Time for new thinking on psychiatric diagnoses

How should psychiatric illness be categorised? The new edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) has already attracted strong criticism prior to its publication. An alternative approach to the categorisation of psychiatric disorders sheds light on important fundamental problems in psychiatry.

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It has been noteworthy that the American psychiatrist Allen Frances, who led the work on DSM-IV, has been sharply critical of DSM-5 (1). He is concerned about a narrowing of the concept of normality, false epidemics driven by the psychopharmaceutical industry, the American Psychiatric Association's dependence on revenues from DSM-5 and the widespread consequences of the revision for individual patients – in that the spotlight will be diverted away from the seriously ill, with regard to both treatment and economics (2).

Descriptive categories

DSM-III was published in 1980 (3) and represented a turning point in the history and classification of psychiatric diagnoses (4, 5). DSM-I and DSM-II were more psychodynamically oriented, and psychiatric conditions were described as degrees of adjustment disorders. DSM-III and the revised version DSM-III-R introduced distinct categories of disorders described using operational criteria, and a so-called theory-neutral description was aimed for, with the main emphasis on empirical validation to corroborate the categories (3, 6). Interrater reliability was important, i.e. the degree to which two different observers make the same diagnosis with a given set of patient symptoms.

The diagnoses, as they were described in DSM-III, had well established roots in western medical history, but there were more obvious links to the psychiatrists Emil Kraepelin (1856–1926) and Kurt Schneider (1887–1967) than to Sigmund Freud (1856–1939) (5, 7, 8). The definition of mental illness was thereby altered from what one *did* or perhaps *was*, as a link in a development, to something one *had*. Kraepelin's main categories of dementia praecox and manic-depressive disorder formed the basis for new categories of disorders. However, something that was an important point for Kraepelin was less obvious – namely the need to comprehend symptoms as manifestations of underlying neuropsychological causes and as an interplay between neuropsychological and psychological mechanisms (7, 8).

A stone is a stone because it is a stone

The DSM and ICD manuals have both been useful in that they established a common language for research and clinical practice. It was explicitly stated in DSM III that as a starting point there was no underlying assumption that the categories were validated entities (3). Nevertheless it was presumed that a gradual empirical validation of the chosen categories of disorders would eventually come about as research advanced.

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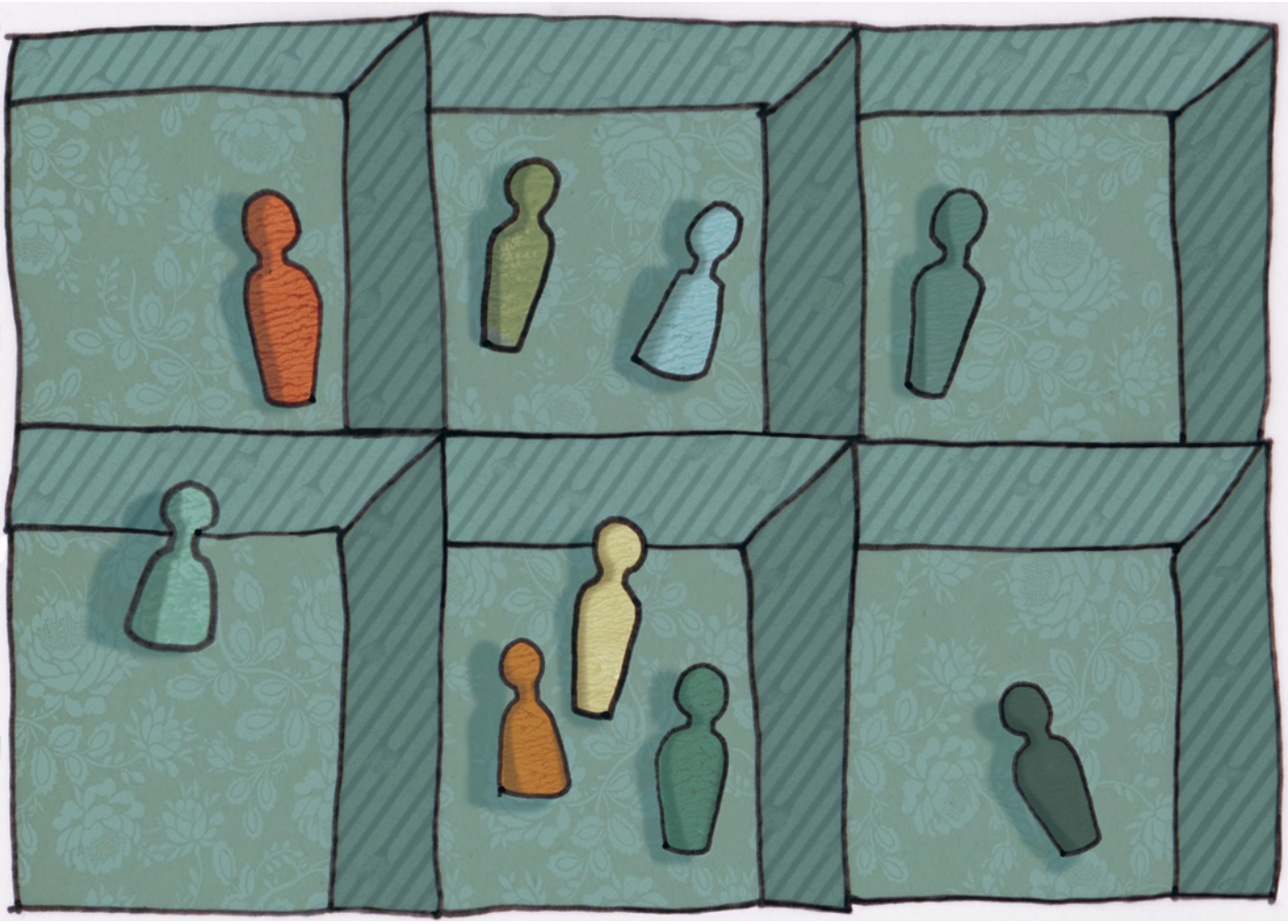
For the most part this has been unsuccessful (9–13). Nevertheless, the categories in the diagnostic manuals have increasingly been used as though they actually represent conditions for which the cause is known. This is perhaps not so strange – «The tendency has always been strong to believe that whatever received a name must be an entity or being, having an independent existence of its own,» said the English philosopher John Stuart Mill (1806–73).

The American psychiatrist Steven Hyman describes this as «the problem of reification» (9). That is to say that the diagnoses are increasingly treated as if they were concrete, natural entities, even though they have essentially been purely constructs. The *validity* of the diagnoses has all along been problematic, that is, how far what is described actually represents something real and «true», something that is grounded in science (14). This problem has gradually become more intrusive as, based on voting, more and more diagnoses have been included.

The last few years have provided us with more knowledge of genetics, neurophysiology, neuropsychological mechanisms and language development. There is an escalating sense of frustration that there is little manifestation of this knowledge in new knowledge of aetiology, the course and the treatment of disorders, and Hyman and others (9–13) believe that the existing diagnostic criteria prevent a more comprehensive understanding. To put it another way, psychiatric research takes as its starting point categories of disorder that are based on clinical manifestations of symptoms and signs. This means that one-to-one explanations are sought, even though it is increasingly obvious that these do not exist (11). There is a danger of using circular reasoning: A stone is a stone because it is a stone.

The weaknesses of this type of research are shown by the fact of losing one's way in descriptions of comprehensive comorbidity, of having problems in delimiting one condition in relation to another and of defining the characteristics of particular diagnoses (9, 11). For example, if one wishes to examine possible causes of obsessive-compulsive disorder and to take as a basis a group of patients with this diagnosis, common causal factors will only reflect that the patients belong to the same diagnosis-related group. Findings which deviate may be ascribed to comorbidity – if you have an obsessive-compulsive disorder, there is a 70 % risk that during the course of your life you will also satisfy the criteria for severe depression; for bipolar disorder it is 10 %. In addition you will have an increased risk for post-traumatic stress disorder and other anxiety disorders (15). If instead it were



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possible to identify common factors, for example emotional response to loss of control, this would provide a more open approach across existing categories.

Paradigm shift?

Based on this recognition, a completely new approach to the conceptualisation of mental disorders has been developed in the USA in the past few years, called The Research Domain Criteria (RDoC), which has received much less attention than the launch of DSM-5. The RDoC matrix was developed by The National Institute of Mental Health (NIMH) and represents a radical break with existing research categories in psychiatry. To the extent that something may be called the start of a paradigm shift, this must be it.

The main intention behind RDoC is to develop new, valid categories that safeguard factual knowledge of different dimensions in mental disorders: symptoms and behaviour, the neurobiological mechanisms that activate them and the genetic and epigenetic factors behind them. The ambitions are great, but the work is very much in the initial phase and has more of the characteristics of a think tank than of a system. Working groups from many disciplines have been appointed, and the necessity for a transparent and open process is emphasised (10–12).

In RDoC's strategy document from June 2011, three main principles are described (16). Firstly the emphasis is on dimensions, not categories. The dimensions represent a different level of biological activity or self-reported symptoms, for example. Secondly, no relation is made with existing diagnoses – the starting point must be associations between neurobiology and behaviour, which can then be linked to clinical phenomena. Thirdly, attempts are made to define several different «constructs», for example fear, loss, perception and cognition. These can be elucidated through different types of analytical approach, for example that of genetics, physiology, behaviour or self-reporting.

It is a stated objective that researchers may use independent measures from different fields of analysis. The constructs that are chosen are not fixed. They are useful ideas that in the best case can be the basis for a continuous process towards more valid constructs.

Many diagnoses, common basis

This thinking may be illustrated by the fact that for more than one hundred years a clear distinction has existed between schizophrenia and bipolar disorder, supported by research that has shown that both the course of these disorders and the response to drugs are different. However, recent genetic studies demonstrate a high degree of genetic overlap between these conditions (17, 18).

In a large international study published in *The Lancet* in February 2013, it was found that diagnostic groups such as schizophrenia, bipolar disorder, autism, depression and ADHD may have common genetic risk factors (19). In another study, linguistic disturbances in patients with schizophrenia spec-

trum disorders and various mood disorders were investigated (20). Here it was found that stable linguistic disorders were more strongly associated with the degree of severity of psychosis, level of social functioning and symptoms of withdrawal than in the diagnostic group.

Long road ahead

RDoC is intended to be the start of a new strategic framework for research and should not replace existing diagnostic manuals. It will nevertheless be interesting to see the degree to which the principles elucidated will influence the processes of the DSM and ICD systems – DSM 5, with the obvious weaknesses indicated by Allen Frances among others, and ICD-11, which will replace ICD-10 in a few years' time. In addition to being important clinical tools, existing diagnostic categories are firmly embedded in the pharmaceutical industry, the research industry and in the financing schemes for the health services. It is unrealistic to assume that a ship with this heavy a cargo will change course immediately.

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In the work on the RDoC up to now, more emphasis has been placed on basic research than on clinical research. This has resulted in a degree of concern that financing of clinical projects is being given low priority (21). Findings from clinical, epidemiological and psychological research will nevertheless be of great importance when it comes to designing valid «constructs» within the suggested model, and may give a new boost to relevant clinical research questions. In Norway we have a good basis for examining the principles behind the RDoC more closely in planning psychiatric research. We have good communities within basic, clinical and epidemiological research,, we have health registries that can be used to shed light on genetics, biological and environmental factors, and we have public financing schemes that ought to make us more independent of existing diagnostic systems than, for example, the USA.

The immediate clinical usefulness of the strategy is less easy to discern. It is nevertheless to be hoped that research that integrates genetics, neurobiology and psychology will eventually lead to a more valid classification, which may have great importance for both clinical evaluation and treatment.

Irrespective of the direction to be taken by the initiative around the RDoC, it is interesting and heartening that a project is being initiated that tackles important fundamental problems in psychiatry. Perhaps «schizophrenia» will still be «schizophrenia» 50 years from now, but hopefully we can avoid seeing a normal grief reaction or children's tantrums being defined as pathological (DSM-5). To quote Steven Hyman (9): «Epidemiology, genetics, psychology and neuroscience has not been kind to the DSM-IV categories, nor have these categories been kind to science. The DSM-III-R was a brilliant advance that prioritized interrater reliability, now it is time to move on.»

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