2

Current Conceptual Models of Mental Disorder

In this chapter I review prominent conceptual models of mental disorder, commenting on their strengths and weaknesses. These are models that provide answers to the question 'what are mental disorders?'. My focus here is on *formal* conceptual models—i.e., those presented as such. I have structured the presentation of these formal views in a way that highlights two different ways that we can understand the question 'what are mental disorders?'. I first present what I refer to as the *structurally oriented concepts*. These concepts focus on the nature of mental disorders in the ontic sense; on what mental disorders are in terms of their physical or causal structure. This is opposed to what I refer to as the *normatively oriented concepts,* which I present next. These normatively oriented concepts focus on why something should be (or should not be) considered a disorder. Please note that I have chosen not to review less formal models in this text. By this I refer to those models presented explicitly or implicitly within frameworks that have boarder non-conceptual purposes such as the DSM-ICD, or the Research Domain Criteria [RDoC]. I have previously presented such reviews in Nielsen (2020) and Nielsen and Ward (2018), but have not included them here as they are less central to the wider and more immediate argument. In closing this chapter, I make

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some observations that support the use of an embodied, embedded, and enactive view as a framework of human functioning through which to consider mental disorder. A key role of this chapter is to demonstrate that while having a multitude of conceptual models at our disposal is useful (i.e., conceptual pluralism), this does not negate the need for conceptual refinement and the development of better models.

2.1 Structurally Oriented Concepts

Haslam (2002) presents a conceptual taxonomy that usefully organizes differing perspectives on the structural nature of psychopathology. Haslam ultimately argues for a conceptual pluralism, whereby different mental disorders are seen to likely have different structural natures; for example, that borderline personality disorder and bipolar disorder are not just different types of mental disorder, but different *kinds* of types, with the latter being much more homogenous and disease-like, and the former being much more heterogeneous and socially weighted in its etiology. In accordance with this, Haslam sees pragmatic value in the plurality of structural views available, and his taxonomy is intended as a first pass attempt to collate the different kinds in a meta-structural way. He clusters the views under the labels: 'non-kinds/continua' (phenomena that don't form a kind but differ on a single spectrum, e.g., color/wavelength, neuroticism); 'practical kinds' (phenomena that can be clustered together because it is useful to do so, e.g., flying creatures, mood disorders); 'fuzzy kinds' (phenomena that can roughly be clustered together based on similarity even though all the instances aren't the same, e.g., board games, sandwiches); 'discrete kinds' (phenomena with no essences that can still be clearly identified as members or non-members most of the time, e.g., biological males[1]); and 'natural kinds' (phenomena with defined essences,

[1] Biological sex is an arguable case of a discrete kind but is a good illustrative example in that it has no single essence, instead being composed of multiple related components (e.g., xx/xy chromosomes, hormone levels, internal and external physiology) that *tend* to bifurcate into male and female camps in *most* cases. This is not to deny the existence or validity of intersex persons in anyway. One could also argue that biological males or females are examples of fuzzy kinds. I am less convinced that there is truly a clear demarcation between fuzzy and discrete kinds, but I include reference here to stay true to Haslam's taxonomy.

e.g., atomic elements). I will unpack these labels further when discussing them below.

In this section I use an adaption of Haslam's (2002) taxonomy to organize my overview of the structurally oriented conceptual models. The key change I have made is that I have excluded 'practical kinds' from this section, instead discussing them in the following section on normatively oriented concepts. I also give more room to the discussion of fuzzy kinds, as this is a complicated concept which will be important in later chapters. I will further explain the differences between the kinds at the start of each sub-section. Note that all structural models discussed necessarily assume realism about mental disorders[2] (Kendler, 2016). Finally, note that the use of Haslam's taxonomy brings with it a focus on the degree of kindship/homogeneity of the underlying causal structures of mental disorder. This is as opposed to demarcating different conceptual positions by the etiological domains they emphasize (e.g., mental disorders are genetic diseases, neurological conditions, social problems)[3]. Where relevant I therefore point out recognized conceptual positions that are not only committed to a particular degree of homogeneity, but also to the primacy of particular etiological domains (e.g., biological essentialism, biopsychosocial holism).

[2] 'Realism' refers to the view that there are ontic things in the world to which the label 'mental disorder' could refer, that these things, whatever form they take, are 'discovered' and exist independently of our attempts to classify them (i.e., they are not *entirely* socially constructed or pragmatic). I briefly discuss social constructionism and pragmatism in the following section on normatively oriented concepts. Socially constructed kinds could possibly be discussed in this section as, while they are constructed, they still have an ontic reality in the form of a pattern of behavior (Mallon, 2016); for example see the controversial socio-cognitive model of dissociative identity disorder (Gleaves, 1996). I cover social constructionist models in the normative section due to their association with anti-psychiatry.

[3] By discussing two separate ideas/dimensions in proximity I risk conflating them here. The idea of a continuum of homogeneity (simple/essentialist—complex/emergent) and the idea of a 'continuum' of etiological domain (biological-social) are in fact separate ideas that are often conflated (although it is interesting to consider if there is actually a possible relationship between these dimensions). Also note that the idea of particular mental disorders existing at *one place* on a organic-to-social continuum is a strongly criticized idea, mental disorders from schizophrenia to borderline personality are better seen as 'dappled' across this spectrum, each with mechanisms at a variety of scales (Kendler, 2012).

Non-kinds/Continua

Haslam (2002) begins his taxonomy with a category that captures those concepts in psychiatry that *do not* count as kinds, i.e., things that are completely continuous and are therefore *non-kinds* or *continua*. Such concepts are often referred to as dimensional. A good example of a non-kind is neuroticism. There is no non-arbitrary level of neuroticism at which someone counts as 'neurotic' or not, rather people can be more or less neurotic, with no clear 'tipping point' at which one can be labeled. Neuroticism therefore is a case of a pure continuum rather than a kind.

Most concepts utilized across psychology are continuous in a certain sense, and better modelled as dimensional rather than categorical (Haslam et al., 2012; Kotov et al., 2017). This also includes many diagnostic concepts, for example someone can be more or less depressed; depression comes in degrees. However, this level of continuity is subtly different to a non-kind where *no* meaningful point of demarcation or tipping point between members and non-members of the class is assumed to be present. There are few conceptual models of disorder that subscribe to this radical continuity, with most models assuming at least a fuzzy degree of categorical kindship across members of a class. The exceptions to this are some of the *practical kind* models which I will discuss in the section on normatively oriented concepts.

Natural/Essentialist Kinds

Haslam (2002) draws a distinction between *natural kinds* proper and *discrete kinds* (which I will discuss next). Within his taxonomy, natural kinds have a clear common causal structure; a single 'latent variable', or 'essence' underlying them. From philosophy, the classic example of natural kinds in this strict sense are atomic elements which are clearly defined by the number of protons present, for example, gold always has seventy-nine protons while helium always has two. When referring to this kind notion, I prefer to use the term *essentialist kinds*. The reasons for this choice of terminology are multiple. Firstly, my general use of the term 'natural kind' is a lot broader than Haslam's (2002) use. My use of 'natural kind'

refers to a kind concept that picks out something real as opposed to conventional, selecting out a class of things which share properties to the degree that labeling them can be useful for our scientific purposes (i.e., correct application of the label to a thing allows for inductive inference as to other properties that the labeled thing may hold). This conception therefore encompasses both strictly natural and discrete kinds in Haslam's terms[4] (and even many 'fuzzy' kinds). Secondly, there is a lot of controversy over what authors actually mean when the term 'natural kind' is used, with some uses signaling a restrictive essentialist concept as in Haslam's taxonomy, and others a more open concept like my general use of the term (Bird & Tobin, 2018). Finally, sometimes there can be difficulty with the use of the term *natural* kind regarding whether such a concept can encompass social or mental phenomena. Rightly or wrongly, one criterion often discussed concerning natural kindship is that of 'mind independence'[5] (Khalidi, 2013). This is seemingly due to a false dichotomy intuitively drawn between what is 'natural' versus 'human' and can produce some difficulties when studying mental and social phenomena such as mental disorders.

Current conceptual models that propose mental disorders to be essentialist kinds tend to be those that model mental disorders on physical disorders, so called *biological essentialism*. These approaches assume that there are yet to be discovered biological disease processes or abnormalities underlying mental disorders. When uncovered, such biological lesions will reveal that mental disorders are essentially physical disorders (presumably of the brain) that manifest mental and behavioral symptoms. The idea is that revealing these latent biological variables will allow for clear and etiopathologically valid categorization. A structural conceptualization such as this can be implicitly seen in explanatory theories such as the—now highly contested—serotonin hypothesis concerning

[4] My orientation here is parallel to a natural kind position argued for by Boyd (1991) and by Magnus (2014a, 2014b), whereby some, but not all, natural kinds are Mechanistic Property Clusters or MPCs (which will be discussed when covering fuzzy kinds).

[5] Khalidi (2013) offers a discussion of this issue, arguing for a shift away from mind independence as a criterion for natural kindship and toward consideration of whether a kind is categorized together based on causal relation/similarity versus categorized together as a matter of convention. Many social kinds (war, money, racism) can indeed be natural despite their mind dependence.

depression. This theory holds that depression is essentially a dysfunction in the serotonergic systems of the brain (Albert et al., 2012; Gardner & Boles, 2011). More explicitly, such essentialist conceptions can be seen in the work of authors like Insel and Cuthbert (2015), who—on the basis of the success of 'precision medicine' in areas such as oncology, where genotyping and targeting of specific cancer sub-types is becoming more common—argue for the need to make our diagnostic categories more precise. Up until this point Insel and Cuthbert's arguments represent a reasonably consensus view. The essentialist (and theory-reductionist[6]) step these authors take is their next one, where they argue that the only way to achieve such precision is through adopting a biologically focused model of psychiatry; a model in which mental disorders are simply brain disorders with behavioral, cognitive, and emotional symptoms. Implicit in this step is the idea that, when it comes to mental disorders, the brain is where the money is; that there are undiscovered neurological essences to what we label (wrongfully in their mind) *mental* disorders[7]. Notably, biomedical notions of mental disorder seem to be gaining in popularity, both within psychopathology and with lay people (Lebowitz & Appelbaum, 2019).

Biological essentialism is not the only kind of essentialist position one could take in regard to mental disorder. For example, psychoanalytic approaches to the explanation of mental disorder represent an essentialist approach, but with the dominant latent variable being some underlying psychological factor (a 'neurosis'), rooted in past experience. The neurosis here, is in effect acting as a psychological essence and could therefore be termed a form of *psychological essentialism*. To use a more mainstream example, *cognitive models* of psychopathology—those that hold mental disorder to boil down to errors or biases in thinking—can also be understood as examples of psychological essentialism. For example, think of therapists that utilize Cognitive Behavioral Therapy [CBT] with clear

[6] 'Theory-reductionism' is the view that the different domains of science can be reduced to the more 'fundamental' sciences, i.e., that psychology is applied biology, is applied chemistry, is applied physics, is applied math.

[7] Another component of their argument is the need to unclip research efforts from current diagnostic categories. This is a point I agree with and will be covered more in Chaps. 6 and 7 which are more focused on explanation.

emphasis on the cognitive over the behavioral. Such therapists see behavioral interventions only as a tool to shift problematic patterns in cognition (to use a common turn of phrase, they do CBT with a capital 'C' and a small 'b'). Such therapists are implicitly taking a psychological essentialist position. Beck and Bredemeier's (2016) unified cognitive model of depression is a good example of a theory that also falls under this conceptual position. For the most part however, the idea that mental disorders are essentialist kinds tends to co-occur with the idea that the essences in question lie within the brain.

Discrete Kinds

Haslam (2002) uses the term *discrete kinds* to distinguish things that feature clear membership conditions, but that—in contrast to essentialist kinds—are not defined by a single causal factor or essence. Instead, discrete kinds have complex underlying causal structures, but due to the dynamics of the causal structure in context they bifurcate into members and non-members of the kind. Thus, discrete kinds still produce a clear boundary with very few ambiguous cases. Haslam (2002) gives the example of melancholic depression. This is a diagnostic concept, present in the DSM-5 as a sub-type of depression, featuring dominant anhedonia and vegetative symptoms. Haslam cites taxometric evidence that melancholic depression is clearly categorical in nature but notes that this does not necessarily imply the existence of an underlying essence, instead arguing that this may be an example of a discrete kind. This is unfortunately the only diagnostic example Haslam mentions, and the concept of a discrete kind has not, to my knowledge, been picked up by other authors. It is also not clear what categorically separates a discrete kind from an essentialist kind with a particularly complex essence (or alternatively a reasonably homogenous Mechanistic property Cluster [MPC] kind, discussed later). I mention it here as it remains an interesting idea, and to be true to Haslam's taxonomy.

Fuzzy Kinds

Fuzzy kinds are real and objective categories that exist in nature and are thereby very different to non-kinds/continua. However, the point of demarcation between what is and isn't counted as a token of the kind is blurry, or rather 'fuzzy'. Rather than a single tipping point, or 'joint' in nature, that separates members of a fuzzy kind and non-members, there is a *zone of ambiguity*; a gentle curve of demarcation rather than a defined point. Fuzzy kinds then, represent "real, discoverable discontinuities" in the world (Haslam, 2002, p. 208), and are therefore not non-kinds. Fuzzy kinds however, admit to intermediate or borderline cases. As an example, the concept of a 'teddy bear' is meaningful. There are clear cases of objects that are teddy bears such as Mr. Bean's 'Teddy', and there are clear cases of objects that are not teddy bears such as my foot. However, there are also in-between cases such as a soft-toy Koala. Koalas are not proper bears yet are sometimes referred to as such. If I showed a soft-toy Koala to a selection of people, some would categorize it as a teddy bear and some would not. But this does not mean that there is no meaningful difference between teddy bears and other objects. Teddy bears can therefore be said to be fuzzy, not just because of their texture, but because they admit ambiguous membership. It is important to note here that it is not the fact that people have difficulty identifying the members of a kind in itself that makes the kind fuzzy, but rather its *actual* in-between status. I am talking here about ontological fuzziness rather than epistemological fuzziness.

A concept being fuzzy suggests that the causal structures underlying the phenomena referenced by the concept are reasonably complex (Haslam, 2002). If some phenomenon is supported by a single causal factor or 'essence' then its identity tends to be clear-cut (i.e., discrete or essential kinds). For example, a given atom either is an example of gold or is not, depending on a single factor (i.e., the number of protons present). For fuzzy kinds, the existence of borderline cases suggests that more than one 'defining' factor is at play. For example, what counts as a teddy bear is dependent on not just one factor but many: does it have a snout, is it cute, is it squishy, does it have round ears? While 'teddy bear' is still

a meaningful category, soft-toy Koalas also exist with enough of these properties to be meaningfully akin to teddy bears, but to not quite be 'proper' teddy bears. If a mental disorder (e.g., depression) differs meaningfully from both normality and other mental disorders (e.g., anxiety), yet there are messy in-between cases (e.g., anxious-depression, or people who are just a little bit depressed) then the fuzzy kind label may be appropriate[8]. When considering mental disorders this idea seems appealing given that such a messy reality is exactly what we find; i.e., high rates of apparent artefactual co-morbidity and diagnostic ambiguity (Andrews et al., 2002; Lilienfeld & Treadway, 2016).

Given this association with complexity, a position intuitively associated with the idea of a fuzzy kind is the biopsychosocial movement (Bolton & Gillett, 2019; Borrell-Carrió et al., 2004; Engel, 1977). This movement is a broad approach to health and wellbeing, born in reaction to the growing biological reductionism of medicine in the middle of the twentieth century. Originally proposed by Engel (1977), the biopsychosocial movement emphasizes the need for holism, and the need to recognize that mental disorders (and physical disorders) generally arise from, or are influenced by, complex non-linear interactions between multiple factors, and that these factors range across different scales of analysis (from molecular to socio-cultural). The movement also emphasizes a congruent focus on the person above and beyond their disease and genuine care and concern during patient-professional interaction. The biopsychosocial movement then, is anti-reductionistic and encourages broad and agentic considerations. Considering the structure of mental disorder through the biopsychosocial lens may therefore bring certain ethical advantages, perhaps producing a more compassionate psychiatry that is more mindful of the person-as-a-whole, rather than simply the mechanics of their disease processes. Despite the value and importance of this approach however, considering the biopsychosocial movement as a structural model of mental disorder is currently problematic. The only structural commitment this approach really makes is to the general facts that 1) factors across the different scales of analysis are likely relevant, and that

[8] The difficulty here is ruling out other possibilities such as anxious-depression being something different all together, or depression simply being radically continuous (i.e., a non-kind).

2) these factors may interact in complex ways. This is in no doubt true, certainly there is a need to recognize the complexity at hand. The problem here is that, in making no firm commitment to the nature of these interactions above and beyond their complexity, the biopsychosocial movement offers very little guidance for attempts at classification, explanation or treatment, other than to 'look at *all* the things' (Ghaemi, 2009). An exception to this is Bolton and Gillett's biopsychosocial model of health and disease (2019), which seeks to further specify how biological, psychological, and social causes can exist and interact to shape human functioning or ill-health. However, as it stands this model does not present a fleshed-out conception of what it takes mental disorder to be. For further discussion of this model and comparison to the model expressed in this book, see Aftab and Nielsen (2021). In summary, despite how often we may hear it spoken of, it is not clear if there is really such a thing as 'the biopsychosocial model of mental disorder'. Such references are better thought of simply as a call to widen our perspective and consider the complex reality of the phenomena we call mental disorders. How this is to be done and what it means for our concept of mental disorder continues to be under specified. The conceptual product of this book represents one possible step forward.

One structural model of mental disorder that puts the fuzzy kind idea to work with greater specificity is the view that mental disorders are *Mechanistic Property Clusters* or 'MPC kinds'[9]. This model was applied to mental disorder by Kendler, Zachar and Craver (2011), building upon the philosophical work of Boyd (1991). MPC kinds are constituted by clusters of properties held together or caused by a mutually reinforcing *network of mechanisms*. For example, the kind 'sheep', in being a biological species, is often assumed to be a meaningful and categorical kind. But what makes a sheep a sheep? Well, for one, sheep are wooly, and have four legs. One problem with this answer is that if I have a three-legged sheep and shave it bare, it still seems like this poor creature, no matter its condition, is still a sheep in a meaningful sense. The properties of being wooly and having four legs then, don't seem to be the 'essence' of what it means

[9] Following Boyd (1991), the philosophical terminology is homeostatic property cluster (HPC), but here I use Kendler et al.'s label (MPCs) as this is conventional in the psychopathology literature.

to be a sheep. Boyd's answer to this problem was to change tack; not to look for the 'essence' of the sheep—the 'necessary and sufficient conditions' that define a sheep—but rather to propose that what makes a sheep a sheep is the fact that all sheep share an evolutionary lineage, representing overlap in the causal structures that led to any one sheep's existence. A slightly different example, given by Magnus (2012, 2014a, 2014b), would be pools of water. Pools of water do not necessarily share a causal lineage, e.g., a pool of water may form here on earth, as well as on a completely different planet. However, a very similar causal process underlies their formation (e.g., an affinity between H_2O molecules due to their dipole structure, processes of condensation, some process of containment). The mechanism (or set of mechanisms) that leads to the formation of such pools is the same or features significant similarity. Cases such as these are referred to as *type-causal* MPCs because the underlying causal pattern occurs multiple times; it is a 'type' of causal pattern that leads to members of the kind sharing properties. The previous example of a biological taxon (a sheep) is referred to as a *token-causal* MPC because there is a single causal cascade (in this case an evolutionary history) shared by all members and leading to their overlapping properties (Magnus, 2012, 2014a, 2014b).

On this MPC view then, mental disorders are fuzzy sets of properties (i.e., properties of people, presumably signs and symptoms) and a network of causal mechanisms that holds these properties together in a wider possibility space (Kendler et al., 2011). This causal network may consist of the symptoms themselves, as well as underlying states and processes. Importantly, the factors playing a role in this causal network may cross boundaries of scale—evolutionary, physiological, psychological, social, etc.—with no *a priori* privilege given (Kendler et al., 2011). Kendler et al. also highlight the flexibility of this position, leaving room for more or less homogenous MPC kinds:

> "In the limit of simplicity and determinacy, MPCs tend toward essences, with properties and mechanisms common to all and only members of the kind. At the other extreme, cluster kinds tend toward constructed or practical kinds, where the boundaries of categories are often defined with

respect to the classificatory practices of some interested party." (Kendler et al., 2011, p. 1146)

Note that more homogenous MPC kinds would likely be captured by Haslam's concept of a discrete kind (Haslam, 2002). The MPC concept is therefore very flexible in its reference.

The MPC view is currently popular when considering the structural nature of mental disorder. It offers a possible reason why no dominating causal factors or clearly defined causal networks underlying any modern mental disorders have been found. Mirroring the study of physical disorder and disease, it has been historically assumed that the discovery of such 'essences' is the ultimate goal of psychopathology research. The MPC view and other such 'fuzzy' models suggest that maybe the reason we are failing to find such essences is that they simply may not exist. Fuzzy models allow us to consider this without giving up on kindship altogether, instead suggesting that mental disorders may be different to many physical disorders, not just because they concern behavior and 'the mind', but because of their complexity. In other words, that they may be heterogeneous categories with no definable essence but that meaningful and useful patterns can still be found. The major issue facing the MPC and other fuzzy views is parallel to that faced by the biopsychosocial approach. If we recognize this degree of complexity, where do we start? Will some scales of analysis be more useful than others? Which mechanisms should be focused on? Despite being more specified than the biopsychosocial approach, the MPC view still does not offer much *guidance* in this respect. As will be seen in later chapters, the concept of mental disorder developed in this book is structurally very similar to an MPC view, while placing issues of complexity and normativity much more in the foreground. The perspective developed attempts to address this issue with guidance, not by prioritizing any scale of analysis *a priori*, but through consideration of the normative dimension of mental disorder and its intersection with the structural.

Before moving on, one currently popular idea that attempts to put the notion of an MPC to work is that of the Symptom Network Model of mental disorders (SNWM). The SNWM approach assumes that many mental disorders are best understood as *networks of symptoms,* which can

be statistically modeled. Symptoms within these networks are hypothesized to cause each other, with recursive feedback resulting in the relative stability of the network over time (Borsboom et al., 2018; Cramer et al., 2010; McNally, 2016). Recent years have seen a significant increase in SNWM research, with many examples being used successfully in empirical studies (Fried et al., 2017). This approach is presented by its proponents as a radically new way of conceptualizing psychopathology; as a model of mental disorder that rejects the search for underlying cause/s of psychopathology, i.e., the essentialist or latent variable model (Borsboom et al., 2018). However, there is considerable debate over whether this is the case, or whether SNWM is simply a new and promising measurement tool that tracks statistical relationships between symptoms (Bringmann & Eronen, 2018; Epskamp et al., 2017; Fried & Cramer, 2017; Haig & Vertue, 2010; Humphry & McGrane, 2010; Molenaar, 2010; T. Ward & Fischer, 2019). These concerns seem warranted, especially given that, conceptually, the SNWM seems very much like an MPC model that restricts itself to the level/scale of signs and symptoms. I will now shift to overviewing a selection of normative conceptual models.

2.2 Normatively Oriented Concepts

The conceptual models covered in this section focus on *why* something should be considered a mental disorder and are mostly not covered by Haslam's (2002) taxonomy as this was oriented predominantly towards structural concepts. Another way to think of these normatively oriented models is that they try to provide understandings of mental disorder with 'conceptual validity' (Wakefield, 2014b). Conceptual validity refers to the ability of a concept or framework to correctly distinguish between 'normal' functioning on one side and *dis*order, *dys*function, or pathology, on the other[10]. The use of 'correctly' here comes from Wakefield's definition and I take it to be synonymous with 'well-reasoned/justified'. To label someone's thoughts and behavior's as 'broken' or 'bad' in anyway invites stigma and has a huge impact on people's lives and

[10] This is not to pre-suppose a categorical difference. In fact, the divide seems likely to be continuous.

self-understandings. As the arbiters of such labels, psychiatry and clinical psychology need explicit ethical guidance, a necessary part of which is a clear understanding of what counts as mental disorder and what doesn't. For this and many other reasons[11], the conceptual pluralism prescribed when discussing the structural nature of mental disorder can seem less applicable when discussing the normative nature of mental disorder. By this I mean that if we are going to label someone as 'dis'-anything, we ought to be able to provide good reasons for doing so, and we ought to seek to be correct in making this distinction (whatever that may turn out to mean).

Even if there is 'one correct' way to understand the normative nature of mental disorders, conceptual pluralism may still be the best way forward given the complexity at hand. Fulford and Colombo (2004) give the analogy of a complex mural on the wall in a dark room, with the mural representing the 'correct' concept of mental disorder. There are six people in the room and each one is given a flashlight. The beam of each flashlight, through taking a different perspective, reveals a different facet of the mural. With enough flashlights we may hope to perceive the entire mural, but each individual flashlight likely has value in this task. I would add to this however, that given the ethical weight of our task alluded to above, critical care is required; we need to make sure that someone isn't pointing their flashlight at the wrong wall.

In what follows I overview some of the conceptual models offered as justification for use of a mental disorder label, or those that attempt to offer guidance as to what should count as mental disorder. It is not my intention to cover all normatively oriented models available as this is not a comprehensive review. For example, I do not cover models that see mental disorder as an entirely moral or religious concept, nor do I cover those reason-based models that see mental disorder as defined in some way by irrationality[12] (Graham, 2013; Megone, 1998). I also do not cover

[11] See Telles-Correia, Saraiva, and Gonçalves (2018) and Wakefield (1992a, 2007) for discussions surrounding the need for a precise definition. Contrariwise see Bingham and Banner (2014).

[12] Briefly, my key issue with these reason-based-models is that they commit to an understanding of the 'rational man' as an ideal from which to contrast disorder. This seems very culturally specific, and it seems there is a risk that this may illegitimately pathologize cultural variance. Megone's (1998) model in particular is also reliant on unfavorable ideas such as Aristotelian teleology (final causes as a function of essence), and human exceptionalism (the idea of a unique and vital difference between humans and animals).

Roschian models that hold mental disorder to be a multi-dimensional cluster concept, centered around a prototype rather than necessary and sufficient conditions[13] (Lilienfeld & Marino, 1995; Walker & Rogers, 2018). I focus instead on families of conceptual models that are currently or recently popular, and that together offer the reader a general overview of the conceptual landscape. I first briefly cover anti-psychiatric or *deflationary* positions as these historically provided the impetus for the development of the other models in this section. I then cover *statistical functionalism*, followed by *evolutionary functionalism*. I then discuss *evaluative* concepts, and finally *practical kinds*. Note that some of these normatively oriented models draw from the philosophy of medicine, and are often concerned with disorder, dysfunction, or disease in general rather than just mental disorder. Because of this I occasionally draw on examples across both physical and psychiatric medicine.

Anti-psychiatric/Deflationary Positions

In overviewing understandings of what makes mental disorder 'disordered', it would be remiss to not highlight those views that hold the label of disorder to be unjustified and/or unethical. Because of their use by persons and groups opposed to the institution of psychiatry through the latter half of the twentieth century, these positions are often referred to as *anti-psychiatric*. However, 'anti-psychiatry' is quite a loaded term, and it is important to distinguish between opposition to psychiatry as a whole, and principled disagreement with the concept of mental disorder. For these reasons it may be better to refer to these positions as *deflationary*. These deflationary positions are responsible for much of the debate concerning the normative justification for the mental disorder label as they represent the null hypothesis: that in important ways the label 'mental disorder' fails to refer to anything in nature. To be clear, what is 'deflated' within such perspectives is the notion of mental disorder as a real/

[13] Briefly the issue with these Roschian/Wittgensteinian models is that they are overly flexible, thereby providing very little specificity or guidance. This is a similar weakness to the pragmatic concepts that I will discuss. I will briefly return to Roschian models when discussing the work of de Haan in later chapters.

natural/worthwhile concept, not our notion of truth itself. This is important to clarify because I am borrowing this term from philosophy where it is often used in this slightly grander way.

The psychiatrist and philosopher Thomas Szasz is responsible for the most famous of these deflationary positions (Szasz, 1960). The core of Szasz's position is that real illness or disorder is necessarily a bodily phenomenon. If this is assumed, then the category 'mental disorder' seems problematic. What we refer to as mental disorders will either turn out to have a physiological cause—and thus be disorders of the brain or body—or they will turn out to have no basis in the body, and therefore not qualify as genuine instances of illness/disorder. For Szasz then, 'mental' disorder is an impossibility and our use of the term must be a 'myth'. While, in public discussion, Szasz is often implied to be some sort of radical social constructionist, his issue with the concept of mental disorder actually stems from a position of biological disease realism. Szasz's use of the word 'myth' is very intentional and has a double meaning. On one side he is referring to the apparent impossibility of *mental* disorder (as explained), and on the other he is speculating that we use the notion of mental illness/disorder to distance ourselves from the harsh realities of our society. The idea here is that the labeling of genuine but normal 'problems in living' as medical issues, and thereby as uncontrollable deviances from the norm, allows us to believe that the society we have constructed is kinder than it really is.

Another famous deflationary position is that of the philosopher Michel Foucault (2003/1961). Foucault's study of the development of the concept of madness in Europe lead him to the conclusion that the modern label of mental disorder is primarily a label for social deviance, and a tool for controlling those whom society disvalues. While we have come to see a categorical difference between those that suffer mental disorder and those that do not, Foucault's analysis suggests that such objectification of these differences has in part arisen because of the way we have historically separated those viewed as 'mad'—alongside political dissidents and criminals—from the rest of society through the practice of institutionalization.

While neither of these views is currently popular in the mainstream psychopathology literature[14], it is somewhat unfair to say they have failed simply because the institution of psychiatry still stands. Many of the normatively oriented concepts I will explore in this section were conceived of as responses to the concerns of these deflationary positions. These deflationary views helped to highlight why the sciences of psychopathology need a strong conceptual base, including a principled reason to demarcate the disordered from the benign. Without such a reason, those of us currently working with mental health diagnoses are practicing on the basis of a non-natural and/or unjustified conceptual framework. In other words, these deflationary positions demonstrate that without a convincing positive understanding of what mental disorders are, psychologists and psychiatrists potentially lack sufficient ethical justification for their practice.

Statistical Functionalism

One common understanding of what counts as mental disorder is that it has something to do with deviation from the statistical norm. This view is apparent when we use the term 'abnormal psychology' as synonymous with 'dysfunctional' or 'disordered' psychology. Unfortunately, by itself such a view does not get us very far. This is because it cannot distinguish between 'good' and 'bad' forms of abnormality, e.g., being abnormally good at mathematics or abnormally good at giving speeches does not seem to count as a mental disorder. For this reason, conceptual models of what counts as mental disorder based around typicality have to further specify what kind of abnormalities or typicalities are relevant to disorder and why. *Functionalism* of some stripe or another often fills this position and will be discussed in the current section. In the following sections I will also discuss models that use *values* or *pragmatics* to fill this space.

The most well-known position of the *statistical functionalist* variety is the Bio-Statistical Theory of Health (BST) developed by Christopher

[14] Such views are expressed elsewhere in academia. One notable example from within psychopathology is the Power Threat Meaning Framework (Johnstone et al., 2018) which takes a similar deflationary perspective on mental disorder.

Boorse (1975, 1977, 2014). This is a conceptual model of health and 'disease' in general but can be used to inform a view of mental disorder. Under the BST, a disease is an *internal* state that impairs health by bringing about reduced efficiency of so-called *normal functions* relative to a *reference class*. Reference classes are members of the same species, sex, and age group[15], thus making normal functions effectively things that others like you can do that contribute to survival or reproduction (Boorse, 1977; Nordenfelt, 2007). If you go bald at the age of 13 while other teenaged humans of your sex do not, then this would count as disease under the BST (so long as hair can be assumed to serve a biological function such as keeping the sun off your head and/or helping to attract mates). The general gist of the BST is that "diseases are internal states that interfere with functions in the species design" (Boorse, 1977, p. 558). Boorse developed this concept to be explicitly value-free; as a concept that sees diseases as empirical facts rather than value-based distinctions[16]. For Boorse then, 'disease' is a theoretical/technical concept and should be distinguished from a more general sense of 'illness' which he does see as value-laden[17]. In other writings he has used the alternative term 'pathology' to refer to disease/disorder (Wakefield, 2014a).

While he does not make it a focus of the theory it is important to note that Boorse (1977) limits the kinds of things that can count as diseases under the BST to inefficiencies/difficulties with *physiological* functions. Thus, I refer to the BST as an example of *physiological statistical functionalism.* For example, someone with abnormally high blood pressure

[15] Boorse indicates that ethnicity should sometime be considered insofar as the differences in functional design across ethnic groups are relevant (Boorse, 1977).

[16] Both Kingma (2007) and Varga (2011) counter Boorse's claim that the BST is in fact value-free by pointing that the use of sex, age, and ethnicity to define the reference class is not itself based on empirical fact but on intuition, and thereby is likely importing value into the process. For example, one common criticism of the BST is that is seems to define homosexuality as a disease on the basis of its statistical deviance and the resulting lower rates of reproduction. Kingma points out that the addition of sexual orientation to the defining attribute of the reference classes would change this entirely. Those that include sexual orientation in the reference class selection would view homosexuality as entirely normal, and those that do not would view it as a disease. Really the BST is only potentially value-free post the selection of a reference class.

[17] Fulford (2001) criticizes the BST, for one arguing that, even if it does produce an internally consistent value-free concept of disease it fails to recognize that the term 'disease' is *used* evaluatively, even by Boorse himself.

relative to a standard developed by measuring the blood pressure of others of the same sex and age could be said to have a disease (hypertension) under the BST, whereas someone with abnormally low empathy would not *necessarily* be seen to have a disease under the BST. In order to be seen as diseases under the BST an assumption has to be made that abnormal mental conditions are causally supported by an abnormal physiological structure (usually in the brain). On this view then, mental disorders are not 'mental diseases' but rather physiological diseases, not yet understood, that happen to feature mental and behavioral outcomes (hence why they are sometimes referred to as 'disease models'). The BST, and other (*physiological*) *statistical functionalist* views—e.g., Reitschel (2014) and the RDoC movement, see Insel et al. (2010) and Nielsen (2020) for further discussion—are typically associated with a clearly categorical or even essentialist structural view, whereby mental disorders are assumed to have yet to be discovered dominant causal factors or essences. It is this exclusion of the possibility of independent mental dysfunction/disorder (mental difficulties without a physiological abnormality as a basis) that opens such views to charges of reductionism.

Not all views that could be labeled as varieties of statistical functionalism are restricted to physiological deviations. For example, Bergner (1997, 2004)—continuing the original work of Ossorio (1985)—proposes a *disability concept* of mental disorder[18]. A key part of their definition is that mental disorder involves significant restriction in a person's ability to engage in deliberate behaviors that that they *ought* to be able to engage in. Regarding this use of 'ought', Bergner (1997) explains that 1) this is purposefully ambiguous in order to accommodate clinical judgement, but also that 2) the idea is that the behaviors one 'ought' to be able to engage in are specified in a sense that is "highly developmental and highly contextual" (p. 240). The essence of what Bergner is claiming seems to be that mental disorder concerns *deliberate behaviors that others can typically perform but that the sufferer cannot*, while excluding any such restrictions on behavior that can be explained in reference to contextual factors (e.g., age, culture, immigrant status, physical environment).

[18] For further (empirical) support of this disability view see Bergner and Bunford (2017), for a critique see Wakefield (1997b).

Direct parallels are clear here to the BST and the idea of relativizing disease to a reference class (although the 'reference class' in this model is much more specific). It is for this reason that I consider Bergner to be proposing a form of *behavioral statistical functionalism*[19].

The key difficulty with statistical functionalism applied to mental disorder can be summed up by the question 'why should being normal matter?' In both varieties of statistical functionalism espoused here, the typicality of some state or action is used to infer that this state is the way that our bodies *ought* to be, or that this action is the way we *ought* to act. Problematically, the link from the 'is' of the statistical norm, to the 'ought' of claiming that a biological state of affairs is *better or worse* than another—what I will refer to as *the normative gap*[20]—seems reasonably thin and unclear. For Bergner, this normative gap goes virtually unrecognized, while for Boorse, the (tentative) link has to do with the normal state representing species design/baseline health: "…the normal is the natural" (Boorse, 1977, p. 555). This does not seem like a big problem when considering physical disorders because at this level what is 'good' versus 'not good' is generally quite clear. As a simple example, most people agree that a heart attack is just plain bad. When speaking of behavior, thought, and emotion however, there is not always one right way to function. Cultural variation is a good example of this. In explicitly evaluative words unavailable to these authors, there is a diversity of legitimate values in the psychological realm that is not present in the physiological (Fulford, 2001). For example, statistical functionalism is often argued to erroneously capture homosexuality under the banner of mental disorder given

[19] This label is by no means a perfect fit, for example, I am not sure whether Bergner and Ossorio would agree with the use of 'functionalism' here. I could label it *contextualized behavioral statistical-ism* or something similar. However, in so far as behaviors one 'ought' to be able to do can be referred to as functions the label used seems acceptable. The current label also highlights important similarities across divergent views; just as the BST contrasts the individual's physiology against a reference class, this view contrasts the individual's capacities against similar others in similar contexts. Further, my sense is that Bergner would disagree that context can ever really be sufficiently captured by use of a reference class nor any statistical means, and that therefore clinical judgement will always be required in diagnosis. He is probably right, but how do we go beyond the statistics while maintaining clarity, rigor, and a common language? This is another reason why a richer conceptual model/framework is required.

[20] This normative gap is of course nothing new—it is simply the domain-local version of Hume's 'ought-from-an-is' problem (Hume, 1978/1738)

it is statistically deviant and results in less offspring. This all suggests very strongly that the use of statistical normality, even if applicable to the definition of dysfunctional physiology, is not applicable in the definition of dysfunctional psychology.

At this impasse there are two options standardly recognized: 1) move away from statistical normality and attempt to plug the normative gap with a better story of how functions can naturally arise. I will explore this option in the next section on evolutionary functionalism. Alternatively, 2) recognize that values do play a role in defining mental disorder, as explored in the following section of value-laden concepts. At the end of this chapter I will suggest that there is another, less recognized, option available to us.

Evolutionary Functionalism

Under evolutionary functionalism, what is disordered is that which fails to perform its evolved function. Rather than deriving ideas of function from that which is statistically normal as above however, this position holds that functions are capacities that parts of the body or mind have, *due to their being selected for across the evolution of the organism*. Evolutionary functionalism then, attempts to plug the normative gap using evolutionary theory. The most well-known conceptual model of this type is Jerome Wakefield's harmful dysfunction (HD) analysis, or more specifically the 'dysfunction' component of this model (1992b, 2007, 2014a). The HD analysis is a two-part model. It holds that mental disorder is 'dysfunction' plus 'harm'. In this section I will discuss the dysfunction component of Wakefield's HD analysis as it is a good example of the pitfalls that arise for the evolutionary functionalist, despite the positions intuitive appeal (I will explore the harm component in the value-laden concepts section).

On the HD view then, dysfunction is a necessary but not sufficient component of disorder (Wakefield, 1992b, 2007, 2014a). This is contrary to the BST in which dysfunction by itself is sufficient for attributing disorder (or rather disease/pathology in BST terminology). The dysfunction component of the HD analysis is defined evolutionarily, requiring that mental disorders include a part or behavior of the organism that

doesn't do what it has been selected to do by the evolutionary process: "A 'dysfunction' exists when an internal mechanism is unable to perform one of its natural functions" (Wakefield, 2007, p. 152). Comparing to the BST once again, the key difference here is the use of the term '*natural* function' as opposed to '*normal* function'. The former are products of random mutation and natural selection across time, and the latter are statistically derived (Boorse, 1977; Wakefield, 1992b). Specific to mental disorder, Wakefield describes the internal mechanisms concerned as 'mental mechanisms'; as evolved tendencies and capacities in behavior, motivation, cognition, perception, or emotion, that have been selected for due to their serving the survival and reproduction of the species and their ancestors[21]. Mental dysfunction within the HD analysis then, is when evolved mental mechanisms don't function as designed by natural selection (with *disorder* being ascribed when the dysfunction results in socio-culturally defined harm). For example, genuine cases of depression, for Wakefield, represent a malfunction in the psychological mechanisms evolved to regulate emotion, leading to a set of behaviors and experiences society deems harmful (Wakefield, 1997a). Hence, Wakefield's well-known criticism of the removal of the bereavement exclusion in the DSM-5 depression criteria: grief following bereavement is not a dysfunction, but rather an evolved mechanism acting as it should (Wakefield, 2013).

Despite the popularity of the HD analysis, many critiques have been made of this approach to understanding dysfunction. Unfortunately these critiques tend to be quite complex (perhaps supporting the HD analysis' continued popularity). Due to this complexity I do not have room to fully unpack these critiques here. For those interested a fuller summary of these critiques can be found in Chap. 2 of my PhD thesis (Nielsen, 2020). To offer the briefest of summaries, there are three different modes of critique launched at the notion of dysfunction within the HD analysis. The first simply attempts to generate counterexamples to the HD notion of dysfunction. Many such examples have been argued, such as cases of depression or conduct disorder where difficulties appear

[21] This use of 'mechanism' is again bio-functional, a common intent. Broader definitions of mechanism are in use so it is important to specify (Andersen, 2014a, 2014b; Garson, 2017; Illari & Glennan, 2017).

to arise not from any dysfunctional mechanism but by normal processes of mood regulation or learning occurring in a pathogenic environment (Lilienfeld & Marino, 1995; Murphy & Woolfolk, 2000; Nesse, 2001; Varga, 2011). Unfortunately this mode of critique has tended to devolve into complex backwards and forwards arguments between Wakefield and his critics, where one gets the sense that both sides think they have bested the other.

The second mode of critique is targeted at Wakefield's use of evolutionary theory within the HD analysis. These critiques target keystone claims within Wakefield's framework, namely that evolution can be said to provide 'designs' or attributes with 'purposes', and moreover that we can confidently claim to know about such designs/purposes. These critiques argue that deviation from an organism's apparent 'design', as well as large degrees of contingency and randomness, are such vital components of the evolutionary engine that the human notion of 'design' seems to be somewhat of an inappropriate analogy. Further, even if such designs or purposes exist, it is doubtful that we could ever be confident in our knowledge of them given the complex and historical nature of even the most basic evolutionary adaptions (Lilienfeld & Marino, 1995; Murphy & Woolfolk, 2000; Sadler, 1999; Sadler & Agich, 1995).

Finally, the third mode of critique attempts to undercut the claim that HD-style dysfunction is value-free (Murphy & Woolfolk, 2000; Sadler & Agich, 1995). These critiques argue that, because of the inherent difficulties with figuring out something's evolutionary function, values will always permeate in the actual application of the HD analysis. Given our current (and likely future) inability to confidently know the evolutionary functions of a behavior, the HD notion of dysfunction can offer very little guidance in practice. Worse, it may encourage us to generate evolutionary stories that implicitly align with our values and biases. As an example, homosexuality could conceivably be considered a dysfunction in Wakefield's sense, given it presumably leads to lower reproductive success. While there are evolutionary theories as to the possible adaptive function of homosexuality, these are (and likely will continue to be) speculative and contested. The HD notion of dysfunction therefore offers unacceptably little guidance as to whether homosexuality should be considered a dysfunction.

Before moving on, it is useful to consider an evolutionary functionalist position different to that of HD-style dysfunction; that of Troisi and Macguire (2002). I mention this here because, in generating their own position of 'Darwinian Psychiatry', these authors demonstrate awareness of some of the mentioned epistemological issues with evolutionary functionalism that hamper Wakefield's analysis of dysfunction. In particular, Troisi and Macguire point out the vital role of phenotypic variability in the evolutionary process, as well as that the evolutionary fitness of a behavior is highly contingent and nigh on impossible to measure directly. In doing so they acknowledge our epistemological limits concerning the evolved functionality of a behavior. As such they suggest a need to measure *functional consequences in the individual* rather than inferring whether they were adaptive for the species in the ancestral context. The problem with this of course is that 'functional consequences' in a Darwinian frame boil down to the number and quality of the offspring produced. Due to obvious time constraints we can't sit around and wait while counting the number of off-spring someone has and/or how long they live. Troisi and Macguire' solution is to suggest the use of 'the achievement of short-term biological goals' as a proxy measurement for evolutionary success. 'Darwinian Psychiatry' then is a much more successful but much less ambitious variation of evolutionary functionalism in comparison to the HD analysis. More importantly for the current discussion however, the limitations these authors place on themselves stem directly from their understanding of the messy realities of evolution. These limitations highlight nicely where Wakefield's concept of dysfunction arguably oversteps what evolutionary theory can truly provide.

Evaluative Concepts

The normative conceptual models explored so far have all been attempts at *naturalizing* mental disorder; of limiting the normative scope of the concept to exclude values, especially individual and culturally specific

values[22]. Many authors argue however, that attempting to do so is futile and we should instead be open and honest about the role of values in psychiatric diagnosis (Doust et al., 2017; Fulford, 2002; Sadler & Agich, 1995; Stier, 2013). Metaphorically, these positions are bridging the normative gap with values, sourcing their claims about the 'goodness' or 'badness' of human thought and behavior from socio-cultural value structures. Moreover, those who hold this position tend to claim that everyone else is doing this too, only without realizing it. Positions that recognize the role of values in this way are broadly known as *evaluative* in nature. In contrast, the collective term for those who attempt to naturalize mental disorder—to see it as purely factual—are most typically known as *descriptivists* (Fulford, 2002). In line with Zachar and Kendler (2007) however, I will refer to this position as *objectivism* in order to avoid using multiple senses of 'descriptivist' across this project.

Generally speaking, evaluativists are motivated by two observations. The first of these observations is that values are almost certainly playing a role in the conception and application of current diagnostic concepts (Foucault, 2003; Sadler, 2005; Stier, 2013; Szasz, 1960). If this is true, this means that when a clinician or psychiatrist makes a diagnosis, there seems to be a very real sense in which they are evaluating the client rather than simply describing their state. Objectivists find this conclusion unsettling, preferring that diagnosis be a purely factual matter (for example see; Hucklenbroich, 2014). A workable objectivist rebuttal here is that evidencing the value-laden nature of current concepts and diagnostic practice speaks only to an understanding of concepts and practice *as they are*, not necessarily *as they should be* (Muders, 2014). This thereby leaves room for the possibility that, despite the role of values in current diagnostic concepts, there is a way to consider them as wholly objective and that perhaps such a way is preferable.

The second observation that often motivates evaluativism is simply that popular objectivist approaches, such as the two brands of

[22] The popularity of such naturalized value-free models may well be a reaction to the arguments of the anti-psychiatry movement who questioned the concept of mental disorder predominantly on the basis of its evaluative (and therefore on their view non-scientific) conceptual nature (Varga, 2011).

functionalism explored above, seem to fail to distinguish between disorder and non-disorder effectively. For example, Doust et al. (2017) explore three examples of conventionally accepted medical disorders and demonstrate that functionalism offers very little guidance as to where the boundaries of disorder should be placed. Instead, they propose, the answer to this question seems to revolve around the values at play. Therefore, they argue that our conceptual models should openly recognize the role of values in demarcating disorder. If they do not do so, we meet the same problem we saw with the HD notion of dysfunction where values may creep in unannounced and therefore unconsidered. Problematically however, Doust et al. offer no framework for how this recognition of the role of values could be achieved.

There are generally three different evaluative stances, taken in response to the acceptance of these observations, as to what a concept of mental disorder should be. I refer to these stances as: *weak-evaluativism*, *strong-evaluativism*, and *anti-psychiatric evaluativism*.

Weak-evaluativism simply recognizes that terms like dysfunction and disorder are evaluative *in a limited sense*. Specifically, weak-evaluativism does not prescribe the inclusion of socio-culturally and individually specific values in consideration of what counts as disorder. According to the weak-evaluativist then, cases where socio-cultural values are playing a role in diagnosis—e.g., see Stier (2013)—are in error. Under weak evaluativism, the values at play are assumed to be universal and therefore not particularly contentious. This brand of evaluativism seems potentially workable for bio-medical disorders where values are relatively agreed upon—e.g., it doesn't seem contentious to say that brain tumors are bad—but seems much less workable in the domain of mental disorder where values are exponentially more diverse (Fulford, 2002).

Strong-evaluativism, in contrast to the weak form, accepts that socio-cultural and individual values should and do play a role in demarcating disorder. The immediate problem with this position however, is that it introduces a high degree of relativism (Jefferson, 2014). This is where what counts as disorder changes across cultures and time periods, dependent on the local value set. For example, under a strong-evaluativism, the labeling of homosexuality as disordered within the bounds of a conservative culture seems concerningly uncontestable. This relativism also

opens-up boundary issues, i.e., how do we know whose values to use, and where does one culture stop and another start? It is potentially due to these issues of relativism that very few strongly evaluativist concepts have been proposed as formal conceptual models of mental disorder.

Finally, the third evaluativist position that can be taken is anti-psychiatric evaluativism. This position holds that concepts of mental disorder are so value-laden that they do not refer to anything 'real', that they are ethically unacceptable, and that we should therefore discontinue their use. Foucault's (2003/1961) position mentioned in the deflationary section would be an example of this kind of evaluativism.

One unique approach to strong-evaluativism that seems to successfully contain the threat of relativism is the HD analysis (Wakefield, 1992b, 2007, 2014a). By specifying that both harm and dysfunction are necessary for an attribution of disorder, but that neither is individually sufficient, Wakefield incorporates socio-cultural values into his conceptual model while staving off unconstrained relativism. Under the HD analysis, harm is considered in explicitly culturally relative terms:

> "…disorder lies on the boundary between the given natural world and the socially constructed world; a disorder exists when the failure of a person's internal mechanisms to perform their functions as designed by nature impinges harmfully on the person's wellbeing as defined by social values and meanings." (Wakefield, 1992b, p. 373).

The general gist of this idea—how it utilizes both components to constrain the other—is regarded highly. For example, renowned author in this area, Peter Zachar, refers to the HD idea as "parsimonious, elegant, and useful" (2014, p. 121); three descriptive terms of which I would certainly agree with the first two. The issue, as we saw in the previous section, is primarily with the workability of the dysfunction component. It is not clear whether this notion of dysfunction represents an acceptable use of evolutionary theory, nor whether we can ever obtain the deep knowledge of evolutionary processes required to utilize it. Hence, with the dysfunction component virtually defunct, the parsimony of the HD idea, and how it attempts to put strong-evaluativism to work in a suitably constrained manner, ultimately falls flat.

Before moving on I should note that a core assumption of the current project is that, in the demarcation of disorder, the question of whether norms and values have a role to play *at all* is somewhat trivial. At its simplest, a diagnosis is a claim that something is *wrong* with a person. On my view it is therefore *necessarily* normative/evaluative, and I therefore reject total objectivism (although not, as I will show, the allure of naturalization). In Chap. 4, I will attempt to carve new ground between the weakly and strongly evaluative positions. The resulting view will include certain socio-cultural values as relevant to mental disorder on a principled basis, while maintaining a thoroughgoing naturalism. This will be achieved through the use of a framework that subscribes to value-inclusive naturalism, allowing us to move beyond the dichotomy of objectivist versus evaluativist positions (Thornton, 2000).

2.3 Practical Kinds

Faced with the many competing normatively oriented concepts explored above, some authors have suggested turning to pragmatism for solutions. A *pure* or *radical* pragmatic view holds that the underlying structure of mental disorders is either that of 1) non-kinds and therefore continuous with normal human behavior, or 2) totally socially constructed. Nonetheless the pragmatist holds that it is *useful* for our purposes as explainers and clinicians (who work within socio-legal environments that often demand categorical identifiers) to treat them as more 'real' and categorical than they may be. On this view then, it is the *usefulness* of mental disorder concepts that justifies their use, despite the fact that they may not refer to any real kind in nature (Haslam, 2002; Kendler, 2016). To return to our metaphor, the pragmatists are skipping over the normative gap and saying 'let's just do what seems useful'.

In this radical form, pragmatism risks total conventionalism (in the sense that they have no referent in the natural world and are thereby empty labels). This where what counts as mental disorder are simply those things that we, or a particular group, *label* as mental disorders. For example, O'Connor (2017) presents the idea that mental disorders are

practical psychiatric kinds. By this he means that mental disorders are those categories that psychiatry invents because they are useful for psychiatry's purpose of helping people. This position is not intended to be a deflationary one; rather than define psychiatry as the profession that treats mental disorder, O'Connor flips this around and defines mental disorder as that which psychiatry treats. Psychiatry in turn is defined in a broader sense as the profession that aims to "…help those with emotional or psychological impairments who seem to be unable to help themselves." (O'Connor, 2017, p. E-8)[23]. This position rejects naturalism about mental disorder, both in the sense that mental disorder may represent natural dysfunction/s, and in the sense that mental disorders may be understood structurally as natural kinds. Rather for O'Connor, mental disorder concepts are the products—and tools—of psychiatric practice which, in turn, he seems to see as a broadly moral enterprise. While this may represent a valid—if slightly disparaging—perspective on the nature of current diagnostic concepts in mental health, it still leaves mental disorders as totally conventional entities and thus provides next to no guidance as to what kinds of things we should or shouldn't count as mental disorder.

In response to this issue of conventionalism, some pragmatist positions take only a *partially* pragmatic approach by incorporating other normative or structural elements. One such model would be Zachar's Practical/MPC hybrid model (2015). This model combines the concept of a fuzzy MPC kind with pragmatism:

> "Concepts for psychiatric disorders are constituted by discoveries *and* decisions. There is an interaction between what the world produces and what we find useful to notice." (Zachar, 2015, p. 289).

Under this model, paradigm mental disorders are seen to be likely tracking MPC like structures in human behavior. The fuzzy nature of MPCs provides instances of ontological indeterminacy, in response to

[23] There is a charge of circularity that can be made against this position. For example, what exactly defines an 'emotional or psychological *impairment*? This seems to be another term for a mental disorder. I take this to be representative of O'Connor's point—on his view mental disorder is a conceptually thin notion, constructed through the practice of a morally defined institution.

which classificatory decisions are made in accordance with our pragmatic purposes. For example, if, for the moment, we assume that depression and its melancholic subtype are MPC kinds whose properties overlap, there is a genuine sense in which the decision to treat these entities as having a type-subtype relation is somewhat arbitrary. We could alternatively treat them as different entities with similar symptom profiles. This is not a totally conventionalist position as there are structures in nature to which mental disorder labels are thought to refer, but Zachar's model highlights that many such arbitrary or pragmatic decisions have, over time, shaped our diagnostic systems[24].

Again however, a pressing issue with Zachar's (2015) model concerns the lack of guidance it provides. It is undeniable that our current diagnostic concepts are partially historical in nature; that their current form is contingent upon past human affairs and decisions rather than representing naturally separable phenomena. Pragmatism helps us recognize this but doesn't necessarily treat it as a problem, let alone provide a solution. This is because, other than their usefulness, pragmatism doesn't commit to any particular notion of what a diagnosis of mental disorder *should* represent. Pragmatic notions of mental disorder seem too thin in that they fail to provide an ideal; they are 'unambitious' in this way (Kendler, 2016). If tomorrow, we discover a new putative mental disorder, pragmatism offers us very little help in deciding whether to include it in our diagnostic systems or not.

This concludes the review of the dominant positions available when considering the conceptual nature of mental disorder. All of the models presented can tell us something interesting about the nature of mental disorder, but all face significant problems. Again, please note that I have chosen to not review the concepts of disorder present in projects such as the DSM-ICD and the RDoC, as these have been sufficiently reviewed elsewhere and are not immediately central to the current work. Such reviews can be found in Nielsen (2020).

[24] Zachar explicitly recognizes this partial nominalism/historicism in his Imperfect Community Model, where mental disorders are seen to be clustered under a single banner partially due to genuine family resemblance, but partially due to pragmatic and historical factors (Zachar, 2014).

Returning to Human Functioning

Considering the conceptual positions reviewed in this chapter, we see evidence for the observation in Chap. 1 that there is a conceptual co-determinacy between conceptions of mental disorder and wider views of human functioning. Foucault, for example, was interested in the relation between individuals and society, believing that behavior is strongly regulated by socially generated norms and concepts (and therefore that the production of these norms and concepts is where true power lies in society). His understanding of mental disorder as a socially constructed label for certain kinds of deviance makes sense in light of this. As a further example, consider Insel and Cuthbert (2015) who argue for a biologically focused model of mental disorder as a route to precision medicine in psychiatry. Note how their essentialist assumptions make perfect sense given the medically minded and brain-focused approach to human functioning that they ground themselves in.

This same conceptual co-determinacy is most clear when considering the functionalist positions. The very idea of these positions is to contrast disorder against an understanding of the things humans should be able to do if they are functioning normally. For the statistical functionalist these things are derived from an understanding of what most others can do, for the evolutionary functionalist these things are derived from an understanding of what is evolutionarily successful. The connection is also clear in the evaluativist position. The evaluativist's central claim is that all objectivist positions fail because they miss the irreducible role of values in our lives. In essence they are saying something like 'we are more than our statistical normality, more that our ability to pass on our genes; we have values'. The claim then is that the objectivist does not hold a rich enough (i.e., value-inclusive) understanding of human functioning by which to contrast mental disorder. In sum, how we conceptualize mental disorder/dysfunction appears deeply related to our basic assumptions about human functioning. This simple observation was the initial impetus for the current project. It raises the specter of a possible way forward in our conceptual understanding of mental disorder. That is, through grounding ourselves in a rich and integrative understanding of human functioning novel insights may arise.

The Normative Gap May Be Artefactual

A second observation is that the 'normative gap' observed between simply describing human behavior and being able to say that some behaviors are disordered or bad in some way, may in-part be an artifact of how we talk about values. Typically, we talk about values as if they are entities that somehow transcend matters-of-fact, but assuming naturalism this simply cannot be the case. This observation has been made before, and put in much clearer terms by Thornton (2000). Thornton considers the debate between those who see mental disorder as necessarily evaluative (e.g., Fulford, Sadler) and those that are attempting to 'naturalize' mental disorder through the concept of a natural function (e.g., Boorse, and to a lesser extent Wakefield). The functionalists think, very roughly, that incorporating values into the concept of disorder/dysfunction is to admit that it is not a natural/scientific phenomenon. Hence, they are trying to show they can *reduce* this notion of mental disorder to a more basic, purely factual language. The evaluativists meanwhile disagree, believing that there is an irreducibly evaluative element to mental disorder. Thornton however, points out that in doing so, both sides tend to agree that *values are not natural*. Thornton's proposal is that a non-reductionistic understanding of naturalism does not rule out an understanding of values as part of the natural world: "…although mental illness cannot be reduced to the realm of law, it is no less real for that." (2000, p. 75). While he does not go into detail, what Thornton is implying here is that 'values' may be real things in the world, emergent at levels of organization higher than physics or chemistry. Further, he seems to be suggesting that the adoption of a naturalized but non-reductionistic worldview may help to resolve, or in other ways move beyond, the apparent evaluative-objective divide.

What this is calling for is a naturalized but non-reductionistic conception of human functioning; one that can incorporate the obvious fact that humans have values and that our functioning is deeply normative. Such a framework could conceivably plug the normative gap in a naturalistic way without leaving us making do with an impoverished notion of what it means to be human. This second observation then, is pointing in

a similar direction to the first. If we want a fuller understanding of mental disorder, we need to situate ourselves within a value inclusive understanding of human functioning. One framework that may be able to serve this role is *enactivism/3e cognition*.

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