to the disorder). Some contained additional criteria such as being “unreasonable” or “excessive.” With the exception of post-traumatic stress disorder and acute stress disorder, which required some traumatic cause, none of the criteria sets specified the reason why the symptoms developed.

Two major reasons accounted for the DSM-III’s reliance on symptoms alone as indicators of some mental disorder. First, its developers asserted that the earlier manuals inappropriately specified what the causes of various conditions were—for example, the loss of some love object or internal conflict led to depression. Therefore, the manual did not specify the causes of the conditions it classified. Second, they were concerned that the overly general definitions of the various conditions in the prior manuals led to an almost complete lack of reliability among clinicians and researchers. Different diagnosticians could not agree on what constituted some mental disorder: for example, what some called “schizophrenia,” others diagnosed as “manic depression.” It was much easier to generate agreement on what condition someone had if psychiatrists only had to take symptoms in themselves into account. Judgments of what were “appropriate” or “inappropriate” contexts were difficult to make and lowered reliability because different clinicians would have different opinions about whether or not symptoms were normal responses to distressing contexts.

Therefore, the manual decided to eliminate contextual qualifiers and to focus on the presence of enough symptoms themselves as indicative of some disorder. This helped to increase the reliability of diagnosis but led many diagnoses to have questionable validity. For example, the DSM criteria for MDD could not separate people who become depressed after losing their jobs or marriages from those with genuine depressive illnesses. In the case of depression this problem was especially acute because symptoms need only be present for a 2 week period, insuring that transient and stress-related conditions were not separated from long-standing and recurrent ones that were not linked to the context in which they arose (Horwitz & Wakefield,

2007). The creation of symptom-based, categorical, and mutually exclusive diagnoses bolstered the prestige of the psychiatric profession in an historical context when its legitimacy was in question. It also had severe flaws that only became apparent in future decades.

AREAS OF CUTTING-EDGE WORK

CONTEXT

The fundamental task of psychiatric diagnosis should be to distinguish genuine mental dysfunctions from normal, albeit distressing, emotions. This requires situating symptoms within the context in which they arise. Many people develop symptoms that resemble those specified in psychiatric diagnostic criteria sets but that are natural results of stressful situations. For example, people who have suffered the loss of jobs, romantic partners, or health often develop symptoms that would meet criteria for MDD. However, if these symptoms dissipate once the individual finds a new job or romantic partner, or recovers from their illness, nothing was wrong within such individuals; they responded appropriately to a distressing situation. Other symptoms such as the inattention, impulsivity, and distractibility that might signify attention-deficit/hyperactivity disorder are similar to ordinary behaviors among many adolescent boys. Even severe symptoms such as the hallucinations found during psychotic episodes can sometimes mark intense religious experiences among certain groups. Symptoms, in themselves, are rarely straightforward indicators of mental disorders in the absence of considerations of the contexts in which they appear.

The best research in this area uses longitudinal studies to examine how symptoms that arise after some stressful life event unfold over time. If symptoms that result from, say, unemployment, divorce, or the death of an intimate are no longer present at a future period of measurement, it is likely that they are natural products of a stressful situation as opposed to a mental disorder. They are likely to dissipate when the situation changes or gradually go away with the passage of time. In contrast, if they persist for extended periods or feature chronic reoccurrences then they are likely to be signs of a mental disorder. Jerome Wakefield and Mark Schmitz (2012, 2013a, 2013b) have used several large data sets collected at more than one point in time to answer this question. Their findings show that people who meet the criteria for major depression after all kinds of losses have similar recurrence rates (3.4%) at the second period of measurement as people with no history of depression (1.7%). Both of these groups have far lower recurrence rates than ones whose depressive symptoms did not arise after some loss (14.6%). Other studies also

indicate that bereaved people were no more likely than the nondepressed to have subsequent depressive episodes 3 years later (Mojtabai, 2011).

These findings indicate that a fundamental weakness of purely symptom-based diagnostic criteria is that they cannot separate people who are responding naturally to stressful environments from ones whose symptoms are not moored to some situational context. Because this type of measure treats both types of symptoms as indicative of mental disorder, it overstates the number of presumably mentally ill people. Much of the criticism directed at the recently issued DSM-5 focused on how symptom-based diagnostic criteria overpathologize many different conditions (e.g., Frances, 2013). Nevertheless, the DSM-5 actually moved toward an even more exclusive focus on symptoms alone when it removed the bereavement exclusion from the MDD criteria. This means that even symptoms that arise after the death of an intimate but are not especially severe and persist for as short as a 2-week period now meet the MDD criteria. Future research should focus on how to identify the differences between conditions that both arise and persist within stressful contexts and those that indicate a true mental disorder.

DIMENSIONALIZATION

The psychodynamic conception that dominated views of anxiety before the *DSM-III* considered mental disorders to vary along a dimension of lesser to greater severity. Mental illness formed a continuum with normal, contextually appropriate conditions on the one end and severe conditions on the other. One of the major motivators of the *DSM-III* was to establish the kind of distinct conditions that prevailed in other medical classifications. Yet, the sharp cutoffs between normal and disordered conditions the diagnostic criteria imposed had little scientific justification. They seemed both arbitrary and unable to recognize minor forms of disorder (Kendler & Gardner, 1998). For example, there was no reason for why diagnoses of generalized anxiety required at least three symptoms or major depression at least five symptoms: people with fewer symptoms might have milder disorders, not be nondisordered. Moreover, the *DSM's* binary logic conflicted with understandings of the subtler ways in which biological and genetic variance become manifest. A dimensional system might better fit the underlying nature of most conditions, which have no sharp cutoff point for where the number of symptoms distinguishes disorder from nondisorder. One of the major goals of the developers of the DSM-5 was to overcome the either/or logic of the manual that seemed to hinder etiological discoveries.

The DSM-5 Task Force proposed major alterations that would move the manual from a categorical toward a more dimensional system. Initially, it suggested a radical revision that would largely replace the distinct criteria

dividing disorders from nondisorders with measures that reflected graded scales of severity.

The single most important precondition for moving forward to improve the clinical and scientific utility of DSM-5 will be the incorporation of simple dimensional measures for assessing syndromes within broad diagnostic categories and supraordinate dimensions that cross current diagnostic boundaries. Thus, we have decided that one, if not the major, difference between DSM-IV and DSM-5 will be the more prominent use of dimensional measures in DSM-5 (Regier, Narrow, Kuhl, & Kupfer, 2009, p. 649).

Dimensions, the revisers hoped, would overcome the inability of categorical measures to identify people who show some, but not enough, symptoms to qualify for a diagnosis. Ironically, dimensional assessment invoked a measurement style of an era that preceded the DSM-III.

The developers of the DSM-5, however, recognized that their initial goal of establishing a dimensional system of measurement was overly ambitious and, given the existing knowledge base, premature. One major dilemma was where to place the lower bound for the presence of a disordered condition. If the line was drawn too high, diagnoses might miss too many genuinely disordered people. Conversely, if it was set too low an enormous number of false positive conditions might result. This is what had happened during the 1950s and 1960s when clinicians and epidemiologists commonly assumed that a small number of symptoms often indicated a milder form of mental disorder, not the absence of disorder. The major problem of such studies was that they uncovered immense rates of assumed mental illness. The best-known survey, the Midtown Manhattan Study, found that just 18.5% of its community sample was symptom free (Srole *et al.*, 1978). Over 80% of the population, therefore, had some degree of "mental illness": 36% were in the mild category, 22% were in the moderate category, and 23% fell into the marked, severe, or incapacitated category. The DSM-5 dimensional criteria, which used such ubiquitous symptoms as feeling "fearful," "anxious," "worried," and so on, and which must endure for only a brief period of time (7 days), would likely produce similarly massive rates of mild "disorders."

The DSM-5 Task Force eventually abandoned its dimensional proposal. The reason, however, was not because of fears of considering too many normal people as having some mental illness. Instead, the divergent needs of researchers and clinicians led to the rejection of the Task Force proposal. While researchers were most interested in developing diagnoses that would improve psychiatry's knowledge base, clinicians had the more practical concerns that the criteria be easy to apply and guarantee reimbursement for treatment. Clinicians worried that dimensions would be burdensome to use in practice, especially if insurance companies mandated their employment. An APA Assembly rejected the dimensional proposal, in effect, voting

to retain the current categorical diagnoses. A proposal that began as a radical revision of the basic structure of the DSM ended in an appendix as a suggestion in need of further study (Wholley & Horwitz, 2013).

Ironically, empirically driven researchers had imposed the categorical system of DSM-III on resistant clinicians. By 2012, however, categorical diagnoses had become millstones for researchers but necessities for clinicians, who must use them to be paid for treatment. Clinicians obtained a measure of revenge on researchers by rejecting their appeal to institute a possibly more valid, but less practically useful, diagnostic system. Social considerations mandated that psychiatry continue to employ a classification whose scientific inadequacies had become blatantly obvious. Psychiatry's categorical system that had been in place since 1980 was shaken but not replaced.

UNREASONABLENESS

At present, many of the DSM's major diagnoses use the unreasonable or irrational qualities of symptoms as indications of a mental disorder. For example, specific and social phobias (the second and third most commonly occurring mental illnesses in community populations, following only depression) must be out of proportion to the actual danger or threat posed by specific objects or situations (APA, 2013, p. 197, 203). The problem is that much human behavior does not seem to be designed to be reasonable and/or rational. Indeed, a major thrust in current psychological research is to show how automatic and unconscious emotional responses typically precede conscious judgments and reasoning about some situation (e.g., Haidt, 2012; Kahneman, 2011).

It is instructive to examine what kinds of things people are afraid of. Those with simple phobias are afraid of animals (22.2%); heights (20.4); blood (13.9); flying (13.2); closed spaces (11.9); water (9.4); storms (8.7); being alone (7.3). The most common forms of social anxiety are public speaking (21.2%); speaking up in a meeting (19.5); and meeting new people (16.8). These figures indicate that many people fear things and situations that are not, in fact, likely to harm them and so might seem unreasonable and irrational (Curtis, Magee, Eaton, Wittchen, & Kessler, 1998; Ruscio *et al.*, 2008).

Yet, the statistically most common anxiety disorders might result from dangers that were appropriate in the ancient environments when the human genome formed (Horwitz & Wakefield, 2012). The most pressing dangers in ancient environments stemmed from carnivores for which humans were a tasty source of calories; the most ancient human remains from millions of years ago show that many people were killed by carnivorous saber-toothed cats and giant cheetahs. Alternatively, falling from a high place posed a real threat of serious injury or death at a time when no protective measures existed. Other specific fears of blood, water, closed spaces, and storms

could also be genuine sources or signals of ancestral dangers. Blood, for example, might suggest the close proximity of enemies. Even air travel, which obviously didn't exist when the human genome was being formed, seems to blend several aspects of biologically shaped fears. It combines fear of being at extreme heights where falling could mean death with fear of entering enclosed spaces where escape is impossible. Such fears could have been useful in ancient periods because they led people to avoid genuinely dangerous situations. Fears that might not correspond to actual dangers in present situations seem understandable as reactions that came down to us as part of our biological inheritance of fears that did make sense in the prehistoric past.

Likewise, in the distant past, people lived in small bands of one or two hundred people, all of whom were well known to one another. Disapproval or rejection within such groups could be highly consequential for survival and incurring the negative evaluations of others carried real risks. A person who was not part of a collectivity would not have been able to survive if cut adrift from the group. Fears of ostracism were natural and adaptive when people depended on tightly connected and long-term ties and where their social status depended on their position in a group. Unsurprisingly, high anxiety about social evaluation and potential rejection became a common part of our nature and remains so even though such anxiety is no longer as contextually suited to modern societies, where individuals often have many alternate social options if they are rejected or fail an evaluation.

The problems that many specific and social fears entail stems from the fact that normal genes no longer fit the environment where they must function, not in any genetic or psychological dysfunction within individuals. An analogy might be the persistence of our craving for highly caloric foods, which was useful in prehistoric environments where calories were hard to come by but which now is a source of obesity and disease in environments where calories are readily available. Such mismatches between what is evolutionarily natural and what is socially reasonable raise fundamental questions about what is normal and what is not. Future research needs to identify the extent to many common forms of mental illnesses actually reflect the operation of natural genetic propensities that might be unreasonable but not disordered.

KEY ISSUES GOING FORWARD

One major issue that future research must address involves how to integrate findings from neurological studies into diagnostic criteria. The principle established in 1980 that the DSM diagnostic criteria sets should not encompass causal inferences has meant that the manual does not incorporate the biological perspective that otherwise dominates current psychiatric

research and treatment. This deficiency is so glaring that the National Institute of Mental Health, the major federal agency concerned with research about mental illness, is developing an alternative manual to the DSM, the Research Domain Criteria (Insel, 2009). This manual will attempt to use brain circuitry and genetic findings as the basis for a new diagnostic system that might supplement or even replace the DSM. The problem the creators of this manual will face is how to distinguish disordered genes, molecules, cells, and so on in the absence of good diagnostic criteria that can separate the neurological basis of natural negative emotions from dysfunctions.

A second endeavor regards the search for valid, as opposed to merely reliable, criteria to define mental disorders. As noted, unlike other medical disciplines, psychiatry currently lacks any biological markers for the conditions it studies. A successful demonstration that various brain-related indicators are associated with different kinds of mental illnesses will not only enhance the potential to identify, treat, and prevent various conditions but also show the extent to which current diagnoses mislabel the conditions they strive to identify.

Another issue going forward will be how to develop appropriate definitions of normal, negative emotions and mental disorders that balance the risks of false negatives and false positives. To date, psychiatry has emphasized avoiding false negatives—considering people who are actually sick as if they are well. Many critics claim that this practice has resulted in unnecessary treatment, overmedication, and stigma (e.g., Frances, 2013). However, if diagnostic criteria are too stringent they can prevent people who might benefit from treatment from getting it. Drawing appropriate lines among normally distressing symptoms, evolutionarily mismatched emotions, and mental disorders will be a highly challenging endeavor. This task will be especially difficult because the symptom-based categories of the extant diagnostic manual provide such an inadequate roadmap for guiding future research.

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