Does psychiatry need an overarching concept of "mental disorder"?

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Since 1992 (1), Jerome Wakefield has been expounding, with minor modifications, a persuasive and influential point of view on the concept of mental disorder as "harmful dysfunction" (HD), which postulates a conjunction of a value term (harm) and a factual scientific term (dysfunction). This "hybrid" definition resolves the previously irrevocable polarity between the "social-constructivist" position (mental disorder is a value-laden social construct with no counterpart in biomedical reality) and the "objectivist" position (mental disorders are natural entities that could be understood in biological terms). In the HD concept, the relativism of the social definition of "harm" is counterbalanced by a factual component of a malfunctioning internal mechanism causing objective dysfunction. Wakefield believes that the HD concept will provide psychiatry with an "ultimate standard" of what constitutes mental disorder and that this is essential to the credibility and coherence of psychiatry as a medical discipline. A notable merit of the application of the HD concept so far has been in the demonstration of the fallacies of the social-constructivist view and in the incisive critique of the "atheoretical" platform of DSM-III and its subsequent editions, as well as of the arbitrariness and over-inclusiveness of some of its categories.

Notwithstanding all this, Wakefield's conceptualization of mental disorder has attracted critique (2,3) of some of its basic assumptions and supporting evidence. While acknowledging that the HD concept can have an energizing impact on the much needed debate about the theoretical foundations of psychiatry, I wish to join the camp of critics and to argue that: a) the HD definition and the conceptual analysis on which it rests contains logical inconsistencies, cannot be generalized to the entire domain of psychiatric nosology, and postulates an untenable *a priori* boundary between disorder and non-disorder; b) the assumption of the HD concept that dysfunction is anchored in a "failure of the mind to work as designed" by the evolution of the species does not accord well with current knowledge in evolutionary genetics and neuroscience; and c) the HD concept is of limited practical utility, especially as regards day-to-day clinical decision making.

Conceptual analysis is basically about how we use language, i.e. explicating what we mean by "mental disorder". In the search for an overarching definition, Wakefield assumes that in every society there are widely shared intuitions about mental disorder which provide a base for consensual judgements on the subject that could be somehow reconciled with scientific evidence of dysfunction. Most cultures certainly have prototypes, beliefs and practices related to mental disorder but, apart from converging on its stigmatizing aspects, such folk taxonomies in diverse societies are unlikely to provide "an underlying shared notion of disorder" that could be part of a rational and universal definition of mental disorder. Even more importantly, folk prototypes typically deal in dichotomies and opposites, e.g, disease versus health and disorder versus non-disorder – a model that can hardly be squared with the biomedical science component of the bipartite HD definition. Both general medicine and psychiatry are increasingly concerned with multiple biological continua and dimensions rather than with either-or categories. Although some extreme values along such continua and dimensions can be represented as categories, there is a huge grey zone of graded transitions between the biological phenomena which simply cannot be fitted into a single dichotomy. Thus, the concept of unitary "mental disorder" in general is a construct which is unlikely to find a "natural kind" counterpart in objective reality.

As regards Wakefield's elucidation of "dysfunction" as the factual component of "disorder", I am puzzled as to why the long shot to evolutionary theory and natural selection is considered necessary or even central to an understanding of psychopathology. Evolutionary psychology and psychopathology are still sciences under construction that can hardly provide a factual basis for teasing out the neural mechanisms and cognitive processes underlying the symptoms and signs of specific mental disorders. The definition of dysfunction as a failure of an organ or mechanism to perform the "natural function" for which it had been "designed" by natural selection implies the existence of purpose-driven evolutionary processes resulting in pre-ordained, fixed structures and functions, presumably located within the human brain. This view ignores the fact that natural selection is an opportunistic process, not guided by purpose or design, and that its general outcome is an increasing inter-individual variability. If anything, this variability will result in wider ranges for the parameters defining specific brain functions and dysfunctions; in different thresholds at which individuals develop mental and behavioural disorders; and in inherently fuzzy boundaries between disorder and non-disorder (2). Lastly, the assumption that neural systems within the human brain perform fixed cognitive or emotional functions pre-ordained by natural selection ignores two widely accepted pieces of evidence from evolutionary biology and neuroscience: first, that some highly specialized human cognitive functions (e.g., reading or writing) evolve by piggy-backing on earlier, more primitive adaptive mechanisms, and are therefore neutral vis-à-vis reproductive fitness; and secondly, that the individual brain is a neural plasticity machine, in the sense that it constructs its own internal cognitive architecture in post-natal development, in an activity-dependent manner, interacting with its environment. Thus, the thresholds of vulnerability to dysfunction of any causes vary individually to an extent that would

make the discernment of a breakdown in a "natural function" implausible.

My last point is: does psychiatry really need an overarching and universal definition of "mental disorder"? Neither disease nor health has ever been strictly and unambiguously defined in terms of finite sets of observable referential phenomena. Medical textbooks rarely devote even passing reference to the subject, and it seems perfectly possible for a medical professional to practice medicine and treat illnesses without using an overarching concept of disease (4). To quote Jaspers (5), "the medical person is least concerned with what healthy and sick mean in general… we do not need the concept of 'illness in general' at all and we now know that no such general and uniform concept exists". Furthermore, "doctors do not concern themselves with maximizing the evolutionary advantages of the human race as a whole, but with aiding individuals" (6).

The matter is further complicated by the emergence of molecular genetic classifications of large groups of diseases, and the concomitant availability of genetic diagnostic tests, which raise the possibility that the entire taxonomy of human disease may eventually be revised. Predictive diagnostic testing in clinically asymptomatic individuals will probably become possible in Alzheimer's disease, certain cancers and, hypothetically, for some of the major psychiatric disorders in the long run. Besides the ethical questions and the psychosocial repercussions of predictive testing, a problem to be faced is that for large segments of society (including health professionals) the concept of disease may become synonymous with the carrier state for a particular set of genes, without any reference to actual HD, blurring even further the demarcation between disease and non-disease. Attempts at defining an all-embracing, abstract definition of "mental disorder" have limited clinical utility (7) and will do poorly in this context.

Generally, the trend of the past decades has been one towards a multidimensional or polythetic conceptualization of the phenomena of disease, with several, relatively independent dimensions: a) clinical syndrome(s); b) structural and/or functional deviations from the statistical average; c) aetiology and pathogenetic mechanisms; and d) personal distress, quality of life and social functioning. At present, the majority of putative nosological entities in psychiatry are at best conceived as *open concepts*, as proposed by Meehl (8), i.e., subject to ongoing modification as new knowledge accrues. Closure will only be attained when fundamental issues of aetiology and pathogenesis are ultimately resolved – which is a long-term agenda. For the time being, the rather "weak" ICD-10 descriptive statement that presence of a mental disorder presupposes "a *clinically recognizable set of symptoms* or behaviours associated *in most cases* with distress and with interference with personal function" will probably do better than attempts at a hard-and-fast definition.

In conclusion, adoption of a generic, presumably universal, definition of "mental disorder" would be premature. It may cause more harm than good to psychiatry.

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