

# **The Concept of Disorder Revisited: Robustly value-laden despite change.**

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## **Abstract**

Our concept of disorder is changing. This causes problems for projects of descriptive conceptual analysis. Conceptual change means that a criterion that was necessary for a condition to be a disorder at one time may cease to be necessary a relatively short time later. Nevertheless, some conceptually-based claims will be fairly robust. In particular, the claim that no adequate account of disorder can appeal only to biological facts can be maintained for the foreseeable future. This is because our current concept of disorder continues to be laden with ethical and political values in multiple different ways.

I.

*Introduction.* From the 1970s onwards, a major research programme in the philosophy of medicine has sought to use conceptual analysis to provide an account of ‘disorder’, ‘disease’, or ‘the pathological’. The aim has been to figure out what makes a condition a disorder, as opposed to some non-disorder state, such as a normal variation or a moral failing. In this paper, I argue that this research programme runs into difficulties because it has been insufficiently sensitive to conceptual change.<sup>1</sup> Employing conceptual analysis to analyse terms like ‘disorder’ is difficult because intuitions and ideas about what counts as disorder shift quite fast. In the case of ‘disorder’, I argue that there has been a recent change; while there used to be a widespread consensus that harm is necessary for a condition to count as a disorder, this consensus has broken down.

I consider three possible ways philosophers can proceed in such circumstances: (i) give up, and stop trying to use conceptual analysis to understand ‘disorder’; (ii) go revisionary, and switch from seeking to describe the current concept of disorder to considering what concept might be best; (iii) seek to ‘belt and brace’ conceptual claims, an approach to be explained later in the paper, whereby conceptually-based claims can be protected against future conceptual shifts through being anchored in multiple considerations. Using the method of ‘belt and bracing’ a conceptual claim, I argue that our current concept of disorder continues to be value-laden in multiple different ways. This means that a core claim of this paper – that normative judgements are involved in determining whether a condition is a disorder – can be expected to be robust. It is *conceivable* that one day usage might shift so radically that my key claim will no longer be true. But multiple conceptual revisions would be required. Thus, I feel pretty safe in claiming that currently, and for the foreseeable future, no account of disorder can be given that appeals only to biological facts.

Section II outlines the assumptions, methods, and key claims of ‘the traditional debate’ about disorder. Section III provides reasons for thinking that our concept of disorder is changing.

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<sup>1</sup> Standardly, philosophers engaged in ‘conceptual analysis’ talk of ‘concepts’ and, following this tradition, throughout this paper I talk of ‘concepts’ and ‘conceptual change’. However, I accept that talk of concepts is somewhat opaque. In *Fixing language: An essay on conceptual engineering* Cappelen (2018) argues that those who seek to analyse and revise concepts require an account of what concepts are, and how they might be changed. He himself thinks that the multiple available accounts of concepts are all so problematic that he avoids talk of concepts in his book, and (despite his title) talks in terms of changing word meanings instead. As there is no natural English word that corresponds with the broad concept of disorder that I am interested in (i.e. one that lumps ‘diseases’, ‘wounds’, ‘injuries’ etc. together), I cannot straightforwardly follow his strategy here, although I accept that talk of ‘concepts’ is somewhat obscure. However, I suggest one way to cash-out talk of the ‘concept’ of disorder is to appeal to our classificatory practices; I am interested in exploring the criteria that split the disordered from the healthy. Relatedly, as I am uncertain what the identity conditions for concepts should be, I am unsure exactly how the ‘conceptual change’ I am interested in should be characterised. It seems most natural to me to say that the concept of disorder has changed. But, some might instead say that one concept is being replaced by a different, successor concept (as in Carnap’s 1962 account of ‘explication’). In any event, the important point here is that there is change happening, and this change will cause problems for those who engage in traditional projects of descriptive conceptual analysis.

Section IV considers how philosophers might refashion traditional descriptive conceptual analysis to deal with conceptual change. Section V argues that there are reasons to expect our concept of disorder to continue to be value-laden for the foreseeable future.

## II.

*Accounts of disorder – the ‘traditional debate’* Following seminal papers by Boorse (1975, 1977), much writing in philosophy of medicine has employed conceptual analysis in an attempt to produce an account of ‘disorder’, ‘disease’, or ‘the pathological’.<sup>2</sup> In these debates, conditions that might be distinguished in everyday English as ‘wounds’, ‘illnesses’, ‘diseases’ or ‘injuries’ are all lumped together. The aim has been to distinguish the pathological from the normal, as opposed to refining the various distinctions that might be drawn between different types of pathological condition. Problematically, there is no common ordinary English word that covers the umbrella concept of ‘any type of pathological state’,<sup>3</sup> and so different authors have ended up employing different terms. In this paper I use the term ‘disorder’ throughout.

In seeking to develop accounts of disorder, authors employed traditional conceptual analysis. Attempts were made to provide sets of necessary and sufficient conditions for something to count as a disorder. Critics then sought to find counterexamples. New accounts of disorder were then proposed, or the initial account revised, in an attempt to accommodate these counterexamples. The overall aim was to find a set of necessary and sufficient conditions for disorder that was both internally coherent, and also meshed with ‘our’ intuitions about as many particular cases as possible.<sup>4</sup>

Getting an account of disorder was understood to be a broadly descriptive project. Conceptual analysis was taken to be a method for making explicit distinctions between disordered and non-disordered states that were already implicit in linguistic practice. As such, accounts aimed to be ‘tidied-up’ accounts of our concept of disorder.<sup>5</sup> One could imagine that if a

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<sup>2</sup> The literature is vast. Influential early work that lies firmly within the tradition I describe includes Nordenfelt (1986, 2001), Reznek (1987), Wakefield (1992). Recent work includes Ananth (2008), Kingma (2010, 2013), Hausman (2011), Boorse (2014). My own previous attempt at providing an account of disorder is Cooper (2002).

<sup>3</sup> Although there is no natural English word that corresponds with the broad concept of disorder, one way to cash-out the claim that we have an umbrella concept of ‘disorder’ that lumps together injuries, wounds, diseases and so on, is to note that many of our classificatory practices lump all these conditions together (so all are treated by medics, all are reasonable grounds for requesting sick leave, and so on).

<sup>4</sup> The extension of ‘our’ notably varies between different authors. Boorse (1997, p.11) was particularly concerned with a theoretical concept of disorder as used by pathologists Others took it that a common concept of disorder is shared by professionals and lay people (Nordenfelt 1986, Reznek 1987, Wakefield 1992).

<sup>5</sup> Lemoine (2013) provides a helpful discussion of where and how attempted analyses of disorder have involved ‘tidying’.

successful analysis was developed and presented to language users, they should recognise it as articulating their current practices (in the sense of ‘Ah yes, that’s what I was getting at!’).<sup>6</sup>

Turning to the accounts of disorder produced, the major source of disagreement has concerned whether harm is essential for disorder. Naturalists claim that disorder can be understood purely in terms of biological dysfunction (e.g. Boorse 1975, 1977, Ananth 2008, De Block 2008, Schramme 2010). Accounts of ‘dysfunction’ vary,<sup>7</sup> but the claim that unifies this camp is that ‘dysfunction’ can be defined in purely scientific terms.

In the other camp are those who advance accounts according to which a condition can only be a disorder if it is harmful (e.g. Nordenfelt 1986, 2001, Reznek 1987, Wakefield 1992, Cooper 2002). Accounts of harm vary between authors, but the key unifying claim is that determining the boundaries between disorder and normality is *not* a purely scientific matter. In addition to knowledge of biological facts, value-judgements (e.g. concerning the nature of a good life, or political questions about the sort of society we want to live in) will also play a role.

Some might worry that all scientific research is value-laden and so balk at the distinction drawn here between accounts that hold the concept of disorder is a ‘naturalistic’ or ‘scientific’ concept, and those that hold it to be a value-laden. One way to reframe the debate to address such concerns is to see the naturalists as claiming that disorder is at least *no more* value-laden than other biological concepts, such as life or cell.

### III.

*Changing intuitions about disorder.* In so far as philosophers seeking to develop accounts of disorder engage in descriptive conceptual analysis, accounts must broadly fit with intuitions about the disorder-status of particular conditions (especially with the intuitions of expert communities).

Naturalistic and value-laden accounts of disorder notably come apart in their judgments of homosexuality. Although the evolutionary origins of homosexuality are disputed, it may turn out that homosexuality is some sort of biological dysfunction (of course, this may turn out not to be the case, but the point is that in the current state of knowledge it is at least conceivable). If homosexuality turned out to be caused by a biological dysfunction this would force naturalists to consider it a disorder (though note that in their view to say that something is a disorder should not be taken to imply that it is a bad thing or needs treating (Boorse 2014, p.703 takes this stance)). Those who adopt value-laden accounts of disorder take a different line; for them biological dysfunction is not sufficient for disorder, and in so far as it is agreed there is no harm, homosexuality cannot be a disorder.

Within psychiatry, there were intense debates as to whether homosexuality should be considered pathological in the late 1960s and early 1970s (for an account see Bayer 1987).

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<sup>6</sup> Wakefield’s account achieved something like this marker of success. His account of disorder was recognised by the architects of the D.S.M. as an explicit articulation of what they had been trying to achieve (Spitzer 1999).

<sup>7</sup> For example, Boorse claims ‘A normal function of a part or process within members of the reference class [set of organisms of same species, sex and age range] is a statistically typical contribution by it to their individual survival and reproduction (1977, p.555). Ananth (2008) offers an evolutionary propensity account of function.

After much discussion, a consensus view developed that in so far as being gay isn't a bad thing, homosexuality shouldn't be considered a disorder (regardless of what any biological etiology might turn out to be). In common with many of those advocating for value-laden accounts of disorder I took this to be prima facie evidence that naturalistic accounts of disorder were descriptively inadequate, and that the correct descriptive account of our concept of disorder would be one according to which harm is essential for a condition to count as a disorder.

For about forty years, from the early seventies onwards, there was a broad consensus amongst mental health researchers and clinicians that harm is essential for a condition to be a mental disorder. This was the approach taken by the *Diagnostic and Statistical Manual of Mental Disorders* (D.S.M.), the influential classification of mental disorders published by the American Psychiatric Association (1987, 1994).

Recently, however, the consensus that harm is required for disorder has broken down. In 2013 a new edition of the D.S.M., D.S.M-5, was published and the definition of mental disorder changed.<sup>8</sup> Revising the D.S.M. takes years, and the American Psychiatric Association posted various drafts online. These drafts show that two competing definitions of mental disorder, developed by two different workgroups, were considered.<sup>9</sup> One definition was an iteration of the previous D.S.M. definition (Stein et al. 2010), and required there to be harm before someone could be considered to have a mental disorder.

The second definition was developed by the 'Impairment and Disability Assessment Study Group' who aimed to produce a definition of mental disorder that was compatible with the definitions of physical disability employed by the World Health Organization. This group sought a value-free account, and characterized mental disorder as mental dysfunction. According to some 'social models' of disability, a distinction must be drawn between *impairment* and *disability* (Oliver 1996).<sup>10</sup> 'Impairment' refers to a biological difference (e.g. having no legs); 'disability' refers to problems in everyday living that are conceived of as arising from the social response to the impairment (including the fact that our societies choose to materially engineer environments to suit typical bodies, e.g. designing buildings with stairs rather than ramps). 'Disability' is harmful (though the harm is caused by society); 'impairment' need not be harmful. In seeking to make notions of mental and physical disability compatible, the Impairment and Disability Assessment Study Group sought to construct a definition of 'mental disorder' which would have enabled it to play a role analogous to that played by 'impairment' in discussions of physical disability.

In the online draft version of the D.S.M., after the two competing definitions were presented a note said that a final decision would be made at a later date. The final, published, D.S.M.-5 definition of 'disorder' reads as follows,

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<sup>8</sup> I provide a fuller account of the revisions to the D.S.M. definition in Cooper (2015).

<sup>9</sup> On publication of the D.S.M-5, the American Psychiatric Association deleted the draft versions. However, a draft that was available December 2011, and that has the two definitions, can still be accessed at

<https://web.archive.org/web/20111209002319/http://www.dsm5.org/ProposedRevisions/Page/s/proposedrevision.aspx?rid=465>

<sup>10</sup> The idea that a clear-cut distinction between impairment and disability can be maintained has come to be contested, in much the same sort of way as has the distinction between 'sex' and 'gender' in feminist thought (e.g. Shakespeare and Watson 2001, Terzi 2004).

A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are *usually associated* with significant distress or disability in social, occupational, or other important activities... (emphasis added, American Psychiatric Association 2013, p. 20)

Or, in other words, a disorder is a dysfunction that is usually associated with harm. It is unclear how this definition should be read. It might be that disorder types are usually, but not always, associated with harm – in which case the final definition looks to be a clumsy attempt at compromise between the two inconsistent proposed definitions. Or, it might be the definition should be read as saying that tokens of a type of disorder are usually, but not always, associated with harm.<sup>11</sup> In any event, the history of the development of the new definition illustrates that the prior consensus that harm is essential for disorder has broken down. The fact that the Impairment and Disability Assessment Study Group proposed a value-free definition of mental disorder provides evidence that it is no longer generally accepted that disorders must be harmful.

Some might wonder whether I am attaching too much importance to debates surrounding the definition of 'mental disorder' in the D.S.M. Maybe rather than demonstrating that mental health professionals are changing their minds about the concept of disorder, the revision process shows only that psychiatrists are bad at writing clear definitions.<sup>12</sup> However, in addition to the changes to the definition of 'mental disorder' in the D.S.M., psychiatrists have also started to change the way they talk about concrete cases. The D.S.M. includes a section for Tic Disorders (Tourette's and related conditions). In the D.S.M-IV (1994) someone could only be considered to have a Tic Disorder if their tics caused some harm (consistent with a value-laden accounts of disorder). The D.S.M-5 (2013) takes a different stance. Now people who tic but whose tics are unproblematic are considered to have a disorder. Such people are quite common; the D.S.M-5 notes that many people with tic disorders 'experience no distress or impairment in functioning and may even be unaware of their tics' (i.e. their tics cause no harm) (2013, p.84).<sup>13</sup> Thus, psychiatrists are now happy to claim that (i) Tic Disorders often cause no harm, and (ii) Tic Disorders are disorders.

The revisions to the D.S.M. definition, and the case of Tic Disorders, show that amongst mental health professionals the previous consensus that harm is necessary for disorder is breaking down. However, it would be premature to conclude that there is now a new consensus, and that mental health professionals now agree that harm is *not* required for disorder. The revisions to the D.S.M. definition were decided late on, with little discussion, and whether they will be broadly accepted long-term remains to be seen. While Tic Disorders are now diagnosed in the absence of harm, there are other mental disorders where harm continues to be essential for diagnosis (e.g. paraphilic disorders). I think that the previous

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<sup>11</sup> I am grateful to Alexander Bird for pointing out this possible reading.

<sup>12</sup> Along these lines Boorse (2014, p.712) notes that the concepts of pathologists are best judged by 'their considered judgments of individual conditions as normal or pathological' rather than by any explicit definitions they might produce.

<sup>13</sup> Note that it's not just the ticcing individual who's unaware of the tics but also those around them. Black et al. (2016) report that tic researchers can frequently spot tics in children even though these have not been noticed by the child, their peers, their parents or teachers.

consensus that harm is necessary for harm is breaking down, but I do not think it's yet clear that a new consensus has developed.

For philosophers who aim to produce a descriptive analysis of the concept of disorder it matters that the consensus that harm is required for disorder is breaking down. We used to say that harm is required for a condition to be a disorder, but now some people will refer to harmless dysfunctions as disorders. If our linguistic community starts to employ terms differently (especially if experts start to employ a term differently), then conceptual analyses will also have to change.

Conceptual analysis aims at finding necessary and sufficient conditions for a concept to be applied. But in some domains our concepts are 'on the move'.<sup>14</sup> In such cases, when a conceptual analysis finds a condition to be necessary for a term to be applied, this necessity may not be projectible into the future. The necessity depends on the current consensus of a linguistic community, and they might change their mind.

For a concept to 'be on the move' is likely quite common, and problems analogous to those I have sketched here regarding the conceptual analysis of 'disorder' are likely widespread. A number of recent writers have argued that conceptual change is commonplace. LaPorte (2004) *Natural kinds and conceptual change* discusses how concepts may be revised in the light of empirical discovery, as with natural kind terms such as 'planet' and 'jade'. Other concepts alter as a result of political contestation, as with 'rape', which initially excluded, but now includes, non-consensual sex within marriage (Ludlow, 2014). Sometimes concepts change over time without anyone consciously instigating revision, through processes of semantic drift (Cappelen 2018, pp.30-32, following Dorr and Hawthorne 2014 discusses 'salad', which once included only cold dishes including green leaves, but now has a much wider extension).

If conceptual change is only occasional, and if it is obvious when change occurs, then philosophical projects employing traditional conceptual analysis might continue (although any analysis would be time-limited in its scope). However, some concepts might change too rapidly for this to be a reasonable approach. In particular, 'human kind' concepts may be particularly susceptible to change (Hacking 1995). Human kind terms pick out classes of people that are studied by the human sciences, such as 'woman', 'black', 'long term unemployed', 'introverted', and, of course, 'disordered'. Because it makes a difference to people how they are classified, the use of human kind terms often becomes a contested issue. Groups lobby for terms to be used in this or that way. Sometimes they are successful, and as a consequence the meaning of human kind terms likely shift more quickly than the meaning of other terms. In such circumstances, when change can be expected to be ongoing and rapid, philosophical projects that seek to understand concepts by employing traditional conceptual analysis are undermined.

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<sup>14</sup> I accept that talk of concepts is somewhat opaque. As such, I am uncertain what the identity conditions for concepts should be, and so I am unsure exactly how this change should be characterised. It seems most natural to me to say that the concept of disorder has changed. But some might instead say that one concept is being replaced by a different, successor concept (as in Carnap's 1962 account of 'explication'). In any event, there is change happening, and this change will cause problems for those who engage in traditional projects of descriptive conceptual analysis.

#### IV.

What to do? How, then, can philosophical work proceed? I first discuss two options that are already being pursued by others in the philosophy of medicine, 1. Give up, 2. Go revisionary, and then introduce a third option, 3. Seek to ‘belt and brace’ conceptual claims.

Option 1: Give up seeking an account of disorder. Hesslow (1993) and Ereshefsky (2009) both think that philosophers should give up seeking an account of disorder. Often people are drawn into debates about the nature of disorder because they see this as a means of answering questions that they have about some specific condition. They want to know whether condition X can excuse wrong-doing, or requires treatment, or whether people with condition X have a brain abnormality, for example, and set to address such questions by trying to figure out if condition X is a disorder. But, Hesslow and Ereshefsky think, in such debates the detour of asking whether condition X is a disorder can be omitted without loss. Instead of worrying about ‘the nature of disorder’ we can instead switch to condition-specific questions of interest like ‘Can character change caused by Multiple Sclerosis excuse wrong-doing?’, or ‘Do the brains of children with Attention Deficit Hyperactivity Disorder differ in any qualitative way from those of other children?’.

I accept that such an approach may suffice for certain types of project, but I think there is a potential loss. The concept of disorder plays a major role in how our society currently thinks. One reason for engaging in descriptive conceptual analysis of our concept of disorder is that it might enable us to make explicit our current thinking (and then potentially go on to critique it) (Nordenfelt 1993). For example, a satisfactory account of disorder might be hoped to elucidate why it is that we tend to think that disorders can excuse and deserve treatment. Or, it might help shed light on the question of whether medics should properly be considered authoritative in determining who suffers from a disorder, and whether they have been cured. If philosophers stop trying to understand our thinking about disorder in general, and focus only on questions about particular conditions, then such potential broader understanding will not be possible.

Option 2: Go revisionary. In revisionary projects, rather than seeking to analyse our current concepts, we instead consider what concepts would be most useful. Revisionary approaches have been advocated by a number of writers who for various reasons have become disillusioned with attempts to provide a descriptive account of disorder (e.g. Schwartz 2007a, Griffiths and Matthewson 2018, Walker and Rogers 2018).

Revisionary projects come in distinct flavours: notably some seek concepts for better science (e.g. Carnap 1962), some for better politics (e.g. Haslanger 2000). I’m not entirely against revisionary projects, but think they have limitations.

Those who seek to develop the ‘best definition’ of disorder (whether for better science, or better politics) must accept that what counts as ‘the best’ will likely be project and context specific. Consider what concept of disorder might best further progressive politics. For some purposes accounts according to which harm is necessary for disorder have advantages. Such an approach to disorder may help legitimise the stance of groups of people who are biologically or psychologically different, but who have lives which they value, and want to be left alone by medics (for example some Deaf people, some autistic people). On an account of disorder where harm is necessary, a person with a difference that causes no harm does not have a disorder, and so questions of treatment or care need not arise. However, for other purposes, a naturalistic approach to disorder might be more useful. Consider how the social model of disability has made a value-free approach to ‘impairment’ (which might be equated



with ‘disorder’) seem to have political benefits. That the ‘best’ concepts are project specific leads to difficulties: (i) as contexts change it can be hard to predict what concepts will continue to be useful in the future, (ii) when terms get defined differently for different projects this can lead to co-ordination problems where such projects meet (as seen in the D.S.M-5 definition of disorder – which sought a compromise between definitions that had been developed in mental health and in disability studies). Such problems can be expected to be particularly troublesome for those who seek to revise ‘disorder’, in comparison to those engaging in revisionary projects in some other domains, because the concept of disorder is employed for very many different purposes (in multiple medical sciences, but also in legal and bureaucratic contexts, for example), and the consequences of a condition being judged a disorder (or not) vary radically with political, economic, and cultural setting.

Note that my criticisms of Option 1 (giving up seeking an account of disorder) or Option 2 (go revisionary) are limited. I am not wholly against projects that pursue these Options; they may suffice for certain purposes. However, because I think both Options have limitations, I think it also worth pursuing Option 3.

*Option 3: Seek to ‘Belt and brace’ conceptually-based claims.* Conceptual analysis aims at finding necessary and sufficient conditions for a concept to be applied, but, at least in some domains, our concepts are shifty. This means that when a conceptual analysis finds a condition to be necessary the necessity is ‘weak’;<sup>15</sup> it depends on the current consensus of a linguistic community, who might go on to change their mind. If there is currently a necessary link between ‘disorder’ and ‘harm’ or ‘unluckiness’, or whatever it might be, the necessity persists only so long and so far as a current consensus amongst language users endures.

Traditionally, philosophers have assumed that one good argument is enough to win a debate. But when concepts are shifty, an argument that supports a claim at one time, may fail in the future as a result of conceptual change. In such cases, a way forward is to seek to support the claims being made in as many ways as possible. Those who want their trousers to stay up, but who have reason to doubt the reliability of their belt, and also have some suspicion about the strength of their braces, can maximise their chances of staying dressed by using both. Analogously, it may sometimes be possible to ‘belt and brace’ conceptually-grounded claims, by grounding a claim in multiple semi-independent considerations.

Until very recently, I defended a traditional value-laden approach to disorder. I thought that a condition could only be a disorder if it is harmful for the individual with it. However, as I have argued in this paper, our concept of disorder is shifting. I think that it was necessary for a condition to be a disorder that it be harmful – but conceptual change means that this requirement has recently become questionable and may sometimes now be abandoned (by at least some linguistic sub-communities).

The ways in which a term like ‘disorder’ is used have changed in the past, are currently contested, and can be expected to change in the future. Despite this, I think it is possible to

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<sup>15</sup> Bix (2003) discusses a similar notion in his discussion of Raz’s claims regarding necessity and our concept of law; ‘The ‘necessity’ in conceptual analysis – at least in Raz’s conceptual analysis - is of a ‘softer’ kind, as it were. It means only that these are connections internal to the concept in question (e.g. to be a legal system is to claim authoritative status), a concept which is itself contingent and may be tied to a particular community and time period.’ (p.549). Tsou (2010) discusses notions of ‘relativised apriority’ as developed by Putnam (and later authors) in thinking about scientific change.

make some claims about the concept of disorder that will be fairly robust. A key claim of traditional value-laden accounts is that it is not possible to give an adequate account of disorder that appeals only to biological facts. I think that this claim can be maintained, and can be expected to be fairly robust in the face of any likely forthcoming conceptual shifts. This is because our current concept of disorder currently requires normative judgments to be made at *multiple points*. While any particular conceptual tie may give way, the whole can be expected to hold.

V.

*'Belt and bracing' the claim that normative judgements are involved in determining whether a condition is a disorder.* The basic idea is that the multiplicity of conceptual links between 'disorder' and value judgements, means that my core claim – that normative judgements are involved in determining whether a condition is a disorder – can be expected to be robust. It is *conceivable* that one day, usage might shift so radically that my key claim will no longer be true. But multiple conceptual revisions would be required. Thus, I feel pretty safe in claiming that currently, and for the foreseeable future, no account of disorder can be given that appeals only to biological facts and that normative judgements will be necessary.

I will sketch two indirect ways in which moral and political values play a role in delimiting disorders: (i) in fixing whether a condition is unusual enough to count as disorder (the threshold problem), and (ii) in fixing whether a condition is within an individual, or to do with the environment (the location problem). Discussion here of these issues must necessarily be brief, and so my arguments will be sketched rather than fully developed, but I aim to illustrate how the method of 'belt and bracing' a conceptually-based claim might work and to make it plausible that 'disorder' is value-laden in multiple ways. Note that I am not attempting an exhaustive discussion of all the ways in which 'disorder' may turn out to be value-laden. There may well be other ways in which values play a role in addition to those discussed here (e.g. some think that on elaboration no naturalistic account of 'biological function' will turn out to be possible (Bedau 1991, 1992, Amundson 2000)).

*Values and thresholds.* It is plausible that value judgements are essentially involved in fixing thresholds between disorder and normal low functioning. The difficulties involved in setting thresholds for disorder are particularly visible if one considers how we think about those disorders that occur at the extreme ends of normal distributions.

A natural thought is that in such cases the threshold for disorder might be set using some statistical measure. Perhaps two-standard deviations below the norm, for example. However purely statistical approaches will not yield boundaries between normality and disorder that look anything like those that we currently draw. The boundaries of some disorders are currently set at the extreme tails of normal distributions, while the boundaries of others are much closer to the mean. To take some examples, Intellectual Disability, Attention Deficit Hyperactivity Disorder (A.D.H.D.) and Hypertension all arise at the tail-end of normal distributions, but have thresholds set to yield prevalence rates of about 1%, 5% and 30-45% respectively.<sup>16</sup> It is implausible to think that thresholds anything like these could be captured

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<sup>16</sup> Intellectual Disability and hypertension are widely accepted to arise at the tail-end of a normal distribution. For A.D.H.D. see Coghill and Sonuga-Barke 2012. Prevalence rates for Intellectual Disability can be found in McKenzie 2016, A.D.H.D. can be found in American Psychiatric Association 2013, p.61, for hypertension in Mancia et al.2013.

by some combination of statistical or biological measures. As such, anyone seeking a broadly descriptive account of our current concept of disorder, will need to consider the role played by ethical and political judgements in setting the thresholds of disorder<sup>17</sup>

In practice, threshold setting is usually done on the basis of a sort of cost-benefit analysis, whereby the harm caused by the condition is weighted against the ease and possible benefits of treatment.<sup>18</sup> As such, thresholds tend to vary as a function of the ease and expense of treatment. In the case of low I.Q., for example, as there is no treatment, only those at the very bottom of the bell-curve are counted disordered.<sup>19</sup> When treatment becomes easier and cheaper (as with A.D.H.D. and hypertension) we tend to count a larger grouping disordered. The committees responsible for determining the thresholds for A.D.H.D. explicitly note that they sought to define a ‘disorder that is functionally impairing and therefore warrants treatment’ (McBurnett 1997, p.114).<sup>20</sup> Thresholds for hypertension were selected ‘based on the evidence from R.C.T.s [Randomised Controlled Trials] that in patients with these B.P. [blood pressure] values treatment-induced B.P. reductions are beneficial’ (Mancia et al 2013, p.199). In such decision making, moral and political values play an essential role in determining the thresholds for disorder (as also noted by Doust, Walker, and Rogers 2017).

*Values and location.* Whether an individual’s physiology and psychology fits them for living well (whether ‘living well’ is understood either in biological terms of survival and reproduction, or in terms of welfare) depends not only on their individual intrinsic characteristics but also on the environment in which they find themselves.<sup>21</sup> Conversely, where an organism experiences problems in living, it will often be possible to ameliorate these either by changing the environment, or by altering the physiology or psychology of the

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<sup>17</sup> Note that the problem arises for those who seek a descriptive account of disorder (i.e. an account that supplies boundaries between health in disorder roughly where they are now drawn). Those who propose a revisionary account of disorder may be able to avoid the problem. Schroeder (2013) suggests a comparative account of health – where judgements of the relation ‘healthier than’ take conceptual priority over judgements as to whether any particular organism is healthy. Hausman (2012) agrees and argues that ‘greater health’ can be defined precisely and naturalistically in terms of biological fitness (although he accepts that evaluative considerations play a role in determining how we draw the line between health and pathology). Rogers and Walker (2017) argue somewhat similarly that giving up on an all-or-nothing conception of disease would be one possible response to the line-drawing problem. Such revisionary approaches minimise the importance of seeking a line between health and pathology.

<sup>18</sup> Schwartz (2007b) agrees ‘negative consequences’ must be considered in setting thresholds, but hopes to cash-out ‘negative consequences’ in naturalistic, biological, terms, i.e. employing notions of biological fitness. Kingma (2014) gives reasons for thinking Schwartz cannot succeed in naturalising ‘negative consequences’. In any case, threshold setting also depends on judgments about the acceptability of treatment.

<sup>19</sup> The threshold for intellectual disability has varied over time. In Cooper (2014) I explain the historical changes by reference to political and economic considerations.

<sup>20</sup> Here ‘functionally impairing’ means, roughly, ‘limits the extent to which someone can fulfil their expected roles at school, work, or socially’.

<sup>21</sup> Boorse thinks that a healthy organism is one with ‘subsystems’ that function with at least typical efficiency – but whether an atypically functioning subsystem is performing better or worse than average will similarly depend on environment. For example, a genetic variant that makes deer breed earlier in the year will increase fitness in an environment with global warming, but would decrease fitness in a world that was cooling (Bonnet 2019).

individual. Deaf people may well find communicating difficult in a speaking society, but not in a society of signers; people with social anxiety might be helped either by drugs to reduce anxiety, or by moving to a small village, and so on.

Garland-Thomson (2011) suggests that disability is often best regarded as a misfitting between an individual's body or psychology and the environment. She takes this to show that disability is relational. As she puts it, 'The problem with a misfit, then, inheres not in either of the two things but rather in their juxtaposition, the awkward attempt to fit them together' (p.593). She goes on 'The relational and contingent quality of misfitting and fitting, then, places vulnerability in the fit, not in the body' (p.600).

However, if we are looking for a descriptive account of disorder, we do currently distinguish between disorders, which are located 'within' individuals, and social and environmental problems, which are located without (Boorse 1977 and Wakefield 1992 also claim that disorders have to be internal). Consider how we would regard the following cases,

- i. Petite woman struggles to use tools designed for big men.
- ii. Left-handed person struggles to use tools designed for right-handed people.
- iii. Wheel-chair user struggles to get around a town without ramps.
- iv. Person who requires artificial respirator struggles to breathe without it.

In all these cases, the difficulties can be dealt with either by altering the individual or by altering the environment; the problems are in a sense relational. However, we tend to think of the location of the problem differently depending on whether we think the individual or the environment should be altered.

In the case of the petite woman, and the left-hander, we think the problems should be dealt with by redesigning the equipment. In these cases, we blame the environment and do not think the individual has a disorder. In the artificial respirator case, we think that the 'environmental accommodations' are too major, and locate the source of the problem within the individual. How we should conceptualise the wheel-chair case is currently contested. On the 'medical model' the disorder lies within the body of the wheel-chair user. On the social model of disability, the problem is located within the environment.

That moral and political considerations play an essential role in such judgments come out most clearly if one considers how we think of homosexuality, and behaviours such as transvestism. In intolerant societies, gay people, and men who dress as women, frequently experience social isolation and distress. However, as we think that the prejudices in such societies are illegitimate, in these cases we blame the distress on the society, and rather than saying that homosexuality or transvestism are disorders we say that society should become more tolerant.

I suggest that whether we count a problem as an internally-located disorder, or as an externally-located environmental problem, depends on whether we think it best to attempt to ameliorate the situation by altering the individual or the environment. This depends on what types of intervention might be possible, but also on whether we think that any possible environmental accommodations are reasonable or not. Determining which environmental adjustments would be reasonable depends on a range of considerations – practical and economic, but also ethical and political.<sup>22</sup> Normative judgements thus play a role in

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<sup>22</sup> I develop this argument in greater detail in Cooper 2017.

determining whether a condition is a disorder via the role they play in distinguishing between internally-located disorders, and externally-located environmental problems.

VI.

*Conclusion.* I have argued that concepts of disorder are currently shifting. This problematises projects of traditional descriptive conceptual analysis concerning ‘disorder’. Conceptual change means that a criterion that was necessary for a condition to be considered a disorder at one point in time may cease to be necessary a relatively short period of time later.

Despite the changing nature of our concept of disorder, I think it is possible to make some conceptually-based claims that will be fairly robust. A key claim of traditional value-laden accounts is that it is not possible to give an adequate account of disorder that appeals only to biological facts. I think that this claim can be maintained, and can be expected to be fairly robust in the face of any likely forthcoming conceptual shifts. This is because our current concept of disorder requires normative judgments to be made at *multiple points*.

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## References

- American Psychiatric Association 1987: *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edn. revised. Washington: American Psychiatric Association.
- American Psychiatric Association 1994: *Diagnostic and Statistical Manual of Mental Disorders*, 4th edn. Washington: American Psychiatric Association.
- American Psychiatric Association 2013: *Diagnostic and Statistical Manual of Mental Disorders*, 5th edn. Washington: American Psychiatric Association.
- Amundson, Ron 2000: 'Against Normal Function'. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 31(1), pp.33-53.
- Ananth, Mahesh 2008: *In Defense of an Evolutionary Concept of Health: Nature, Norms, and Human Biology*. Aldershot: Ashgate.
- Bayer, Ronald 1987: *Homosexuality and American Psychiatry: The Politics of Diagnosis*. Princeton: Princeton University Press.
- Bedau, Mark 1991: 'Can Biological Teleology be Naturalized?' *Journal of Philosophy*, 88(11), pp.647-655.
- Bedau, Mark 1992: 'Goal-Directed Systems and the Good'. *The Monist*, 75(1), pp.34-51.
- Bix, Brian H. 2003: 'Raz on Necessity'. *Law and Philosophy*, 22(6), pp.537-559.
- Black, Kevin J., Elizabeth Rose Black, Deanna J. Greene, and Bradley L. Schlaggar 2016: 'Provisional Tic Disorder: What to Tell Parents When Their Child First Starts Ticking'. *F1000Research*, 5, p.696. doi:10.12688/f1000research.8428.1
- Bonnet, Timothée, Michael B. Morrissey, Alison Morris, Sean Morris, Tim H. Clutton-Brock, Josephine M. Pemberton, and Loeske EB Kruuk 2019: 'The Role of Selection and Evolution in Changing Parturition Date in a Red Deer Population'. *PLoS Biology* 17(11): e3000493. <https://doi.org/10.1371/journal.pbio.3000493>
- Boorse, Christopher 1975: 'On the Distinction Between Disease and Illness'. *Philosophy & Public Affairs*, 5(1), pp. 49-68.
- Boorse, Christopher 1977: 'Health as a Theoretical Concept'. *Philosophy of Science*, 44(4), pp. 542-573.
- Boorse, Christopher 1997: 'A Rebuttal on Health'. In J. Hunter and R. Almeder (eds.), *What is Disease?* Totowa, New Jersey: Humana Press. pp.1-134.
- Boorse, Christopher 2014: 'A Second Rebuttal on Health'. *Journal of Medicine and Philosophy*, 39(6), pp.683-724.

Cappelen, Herman 2018: *Fixing Language: An Essay on Conceptual Engineering*. Oxford: Oxford University Press.

Carnap, Rudolf 1962: *Logical Foundations of Probability*. 2<sup>nd</sup> edition (1<sup>st</sup> edition 1950). Chicago: University of Chicago Press.

Coghill, David. and Edmund JS Sonuga-Barke 2012: 'Annual Research Review: Categories Versus Dimensions in the Classification and Conceptualisation of Child and Adolescent Mental Disorders – Implications of Recent Empirical Study'. *Journal of Child Psychology and Psychiatry*, 53(5), pp.469-489.

Cooper, Rachel 2002: 'Disease'. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 33(2), 263-282.

Cooper, Rachel 2014: 'Shifting Boundaries Between the Normal and the Pathological: The Case of Mild Intellectual Disability'. *History of Psychiatry*, 25(2), pp.171-186.

Cooper, Rachel 2015: 'Must Disorders Cause Harm? The Changing Stance of the DSM.' In Steeves Demazeux and Patrick Singy (eds.) *The DSM-5 in Perspective*, Springer, Dordrecht. pp. 83-96.

Cooper, Rachel 2017: 'Where's the problem? Considering Laing and Esterson's account of schizophrenia, social models of disability, and extended mental disorder.' *Theoretical medicine and bioethics*, 38(4), pp.295-305.

De Block, Andreas 2008: 'Why Mental Disorders are Just Mental Dysfunctions (and Nothing More): Some Darwinian Arguments.' *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 39(3), pp.338-346.

Dorr, Cian and John Hawthorne 2014: 'Semantic Plasticity and Speech Reports.' *Philosophical Review*, 123(3) pp. 281-338.

Doust, Jenny, Mary Jean Walker, and Wendy A. Rogers 2017: 'Current Dilemmas in Defining the Boundaries of Disease'. *Journal of Medicine and Philosophy*, 42(4), pp.350-366.

Ereshefsky, Marc 2009: 'Defining 'Health' and 'Disease''. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 40(3), pp.221-227.

Garland-Thomson, Rosemarie 2011: 'Misfits: A Feminist Materialist Disability Concept'. *Hypatia*, 26(3), pp.591-609.

Griffiths, Paul E., and John Matthewson 2018: 'Evolution, Dysfunction, and Disease: A Reappraisal.' *The British Journal for the Philosophy of Science* 69 (2) pp. 301-327.

Hacking, Ian 1995: 'The Looping Effects of Human Kinds'. In D. Sperber and A. Premack (eds.) *Causal Cognition*. Oxford: Clarendon Press. pp.351-394.

Haslanger, Sally 2000: 'Gender and Race: (What) Are They? (What) Do We Want Them To Be?' *Nous*, 34(1), pp.31-55

Hausman, Daniel 2011: 'Is an Overdose of Paracetamol Bad for One's Health?' *The British Journal for the Philosophy of Science*, 62(3), pp. 657-668.

- Hausman, Daniel 2012: 'Health, Naturalism, and Functional Efficiency'. *Philosophy of Science*, 79(4), pp.519-541.
- Hesslow, Germund 1993: 'Do We Need a Concept of Disease?' *Theoretical Medicine*, 14(1), pp.1-14.
- Kingma, Elseijn 2010: 'Paracetamol, Poison, and Polio: Why Boorse's Account of Function Fails to Distinguish Health and Disease'. *The British Journal for the Philosophy of Science*, 61(2), pp.241-264.
- Kingma, Elseijn. 2013: 'Naturalist Accounts of Mental Disorder.' In K.W.M. Fulford, Martin Davies, Richard Gipps, George Graham, John Sadler, Giovanni Stanghellini, and Tim Thornton (eds.) *The Oxford Handbook of Philosophy and Psychiatry*. Oxford: Oxford University Press. Pp.363-384.
- Kingma, Elseijn 2014: 'Naturalism about Health and Disease: Adding Nuance For Progress'. *Journal of Medicine and Philosophy*, 39(6), pp.508-608.
- LaPorte, Joseph 2009: *Natural Kinds and Conceptual Change*. Cambridge: Cambridge University Press.
- Lemoine, Maël 2013: 'Defining Disease Beyond Conceptual Analysis: An Analysis of Conceptual Analysis in Philosophy of Medicine'. *Theoretical Medicine and Bioethics*, 34(4), pp.309-325.
- Ludlow, Peter 2014: *Living Words: Meaning Underdetermination and the Dynamic Lexicon*. Oxford: Oxford University Press.
- Mancia, Giuseppe, Robert Fagard, Krzysztof Narkiewicz, Josep Redon, Alberto Zanchetti, Michael Böhm, Thierry Christiaens, Renata Cifkova, Guy De Backer, Anna Dominiczak, Maurizio Galderisi, Diederick E. Grobbee, Tiny Jaarsma, Paulus Kirchhof, Sverre E. Kjeldsen, Stéphane Laurent, Athanasios J. Manolis, Peter M. Nilsson, Luis Miguel Ruilope, Roland E. Schmieder, Per Anton Sirnes, Peter Sleight, Margus Viigimaa, Bernard Waerber & Faiez Zannad 2013: '2013 ESH/ESC Guidelines for the Management of Arterial Hypertension', *Blood Pressure*, 22(4), pp. 193-278, DOI: [10.3109/08037051.2013.812549](https://doi.org/10.3109/08037051.2013.812549)
- McBurnett, Keith 1997: 'Attention-Deficit/Hyperactivity Disorder: A Review of Diagnostic Issues'. In Thomas Widiger, Allen J. Frances, Harold Pincus, and Ruth Ross (eds.) *DSM-IV Sourcebook, Vol. 3*. Washington: American Psychiatric Publishing. pp.111-143.
- McKenzie, Katherine, Meagan Milton, Glenys Smith, and Hélène Ouellette-Kuntz. 2016: 'Systematic Review of the Prevalence and Incidence of Intellectual Disabilities: Current Trends and Issues.' *Current Developmental Disorders Reports* 3 (2) pp. 104-115
- Nordenfelt, Lennart. 1986: 'Health and Disease: Two Philosophical Perspectives. *Journal of Epidemiology and Community Health*, 40 (4), 281-284.
- Nordenfelt, Lennart 1993: 'On the Relevance and Importance of the Notion of Disease'. *Theoretical medicine*, 14(1), pp.15-26.
- Nordenfelt, Lennart 2001: *Health, Science and Ordinary Language*. Amsterdam: Rodopi.
- Oliver, Mike 1996: 'Defining Impairment and Disability: Issues at Stake'. In C. Barnes and G. Mercer (eds.) *Exploring the Divide*. Leeds: The Disability Press. pp.29-54.



- Reznek, Lawrie 1987: *The Nature of Disease*. London: Routledge.
- Rogers, Wendy and Walker, Mary Jean 2017: 'The Line-Drawing Problem in Disease Definition'. *Journal of Medicine and Philosophy*, 42(4), pp.405-423.
- Schramme, Thomas 2010: 'Can We Define Mental Disorder By Using the Criterion of Mental Dysfunction?' *Theoretical Medicine and Bioethics*, 31(1), pp.35-47.
- Schroeder, S. Andrew 2013: 'Rethinking Health: Healthy or Healthier Than?' *The British Journal for the Philosophy of Science*, 64(1), pp.131-159.
- Schwartz, Peter. 2007a: 'Decision and Discovery in Defining 'Disease'.' In H. Kincaid, and J. McKittrick (eds) *Establishing Medical Reality: Essays in the Metaphysics and Epistemology of Biomedical Science*, 90, Dordrecht: Springer. pp.47-63.
- Schwartz, Peter 2007b: 'Defining Dysfunction: Natural Selection, Design, and Drawing a Line'. *Philosophy of Science*, 74(3), pp.364-385.
- Shakespeare, Tom and Nicholas Watson 2001: 'The Social Model of Disability: an Outdated Ideology?' In *Exploring Theories and Expanding Methodologies: Where We Are and Where We Need to Go*. Series: *Research in Social Science and Disability* (2) Emerald Group Publishing Limited. (pp. 9-28).
- Spitzer, Robert L 1999: 'Harmful Dysfunction and the DSM Definition of Mental Disorder' *Journal of Abnormal Psychology*, 108(3), pp.430-432.
- Stein, Dan J., Katharine A. Phillips, Derek Bolton, K. W. M. Fulford, John Z. Sadler, and Kenneth S. Kendler. 2010: 'What is a Mental/Psychiatric Disorder? From DSM-IV to DSM-V.' *Psychological Medicine*, 40(11), pp.1759-1765.
- Terzi, Lorella 2004: 'The Social Model of Disability: A Philosophical Critique'. *Journal of Applied Philosophy*, 21(2), pp.141-157.
- Tsou, J. 2010: 'Putnam's account of apriority and scientific change: its historical and contemporary interest'. *Synthese*. 176(3), pp. 429-445
- Wakefield, Jerome. 1992: 'The Concept of Mental Disorder - On the Boundary Between Biological Facts and Social Value'. *American Psychologist*, 47(3), pp. 373-388.
- Walker, Mary Jean and Wendy Rogers 2018: 'A New Approach to Defining Disease'. *Journal of Medicine and Philosophy*, 43(4), pp. 402-420.