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False positives in psychiatric diagnosis: implications for human freedom

Jerome C. Wakefield

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Abstract Current symptom-based DSM and ICD diagnostic criteria for mental disorders are prone to yielding false positives because they ignore the context of symptoms. This is often seen as a benign flaw because problems of living and emotional suffering, even if not true disorders, may benefit from support and treatment. However, diagnosis of a disorder in our society has many ramifications not only for treatment choice but for broader social reactions to the diagnosed individual. In particular, mental disorders impose a sick role on individuals and place a burden upon them to change; thus, disorders decrease the level of respect and acceptance generally accorded to those with even annoying normal variations in traits and features. Thus, minimizing false positives is important to a pluralistic society. The harmful dysfunction analysis of disorder is used to diagnose the sources of likely false positives, and propose potential remedies to the current weaknesses in the validity of diagnostic criteria.

Keywords Psychiatric diagnosis · Misdiagnosis · False positive diagnosis · DSM · Harmful dysfunction · Ethics · Evolutionary psychology · Justice · Function · Philosophy of psychiatry

I will be concerned in this paper with the problem of "false positive" diagnosis—a form of misdiagnosis—and its broader social implications. The recent evolution of psychiatry has imparted to psychiatric diagnosis an increasingly central role in social regulation. I will argue that an important consequence is that the seemingly technical problem of diagnostic invalidity, and particularly false positive diagnosis,

J. C. Wakefield (✉)
Silver School of Social Work and Department of Psychiatry,
New York University, 1 Washington Square North, New York, NY 10003, USA
e-mail: jerome.wakefield@nyu.edu

has become a central issue in the attempt to preserve a pluralistic society that accepts the legitimacy of human normal variation and preserves the freedoms such acceptance entails.

False positives and the validity of DSM/ICD diagnostic criteria

A false positive diagnosis for a certain disorder occurs when an individual is diagnosed as having the disorder, but in fact, the individual does not have the disorder [1]. However, my considerations will be limited to a narrower sub-domain of false positives.

In clinical practice, false positives could be due to errors in the application of official criteria, to a sincere but mistaken view on the part of the professional that a patient is disordered despite not meeting criteria, or to purposeful misclassification in order to justify insurance reimbursement, among many other possibilities. However, in considering false positive diagnoses, I will *not* be interested in the many cases in which clinicians mistakenly attribute a disorder to a patient by misapplying the standard diagnostic criteria to a case or by making an honest mistake on the basis of misleading evidence. Nor am I interested in cases in which the clinician purposefully misdiagnoses a condition for some reason, such as to obtain insurance reimbursement for an otherwise uninsured condition. False positives in clinical practice can occur for all these and many other reasons, but such misdiagnoses will not be my primary focus.

I believe that such false positives occur in clinical practice at substantial rates based on what my colleagues tell me about their practices. Moreover, the addition of the clinical significance criterion to many DSM-IV diagnostic criteria sets—which means that, in addition to satisfying symptomatic criteria, a condition must cause significant distress or role impairment to be considered a disorder—was an expression of the belief by leaders in psychiatry that problems in living are often misdiagnosed as disorders. However, to argue that a substantial percentage of diagnoses in clinical practice are false positives would require an empirical study, not a conceptual or theoretical analysis of criteria.

Rather, I am primarily interested in cases in which the criteria as they are given in standard diagnostic manuals, such as the DSM [2] or ICD [3], are correctly applied to a case that does indeed satisfy the criteria, but is nonetheless not in fact a disorder. That is, I am interested in how the current standard diagnostic criteria themselves, when they are correctly and literally applied, inherently misclassify some people independently of whether they are diagnosed by a clinician. My focus is on the validity of current diagnostic criteria, not the actions of clinicians that are shaped by many considerations other than the diagnostic criteria themselves. This is the only "false positives" problem I consider here. I ignore all the many other ways that diagnoses can go wrong.

There is, of course, a vast literature on the validity and reliability of DSM diagnostic criteria. Reliability is not at issue here. Although it is a prerequisite for adequately valid diagnoses, reliability of the application of criteria in no way implies validity; both disorders and non-disorders can be reliably measured without

being valid. Validity, however, is an issue here, and one might have hoped that the validity literature would be helpful.

However, when it comes to the validity of the epidemiological translations of DSM diagnostic criteria to which I will be primarily attending, the validity studies generally are not very helpful for our purposes. This is so for two primary reasons. First, the validating procedures and instruments used to test the validity of a given assessment are often themselves based on DSM criteria; there is a basic circularity if one is interested in whether the DSM criteria themselves are valid. Second, where validity is supported by outcomes rather than alternative diagnostic procedures, those outcomes themselves are ambiguous as to their meaning. For example, if the diagnostic criteria successfully predict later problems or role impairment, this could be so because intense normal distress also tends to predict such outcomes. There is no way of escaping a confrontation with the concept of mental disorder when undertaking the identification of false positives, and so a consideration of the concept of mental disorder is addressed below.

It is important to be clear at the outset that the problem of distinguishing true disorder from false positives should not be construed as equivalent to the problem of distinguishing when to treat a patient versus when not to treat or when to watchfully wait to see how the patient's condition develops. Some disorders should not be treated, and some highly distressing normal responses should be treated. Although whether or not a condition is a disorder surely has implications for treatment decisions, other considerations enter into such decisions as well. But the present discussion is limited to the issue of how to classify the condition, not whether or how to treat.

One further point before proceeding. The DSM makes the point that it is conditions, not individuals, that are subject to diagnoses; for example, people are not appropriately labeled reductively as "schizophrenics" but rather are diagnosed with schizophrenia. However, one of the main tasks of psychiatric epidemiology has been to count the number of individuals in the community who have a certain disorder, and so for convenience, I will refer to the diagnosed person as, say, depressed. Such references are always meant as shorthand for the diagnosis of a person's condition as depression.

But aren't clinicians smarter than the criteria?

One might object to the focus on DSM's diagnostic criteria. Clinicians are smarter than the diagnostic criteria produced by the DSM or ICD. They ignore the criteria when they do not make sense. Thus, the validity of the criteria has little importance.

This objection would be naïve. For one thing, clinicians do often use the criteria for diagnostic purposes, although it is certainly true that clinicians have the advantage of being able to interview the patient and override the criteria when they think the patient's history and situation warrants an exception. But the importance of the diagnostic criteria in determining diagnosis goes far beyond clinicians' practices. DSM and ICD criteria are these days applied in many other important venues in which there may be no clinician to evaluate whether the criteria make

sense under the circumstances, or in which the clinician is constrained to apply the criteria as officially stated. The criteria, that is, have a life of their own outside of the clinician's consulting room where clinical wisdom may transcend the criteria.

For example, epidemiological studies, such as the National Comorbidity Survey and its recent Replication as well as various WHO-sponsored analogs [4–6], attempt to measure how many people in the community suffer from specific mental disorders—including those who have never seen a clinician and even those who do not think they need to see a clinician. These studies are extraordinarily influential in setting the mental health services policy agenda and in providing a framework for much of the discussion of mental disorders. They largely use DSM and ICD criteria, which are applied literally and mechanically to community members. Diagnosis is based strictly on the answers to multiple-choice interview questions in the form of a checklist of symptoms that comprise standard diagnostic criteria. The interview is generally administered by lay interviewers with no expertise or opportunity to override standard criteria; and diagnosis is algorithmically rendered without any further information about the context of the respondent's symptoms. In such influential studies, the standard diagnostic criteria are the sole and final arbiters of diagnosis.

Moreover, in the United States, efforts have begun to screen the population routinely for mental disorders and their symptoms, especially depression, anxiety, and substance abuse, in such mass venues as general physicians' offices and high schools [7]. Such efforts have won the support of major official scientific bodies [7]. The goals are to identify and treat those with "unmet need" for mental health services and, by early treatment, to prevent mild disorders from developing into more severe afflictions. Efforts also seek to identify those at risk for developing a mental disorder and attempt to treat them so as to prevent a disorder from developing. These efforts use DSM-derived brief symptom-checklist questionnaires—similar to those used in epidemiologic studies but often in an even more abbreviated form—to identify those suffering from, or at risk for suffering from, a disorder, especially depression.

Most importantly, most diagnoses of mental disorders, such as depression and anxiety, as well as their treatment—usually with medication—now take place in general practitioners' offices. Despite their enormous skills and good intentions, general practitioners generally are not trained to do the kinds of in-depth background interviewing and assessment that might lead a mental health professional to override the official criteria in diagnosing a patient. Surely, general physicians, too, can use common sense. When, for example, they hear that a seemingly clinically depressed patient has just gone through some major loss, they can decide that the patient probably is undergoing a normal loss response despite satisfying diagnostic criteria, so that "watchful waiting" might be a better approach than immediate medication. However, physician time for such exploration is notoriously in short supply, and even patients who are being treated with medication are sometimes monitored only rarely. Moreover, the typical situation is likely the opposite. Given the limited time physicians have with patients—at least in the United States—diagnoses are often made on the slim grounds of superficial symptom reports, even of sub-threshold conditions that exhibit fewer than the

standard requisite number of symptoms. (As an aside, I have been told by an individual who trains general practitioners to screen for depression that physicians are sometimes explicitly instructed not to take context into account because it is not part of the official diagnostic criteria and therefore may confuse the diagnostic picture!)

Diagnostic criteria for mental disorder are also applied these days in many venues outside of the medical arena. For example, in court cases—such as court evaluations of custody disputes in divorces—mental disorder diagnoses and court-mandated mental health profiles may be required. Insurance companies routinely adjust rates depending on a history of mental disorder diagnosis in the applicant or his or her relatives. And, clinical trials for experimental cancer drugs and for other medical treatments often exclude those who qualify for a mental disorder diagnosis. In such non-medical venues, it is even more likely that, for ease and consistency and due to lack of authority to do otherwise, official criteria will be applied literally "according to the book."

In sum, while the DSM and ICD diagnostic criteria are certainly crucial to clinical practice today, it is true that clinicians may at times override the criteria in light of contextual information, despite there being no formal mechanism in the DSM for doing so. However, the criteria have achieved a cultural power and iconic status well beyond the clinician's assessments. Thus, the validity of the criteria and the recognition of any potential for false positives are all the more important.

So, the reality of medical practice is that the diagnoses in epidemiological surveys and in clinical practice are, to some extent, converging through the use of the same instruments in clinical screening. Thus, the validity of the DSM diagnostic criteria themselves is of paramount importance to the false positives problem. And, this convergence appears to be the trend and the reality of where we are headed in diagnosis. The status of false positives as a threat to freedom lies especially in these recent developments.

Functions of psychiatry

Treatment of disorder is the essential defining mission of psychiatry, and certainly, this mission has a special status among the many tasks undertaken by the mental health professions. Thus, the distinction between disorder and non-disorder is conceptually central to clinical theory and practice.

Nonetheless, it is important to recognize that as part of their social mandate to use their skills for human betterment, psychiatry and the other mental health professions—analogous to medical disciplines more broadly—have several functions beyond the treatment of disorders. In focusing this paper on the diagnosis of mental disorder, I am neither denying that there are other functions of the mental health professions nor suggesting that "mental disorder" is a general term for every condition with which these professions are concerned. Thus, I reject the common assertion that a medical disorder is whatever medical clinicians treat—which would, for example, make pregnancy, the pain of childbirth, and ungainly noses medical disorders. To the contrary, "mental disorder" refers only to one specific kind of

mental difficulty, namely, those that satisfy the medical concept of disorder—which, I take it, requires that there be a failure of some internal system to perform a biologically designed function [8, 9] (see below).

So, not everything that mental health professionals treat is a mental disorder. This is acknowledged by the DSM in its "V-code" categories of non-disorders, about which psychiatrists are frequently consulted. These diagnoses include non-disordered conditions such as marital problems, adolescent identity issues, and acute grief after the loss of a loved one. But even the DSM's V-codes do not go nearly far enough in specifying the scope of the mental health professions' role beyond the domain of disorder.

Klerman and Schecher, for example, suggest that the mental health professions have three roles [10]. First, the "core" role (as they label it) is treating mental disorder. Second, clinicians are available to help people to cope with stress and distress in general, even when they are normal human responses to loss and other extreme social or other environmental difficulties. And finally, third, going even beyond addressing distress, the professions attempt to enhance human potential in ways that are socially or personally desirable. So, psychiatry has many functions.

I would elaborate on these additional functions further. The mental health professions have as a major responsibility the pursuit of what I would call *psychological justice* [11, 12]. By this I mean that a society, in accordance with its specific values, will attempt to treat people who are normal but who possess normal variations of human traits that do not fit the society's values. Such mismatches between normal variation and a society's values, while not constituting disorders, do unjustly prevent people who possess those particular variations from participating in the society in an adequate manner.

And, there is the cultivation of virtue. I would part company from those who attempt to fold moral theory into the theory of health and who argue that "positive psychiatry" includes, within the concept of health, traditional notions of virtue such as wisdom and courage [13]. A major challenge for the philosophy of psychiatry is in fact to distinguish virtue and other social ideals from health in light of the anti-psychiatric critique of psychiatry. That is, the philosophy of psychiatry must answer the question of why psychiatry is not just a sophisticated form of social control that wraps itself in the banner of medicine, thus a discipline that uses medical technology and jargon to classify and control people but is not really about disorder in anything like the sense that medicine has traditionally understood it.

Virtue, I would argue (but will not do so here because such an argument requires a paper of its own), is not a part of health [14]. To distinguish the cultivation of virtue from the treatment of disorder, I would say that virtue concerns mental features that go beyond biologically normal functioning and even override normal functioning to meet cultural and personal aspirations to excellence. Health is about the realization of the baseline of biologically designed functioning, whereas virtue is about the transcending of biological design to realize personal and social ideals. And, the mental health professions, given their expertise, may well function to help people develop the mental capacities to possess virtue, although that is not generally the same as treatment of mental disorder.

Tendency to false positives

The existence of these multiple functions of psychiatry is important for any discussion of false positives for two reasons. First, the fact that a certain condition that is currently classified as a disorder is not in fact a disorder does not imply that the condition cannot be treated. Due to psychiatry's multiple functions, the conceptual status of a condition as a disorder is not identical with the advisability or appropriateness of treatment of the condition. Second, the multiplicity of functions of psychiatry offers one explanation of why it is easy to get confused in classifying conditions as disorders. Psychiatry has other, secondary functions, in addition to treatment of disorders, that might justify intervention. But, if we forget about such other functions, we may erroneously infer from the intuited legitimacy of treatment of a condition that the condition must fall under the disorder category because disorder, we may mistakenly assume, is the only conceptual warrant for treatment. This erroneous inference yields the commonly stated view that "disorder is whatever physicians treat," despite the manifest falsity of this conclusion as evidenced by the treatment of birth pain, pregnancy, ungainly noses, and so on. Under the sway of such a view, many clinician-theorists focus on appropriateness of treatment in judging disorder and are inclined to place various forms of non-disordered but treatable distress under the disorder category as a result. This is problematic because the calculus of decision making with various trade offs and the integrity of informed consent depend on getting right the general kind of condition afflicting the patient—not only its general nature but also, often, its likely prognosis.

Such erroneous inferences aside, there is a much more important reason for why confusion about disorder is rampant in our era. Since about 1980, symptom-based diagnostic criteria have been used for diagnosing disorders both in the United States's DSM and in the ICD. Under such a system, it is very easy to confuse normal distress with disorder and to classify distress conditions as mental disorders because normal human distress contains many of the same symptoms as a disorder. (I will follow the current convention of using "symptoms" as a generic term to refer to various phenomena that may be normal or disordered, even though this usage itself biases the discussion towards interpreting the phenomena as indicators of disorder.) For example, there are symptoms during sadness that resemble the symptoms that occur during clinical depression [15]. Using symptom lists to diagnose disorder creates a major problem for distinguishing disorder from non-disorder, over and above traditional problems of differential diagnosis.

Why false positives are a social problem

Aside from the issue of classification error, there are obvious reasons clinicians would like to avoid false positive diagnoses if at all possible. It is true that even if one has no disorder, but merely intense normal emotions of anxiety or depression in response to one's situation, one may conceivably benefit from treatment. However, studies show that once a clinician classifies a patient as disordered versus non-disordered, the kinds of thinking the clinician does about appropriate interventions

and their prioritization as optimal or preferable changes [16]. The potential benefits and costs of various interventions will be assessed differently. So, for example, an intense normal reaction to a loss is different from a similar clinical depression even though they may be equally intense and painful, because one expects a better prognosis with a normal reaction. Thus, the degree of one's willingness to undergo pharmacological treatment with its potential side effects may be different. One's informed consent to treatment may thus be affected by false positives. So, false positives have many clinical implications as well as practical liabilities, as mentioned earlier.

But there are broader reasons for uneasiness about false positives that concern the social response to diagnosis and its implications. When diagnosed with a mental disorder, one enters some form of the sick role. The sick role itself involves trade-offs. Part of the sick role is that, in return for what it gives you in terms of liberty from normal obligations and freedom from being blamed for your limitations or afflictions, you have a prima facie obligation to try to change. Therefore, built into the sick role, there is a certain kind of pressure, and thus, in many cases, an implicit lack of full equal respect of the kind one has in principle for normal variations. Even if one does not like a form of normal variation, one accepts that "it takes all kinds" in life, and that even if some people are different and have an odd way of doing things, it is *their* way of doing things. With disorders, one tends to take a somewhat different stance. Given the patient's obligation to try to change and become healthy again, one is inclined on average to be less accepting of the current condition, even if sympathetic to the patient's affliction.

Thus, allowing massive false positive diagnoses potentially conflicts with allowing maximal human emotional freedom. Misconstruing other kinds of problems as diagnosable disorders makes life one-dimensional and discourages the full range of human emotions, even for those people who would prefer to feel such emotions rather than to relieve them using medical techniques. We are in effect artificially constraining the range of normal human emotions through these diagnoses.

The harmful dysfunction analysis of "disorder" as a diagnosis of the false positives problem

Thus, if the symptom-based approach to diagnostic criteria and disorder, whatever its other merits, is potentially prone to false positives as I have argued, it is essential to reconsider the concept of disorder and what is supposed to fall under this core category. The DSM's own definition of disorder says that disorder is not just a matter of conflict with society or social deviance, but that the symptoms have to be caused by a dysfunction in the individual. Agreeing with this point, I proposed some time ago what I labeled the "harmful dysfunction" analysis of the concept of mental disorder [8, 9, 17–20].

Actually, although I posed it as an account of mental disorder (because it is within the mental domain that the concept of disorder is most challenging and perplexing), the harmful dysfunction analysis is intended to apply to medical

disorder in general, both mental and physical. This must be the case, because one of the central questions I am trying to address, from the anti-psychiatry era, is how psychiatry can be considered a genuine medical discipline like other medical specialties, treating conditions that are disorders in the same sense of "disorder" as is used in the rest of medicine. The harmful dysfunction analysis is an attempt to answer that question, and thus, to explain how mental disorders are instances of medical disorders.

What the harmful dysfunction analysis suggests is that the concept of disorder has two components—a factual component and a value component. To be a disorder, a condition has to satisfy both components. The value or "harm" component will be largely left aside in this discussion because it does not bear as much on false positives. This is because almost everything that is labeled as a disorder, however mistaken this may be in a given case, is generally, with rare exceptions, a negative or undesirable or harmful condition.

The problem of false positives arises primarily with the other, factual component of the concept—that the condition must involve a failure of some mental mechanism to perform one of its natural or biological functions. This is the component that tends to explain the false positives problem. There is an inclination to take the various undesirable states that psychiatry addresses and to mislabel them disorders when, in fact, they are not caused by internal dysfunctions. The dysfunction criterion is the way to distinguish disorders from all the other kinds of harmful and negative conditions in life, which are misfortunes but not disorders.

This diagnosis of the false positive problem depends on my claim that, for a condition to be a disorder, it must satisfy both the sociocultural harm criterion and the dysfunction criterion—both are required for disorder. Why is one not sufficient without the other? Let me consider a few aspects of this account, and why it might be justifiable, before linking it up to the false positives problem again.

There are many undesirable conditions that are not generally considered disorders, and one must ask: Why are professional and commonsense judgments made in this way? Ignorance, lack of talent, and lack of skill are not considered disorders—why and how do we make these judgments? Illiteracy is not considered a disorder by almost anyone, yet there are reading disorders in which the same superficial phenomenon of lack of ability to read is considered a disorder—why and how do we make that distinction? Routine delinquency is not considered a disorder, whereas conduct disorder, which has many of the same manifestations, is considered a disorder—what is the underlying logic of this distinction that is actually made?

One can study these judgments empirically, as I and colleagues have done in the case of lay and professional judgments about youths who suffer from conduct disorder rather than a normal response of delinquent behavior to a threatening environment [21, 22]. One finds that these tend to be consensus judgments. One can study subjects using clinical vignettes, and the judgments can be predicted and manipulated based on the harmful dysfunction analysis; and it turns out that large numbers of people agree on these judgments. This consensus needs to be explained. There are many conditions that, whatever their positive side effects, are quite harmful in life; for example, fatigue after exercise impairs us, and sleep causes us to

spend one-third of our lives paralyzed and hallucinating, but nobody considers these to be disorders.

So, the question is why some problematic conditions are considered disorders and others are not. Considering all the examples from illiteracy to delinquency to sleep, the account that best explains why many harmful conditions are not considered disorders seems to be the following: no matter how harmful these conditions may be, they are part of the way we are biologically designed. This seems to be the only salient common feature of these negative conditions that are not considered disorders.

Implications of the harmful dysfunction analysis: Normal human variation, context, and meaning as essential to judging disorder

This conclusion leads on to several further implications about how to approach the distinction between disorder and non-disorder. First, normal trait variation must be distinguished from disorder. For example, intense response to loss may be part of normal variation and not a disorder, and so on for a variety of traits and features. In other medical specialties, this sort of point is totally obvious. For example, physicians who treat height disorders debate in the literature whether a given condition is a height disorder due to, say, a hormone deficiency or just an extremely short height within a normal range, and whether intervention with growth hormone injections is justifiable if the condition is part of the normal curve. No such discussion would be possible if the superficial "symptom" of shortness was taken in and of itself to indicate disorder. However, in psychiatry, due to symptom-based diagnoses, we rely on symptoms, so it is harder to have such a discussion. Consequently, people don't debate as fully whether a phenomenon is part of normal variation or a true pathology.

A second important implication is the need to take into account the context of the symptoms. Mental mechanisms are generally biologically designed to be responsive to the environment. They are designed to be triggered in some circumstances and not to be triggered in other circumstances. This means that one cannot necessarily tell whether an emotional response is a disorder unless one knows the context. There are of course some conditions in which the symptoms are so severe or their nature is such that one can tell from that alone that there is a disorder. But the point is that one cannot make the general distinction between disorder and non-disorder without knowledge of the context in most cases.

However, the DSM, in attempting to create reliable and scientific criteria, which were important goals at the time, defined disorders in terms of symptoms and thus, as a side effect, largely took context out of the diagnostic criteria. For example, physicians used context for about 2500 years to distinguish conditions like depressive disorder from normal sadness. They asked, what is going on in the environment, and are these responses emotionally normal within that context? Today, since the advent of DSM symptom-based criteria, there is little recognition of context within the diagnostic criteria.

And finally, there is meaning. We know that with depression, for example, if one uses obvious predictors like stressors, one does not get such good predictions of whether people will get depressed. But if one adds considerations such as whether people feel entrapped in their negative situation without a way to free themselves or whether they feel humiliated, one dramatically increases predictive power. Losing a job is predictive of depressive symptoms, but losing a valued job is more predictive; and losing one's job when there is little prospect of getting another job is more likely depressing than losing one's job when other equally good jobs are easily available. Moreover, getting another job tends to make the symptoms disappear quickly. This is hermeneutics, the power of meanings to modify emotional response. It seems to me that psychiatry has been translating such considerations of meaning into medical-style risk factors rather than seeing them for what they are—aspects of the individual's overall meaning system, the emotional power of which is built into our normal functioning. Ironically, such translation of normal meaning processes into risk factors and ultimately into dysfunction talk in an overly medicalized way was exactly what psychiatry was trying to avoid when it answered the anti-psychiatrists with the DSM's symptom based criteria and tried to get clearer about disorder. So, the root of the false positives problem is that current symptom-based diagnostic criteria inadequately address issues of normal individual variation, context, and meaning.

But why aren't mismatches between an individual and the current environment disorders?

Many intensely distressing conditions are natural outcomes of the way humans are biologically designed and thus are not disorders, according to the HD analysis. But what is wrong with considering such problems as disorders? Why is that a threat to human freedom? One problem frequently brought up along these lines as an objection to the evolutionary view of disorder (and noted by Schramme in this volume) is that it implies that we have to judge disorder by how we were biologically designed in the past, rather than how well we are adapted to the current environment. That proposition seems counterintuitive when one first encounters it. Why should we care about what happened in the past that explains how we are today, rather than how we are doing today and how we match our current environment? What would be the problem with judging disorder by the harm a condition causes the patient now, rather than whether the harm is due to a failure of biological design?

However, the fact is that when one asks people for their judgments about disorder and non-disorder, their judgments go against the "current mismatch" approach and in favor of the evolutionary approach. There are many conditions that are part of how we are biologically designed but that we don't like today because our environment has changed in a way that makes these conditions problematic for us. For example, we have a taste preference for fat and sugar, the fight or flight reaction is frequently triggered in our overly stressful environments, and we experience sexual desire for other people beyond our spouses or partners within the monogamous relationships sanctioned by our societies, and so on. We have many

such mismatches between our natures and the current environment, but we do not consider these conditions themselves to be disorders. If these conditions lead on to some other malfunction, then they would be disorders. But they are not disorders in themselves. Thus the evidence is in favor of the harmful dysfunction analysis's claim that, in judging disorder, we think in terms of deviations from what is biologically designed and not in terms of the mismatch between our features and our current environment.

Moreover, the mismatch view has troubling implications for tolerance of diversity and thus for human freedom. To accept the mismatch theory and diagnose accordingly means, I will argue, that social control would again be sufficient reason for diagnosis—potentially a disaster for the conceptual integrity of psychiatry and also possibly socially repressive.

Think of what it would mean if we judged disorder by the individual's maladaptation to the current environment. It would mean that we would have given in to the antipsychiatric critique and accepted that individuals have a disorder if they cannot succeed within a set of values and an environment that society respectively defines and creates. Think here of the Woody Allen character who after 20 years was incapable of setting the clock on his VCR. Having grown up in another era, it was just beyond him to comprehend how to work this machine. My own children do things with computers that I cannot understand. I can easily imagine myself in another 20 years being incapable of dealing with the evolving current technology. If that happens, do I then have a disorder or is it a different kind of problem?

The harmful dysfunction analysis says this is a different kind of problem, and that it is important to distinguish this from disorder because the kind of understanding, theory, and treatment that we bring to such problems may well be different. Acceptance of the mismatch criterion would imply that one can create mass disorder simply by changing the social environment; if human beings fail to satisfy the new social demands, they can be classified as disordered. The mismatch criterion does not allow for a baseline beyond social values for disorder judgments because social values are a large part of the cultural environment that the individual's features must "match" in order for the individual to be healthy.

The Soviet dissidents were, after all, mismatched in their longing for freedom within the context of their political environment. Only the biological design approach to disorder offers some conceptual way to keep track of when individuals are disordered versus when social values are changing and making new and challenging demands upon human beings. These distinctions should not be lost because they have potential implications for acceptance of variation, pluralism, and human freedom.

I conclude that there are some surprisingly powerful reasons in terms of human freedom for rejecting the current maladaptiveness or "mismatch" approach to disorder and for embracing the harmful dysfunction analysis's evolutionary view. Only the latter gives us a "place to stand" independent of changing social demands from which to judge disorder, and thus frees psychiatry of the specter of social control and spurious medicalization as its primary mission. And, I have argued, an integral part of avoiding such negative outcomes of the diagnostic revolution initiated by the DSM is to address and resolve the false positives problem in current psychiatric diagnosis.

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