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### **Developing alternatives to the DSM: The challenge of overcoming ‘lock-in’**

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Abstract: The Diagnostic and Statistical Manual of Mental Disorders is a classification that is currently much used, but not much loved. There have been many attempts to develop alternatives to the DSM, but it has proved very difficult for alternative classifications to achieve uptake. In this chapter I argue that the DSM is now difficult to replace because the classification has become ‘locked-in’. In the same sort of way that it has proved hard for typists to move on from QWERTY keyboards, though this layout is likely suboptimal, it has become hard for mental health systems to move on from the DSM. I finish with some suggestions as to how lock-in might be overcome, focussing particularly on the challenges faced by those who aim to produce an alternative classification that might be employed for clinical and administrative purposes.

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## **Developing alternatives to the DSM: The challenge of overcoming ‘lock-in’**

### 1. Introduction

The *Diagnostic and Statistical Manual of Mental Disorders* currently provides a common language for mental health research, policy and care. However, surveys of mental health professionals regularly find that although the classification is widely used, it is not much loved. Many non-psychiatrists would prefer some alternative classification to be developed. In a recent survey of psychologists, Raskin, Maynard & Gayle (2022) found that 90% use the DSM-5, mainly due to the requirements of insurance reimbursement, but that many would prefer some alternative. Similar results have been found for decades. Psychologists have been unenthusiastic users of the DSM ever since the days of DSM-II (APA, 1968; Miller, Bergstrom, Cross, & Grube, 1981; Raskin & Gayle, 2016; Gayle & Raskin, 2017). Social Workers similarly often use the DSM, while longing for an alternative (Kutchins and Kirk 1988; Frazer, Westhuis, Daley and Phillips, 2009; Hitchens and Becker, 2014).

The fact that many mental health professionals report using the DSM but are unhappy with its basic assumptions raises questions: Why has it proved difficult to develop an alternative to the DSM? And, how might one go about developing an alternative classification that could be employed for clinical and administrative purposes? For the most part this Chapter is pessimistic. I start with a reminder of the long history of failed attempts to overhaul the DSM. I argue that it is now extremely difficult to change practices of mental health classification because the DSM has become ‘locked-in’. In the same sort of way that it has proved hard for typists to move on from QWERTY keyboards, though this layout is likely suboptimal, it has become hard for mental health systems to move on from the DSM. On a more optimistic note, I finish by considering how it is that the locked-in status of the DSM might potentially one day be overcome.

### 2. Attempts to overhaul the DSM have a long history

Although currently widely used, the DSM has become important relatively recently (Cooper 2005, Decker 2013, Shorter 2013). The earliest edition of the DSM, published in 1952 was slim, cheap, and little read. The DSM only came to be widely used in the United States in the 1970s, and came to global prominence only following publication of DSM-III in 1980.

Almost as soon as the DSM system came to dominance, psychologists started to attempt to develop an alternative. In 1977, the American Psychological Association set up a “Task Force on Descriptive Behavioural Classification”, charged with developing an alternative to the DSM (Board of Directors Minutes, June 24-25, 1977). The Task Force was created because the American Psychological Association was becoming concerned that the American Psychiatric Association controlled the DSM and that DSM diagnoses were coming to be required by insurance companies. Voicing concerns that continue to resonate today, the Task Force worried that the DSM was ‘a disease-based model inappropriately used to describe problems of living’ (Task Force on Descriptive Behavioural Classification, 1977, p. 1). Proposals were put forward to create a new, better, alternative to the DSM, but after just a year, the Task Force was disbanded. The Board of Directors of the American Psychological Association decided that the plans of the Task Force were unrealistic in scope and that the likelihood of outside funding was slight (Board of Directors Minutes, December 1-2, 1978, p. 11).

More recently, the American Psychiatric Association itself has become unhappy with the DSM classification – but it has also found it difficult to bring about radical changes. The most recent edition of the DSM, the DSM-5-TR (2022), is only a ‘Text Revision’, i.e. only the surrounding text, and not the sets of diagnostic criteria themselves, were revised in this edition.<sup>1</sup> It is thus no surprise that the DSM-5-TR and DSM-5 are highly similar. The similarities between the DSM-5 (2013) and its predecessor, the DSM-IV (1993), are more noteworthy. The American Psychiatric Association initially planned for these two editions to be very different, but ultimately failed to bring about major change.

The revision process that led up to the DSM-5 began in 1999 with an initial conference, later published as *A Research Agenda for DSM-V* (the Latin numerals only changed later) (Kupfer et al., 2002). *A Research Agenda* began by detailing problems with the DSM series. Chapters noted that high co-morbidity rates, and the slow progress of research projects which sought the biological mechanisms underpinning disorders, suggested that DSM categories likely lacked validity. The *Research Agenda* envisioned that a “paradigm shift” would be required

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<sup>1</sup> Although a few sets of diagnostic criteria were revised to correct errors, and a new diagnosis ‘Prolonged Grief Disorder’ was added.

(Kupfer et al, 2002, p.xix) and suggested that the DSM-5 should move towards more biologically-based and more dimensional approaches to classifying psychopathology.

The American Psychiatric Association invested huge amounts of work and money into producing the DSM-5. The total process involved thousands of experts, took over twelve years and cost \$25 million (Frances, 2013, p.175). In the end, however, and despite huge efforts at revision, the published DSM-5 differed very little from its predecessor. Although the committees revising the DSM started out with ambitions for radical changes, over time, one-by-one, the more radical suggestions for overhaul were dropped. In his final evaluation, David Kupfer, who chaired the Task Force to revise the DSM-5, described it as “an aggressive, conservative document”; in his view the committees were aggressive in their pursuit of revision, but conservative in their decisions in the end (Levine, 2013).

In its finally published form the DSM-5 differs from its predecessor much less than originally envisaged; a few disorders have been added, a few disorders have been removed, diagnostic criteria have been tweaked here and there. The failure to radically revise the DSM demonstrates that the American Psychiatric Association now struggles to revise its own classification. In the next section I examine why it is that the DSM has proved so difficult to change.

### 3. Why is the DSM now so hard to change? Lock-in and classification

In *Sorting Things Out* (2000), Geoffrey Bowker and Susan Star argue that classifications can be thought of as part of the information infrastructure of science, and have features in common with material infrastructure, like electricity supply networks. They suggest that as with material technologies, it is possible for “path dependent” development to cause a sub-optimal classification to become “locked-in” and hard to replace (Bowker and Star, 2000, p.14).

The QWERTY keyboard layout offers the classic example of path dependence leading to a suboptimal technology becoming locked-in (David, 1985). In the days of mechanical typewriters, the QWERTY layout was designed to reduce the chances of keys jamming together; the design minimises the frequency with which physically adjacent keys are used one after the other. Modern keyboards no longer jam, and so it may well be the case that a

different layout would now be preferable. However, the costs of shifting from one layout to another are too great for QWERTY to now be displaced. Everyone finds it easier to type on keyboards that have a familiar layout, and so everyone buys QWERTY keyboards. Despite being sub-optimal, the QWERTY design has become locked-in.

As the QWERTY case illustrates, certain technologies are path dependent, and can become locked-in to suboptimal design. The phenomenon arises as follows: At an initial time a particular technology comes to be adopted either because it has some temporary advantage over competitors, or through chance factors. The technology is such that success breeds success, such that, at some later point, the adopted technology becomes very hard to dislodge. Path dependence, potentially leading to lock-in, can occur whenever a technology is such that positive feedback mechanisms ensure that its greater use brings ever greater returns. The QWERTY keyboard layout manifests path dependence because the more used typists become to working with a particular layout the harder and harder it becomes to change. I suggest that, like the QWERTY keyboard, the DSM has become locked-in. With each successive edition, the DSM has become more and more widely adopted, and it is now very difficult to develop a serious competitor.

In the late 1970s, when work started on DSM-III, few people were interested in classification in mental health (Decker, 2013). The lack of general interest enabled a small group of like-minded researchers to gain control of the revisionary process. These researchers, dubbed the “neo-Kraepelians” by Blashfield (1984), shared a particular outlook. They believed that diagnosis and classification mattered, that diagnostic criteria should be operationalised to achieve reliability, and that mental disorders would prove to be biologically-based medical disorders. The neo-Kraepelinians were left free to develop the DSM-III as they thought best.

Subsequent to publication, the success of the DSM-III took most by surprise (Decker, 2013). Crucially, the classification launched at a time when it was becoming the norm for mental health services to be paid for by insurance, and for insurers to demand a diagnosis. While insurance for mental health care was rare in the US when the DSM-I was published in 1952, coverage gradually increased throughout the sixties and seventies, and had become widespread by 1980 (Cooper, 2005, pp.127-132). The DSM contains the codes used to fill in insurance forms. These codes are drawn from the version of the ICD (the classification of disorders published by the WHO) that is used in the US. Although these codes can be

obtained without buying the DSM, the DSM contains them in a user-friendly format, and most mental health professionals in the US access the codes via the DSM. This is the main reason that mental health professionals of all types (not just psychiatrists, but also psychologists, social workers, and counsellors) buy and use the DSM (Miller et al., 1981, Kutchins and Kirk 1988, Frazer et al. 2002).

During the same period, the testing, regulation, and marketing of psychoactive drugs came to see them as directed at specific disorders, as opposed to symptoms (Cooper, 2005, pp.112-118; Shorter, 2013, p.13). Researchers came to use DSM-III diagnostic criteria to pick out subject populations for research; the FDA demanded the use of DSM categories in drug trials; advertising started to employ the idea that psychoactive drugs treat specific conditions. Such activities helped legitimise the notion that the descriptions included in the DSM-III were scientifically respectable and referred to real disorders. The net result was that the DSM-III classification came to be much more widely used and more respected than its predecessors. The successes of the DSM-III though have had a downside. The classification has become locked-in and is now very difficult to revise.

DSM categories are now employed in most mental health research. This means that when it comes to revising the classification there is a substantial body of work available that can inform considerations as to whether particular DSM categories should be revised. The available research is directed at DSM categories, and thus evidence becomes available to guide tweaking DSM-categories. Studies may well show that an extra symptom should be added to the diagnostic criteria for a particular disorder, that a diagnosis could usefully be split into subtypes, or that two diagnoses should be merged together. However, finding research that might inform shifting to a radically different type of classification system is more difficult. Almost everyone uses the DSM, and so the research base for alternatives tends to be weak.

In addition, as the DSM has become ever more important, it has become tied to networks of other classifications and bureaucratic structures. The complex links between the DSM and systems for insurance reimbursement are especially noteworthy. It is important for American Psychiatric Association revenues that the codes included in the DSM be acceptable to insurance providers because the main reason that clinicians buy the DSM is for the codes. However, making the DSM insurance-friendly is a complex undertaking. The US is bound by international treaty to use a version of the ICD, the classification produced by the World

Health Organisation, for official medical coding. The US Health Insurance Portability and Accountability Act (1996) also requires the use of ICD codes. As such, the DSM needs to maintain compatibility with the ICD so that it contains codes that are acceptable to insurance companies.

In order to maintain compatibility with the ICD, when changing the DSM, the American Psychiatric Association consults with the WHO. The users and purposes of the ICD differ from those of the DSM (Reed, 2010). As such, there is no guarantee that changes that would promote the interests of the American Psychiatric Association will also satisfy the needs of the WHO. Although used around the world, the DSM is primarily directed at clinicians and researchers working in the US. In contrast, the ICD is specifically designed for international use. The ICD comes in various versions. While the most complex is intended for use by researchers, two simplifications of this are produced, one for specialist clinicians, and one for use in primary care settings. Crucially all three versions of the ICD are intended to be compatible, and the WHO is committed to ensuring that the primary care version is suitable for use by non-specialist clinicians working in developing countries. This commitment constrains the possibilities for revising the ICD.

The need to maintain compatibility with the ICD, and to maintain acceptability by the insurance industry, creates complex constraints on the ways in which the DSM can be revised. Furthermore, the ICD-insurance-industry network is not the only network in which the DSM is embedded. In the US, DSM categories have been adopted by numerous government organisations. The DSM affects everything from the ways in which school children with special needs receive services to the laws governing the detention of sex offenders. Any revision can thus have huge ramifications. The difficulties involved in foreseeing possible consequences and negotiating with various stakeholders make it very difficult for substantial revisions to be made.

We can see that rather than lock-in being merely a contingent, and unfortunate, side-effect of success, lock-in will always be a risk when a classification comes to be widely used. As the classification came to be used by more and more communities, it became embedded in more and more systems, and became harder and harder to revise. As users became ever more familiar with the DSM system conceiving of shifting to anything radically different became more and more difficult.

#### 4. How might lock-in be overcome

The DSM is currently locked-in but this may change in the future. Lock-in is a time specific and agent-relative phenomenon. Changes that the American Psychiatric Association was unable to make to the DSM-5 may turn out to be possible for some later edition of the DSM, or for some other new classification of mental disorders, possibly produced by another organisation.

How can lock-in be overcome? In the literature on the lock-in of technologies a number of methods are commonly suggested: First, a central authority, for example, a government, may dictate a switch to a new system (Cowan and Hultén, 1996). This method of overcoming lock-in is best illustrated by those cases where a country switches from driving on one side of the road to the other. No individual driver could decide to make the switch, but the government has the power to make sure that everyone adopts the new standards. Second, it may be possible to overcome lock-in via creating a niche market (Cowan and Hultén, 1996); if some smallish number of users of a technology are sufficiently isolated then it may be possible to convert them to a new system even if most continue in the old ways. Edison's first electric lighting system, for example, was installed on a steamship – a niche isolated from the then dominant systems of urban gas lighting (Utterback, 1994). Third, on occasion, lock-in has been overcome because users so dislike the idea of being locked-in that they employ heroic measures to shift to a new technology. Thus, the German municipality of Munich recently moved from Windows to Linux, in large part for political reasons (Dobusch, 2008). Fourth, some crisis may render continuing with the status quo untenable. Cowan and Gunby (1996) discuss how the development of pest resistance has forced a switch away from the previously locked-in practices of heavy pesticide use in various types of agriculture. Each of these methods can only be employed when the time and circumstances are right. The levers of change - legislative clout, niches, grassroots resistance, crises – tend to be in short supply. The reason that lock-in is time and agent relative is because only certain agents, at certain times, have access to the means necessary for overcoming lock-in.

Developments are currently underway that may one day come to challenge the dominance of the DSM system. Today, various groups continue to propose ambitious projects that aim to present an alternative to the DSM. Recent years have seen the development of the Psychodynamic Diagnostic Manual 2 (PDM-2) (Lingiardi & McWilliams, 2017), the

Hierarchical Taxonomy of Psychopathology (HiTOP) (Kotov et al 2017), and Power Threat Meaning Framework (PTMF) (Johnstone & Boyle, 2018), and the Research Domain Criteria (RDoC) research initiative (NIMH no date a).

Of these initiatives, the RDoC project is the most advanced. The US National Institute of Mental Health developed the RDoC as a radically different approach to classification. The Research Domain Criteria project (RDoC) aims “to define basic dimensions of functioning (such as fear circuitry or working memory) to be studied across multiple units of analysis, from genes to neural circuits to behaviors, cutting across disorders as traditionally defined” (NIMH, no date a.). The system relies far more on dimensions and is more biologically-focussed than the DSM. Notably the system is aimed only at researchers, and is not intended for clinical or administrative use. The intention is that instead of researchers studying groups of patients diagnosed with say schizophrenia, or PTSD, using RDoC they will study groups suffering from problems with, say, impulse control or emotional lability.

We can see the RDoC project as aiming to break the hold of the DSM on psychiatric classification via utilising a number of the strategies that have been used to successfully overcome lock-in in other settings. First, in so far as RDoC only aims to be used by researchers, it can be understood as being aimed at a niche market. Second, as a major grant giver the NIMH is a “central authority”, at least as far as US researchers are concerned. The NIMH can require grant applicants to employ RDoC and thus force through use of the system (Insel 2013, Pickersgill 2019). In its first decade, NIMH funding resulted in over 1000 research papers that made use of RDoC (Morris et al 2022). It remains, though, early days for the RDoC. Whether RDoC will succeed longer term and become more widely used by researchers remains to be seen.

In any case, while the RDoC has come to be used by some researchers, it should be emphasised that the RDoC system is unsuitable for everyday use by clinicians and administrators. Those who would develop alternatives to the DSM for clinical and administrative use face additional challenges. Clinicians primarily use the DSM for securing payment. As such any group seeking an alternative to the DSM for use by regular clinicians must solve the economic and administrative obstacles to developing a different classification. A major issue is that the Health Insurance Portability and Accountability Act (1996), mandates that health insurers use ICD codes. The version of the ICD currently employed in

the US, ICD-10-CM, includes two types of code that in principle could be used by mental health services. Best known are the codes for DSM-style diagnoses. However, the ICD also contains non-disorder ‘Z-codes’ which include codes for a range of life issues, such as ‘Burnout’, ‘Social role conflict’, and ‘Antisocial behaviour’. Historically, insurers in the United States have refused to reimburse for Z-codes. Still, if it were possible to convince some funders to reimburse for Z-codes, these codes might potentially be employed to enable the use of a classification that focussed on life problems rather than on mental disorders.

Another option would be to seek out niches that are unconstrained by the Health Insurance Portability and Accountability Act. The act applies only to health insurance. In some settings, mental health care may be funded in other ways, for example, where counselling is provided for university students, or by Employee Assistance Programs. Bereavement counselling also offers an obvious example, and is sometimes covered by life insurance. Such settings constitute special ‘niches’ in which there may be no need to use the DSM and where radically different forms of diagnosis, or no diagnoses at all, might be employed.

I acknowledge that my suggestions here are modest. The DSM is currently ‘locked-in’ and will be hard to replace. In so far as mental health professionals currently employ the DSM largely for insurance purposes, the key problem to be addressed by those seeking an alternative is to make it compatible with the needs of the funders of mental health services.

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