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Disorder as Harmful Dysfunction: A Conceptual Critique of *DSM-III-R*'s Definition of Mental Disorder

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The *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM-III-R*) operationally defines *disorder* essentially as "statistically unexpectable distress or disability." This definition is an attempt to operationalize 2 basic principles: that a disorder is harmful and that a disorder is a dysfunction (i.e., an inability of some internal mechanism to perform its natural function). However, the definition fails to capture the idea of "dysfunction" and so fails to validly distinguish disorders from nondisorders, leading to invalidities in many of *DSM-III-R*'s specific diagnostic criteria. These problems with validity are traced to *DSM-III-R*'s strategies for increasing reliability.

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The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM-III-R*; American Psychiatric Association, 1987) is used by virtually every mental health professional in the United States to guide diagnosis and to justify third-party reimbursement for treatment. *DSM-III-R* is also used by most mental health researchers to identify and evaluate clinical samples. Consequently, the principles used to decide which conditions to include as disorders in *DSM-III-R* are of critical importance to mental health practice.

One factor guiding such decisions is the conception of disorder possessed by the framers of the manual. That conception is made explicit in the manual's definition of mental disorder (p. xxii; see later discussion), which attempts to provide a conceptually sound basis for deciding whether a condition can legitimately be considered a disorder. *DSM-III-R* (p. xxii) notes that the definition "influenced the decision to include certain conditions in *DSM-III* and *DSM-III-R* as mental disorders and to exclude others." From the perspective of theoretical consistency, one may state more strongly that every specific condition listed in the manual as a disorder must satisfy the logical requirements set out in the manual's general definition of mental disorder. Even the manual's distinction between disorders and "V-code" conditions (i.e., conditions that are not disorders but that are often the subject of clinical consultation) depends for its legitimacy on the assumption that the V-code conditions do not satisfy the definition of mental disorder.

The definition of mental disorder is of particular importance to *DSM-III-R*'s conceptual structure because *DSM-III-R* is designed to be an atheoretical manual that is acceptable to clinicians and researchers of many theoretical persuasions (p. xxiii; Spitzer & Williams, 1983, p. 340, 1988, pp. 83-84). One may ask whether there is anything shared by theories as disparate as psychoanalysis and behaviorism that can form the basis for a common nosology. The answer implicit in *DSM-III-R* is that all theories of mental disorder presuppose a common pretheoretical concept of mental disorder, as expressed in *DSM-III-R*'s theory-neutral definition. The concept specifies the domain of conditions that such theories must explain if they are to be theories specifically of mental disorder. The concept thus provides the glue that holds together the mental health field. Because the concept is theory neutral, it can serve as a basis for the creation of an atheoretical manual. To accomplish this, the set of criteria for each category of disorder listed in *DSM-III-R* must possess validity as an indicator of disorder when judged by the shared concept of mental disorder alone, independent of any additional theoretical assumptions (at least this is the ideal goal). Thus, whereas theory-based diagnostic manuals have various theoretical principles to guide them in deciding what is a disorder, in *DSM-III-R* it is the concept of mental disorder itself that provides the direct and exclusive intellectual justification for such decisions.

Given its importance to *DSM-III-R*'s conceptual structure, the definition has received remarkably little scrutiny. An avalanche of publications about specific *DSM-III-R* diagnostic criteria has been accompanied by almost no critical examination of the definition by which *DSM-III-R* claims to determine whether a proposed criterion actually is a category of disorder. In this article, the usual emphasis is reversed; the focus is on the logical structure and validity of *DSM-III-R*'s general definition of mental disorder, and specific categories of disorder are considered only when they illustrate broader points about the general definition. *DSM-III-R* is approached as a systematic treatise that must fulfill requirements of consistency and conceptual rigor.

In examining *DSM-III-R*'s definition and its specific criteria, my central concern is validity in discriminating disorder from nondisorder, which I call *conceptual validity*. Conceptual validity is critical for *DSM-III-R*'s diagnostic criteria because all other types of validity, such as predictive or construct validity, are relevant to psychodiagnosis only if whatever is being validly measured or predicted is indeed a disorder. The ques-

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tion of the valid discrimination of one particular disorder from another (as opposed to the overall discrimination of disorder from nondisorder) is not considered here.

DSM-III-R's definition of mental disorder is largely the work of the editor of *DSM-III* and *DSM-III-R*, Robert Spitzer, and his colleagues. Spitzer arrived at the definition through the method of conceptual analysis, which is also used here. In a conceptual analysis, proposed accounts of a concept are tested against relatively uncontroversial and widely shared judgments about what does and does not fall under the concept. To the degree that the analysis explains these uncontroversial judgments, it is considered confirmed, and a sufficiently confirmed analysis may then be used as a guide in thinking about more controversial cases. Spitzer's persistence and ingenuity in searching for an adequate account of the concept of disorder have helped to move the field of psychodiagnosis forward on a more conceptually sophisticated footing. Moreover, Spitzer's analysis is sufficiently precise to make it possible to "disconfirm" aspects of the definition through new conceptual arguments of the sort undertaken here and thus to progress toward a better definition. Indeed, Spitzer himself was the foremost critic of his earlier analyses, adjusting the definition to deal with new problems or counterexamples as they arose. Because, in effect, it is Spitzer's analysis of mental disorder that is examined, I sometimes refer to the analysis as Spitzer's rather than *DSM-III-R*'s, but this is done with the understanding that the committee system by which *DSM-III-R* was formulated implies that many others had roles in the decision to include the definition in the manual and in determining its precise content. *DSM-III-R*'s definition is essentially the same as that presented in *DSM-III* (American Psychiatric Association, 1980) except for minor improvements not relevant to the argument here, so secondary publications discussing *DSM-III*'s definition (Spitzer & Endicott, 1978; Spitzer & Williams, 1982) are equally relevant to *DSM-III-R* and are drawn on.

The heart of the argument presented here can be summarized as follows. There are two fundamental principles that guide *DSM-III-R*'s definition of mental disorder. The first is that a disorder is a condition that has negative consequences for the person. The second is that a disorder is a dysfunction (i.e., a condition in which some internal mechanism is not functioning in the way it is naturally designed to function). ("Mechanism" is used throughout this article in a generic sense that encompasses both physical organs and behavioral, psychological, motivational, perceptual, and other mental features of the organism.) The "dysfunction" requirement is necessary to distinguish disorders from many other types of negative conditions that are part of normal functioning, such as ignorance, grief, and normal reactions to stressful environments. The two principles could be directly incorporated into a conceptually valid definition of disorder as "harmful dysfunction," but *DSM-III-R* does not take this route. A primary goal of *DSM-III-R* is diagnostic reliability, which requires diagnostic criteria that are precisely and operationally defined. Neither harm nor dysfunction are adequately precise concepts, so *DSM-III-R*'s definition attempts to translate them into clearer terms. Harm is translated into a list of specific and recognizable kinds of harm, particularly distress and disability. The translation of dysfunction into operationalized terms poses more of a problem because judgments about dysfunction involve inferences about the person's internal mental mechanisms. Nonetheless, *DSM-III-R* replaces the dysfunction requirement with the requirement that the condition cannot be a statistically expectable response to the environment. The idea is that normal functioning is statistically expectable, whereas dysfunction is unexpectable, so an unexpectability requirement should do approximately the same work as the dysfunction requirement while being precise and noninferential. Thus, as its operationalized translation of "harmful dysfunction," *DSM-III-R* defines mental disorder roughly as "a mental condition that causes distress or disability and that is not a statistically expectable response." However, in fact harmful dysfunction and unexpectable harm diverge in several important ways; for example, some normal reactions to external stresses can be unexpectable and harmful, some nondysfunctional internal conditions like illiteracy or greediness can be unexpectable and harmful, and some conditions that are quite expectable in context, like posttraumatic stress disorder (PTSD) after a severe trauma, can still be dysfunctions. For these and other reasons, *DSM-III-R*'s definition fails to operationalize dysfunction adequately and thus fails to distinguish validly disorders from other negative conditions. These invalidities in the definition lead to invalidities in many specific *DSM-III-R* diagnostic criteria. Thus, *DSM-III-R*'s method of pursuing reliability has substantial costs in validity.

As in *DSM-III-R*'s definition, the focus here is on analyzing the concept of disorder; little attention is paid to "mental." This is because the most contentious question is not whether conditions labeled mental disorder really are *mental,* but whether they really are *disorders.* Also as in *DSM-III-R,* it is assumed here that the concept of mental disorder is a straightforward extension to mental processes of the general concept of disorder used in physical medicine. Thus, I freely use examples from both the mental and physical realms whenever they shed light on the structure of the concept of disorder.

This article consists of three parts. The first part is devoted to understanding *DSM-III-R*'s strategy in defining mental disorder and to analyzing and reconstructing the definition. The second part identifies conceptual problems with the definition and shows how these problems have consequences for specific criteria. The third part considers the implications of the analysis and critique for *DSM-III-R,* for the construction of future manuals, and for future empirical and conceptual research.

One more caveat before proceeding: *DSM-III* and *DSM-III-R* clearly represent a great advance over previous diagnostic manuals. Their many positive features have been well described in the literature (e.g., Kendell, 1983; Klerman, 1984; Spitzer & Williams, 1983, 1988) and are not summarized here. The argument presented here that there are problems with the validity of *DSM-III-R*'s account of disorder should not be confused with an overall rejection of *DSM-III-R* or with a disagreement over its fundamental goal of formulating an atheoretical and reliable set of diagnostic criteria for mental disorders.

Analysis

Identifying the Essence of DSM-III-R's Stated Definition

DSM-III-R's stated definition of mental disorder is as follows (the sentences are numbered for easy reference later):

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> [1] In DSM–III–R each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in a person and that is associated with present distress (a painful symptom) or disability (impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. [2] In addition, this syndrome or pattern must not be merely an expectable response to a particular event, e.g., the death of a loved one. [3] Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the person. [4] Neither deviant behavior, e.g., political, religious, or sexual, nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the person, as described above. (p. xxii)

It is useful to formulate a briefer version of *DSM–III–R*'s definition that makes clearer the elements that are most important for present purposes and that corrects some superficial problems.

First, Sentence 1 notes that *DSM–III–R* will limit itself to "clinically significant" conditions. This is intended to restrict the manual to conditions that actually come to the attention of clinicians (Spitzer & Williams, 1982). For example, Spitzer and Williams noted that caffeine withdrawal causes as much distress as caffeine intoxication, but because people do not seek professional help for caffeine withdrawal and they do for caffeine intoxication, only the latter is considered "clinically significant" and is included in *DSM–III* as a mental disorder (1982, p. 20). This approach keeps professionally useless categories from cluttering up the diagnostic manual, but as a feature of a definition of disorder it has the problem of allowing the sociology of help seeking to intrude into an analysis of the logic of disorder. Spitzer and Williams themselves noted that some pathological conditions are not in the intended sense "clinically significant" (p. 19). However, a correct definition of disorder must classify every pathological condition as a disorder whether or not the condition is currently an object of professional attention. Otherwise, the definition leads to the unacceptable conclusion that social obstacles to consulting mental health professionals have the effect of eradicating disorder, and it becomes impossible to argue that a condition for which people do not now seek clinical help is in fact a disorder for which they should seek help. As Lewis (1953) noted, any criterion for disorder that depends on whether people actually seek treatment for a condition has the defect that

> It will fluctuate enormously from place to place and from time to time, it will depend on an attitude by the patient towards his doctor, and it will certainly fail to include many people whom, by any common-sense standard, one must call ill. (p. 119)

Thus, for the purpose of formulating a definition of mental disorder, the clinical significance constraint is best eliminated.

Second, the phrase "behavioral or psychological syndrome or pattern" admirably avoids a commitment in the struggle between behavioral and intrapsychic approaches, but because we are primarily worried about "disorder" rather than "mental," "mental condition" will do as a neutral characterization of the domain in which mental disorders take place. (For exploration of the relationship between the behavioral and psychological aspects of the mental, see Wakefield, 1988b, 1989a.)

Third, the phrase "in the person," which occurs in Sentences 1 and 3, is redundant because a mental condition must occur in the person. This is not to say that the "in the person" requirement is unimportant but only that these phrases are redundant; in fact, the requirement that the disorder is "in the person" is one of the most central components to the definition of disorder, and it is discussed at length later.

Fourth, the phrase "is associated with" in Sentence 1 is insufficiently precise. Certainly, not every condition that is merely correlated with distress or disability is a disorder. Spitzer and Williams stated that "the *consequences* of a condition . . . determined whether the condition should be considered a disorder" (1982, p. 16, emphasis added). Thus, the idea is that the distress or disability is caused by the condition.

Fifth, it is convenient to make the list of potential negative consequences less unwieldy. Distress and disability are the most important harms for *DSM–III–R*'s purposes and for the purposes of the following argument, and they can be construed so as to include the other harms listed in the definition. This can be done by interpreting death and loss of freedom to be variants of disability and by understanding the phrase "distress or disability" to include actual distress or disability or increased risk of future distress or disability. Thus, the ideas expressed in the final phrase of Sentence 1 can be left implicit.

Sixth, the phrase "it must currently be considered" in Sentence 3 is subtly misleading. To be a disorder, a condition must actually *be* a dysfunction; its being *considered* a dysfunction is not sufficient. One can be wrong about whether a condition is a disorder, but the definition as stated would preclude error by making the pathological status of a condition depend merely on what one happens to believe rather than on the truth. This point is not just philosophical hairsplitting. Some Soviets considered political dissidents to be dysfunctional, some 19th-century southern physicians considered it to be a dysfunction for a slave to attempt to escape from his or her master, and some Victorian physicians considered masturbation and female orgasm to be dysfunctions, but they all happened to be wrong and their judgments of disorder were consequently incorrect. The way *DSM–III–R*'s definition is worded, one would be committed to saying that the respective diagnosticians, because they really did consider the respective conditions to be dysfunctions, were correct in their judgments of disorder.

Seventh, the reference to biological dysfunction in Sentence 3 is meant to allow for the fact that distress or disability resulting from a physical dysfunction sometimes constitutes a mental disorder. However, for a biological dysfunction to be the source of a mental disorder, it must do more than directly cause distress or disability. Many physical dysfunctions produce distress but do not constitute mental disorders. A mental disorder exists only if the physical condition causes a change in the functioning of the mind that in turn causes the distress or disability. So a mental disorder always requires a mental dysfunction, and Sentence 3 can be simplified accordingly.

Finally, Sentence 4 notes that deviance from or conflict with society is not in itself a disorder. These points are important for protecting against social abuse of diagnosis but, as Sentence 4 indicates, the same points are implicit in references earlier in the definition to the fact that a disorder is a dysfunction in the person.

In view of all the points so far, and making some additional

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minor simplifications of language, we can provisionally reformulate the definition as follows:

A mental disorder is a mental condition that (a) causes significant distress or disability, (b) is not merely an expectable response to a particular event, and (c) is a manifestation of a mental dysfunction.

Disorder as Dysfunction

The third clause of the definition states that a disorder must be a dysfunction. In this section, I argue that although the dysfunction requirement is accepted by *DSM-III-R* as a fundamental principle, nonetheless the dysfunction clause is not intended to be a formal part of the definition because the rest of the definition by itself is supposed to capture the idea of dysfunction. I also make some brief comments about the concept of dysfunction that are useful later for evaluating whether *DSM-III-R*'s definition accomplishes its aim of being consistent with the dysfunction requirement.

The literature on the definition of mental disorder (e.g., Boorse, 1975, 1976a, 1977; Caplan, 1981; Kendell, 1986; Klein, 1978; Moore, 1978; Ruse, 1973; Spitzer & Endicott, 1978) confirms that there is a widely shared dysfunction conception of disorder, variously expressed in phrases like the following: a disorder is an organismic dysfunction; a disorder occurs when something goes wrong with the functioning of the organism; a disorder exists if the organism is not functioning naturally; an organism is disordered when one of its organs or other internal mechanisms is not performing the function for which it was designed. By themselves, such statements are not an adequate analysis of disorder because *dysfunction* and related terms are too close in meaning to *disorder* to provide an illuminating independent criterion for disorder. Ultimately, the problem of defining disorder is in part the problem of defining dysfunction. Nevertheless, establishing as a framework principle that a disorder is a dysfunction is a necessary first step because it puts our analytical efforts on the right track.

Spitzer (Spitzer & Endicott, 1978) made it clear that he interpreted the concept of dysfunction to be a necessary and universal framework for any analysis of disorder: "Our approach makes explicit an underlying assumption that is present in all discussions of disease or disorder, i.e., the concept of organismic dysfunction" (p. 37). He noted that "an inferred or identified organismic dysfunction" is one of several "fundamental concepts in the notion of medical disorder" (Spitzer & Endicott, 1978, p. 17). The centrality of dysfunction is repeatedly cited in secondary literature (e.g., Spitzer & Endicott, 1978, pp. 17–18; Spitzer & Williams, 1982, pp. 18, 21), and dysfunction is sometimes equated with disorder (e.g., Spitzer & Endicott, 1978, p. 28), as when Spitzer and Williams (1982) argued that nondistressing paraphilias are disorders simply because they are dysfunctions (p. 21). Moreover, others who analyzed *DSM-III*'s definition of disorder (Klein, 1978, p. 65; Moore, 1978, p. 97) also concluded that it relies on the underlying assumption that a disorder is a dysfunction.

Despite *DSM-III-R*'s commitment to defining *disorder* consistently with the principle that a disorder is a dysfunction, the dysfunction clause is not intended to be part of the formal definition. As noted earlier, there is a serious problem with defining disorder directly in terms of dysfunction, if no analysis of dysfunction in simpler terms is provided. The problem is that the two concepts are so close in meaning that such a definition does not substantially advance understanding. Spitzer clearly recognized that it is circular to define disorder in terms of dysfunction; Spitzer and Endicott (1978, p. 18) stated that *DSM-III*'s definition aims to "avoid such terms as 'dysfunction,' 'maladaptive,' or 'abnormal,' terms which themselves beg definition" (1978, p. 17). However, despite Spitzer and Endicott's disclaimer (p. 17) that they are not defining disorder directly in terms of dysfunction, they used the term *dysfunction* in their definition of disorder (p. 18), and the term also appears in the definitions in *DSM-III* and *DSM-III-R*. How can the definitions and the disclaimer be consistent?

The answer can only be that the definitions are not really meant to include the dysfunction clause as an essential part. This answer is confirmed later in Spitzer and Endicott's (1978) article, in which they attempt to provide operational criteria for the "distress and disability" part of the definition. They stated that "the operational criteria discussed in the following sections can be viewed as providing sufficient evidence for. . . an organismic dysfunction" (pp. 18–19). Thus, Spitzer and Endicott believed that they specified sufficient criteria for dysfunction in the rest of the definition, making the dysfunction clause redundant. This interpretation is consistent with Spitzer and Williams' (1982) claim that they are defining disorder in terms of the consequences of a condition; the consequences are the distress and disability, and these consequences, modified by the "unexpectable response" clause to be discussed shortly, are supposed to be sufficient by themselves to imply a dysfunction and thus a disorder. It may be concluded that the dysfunction clause is not intended to play a substantive role in the definition because its content is thought to be exhausted by the kind of distress and disability specified. Moore (1978) arrived at a similar conclusion: "Organismic dysfunction" carries no weight in the definition that I can ascertain beyond . . . that one of the negative consequences—distress, disability, or disadvantage—has come about. Accordingly, the heart of the definition turns out to be these three negative consequences" (p. 92).

In addition to this textual support, there are two other pieces of evidence that the distress and disability clause and the unexpectable response clause are meant to stand alone, independent of the dysfunction clause, as *DSM-III-R*'s working definition. The first is the existence of the unexpectable response clause itself. Why should that be in the definition in the first place? The answer (to be explored in more detail later) is that its main use is to take care of certain problems that arise as a result of the deletion of the dysfunction clause. Without the dysfunction clause, there is the danger that normal distress and disability, such as grief at the loss of a loved one, will be classified as disordered. Limiting disorders to unexpectable harmful consequences eliminates the obvious counterexamples because most normal distresses are expectable responses to particular events. For example, grief is eliminated as a counterexample because it is an expectable response to loss. However, these counterexamples would never occur if the dysfunction clause was included in the definition; grief, for example, is not due to a dysfunction but is part of normal functioning. The fact that the unexpect-

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able response clause deals with counterexamples that only become a problem if the dysfunction clause is eliminated strongly suggests that the dysfunction clause is not intended to be included in the definition.

The second piece of evidence consists of the way that the diagnostic criteria in *DSM–III–R* are formulated. Assuming that "the proof is in the pudding," we can reason backward from the criteria for specific mental disorders to the definition of mental disorder that would make sense of them. Such an examination reveals that the concept of dysfunction plays no direct role in the formulation of specific diagnostic criteria in *DSM–III–R*. In no criterion do we find, for instance, a clause like "the distress must have been caused by a dysfunction in the person" or any other reference to the existence of a dysfunction. What we do find are criteria that fit the "unexpected harmful consequences" rubric. That is, the criteria specify kinds of distress or disability, and it is either obvious from the context or stated in the criterion itself that the harm is an unexpectable response. (Some examples illustrating these points are presented later.) Insofar as the definition expresses the conception of disorder that guided the formulation of *DSM–III–R* diagnostic criteria, the dysfunction clause need not be seen as part of the definition.

It should now be clear that Spitzer is doing two things at once in the definition. He is stating for the record that the dysfunction requirement is a necessary part of the concept of disorder. In addition, he is putting forward a more reliable and operationalized translation of the dysfunction conception. The hope is that any condition classified as a disorder under this translation will in fact be a dysfunction without ever having to use the concept of dysfunction in the definition. In sum, unexpectable distress or disability is in part supposed to be an operational analysis of what a dysfunction is, making the dysfunction clause redundant.

Eliminating the dysfunction clause, *DSM–III–R*'s definition of mental disorder can now be provisionally reconstructed as follows:

A mental disorder is a mental condition that (a) causes distress or disability and (b) is not merely an expectable response to a particular event.

To evaluate the fidelity of *DSM–III–R*'s operational definition of disorder to the dysfunction requirement, some independent understanding of dysfunction is required. A reasonable supposition is that a dysfunction implies an unfulfilled function, so that a dysfunction represents the failure of some mechanism in the organism to perform its function. The kinds of functions that are relevant are not those that result from human decisions to use a part of the mind or body in a certain way. For example, although there is a colloquial sense in which the nose functions to hold up the glasses, it would be at best a joke to bring up the function of holding up the glasses in the context of an evaluation of nasal health and pathology, and although the sound of the heart performs a useful function in medical diagnosis by indirectly indicating other aspects of cardiac functioning, the sounds in themselves are not a function of the heart in *the sense relevant to evaluating* healthy and disordered functioning.

This suggests that the only functions that are relevant to evaluation of dysfunction are the "natural functions" of mechanisms. There have been many attempts to analyze the concept of natural function (e.g., Boorse, 1976b; Cummins, 1975; Elster, 1983; Hempel, 1965; Moore, 1978; Nagel, 1979; Woodfield, 1976; Wright, 1973, 1976). A careful analysis of the concept (Wakefield, 1992) leads to the conclusion that the most viable approach is based on the notion of evolutionary design. Certain mechanisms are naturally selected because of the beneficial effects that the mechanisms have on the organism's fitness, and those beneficial effects are the natural functions of those mechanisms. The natural function, then, is not just any benefit or effect provided by a mechanism but a benefit or effect that explains, through evolutionary theory, why the mechanism exists or why it has the form that it does. That is why, for example, the sound of the heart is not its function, whereas the pumping of the blood is its function; it is the pumping, and not the sound, that explains why we have hearts and why hearts are structured as they are. Note that such explanations apply to mental mechanisms as well as to physical ones. Perception, language, learning, action, belief, emotion, thought, drive, and all the other furniture of the mind have their distinctive functions that explain why they exist in the first place and why they have the structures that they do. So, although this account of "natural function" is in a broad sense biological, it is not in any sense physicalistic.

There is a hint that the evolutionary model of natural functions is accepted by Spitzer as the basis for attributions of dysfunction. Spitzer stated that *DSM–III–R*'s approach to disorder, based on the notion of dysfunction, "is similar to Klein's approach but we have ignored issues of evolution and the hierarchical organization of functions" (Spitzer & Endicott, 1978, p. 37). Klein's (1978) approach is based entirely on an evolutionary interpretation of function and dysfunction. The implication of Spitzer's statement seems to be that, although evolutionary considerations have been ignored, they are accepted as a basis for understanding the nature of dysfunction.

It may be concluded that the proper analysis of dysfunction, insofar as this concept is relevant to diagnosis, is something like "failure of a mechanism in the person to perform a natural function for which the mechanism was designed by natural selection." This is a purely scientific concept, although discovering what in fact is natural or dysfunctional may be extraordinarily difficult. Whether *DSM–III–R*'s operational definition satisfactorily captures this concept in accordance with its own dysfunction requirement is considered in a later section.

Disorder and Harmful Consequences

So far, *DSM–III–R*'s definition has been approached from the perspective of the role of the dysfunction clause. Now the definition is approached afresh from the perspective of the negative consequences requirement.

Spitzer and Williams (1982) stated that the central idea behind *DSM–III–R*'s definition of mental disorder is that a disorder can be defined in terms of certain kinds of negative consequences to the organism, particularly distress or disability: "It was argued that the consequences of a condition, and not its etiology, determined whether the condition should be consid-

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ered a disorder. . . . Therefore, it was proposed that the criterion for mental disorder was either subjective distress or generalized impairment in social effectiveness" (p. 16).

A definition of disorder in terms of negative consequences or, more simply, harm has the disadvantage that *negative* and *harmful* are essentially value terms, introducing moral and social judgments and a degree of value relativity into what many feel should be a purely scientific concept. However, there are good arguments that this value aspect of disorder cannot be entirely avoided and that values are an integral part of the concept of disorder (Wakefield, 1992). Put simply, this is because disorder is in certain respects a practical concept that is supposed to pick out only conditions that are undesirable and grounds for social concern, and there is no purely scientific nonevaluative account that captures such notions. The value aspect of disorder raises thorny diagnostic issues where differences in values exist; for example, as Spitzer (1981) concluded, it is likely that the debate over the pathological status of homosexuality must ultimately be understood in part as a debate over values rather than over scientific facts and theories.

DSM–III–R's strategy for avoiding some of the problems that a value analysis might entail is to specify the empirically verifiable kinds of negative consequences that generally occur in disorder. Once these concrete forms of harm are specified, they can be substituted in the definition for the general concept of harm. Then, in practice, the application of the definition will not require reference to values except in controversial cases. As we have seen, *DSM–III–R* specifies that it is the harms of distress and disability that are the primary indicators of disorder. The *DSM–III–R* reduction of the value aspect of disorder to distress and disability is accepted here in order to focus on problems with other features of the definition.

Taken at face value, the Spitzer and Williams passage just quoted suggests a definition of disorder as "any internal condition that causes harm to the person." The advantage of a definition of disorder strictly in terms of harmful consequences would be that such consequences of an internal condition are generally observable, whereas the internal condition itself and its functional or malfunctional nature are generally unobservable. Thus, a definition framed in terms of harmful consequences would be relatively easy to operationalize and could be made extremely reliable. Moreover, such a definition could use shared commonsense concepts dealing with observable harm, like distress and disability, and could therefore remain theoretically neutral. If it is observable harm that makes a condition a disorder, no assumptions need be built into diagnostic criteria about whether the internal source of the harm is best described in behavioral, psychoanalytic, or other terms, because that is irrelevant to the judgment of disorder. For these reasons, a definition of disorder in terms of harmful effects is extremely attractive.

However, the simple harmful consequences definition is, of course, not the definition with which Spitzer ends up. The reason is that harmful consequences clearly are not sufficient for dysfunction and, therefore, are not sufficient for disorder. For example, grief in response to the death of a loved one, distress from actual or threatened abuse, and frustration after sexually interacting with a dysfunctional partner can all involve significant distress or disability and yet need not be dysfunctions or disorders. Even rational beliefs, like the belief that one is going to die or the belief that one is disliked by a valued acquaintance, can cause extreme distress but are not disorders because they are not caused by dysfunctional mechanisms in the person. Harm itself cannot be what distinguishes dysfunction from nondysfunction because the very same harmful consequences can occur in an organism that is not dysfunctional as in an organism that is dysfunctional. For example, a person can be chronically unhappy because of a normal reaction to a sequence of negative life events such as the lengthy terminal illness of a loved one or because of a cognitive or affective dysfunction; and people can experience roughly the same sort of terror because of a reasonable belief that the Mafia is out to kill them (e.g., they might be hit-men turned police informants) as they can because of a paranoid delusion that the Mafia is out to kill them. So the definition of disorder as "any internal condition that causes harm" is much too broad.

Given that the simple harmful consequences approach must be rejected, the question becomes whether there is some amended version that might work. In effect, Spitzer attempted to make the harmful consequences approach match the dysfunction conception by adding the unexpectability clause. As noted earlier, if one makes the assumption that disordered functioning is statistically deviant, requiring that the harm be unexpectable seems to ensure that it is due to a dysfunction. All the examples cited previously of negative conditions that are not disorders are expectable responses to environmental events and so are not classifiable as disorders if the unexpectability requirement is added to the harmful consequences definition.

To assess whether the addition of the unexpectability clause makes the definition satisfactory, one has to know what *unexpectable* is intended to mean. One possibility is that it means "not to be expected in an organism that is functioning properly," which is more or less the same as "dysfunctional." If this is what it means, it takes care of all the counterexamples but only at the cost of making the definition trivial by inserting an implicit reference to dysfunction into the meaning of unexpectability. The remaining possibility is that *unexpectable* means "infrequent," that is, "statistically unlikely." This appears to be Spitzer's intended interpretation:

> In practice it is often difficult to determine whether the distress or disability associated with a noxious environment . . . represents an expectable and "normal" reaction—in which case the organism is functioning properly—or a sign of organismic dysfunction, a disorder. . . . In practice, making such distinctions often requires knowledge of subcultural norms and the frequency of various forms of reaction to environmental contingencies. (Spitzer & Endicott, 1978, p. 28)

Thus, it is norms and frequencies, which are statistical concepts, that are used to determine expectability.

One adjustment needs to be made in the unexpectable response clause as it is presented in *DSM–III–R*. The problem is that *DSM–III–R*'s criterion says that a disorder must not be an expectable response to a particular event, but this seems to allow that it could be an expectable response to a series or pattern of events. This is untenable; there is no relevant conceptual difference between responses to single and multiple events. If expectable responses to a single event—such as grief when a loved one dies, a child's fear when a parent threatens abuse, and

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a woman's frustration after her partner prematurely ejaculates —are not to be considered disorders, expectable responses to patterns of events—such as cumulative unhappiness because of the loss of several love objects, the chronic fear of a child who is regularly abused, or the chronic frustration of a woman who is in an unsatisfying sexual relationship—should also not be considered disorders on the same logic. The concept of expectability is supposed to operationalize the notion of normal functioning, and normal responses occur to single and multiple events. Thus, if the unexpectability clause is to work at all, it must apply to unexpectable responses in general. Consequently, a generalized criterion concerning external event sequences of any duration rather than particular events is assumed in the following discussion.

The expansion of the unexpectability clause to cover reactions to patterns of events has implications for the viability of a common feature of *DSM-III-R* diagnostic criteria. Criteria often include a requirement that symptoms must have existed for some time—usually 6 months—before a disorder can be diagnosed. These time requirements are in part an attempt to deal with the sort of problem pointed out by Dohrenwend and Dohrenwend (1965), who argued that the validity of diagnosis is jeopardized by the fact that normal reactions to stress often mimic symptoms of disorder. The Dohrenwends emphasized the reaction to transient stressors, such as combat missions. *DSM-III-R*'s response appears to be that if a condition lasts long enough (e.g., 6 months), the condition must have outlasted the transient stressor and cannot be a purely situational response, so some internal dysfunction must be operating independently of the original stressor to maintain the harmful response. However, *DSM-III-R*'s time requirements only ensure that the symptoms are not a response to a particular event; they fail to deal with negative reactions that are maintained by chronic environmental stressors, which may last longer than 6 months. (The time requirements are considered again later in a discussion of the tension between reliability and validity.)

To avoid confusion, it should be emphasized that environmental stress can result in a genuine disorder by causing an enduring change in internal functioning (e.g., a heart attack or a psychosis is a real disorder even if triggered by situational stressors). The critical distinction that needs to be drawn is between those situations in which an environmental stress causes a breakdown of an internal mechanism such that the breakdown becomes independent of the original stress versus a natural response that is initiated and maintained directly by the ongoing stress and that would subside if the stress disappeared. The former kind of reaction is a disorder but the latter is not, according to the dysfunction conception.

DSM-III-R's working definition of mental disorder may now be reformulated:

A mental disorder is a mental condition that (a) causes distress or disability and (b) is not a statistically expectable response to external events.

This completes the exegesis and reconstruction of *DSM-III-R*'s attempt to define disorder. In the next part I will develop a conceptual critique of the reconstructed definition.

Critique

Problem of Normal Distress

DSM-III-R's definition of disorder as "statistically unexpectable distress or disability" fails to accomplish its purpose of capturing the dysfunction requirement in a more operationalized form. The most basic problem with the definition is that there are many statistically deviant conditions that cause distress and other harms but that are not dysfunctions. In the mental realm, selfishness, cowardice, slovenliness, foolhardiness, gullibility, insensitivity, laziness, and sheer lack of talent are a few examples of the types of inner misfortunes and failings that can cause harm and that can be statistically deviant either in the nature of the response or in the response's intensity without being classifiable as disorders. The dysfunction requirement is supposed to distinguish disorders from other internally caused harms to which human beings are subject, and the unexpectability requirement does not succeed in drawing the same distinction.

DSM-III-R's V codes (pp. 359–362) provide a good illustration of how *DSM-III-R*'s definition fails to distinguish disorders from other sorts of unexpectable negative responses. The V codes are problematic conditions that are often the focus of intervention but that are not attributable to a mental disorder. They include conditions such as academic problems, professional thievery, malingering motivated by financial incentives, marital conflict in connection with divorce proceedings, internal conflict over career choice, conflicts between adolescents and parents over choice of friends, and problems of adjustment to retirement. Clearly, *DSM-III-R* is correct that such problems are often not due to mental disorders. However, simply specifying that V code conditions are not due to mental disorders is not sufficient to guarantee the coherence of the category. Theoretical consistency demands that the V code conditions themselves must not satisfy *DSM-III-R*'s definition of disorder. In fact, many V code conditions are not only harmful but are also unexpectable either in the kind of condition or in the intensity of the condition, and so qualify as disorders under *DSM-III-R*'s definition even if there is no involvement of any other listed disorder.

Although *DSM-III-R* goes against its own definition and correctly classifies the V code conditions as nondisorders, in other cases the conceptual difficulties with the definition of *mental disorder* lead to invalidities in specific *DSM-III-R* diagnostic criteria. Several conditions that involve statistically unexpectable levels of harm are classified as disorders in *DSM-III-R* even though they are not necessarily dysfunctions. For example, a condition is classified as an adjustment disorder if symptoms following a psychosocial stressor "are in excess of a normal and expectable reaction to the stressors" (p. 330). Thus, any reaction to a stressor that is above the mean in intensity is classified as a disorder, which is incorrect because it fails to distinguish disorder from normal variation. Similarly, oppositional defiant disorder (p. 57) is diagnosed when, during a 6-month period, a child displays certain kinds of defiant behavior, such as loss of temper, arguing with adults, refusing to do chores, and swearing, at a rate that is "considerably more fre-

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quent than that of most people of the same age." However, greater frequency than usual of such behaviors may indicate a stressful home environment, an environment in which adults have proved themselves unworthy to be obeyed, socialization in an environment in which such behaviors are considered more acceptable than usual, or even an adaptive reaction to a truly unjust or abusive environment. Distinguishing such "normal" sources of greater than average oppositional behavior from the existence of a dysfunction should be part of the point of diagnosis, but *DSM-III-R*'s unexpectable harmful response definition of disorder yields a definition of oppositional defiant disorder that does not allow for such discriminations.

At the same time that it is too broad because it encompasses normal unexpectable distress, *DSM-III-R*'s definition is in other ways too narrow. The problem, once again, is with the unexpectability clause. Although the definition excludes from disorder any reaction that is expectable on the basis of environmental events, it does not specify which events are to be considered in making the determination of expectableness. The question is, "Unexpectable relative to what?" If we take the definition to allow any reasonable set of prior events to be used to determine expectability, the definition fails to include as disorders a great many conditions that are disorders. For example, a "merely expectable response" to many kinds of extreme trauma is PTSD (*DSM-III-R*, pp. 247–251), and an expectable response to lack of contact with a care giver in infancy is anaclitic depression. The same situation exists with regard to physical disorders: An expectable response to exposure to a flu virus is for a flu to develop, and an expectable response to extreme, sudden pressure on the arm is for the arm to break. Nonetheless, these conditions are disorders. What makes them disorders is that, even though expectable under the circumstances, they are all clearly dysfunctions. For example, even if PTSD occurs in a majority of circumstances in which trauma is sufficiently severe, it is still classifiable as a disorder if, as appears to be the case, the reaction to those circumstances involves a breakdown in the natural functioning of internal reparative and coping mechanisms, analogous to the statistically predictable breaking of the arm under sufficient traumatic pressure. The fact that in PTSD the person's coping mechanisms often fail to bring the person back to functional equilibrium months and even years after the danger is gone, and that PTSD reactions are dramatically out of proportion to the actual posttraumatic danger, suggests that the response is indeed independent of any environmental maintaining cause and therefore is a dysfunction. The requirement that the distress must be unexpectable thus causes the definition to be so narrow as to exclude from disorder status certain of *DSM-III-R*'s own categories. Indeed, as we learn about the causes of disorder, responses that were unexpectable become expectable relative to newly identified risk factors, so in principle the unexpectability requirement implies that nothing whatsoever is a disorder.

It might be suggested that the way to solve this problem is to specify the reference set relative to which the response in question has to be unexpectable. Thus, for example, experiencing PTSD and breaking one's arm are expectable relative to the set of people who undergo a certain kind of mental or physical trauma, respectively, but neither are expectable relative to the set of people in the general population, so it is the latter base line that should be used to demonstrate that these are disorders. The problem with this suggestion is that it is circular because there is no independent way of deciding which base line to use other than by making judgments about what is a disorder. In any event, the "correct" base line from which to judge disorders unexpectable cannot be the population at large; most people get periodontal disease, mild lung irritation, and coronary artery disease.

These problems with the unexpectability requirement might make one wonder whether there is some other way to prevent normal distress from being classified as disorder. In Spitzer and Endicott (1978), the problems that are handled with the unexpectability clause in *DSM-III-R* are handled instead with the following clause: "Conditions are not included if the associated distress, disability, or other disadvantage is apparently the necessary price associated with attaining some positive goal" (1978, p. 28). Thus, the pain of childbirth is the price a woman pays for the benefit of having a child, and the grief one feels at the loss of a loved one is the price one pays for the benefit of having deep attachments, so these counterexamples are avoided. However, as Moore (1978, p. 95) noted, this alternative clause excludes as disorders all those conditions caused by activities that are thought to be desirable: "The necessary prices associated with (the positive goods of) mining and smoking are, respectively, black lung disease and lung cancer; by virtue of [the "necessary price"] criterion, these are not medical disorders" (p. 95). Moore's point could obviously be extended to a whole range of disorders, including heart disease that derives from eating of preferred foods or cancer that results from the use of beneficial pesticides or other chemical or radiological agents.

As in the case of the unexpectability requirement, the problem with the "necessary price" requirement is that it does not quite match the dysfunction approach. Sometimes the necessary price for a benefit is consistent with the way we are naturally designed to obtain the benefit, as in the pain of childbirth or the gum irritation during teething, whereas in other cases there is nothing natural or inherent in our design about paying the necessary price, as in acquiring black lung disease from smoking or atherosclerosis from eating fatty foods. The necessary price criterion yields the correct classification only when the trade-off is part of the natural functioning of the organism.

The problem with Spitzer's attempts to eliminate counterexamples involving normal distress is that his proposals do not focus on the source of the problem. Life naturally contains a certain amount of distress, and distress that is consistent with the natural functioning of the organism is not a disorder. Neither of Spitzer's suggested formulas capture this idea. Neither "distress that is an expectable response" nor "distress that is the price for attaining a positive goal" is the same as "distress that is consistent with natural functioning," and the differences lead to enough counterexamples to make both proposals unacceptable.

Problem of Normal Inability

So far it has been shown that the unexpectable distress or disability definition is too broad (it allows many statistically

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deviant but normal responses to be classified as disorders) and too narrow (it excludes many disorders because they are expectable responses to their antecedent causes). A further problem of overbroadness arises specifically with respect to the disability clause. *DSM–III–R* lists disability as one of the forms of negative consequence that can indicate a disorder, but the only explanation of this concept that is provided is that a disability is an "impairment in . . . functioning" (p. xxii). Because any lack of ability might be described as an "impairment in functioning," *DSM–III–R* does not provide a way of distinguishing disability in the sense relevant to disorder from normal inability. For example, illiteracy involves an inability to read, and this inability surely impairs functioning, but, despite the fact that it is unexpectable in our society, illiteracy is still not a disorder.

From a dysfunction perspective, one might expect disability to be defined as a dysfunction that makes the organism incapable of doing something that it is naturally designed to be capable of doing. However, *DSM–III–R* cannot define disability in terms of dysfunction because one purpose of the definition is to eliminate the reference to dysfunction in favor of references to distress and disability. Without any constraints on what qualifies as a disability, the lack of any useful ability might be considered a disability and thus a disorder. The unexpectability clause would not eliminate the problem, because most inabilities are not reactions to specific environmental events, whether transient or prolonged. For example, a short person's lack of ability to play professional basketball is negative and is not an expected response to any external events, so it could be classified as a disorder without violating the definition. Even if the meaning of the unexpectable response clause were stretched to cover any inabilities that are statistically unexpectable (and the "response to environmental events" aspect were ignored), the conceptual problem would remain. Many physical abilities, such as strength, running speed, and jumping ability, are normally statistically distributed, so the portion of the population that is in, for example, the bottom quartile for a given ability would possess an unexpectable inability and therefore be classifiable as disordered.

Spitzer and Endicott (1978) did try to narrow down the scope of the disability criterion. They stated that a disability is "some impairment in functioning in a wide range of activities" (p. 23). However, there is no reason that a disorder cannot consist of impairment in one important activity, like respiration, thinking, seeing, or sexual arousal. Moreover, the existence of a wide range of inabilities does not necessarily constitute a disability in the relevant sense. For example, a person who is unathletic is "disabled" in a very wide range of activities (e.g., basketball, baseball, jogging, and so on) but is still not disordered. Clearly, it is the kind of abilities that are lacking, and not just the number, that determines disorder.

The lack of an account of disability opens the way for questionable diagnostic criteria. For example, suppose that a male client complains that he does not have the ability to voluntarily control the timing of his orgasms during intercourse. Is this patient disordered? A large minority of men do not have the ability to voluntarily control the timing of orgasm during intercourse (Masters, Johnson, & Kolodny, 1982), and many others have the ability only because of intentional efforts to develop it. Nonetheless, the patient is experiencing a negative consequence in the form of an inability and one that is statistically unexpectable. So the condition does seem to qualify as a disorder under *DSM–III–R*'s definition. Indeed, *DSM–III* classified such patients as disordered. However, it was never clear that the inability to control ejaculatory timing is a disability in the sense relevant to disorder, and in *DSM–III–R* the criterion for premature ejaculation was changed so that lack of voluntary control is no longer a criterion for diagnosis. Which is correct? This question can be sensibly debated only within a dysfunction framework. The piece of information that is needed to establish the correct answer is whether men are naturally designed to have the capacity to voluntarily control the timing of orgasm. In fact, there is no evidence that men are so designed and a considerable amount of circumstantial evidence that they are not so designed (Wakefield, 1988c). *DSM–III–R*'s definition does not point to the importance of the questions of natural design and natural function in resolving such questions. It is possible that a considerable number of men were misdiagnosed with premature ejaculation as a result.

It seems that any criterion for identifying disabilities that constitute disorders will have to be framed in terms of the natural functioning of the organism. Indeed, *DSM–III–R*'s description of disabilities in terms of the "impaired functioning" of the organism implicitly acknowledges that the concept of disability must be defined in terms of the concept of dysfunction and not the other way around. Simply put, inabilities are disabilities in the sense relevant to disorder when the ability that is lacking is one that the organism is naturally designed to possess.

Disorder as "In the Person"

Basic to the concept of disorder put forward in *DSM–III* and *DSM–III–R* is the notion that a disorder is a condition in which something has gone wrong "in the person." A negative response to the environment becomes a disorder only if enduring changes occur inside the person that generalize to other environments. The in the person requirement is critical to *DSM–III–R*'s goal of distinguishing disorders from social deviance and from reactions to social pressure, disapproval, or conflict. Labeling people as disordered when their distress is due to an oppressive environment is not only incorrect but potentially harmful because it suggests that something is wrong with the person and it directs interventive attention toward the person's internal functioning and away from the person–environment interaction. For example, a child in an abusive environment, a homosexual person in a homophobic environment, and a dissident in a politically repressive environment might experience distress, but it is incorrect and potentially harmful to label such people as disordered on that basis alone. So limiting disorders to conditions in which something has gone wrong in the person is critical for an acceptable definition of disorder.

The in the person requirement would be automatically fulfilled by a definition that included the dysfunction requirement, because dysfunction implies that something has gone wrong with some internal mechanism. However, once the dysfunction clause is eliminated, some other way must be found to ensure that the in the person requirement is met. Note that although it is necessary for a problem to be internal to a person

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for it to be a disorder, internality is not sufficient for disorder, as examples like ignorance and foolhardiness illustrate.

DSM-III-R tries to draw the distinction between problems that are in the environment and problems that are in the person by stating explicitly that the distress or disability must be caused by a condition in the person and also by requiring that the person's distress or disability must be caused by a mental condition, which obviously is in the person. However, neither of these straightforward causal requirements is sufficient to locate the problem in the person. Even when distress is ultimately due to a problem in the environment rather than in the person, there is generally an internal mental reaction to the environment that is a mediating cause of the person's distress. For example, in the case of a child in an abusive environment, the environment is causally linked to the child's distress by the child's reaction to the environment, including the child's lowered self-esteem, fear of future abuses, guilt about what he or she might have done to deserve the abuse, and other emotional and cognitive reactions. Such mental states are the immediate causes of the relevant distresses, so they satisfy *DSM-III-R*'s in the person causal requirement, even though this is a typical case in which, in fact, the problem is not in the person.

Although the mental and in the person causal requirements fail to ensure that the problem is in the person in the relevant sense, one might think that other aspects of *DSM-III-R*'s definition do the job. Specifically, *DSM-III-R*'s definition of disorder states that "neither deviant behavior, e.g., political, religious, or sexual, nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the person, as described above" (p. xxii). However, how does one know, according to *DSM-III-R*, whether the deviant behavior is in fact due to a dysfunction or is just a matter of social conflict? The only way is if the analysis of dysfunction in the unexpectable distress or disability definition successfully distinguishes social conflict from individual problems. However, the distinction cannot be drawn on the basis either of the negative consequences of the condition (both individual disorders and social conflicts can cause distress or disability in individuals) or the unexpectableness of the condition (both may cause unexpectable reactions). A Black person who is more sensitive than average to racism in the environment, a homosexual person who is more sensitive than average to a homophobic environment, and a political dissident who has less than average tolerance for a politically repressive environment are all experiencing negative consequences caused by unexpectable mental responses, but they are not necessarily disordered because in the relevant sense the problem is not "in them" but "in the environment." Consequently, *DSM-III-R*'s definition of mental disorder fails to capture the relevant notion of the problem being in the person.

From the dysfunction perspective, the idea that the distress is intrinsic to the person's condition just means that the distress results from the failure of one of the individual's internal mechanisms to perform the function for which it was designed. The location of the problem in the person is justified not by the fact that there is an internal cause but by the fact that the internal cause is a dysfunction. *DSM-III-R*'s definition fails to match the dysfunction requirement because it substitutes simpler causal requirements for more complex functional evaluations, leading to the previously mentioned problems in discriminating disorder from social deviance and conflict.

In this and the two previous sections, it has been argued that *DSM-III-R*'s definition of mental disorder fails in a variety of ways to distinguish disorders from nondisorders because of its divergence from the dysfunction requirement. Spitzer and Endicott (1978) made several further suggestions as to clauses that might be added to the "negative consequences" approach to make it more adequate and bring it into line with the dysfunction requirement. However, these suggestions raise issues that are not directly relevant to *DSM-III-R*. A full discussion of the Spitzer and Endicott proposals is provided in a forthcoming publication (Wakefield, 1991).

Discussion

Tension Between Diagnostic Reliability and Validity

A guiding motivation in the construction of *DSM-III-R* is the desire to increase the reliability of diagnostic criteria. In an early article, Spitzer stated the logical rationale for this emphasis: "The validity, i.e., the usefulness, of a classification system is limited by its reliability. Therefore, to the extent that a classification system of psychiatric disorders is unreliable, a limit is placed on its validity for any clinical research or administrative use" (Spitzer, Endicott, & Robins, 1975, p. 1187). Spitzer here justified a concern with reliability by the positive contribution that increased reliability can make to validity. Kendell (1975) made clearer the fact that increased reliability does not always yield increased validity and that reliability under such conditions is not particularly desirable:

> Reliability is a means to an end rather than an end in itself. Its importance lies in the fact that it establishes the ceiling for validity; the lower it is, the lower validity necessarily becomes. The converse, of course, is not true. Reliability can be high while validity remains trivial and in such a situation reliability is of very limited value. (pp. 38–39)

Even Kendell's statement is slanted toward the positive because it suggests that at worst an increase in reliability may fail to increase validity. In fact, pursuing reliability in a single-minded way can lead to a decrease in validity; one need only operationalize criteria in ways that do not correspond to what one is trying to measure. Eysenck's (1986) critique of *DSM-III* recognizes this problem and accuses *DSM-III* of going to excessive lengths to increase reliability without balancing such efforts against considerations of validity:

> It might be argued that reliabilities are higher using this scheme than they have been in the past, and that reliability is a prize so outstanding that any sacrifice may be worth making in order to achieve it. This would seem to be putting the cart before the horse. Reliability is desirable, but validity is far more important. (p. 91)

Eysenck here echoed an earlier claim by Vaillant (1984) that "DSM-III sacrifices validity for reliability" (p. 545).

My earlier critique of *DSM-III-R*'s definition of mental disorder suggests that there is some merit to Vaillant's (1984) and Eysenck's (1986) criticism. In making criteria more reliable, *DSM-III-R* has sacrificed some aspects of validity as judged

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by the standard that *DSM-III-R* sets itself: namely, that a disorder must be a dysfunction. The essential nature of this tradeoff between reliability and validity can be stated as follows. Disorder refers only to those conditions in which harm to the organism ("symptoms") is caused by a dysfunction, that is, by a failure of some internal mechanism to operate as it was naturally designed. *DSM-III-R* attempts to increase reliability by eliminating the inference to internal mechanism failure and relying for diagnostic judgments on the unexpectable nature of the harms alone. However, many of the unexpectable harms that can indicate a dysfunction can also be caused in other ways, such as by normal reactions to stressful environments or by nondysfunctional inner states. Noninferential symptom-based criteria, therefore, fail to discriminate disorders from other causes of symptomatic harms. Consequently, *DSM-III-R*'s strategy for increasing reliability simultaneously decreases validity.

Several features of the criteria for conduct disorder (*DSM-III-R*, p. 55) illustrate particularly clearly how *DSM-III-R*'s strategies for increasing reliability are linked to decreases in validity, so this example is considered in some detail. As defined by *DSM-III-R*, conduct disorder is possibly the most common diagnosable childhood disorder (Kashani et al., 1987). Its diagnosis requires that a child satisfy at least 3 of 13 behavioral criteria. For example, an adolescent who, over a period of 6 months, runs away from home for a second time, breaks into a car, and steals something is necessarily disordered according to *DSM-III-R*. The three criteria that are most discriminative of conduct disorder according to the *DSM-III-R* national field trials (*DSM-III-R*, p. 55) are stealing (without confrontation of the victim), running away from home, and lying (other than to avoid physical or sexual abuse). These and other criteria for conduct disorder satisfy *DSM-III-R*'s definition of mental disorder because they consist of harmful and unexpectable behavior. Yet these criteria do not enable one to discriminate instances in which such behavior is caused by internal dysfunctions of, for example, socialization mechanisms, moral development, or impulse control from instances in which such behavior is the result of social pressure, adaptation to problematic environmental conditions, or other nondisordered causes. An adolescent who behaves in such ways may be rebellious, foolish, coerced, or desperate rather than disordered. These distinctions are lost because of the operationalization of conduct disorder in terms of actual behaviors.

The criteria for conduct disorder do contain a gesture in the direction of discriminating between dysfunctional and other causes of behavior. The criteria specify that lying counts as a criterion only if it is not aimed at avoiding sexual or physical abuse. The reason for this exemption is obvious; it is normal, rational, and even desirable for someone to lie to save themselves from such abuses, so labeling a child who does so as disordered is a particularly offensive example of blaming the victim. However, the same principle should apply whenever a child's lying is rationally understandable as an adaptive response to an oppressive environment and is not due to a breakdown of some internal moral, social, or other regulating mechanism. For example, the avoidance of severe emotional abuse through deception is no less desirable, no less rational, and no more disordered than the avoidance of physical or sexual abuse through such means. If the criterion took such considerations seriously, it would require the clinician to understand the child's motivations and environment before judging the child's lying to be evidence of disorder. It would clearly be more conceptually valid to require such an assessment and to exempt a wide variety of cases of lying from the disorder category. However, such a criterion would require the clinician to make a complex judgment about the nature and the cause of the lying. The reliability of such a criterion is unknown but is probably less than the present *DSM-III-R* criteria. *DSM-III-R* ignores the large but vague range of valid exemptions and limits the exemption to the most reliably ascertainable subset: physical or sexual abuse. Whatever its benefits, this strategy ensures that some nondisordered children will fall under the criterion. Consequently, reliability takes precedence here over aspects of validity.

Considerations similar to those in the lying example probably explain a puzzling feature of the criteria for major depression (pp. 222–223, 229–230) that leaves a gap in validity. The criteria require that "the disturbance is not a normal reaction to the death of a loved one (Uncomplicated Bereavement)" (p. 223). The puzzle lies in the specificity of the exemption; there is nothing unique about the loss of a loved one that qualifies it for such special treatment. The same kinds of symptoms that occur in bereavement also occur as a normal response to many other losses, such as receiving a terminal medical diagnosis, suffering a disfiguring injury, or having a loved one terminally ill. It seems that the only reason for limiting the exemption to bereavement is that clinicians would otherwise be forced to evaluate the meanings of various real losses in their patients' lives and to assess whether the losses are sufficiently deep to make depressive symptoms part of a normal mourning and adjustment process, which would decrease reliability.

Returning to conduct disorder, recall that one problem with the unexpectable response requirement was that it did not specify the base line relative to which symptoms should be judged unexpectable. In the case of conduct disorder, no base line is stated, so the implicit base line is the general population, restricted to children of certain ages; this base line is explicit in the related category of oppositional disorder, in which diagnosis is allowed if symptoms are "considerably more frequent than that of most people of the same mental age" (p. 57). This method of identifying disorder may be reliable and operationalizable, but it is also invalid because it does not distinguish unexpectable responses that result from internal dysfunctions from unexpectable responses that result from unusually stressful environments or unusual but nondysfunctional internal causes, which can be just as unexpectable in the general population as dysfunctions.

Conduct disorder shares with many other *DSM-III-R* categories the requirement that a disorder can be diagnosed only if the symptoms have continued for "at least six months" (p. 55). Such time requirements are ultimately motivated by a desire to increase validity; transient distresses are more likely to be caused by transient environmental circumstances than by internal malfunctions (cf. the earlier discussion of the validity issue raised by the Dohrenwends, 1965). If one attempted to translate this concern directly into a diagnostic criterion, one might require that the symptoms had continued for a long enough time independently of obviously related environmental maintaining

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causes to warrant an inference that an internal mechanism is malfunctioning. However, such a criterion requires a complex judgment on the part of the clinician based on an assessment of the context of the symptoms, introducing unreliability. Instead, *DSM-III-R* sets a precise time requirement that is applied without reference to the context, thus minimizing clinical judgment and maximizing reliability. However, this increase in reliability has the effect of decreasing validity. The problem is more than just that 6 months is an arbitrarily chosen figure and has no greater validity than, for example, 5 or 7 months. The deeper problem is that there is nothing about the passage of time in itself that transforms a nondisorder into a disorder. Thus, in certain categories, all genuine disorders of less than 6 months duration are incorrectly classified as nondisorders under *DSM-III-R*'s approach, despite the fact that a clinician often has sufficient evidence (e.g., based on the patient's history) that there is a genuine disorder well before 6 months of symptoms have elapsed. Nor does the 6-month requirement ensure that there will be no false positive results. As noted earlier, nonpathological distress in response to ongoing environmental circumstances can last longer than 6 months. In sum, the distinction between conditions that have lasted less than 6 months and conditions that have lasted more than 6 months does not validly correspond to a distinction in nature between pathology and nonpathology.

Tactics for Increasing the Conceptual Validity of DSM-III-R Criteria

The conceptual problems with *DSM-III-R*'s definition of mental disorder do not imply that every diagnostic criterion in *DSM-III-R* is flawed. Individual criteria must fulfill the requirements set by the definition, but some criteria have additional features that enhance their validity. Using such cases as a guide, in this section there is a brief and tentative consideration of some ways to improve validity that are consistent with the general style of *DSM-III-R* but that are responsive to the criticisms presented earlier. Obviously, the construction of a proper diagnostic criterion is not simply a matter of logic; it requires a familiarity with what is known about the nature and peculiarities of the particular condition. Thus, a full exploration of how to improve *DSM-III-R* diagnostic criteria must await detailed reviews of each individual category. The following remarks are intended to stimulate thought about the general logic of such improvements and not to be a proposal for changing any particular category.

The central problem is that *DSM-III-R* criteria do not always pick out dysfunctions. One obvious way to escape this problem is to specify in the criteria that the symptoms must not be due to environmental stresses, lack of education, or other specific nondysfunctional causes. In principle, such clauses could be added to the current criteria in much the same way that the criteria now include clauses requiring that the symptoms must not be due to another *DSM-III-R* disorder or to organic disorders. The exclusion of specific nondysfunctional causes would in effect be a systematic extension of the exemption clauses in the criteria for conduct disorder and major depression, discussed earlier. However, a list of such excluded causes could quickly become unwieldy.

Alternatively, rather than excluding specific nondysfunctional causes, it could simply be specified that the symptoms must be due to a dysfunction. The specification that there must be a dysfunction could also include, where appropriate, a specification of the particular mechanism or system that must be dysfunctional for the condition to qualify as a certain kind of disorder. For example, inhibited orgasm must be a dysfunction of orgasmic mechanisms, and not some more general dysfunction that happens to prevent orgasm as a side effect, such as an arousal dysfunction. Adjustment disorder might be more precisely defined as a dysfunction of the mechanisms for coping with stress. Such criteria have the advantage that they actually state what has gone wrong with the functioning of the patient right in the diagnostic criteria. However, for reasons given earlier, it is not acceptable simply to place dysfunction into the criteria unless a clear analysis of dysfunction is also presented. Further understanding of the concept of dysfunction and of the nature of specific functions is necessary before this approach is fully satisfactory.

There are several ways that criteria can distinguish dysfunctions from nondysfunctions without actually stating that there must be a dysfunction. For one thing, the symptoms might be so extreme that nothing but the breakdown of internal mechanisms could be expected to cause them. For example, although some *DSM-III-R* criteria for major depression (pp. 222–223, 229–230) might be caused by a normal reaction to extreme environmental conditions, *DSM-III-R* correctly notes that the more severe symptoms of depression, such as "morbid preoccupation with worthlessness, suicidal ideation, marked functional impairment or psychomotor retardation" (p. 223), are not part of a normal response to loss or stress on a chronic basis, even in the extreme case of bereavement.

When there are possible alternative explanations of symptoms besides dysfunction, the instances of dysfunction can sometimes be picked out through a set of well-chosen criteria that are stated in such a way as to eliminate the nondysfunctional causes. A case in point is generalized anxiety disorder (pp. 251–253). The level of anxiety that exists in this disorder can also exist in nondisordered people who are facing unusually stressful circumstances. *DSM-III-R* distinguishes the two by specifying that disorder is to be diagnosed only if there is "unrealistic and excessive" worry and anxiety, making the existence of a dysfunction more likely on the assumption that our fear response is naturally designed to function so that fear is roughly proportional to the actual level of danger.

A dysfunction exists when a person's internal mechanisms are not able to function in the range of environments for which they were designed. Thus, one can construct a test for dysfunction by specifying an environment in which the function is designed to manifest itself; if the function fails to be manifested in that environment, there is likely a dysfunction. As a conceptual thought experiment to make this idea clearer, consider an ancient physician who has no idea how the eye works but who wants to define the disorder of "blindness." The physician might first suggest that blindness exists when a person "does not see," but that would be incorrect; there are many nondisordered people who do not see because of the circumstances, such as people who are without a torch on a dark night, people who are in unlighted dungeons or caves, blindfolded people, and

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people who have their eyes closed. Clearly, a person is blind only if he or she is unable to see under circumstances in which normal people can see. What is needed is a concrete description of the circumstances under which a normal person having no dysfunction would be expected to see. So the physician might specify that "blindness is the inability to see when one's eyes are open in normal sunlight (or the artificial equivalent) with no obstructions, like blindfolds, over the eyes." This offers an atheoretical operational definition for the disorder of blindness. The criterion is not perfect, because it cannot take into account all possible environmental interferences with normal functioning. For example, it might just so happen that the sun is on the horizon and is "in the person's eyes," thus "blinding" the person in a sense that does not imply disorder, or that the person is crying and vision is obscured by tears. So the clinician's commonsense understanding of normality must enter into the assessment. Nonetheless, the suggested descriptive criterion does come close to operationally capturing the idea that a person has the disorder of blindness. The example of an ancient physician is relevant because the position of the *DSM–III–R* classifier, who wants to construct an atheoretical criterion for disorder under circumstances of great ignorance about mental mechanisms, is quite analogous to the position of the ancient physicians who constructed the first descriptive manuals of physical disorders. The point of such descriptive criteria is to specify conditions under which the clinician can reasonably judge that the symptoms are caused by an internal dysfunction without specifying the actual nature of the dysfunction.

An example of a criterion that does a good job of distinguishing dysfunction from nondysfunction in a manner analogous to the blindness example is the *DSM–III–R* criterion for inhibited female orgasm (p. 294). Indeed, the line of reasoning illustrated in the blindness thought experiment is probably quite analogous to the sort of reasoning that led from Masters and Johnson's (1970; Masters et al., 1982) earlier criterion for orgasmic dysfunction to *DSM–III–R*'s criterion. Masters and Johnson (1970, p. 227; Masters et al., 1982, p. 374) defined orgasmic dysfunction as simply a lack of orgasms; a woman is orgasmically dysfunctional if she does not have orgasms, whatever the reason (analogously to "does not see"). This criterion fits *DSM–III–R*'s definition of disorder, because "does not have orgasms" is an unexpectable and a negative condition, and the criterion is certainly operational and reliable. The problem occurs in the area of validity. Because the criterion does not take into account the causes of the lack of orgasm, it lumps together lack of orgasms resulting from a true disorder of orgasmic functioning with, for example, lack of orgasms resulting from religiously inspired abstinence from all sexual activity (Masters & Johnson, 1970, p. 232) and lack of orgasms resulting from having sex only with a prematurely ejaculating partner (p. 239). Thus, Masters and Johnson invalidly classified a woman as orgasmically disordered even if she has never experienced either coital or masturbatory sexual stimulation of the kind that would normally trigger an orgasmic reflex (Wakefield, 1987b, 1988a, 1989b).

Despite lack of guidance from the definition of disorder, *DSM–III–R*'s criterion for inhibited female orgasm manages to rectify Masters and Johnson's (1970) error. It does so by adding a series of requirements that, if met, come close to demonstrating that there is indeed a dysfunction behind the lack of orgasms. The requirements summarize the circumstances under which the orgasmic response is designed to occur. To be diagnosed with inhibited female orgasm, *DSM–III–R* requires that a woman fail to have orgasms "following a normal sexual excitement phase during sexual activity that the clinician judges to be adequate in focus, intensity, and duration" (*DSM–III–R*, p. 294). Thus, *DSM–III–R*, unlike Masters and Johnson, manages to distinguish those women who have an orgasmic dysfunction from those who do not have orgasms for reasons of circumstance or preference. *DSM–III–R* accomplishes this by specifying the external conditions under which a woman would experience an orgasm if the functioning of her internal orgasmic mechanisms is normal, analogous to the criterion for blindness that specifies the external conditions under which a visually normal person would see. However, as noted, such a criterion cannot be complete because so many different circumstances can prevent the expression of a normal orgasmic capacity. *DSM–III–R*'s qualification that "the clinician judges" that appropriate circumstances have been experienced is a way of covering these endless possibilities. Note that Wakefield (1987b), commenting on *DSM–III*, recommended deletion of the "clinician's judgment" feature of the criteria because there was no similar reliance on the clinician's judgment in comparable male criteria, which suggested sex bias. However, an appreciation of the deeper logic of the situation suggests that such reliance on clinical judgment is an essential implicit feature of all.

These examples show that the problems with *DSM–III–R*'s definition of disorder do not lead to invalidities in all the manual's diagnostic criteria. They also suggest strategies for improving the validity of some categories.

Implications for Empirical Research

The conceptual critique of *DSM–III–R*'s definition of mental disorder has several implications for empirical research. These implications all arise out of the central point that *DSM–III–R*'s diagnostic criteria, because of their operationalized nature, do not validly distinguish dysfunctions or disorders from nondisorders.

One implication is that current diagnostic categories are likely to result in highly heterogeneous research samples. It is often stated that reliable criteria are important precisely because they ensure homogeneous research samples. Indeed, *DSM–III–R*'s operational criteria do increase homogeneity in the superficial symptom picture. However, the difference between disorder and nondisorder is in part a difference in the kinds and locations of the causes responsible for manifest symptoms. By decreasing validity and encompassing some conditions in which the symptoms are not due to dysfunctions, *DSM–III–R*'s criteria decrease homogeneity in the causal mechanisms underlying the symptoms.

This sort of heterogeneity is problematic both for research into causal mechanisms and for therapy outcome studies. In studies aimed at modeling causation, heterogeneity of a sample with respect to causes enormously complicates the task of modeling. To return to the Masters and Johnson (1970) example discussed earlier, imagine trying to theoretically model the

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cause of orgasmic dysfunction, defined simply as lack of orgasms, when the research sample includes women who have avoided sexual stimulation for religious reasons but who are otherwise normal, women who have dysfunctional partners but who are otherwise normal, and women who have real dysfunctions of the orgasmic response and who cannot reach orgasm despite intense and persistent stimulation. The latter group of women is much more homogeneous. Similar problems arise for *DSM-III-R* categories defined in a logically analogous manner.

With respect to outcome studies, if a criterion for sample inclusion fails validly to discriminate disorders from nondisorders, the sample will be heterogeneous in ways that are likely to affect response to treatment. Moreover, the generalizability of outcome results to populations of truly disordered individuals is placed in question by the fact that some of the people who are "cured" by treatment were never really disordered in the first place. Because appropriate data are not available for *DSM-III-R* categories, the Masters and Johnson (1970) example is again used to illustrate the point. After Masters and Johnson operationally defined primary orgasmic dysfunction as a total lack of orgasms irrespective of the cause, a large outcome research literature grew up around this diagnosis. That literature seemed to establish that simple masturbation therapy could reverse this disorder in well over 90% of patients (Barbach, 1974; Ersner-Hershfield & Kopel, 1979; LoPiccolo & Lobitz, 1972; Payn & Wakefield, 1982; Wallace & Barbach, 1974), qualifying this condition as perhaps the most successfully treated mental disorder. These results were then cited in literature reviews to support the efficacy of brief sex therapy in the treatment of sexual disorders (e.g., Andersen, 1983; Zilbergeld & Kilmann, 1984), contrary to the common view that such treatment could not effectively deal with the complexity of disordered functioning. However, an analysis of the criteria used for sample inclusion and for outcome assessment in that literature (Wakefield, 1987a, 1988a) suggests that for the great majority of women who were "cured" there was no evidence that they had ever had an orgasmic dysfunction affecting their masturbatory activity in the first place. In effect, the researchers took women who had never masturbated and who did not have coital orgasms, and who therefore fit the operationalized description "never had an orgasm," and got them to masturbate for the first time, classifying their resulting masturbatory orgasm as a cure of what was supposed to be their total coital and masturbatory orgasmic dysfunction (Wakefield, 1987a, 1988a). Such cure rates say nothing about the power of therapy to help people who are truly disordered with an inhibition of orgasmic functioning. The inadequacy of the operationalized diagnostic criterion thus resulted in the relative uselessness of a large research literature from the perspective of the cure of psychopathology and in misleading suggestions of the curative power of brief sex therapy. Similar problems could exist for outcome studies that use invalid *DSM-III-R* criteria for sample selection and, therefore, are likely to include nondisordered subjects.

The analysis also has ethical implications for researchers. If diagnostic criteria do not adequately distinguish environmentally stressed people from disordered people, researchers must review their sample selection and treatment protocols to be sure that therapies with potential negative side effects are not given to those whose problems really lie in the environment. Drug trials for childhood disorders such as conduct disorder and separation anxiety disorder are prime candidates for such ethical reviews.

This analysis implies that research should be able to identify dramatically different subsamples among those currently classified as having a specific disorder. These subsamples should correspond to subgroups that do and do not have an internal mechanism dysfunction. The nondisordered subsample should appear to be much easier to "treat" and should show more spontaneous "recovery" on average, and the symptoms should be demonstrably related to causes other than internal mechanism failures, such as environmental stresses. In the case of conduct disorder, there is some evidence for the existence of such subsamples. Stewart and Kelso (1987) stated that their "data suggest that there are 2 types of ACD [i.e., aggressive conduct disorder]; one short-lived and benign, the other more likely to persist and more serious" (p. 296). About 45% of the sample fell into the "benign" group (p. 296). Although not demonstrated by Stewart and Kelso's work, it is possible that the distinction between the two kinds of ACD is in fact the distinction between those who truly have conduct disorders and those who are responding to difficult environmental pressures. Studies examining the possibility that such subsamples exist for other diagnostic categories would help to clarify the extent of actual overdiagnosis that results from the conceptual problems identified earlier.

A last implication is that theory-guided psychological research into normal mental mechanisms is critical to an understanding of pathology. No matter how useful a descriptive atheoretical manual may be for now, the distinction between disorder and nondisorder and the individuation of disorders ultimately depend on empirically confirmed theoretical inferences about the normal workings of inner mechanisms.

Implications for Future Conceptual Work

Using the same method of conceptual analysis as Spitzer, I have shown that *DSM-III-R*'s definition of disorder does not account for a large number of relatively uncontroversial judgments about disorder and nondisorder. In each case in which *DSM-III-R*'s definition makes an apparent classification error, the error was shown to result from the definition's failure to match the dysfunction requirement.

These considerations suggest the need for increased attention in the mental health literature to the nature of functional concepts, especially natural function. An analysis of this concept and a discussion of the implications of the analysis for defining mental disorder are provided in another article (Wakefield, 1992). Such an analysis can build on a voluminous philosophical literature attempting to explicate the meaning of natural function (e.g., Boorse, 1976b; Cummins, 1975; Elster, 1983; Hempel, 1965; Nagel, 1979; Woodfield, 1976; Wright, 1973, 1976). Questions debated in this literature include whether "function" is a value or factual concept, the relation of natural functions to evolutionary theory, and the nature of "teleological" explanations in which functions are cited as the "purpose"

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of a mechanism. If *DSM-III-R*'s dysfunction requirement is correct—and this critique suggests that it is—the answers to such conceptual questions about function are directly relevant to the nature and appropriate limits of psychodiagnosis.

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