CHAPTER 1

WHAT IS MENTAL DISORDER?

Since the publication of the D.S.M.-III in 1980, the D.S.M. has included a definition of mental disorder:

> ...each of the mental disorders is conceptualized as a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that is typically associated with either a painful symptom (distress) or impairment in one or more areas of functioning (disability). In addition there is an inference that there is a behavioural, psychological, or biological dysfunction, and that the disturbance is not only in the relationship between the individual and society.[1]

With minor revisions this definition has also been included in later editions of the D.S.M. (for comparison, all these definitions are given at the end of the book in an Appendix). In this chapter I examine the notion of "disorder" used in constructing the D.S.M. One major issue to be addressed is whether there are objective, biological matters of fact that determine whether a condition is a disorder, or whether value judgements are necessarily involved.

At the outset, a note regarding terminology is necessary. In the philosophical literature on the pathological, as well as in much medical discourse, it has become usual to use "disease" or "disorder" interchangeably to refer to all pathological conditions - diseases in the narrow sense, injuries, wounds, and disabilities. This is the sense of disease on which it makes sense to say, for example, that "Health is the absence of disease". Here I shall follow this philosophical and medical usage - and will use "disorder" or "disease" interchangeably to refer to all pathological conditions.

As well as exploring conceptual issues, I will examine the political debates that have surrounded the development of the D.S.M. definition of "disorder". It may seem odd to consider conceptual and political problems together, but there are advantages. Many conceptual issues have come up in the political debates; thus considering the political debates can save the philosopher time. More importantly, many philosophers before me have written about disorder and have been almost totally ignored by physicians.[2] In part this is because medical debates over "disorder" often have political overtones to which philosophers have been inadequately sensitive. For example, within psychiatry, debates concerning accounts of mental disorder have been linked to the question of whether psychologists should

[1] A.P.A. 1980 p.6

[2] For example a recent edition of the *Journal of Abnormal Psychology* (1999 Vol.108 No.3) was devoted to discussion of accounts of disease. Bill Fulford was the only philosopher to contribute to the discussion or have his views discussed at any length, and he is also a practising psychiatrist

treat mental illness, and to debates concerning the status of homosexuality. By considering these debates alongside conceptual issues I hope that my discussion of accounts of disorder will be of relevance to the debates within medicine as well as to debates within philosophy.

1.WHY DEFINE "DISORDER"?

Whether a condition is considered a mental disorder often has social, economic, and ethical implications. As such, debates that hinge on whether some condition should be considered a disorder are commonplace in both medicine and popular culture. Are psychopaths evil or sick? Should health insurance pay for the treatment of nicotine addiction? Is it right for shy people to take character-altering drugs? All these debates may be seen to depend on whether the conditions are disorders, and developing an account of disorder may be hoped to help us in addressing such questions. For many individual philosophers and physicians this has been sufficient motivation to attempt to produce an account of disorder. Questions concerning the status of particular conditions have always been with us, however, and yet it is only in the 1970s that the American Psychiatric Association (from now on the A.P.A.) seriously began to try and define "mental disorder". Why did the A.P.A. become interested at this particular time?

One possible answer should be dismissed from the outset. Prior to the D.S.M.-III the A.P.A. produced classifications of mental disorders without ever producing a definition of "mental disorder". Retrospectively commentators have often seen the absence of a definition in the earlier classification systems as a strange deficiency.[3] How, they have asked, can one classify mental disorders without knowing what mental disorders are? The implication is that it is a logical requirement for a scientific classification system to contain a definition of its domain. These commentators suggest that the lack of a definition in the D.S.M.-I and D.S.M.-II is just one example of the ways in which these classification systems were deficient from a scientific point of view. As psychiatric classification became scientific they claim that it was inevitable that a definition of "mental disorder" would come to be included in the D.S.M.

That this response is mistaken, however, can be seen when it is remembered that most scientific classification systems do not explicitly define their domain. The *International Classification of Diseases*, for example, gives no definition of "disease". Similarly, taxonomies of the flora and fauna of particular areas do not normally start off by saying what they mean by living thing. Clearly it is quite possible to produce a classification without the domain being explicitly defined. It is the presence of a definition of "disorder" in the D.S.M.-III, rather than its absence in earlier editions, that is unusual.

I will argue that the A.P.A. became interested in producing a definition of "mental disorder" in the 1970s for political reasons. Understanding these reasons sheds light on much that otherwise seems odd in the debates over "disorder" – why

[3] For example, Klein 1978 p.41, Spitzer and Williams 1982 p.15

it is that interest in the question has ebbed and flowed, and why it is that so many discussants have been obsessed by the case of homosexuality, for example. It will also illustrate exactly why it is that defining "disorder" can be important.

During the 1970s the A.P.A. was under heavy attack from two quarters: On the one hand, "anti-psychiatrists" challenged the legitimacy of psychiatry as a branch of medicine. On the other, gay activists protested at homosexuality being classified as a mental disorder. Defining "mental disorder" was rhetorically useful for the A.P.A. in both these battles.[4] Armed with the "right" definition, it could show that mental disorders are medical disorders, and determine whether homosexuality is pathological.

First, the anti-psychiatrists: In the early 1970s the anti-psychiatry movement was in full swing. The anti-psychiatrists were a diverse group, united only in their distrust of psychiatry. They argued on various different grounds that mental illness is profoundly unlike physical illness, and that therefore psychiatry is only dubiously a branch of medicine. Thomas Szasz, in particular, was a serious irritation to American psychiatry at this time. Szasz was a trained psychiatrist, and published regularly in respectable and widely read outlets such as the *New York Times*. He claimed that psychiatric patients don't suffer from diseases but are rather malingerers, social misfits, and people with problems in living.[5] Correspondingly, psychiatrists should not be classed with medical doctors but are rather, at best, expensive agony aunts or, at worst, agents of social control.

Against the background of such attacks, in 1973, at the same time as setting up a Task Force to revise the D.S.M., the A.P.A. set up a Task Force to define the term "mental illness".[6] It was hoped that the definition produced could be used in the preamble to the D.S.M.-III. Considerable effort was put into defining "mental illness", as can be seen from the fact that a special session at the annual A.P.A. meeting was dedicated to the issue. Various contributors were invited to discuss the proposed definitions from the perspectives of psychoanalysis, law, medical insurance and sociology. Other discussants were asked to consider possible implications for the individual patient, and for the interface of psychiatry with other branches of medicine and psychology.[7] Unfortunately the A.P.A. archives do not hold a copy of the definition produced. Still, that such effort was expended in an attempt to defend psychiatry from the attacks of the anti-psychiatry movement is made clear by the organiser's expressed satisfaction that the Task Force had managed to "avoid an overly broad definition of mental disorders that would view all individual and social unrest or problems in living as psychiatric illness, and at the same time justify the designation of mental disorders as a subset of medical disorders."[8] The phrase "problems in living" had been popularised by Szasz, and I

[4] Kutchins and Kirk 1997 also consider the A.P.A.'s interest in defining "disorder" to be linked to these issues.
[5] Szasz 1960
[6] Barton 1973
[7] Spitzer 1975
[8] Spitzer et al. 1977 p.3

suggest that its use here indicates that the A.P.A. was seeking to refute his claims in particular.

At around the same time the A.P.A. was coming under attack from gay rights groups who wanted homosexuality removed from the D.S.M.[9] Gay rights protesters mobbed the 1970 A.P.A. annual meeting in San Francisco, shouting down speakers with whom they disagreed and disrupting much of the meeting. Throughout 1971 and 1972 the activists continued to protest against the A.P.A. position. Robert Spitzer, who would later become chairman of the D.S.M.-III committee, became involved in the debates and found defining "disorder" to be a useful way of defending his stance on homosexuality.[10] Spitzer suggested that homosexuality per se is not a disorder but that a diagnosis should be included for homosexuals who experience distress concerning their sexual orientation. Such a proposal was politically useful because it found some middle ground between those who considered homosexuality to be a mental disorder and those who considered it a normal variant of human sexuality. To defend his claim, Spitzer formulated a definition of "mental disorder" that he claimed was satisfied by all the disorders in the D.S.M.-II with the exception of homosexuality. According to Spitzer's definition a condition can only be a mental disorder if it causes distress or disability. As many homosexuals experience no distress or disability, homosexuality in and of itself cannot be a disorder. However, those people who are distressed about their sexual orientation *can* be considered to suffer from a disorder and are appropriately treated by psychiatrists. Spitzer's position came to be adopted by the A.P.A. in 1973, when homosexuality was removed as a diagnosis from the D.S.M.-II and "Sexual Orientation Disorder", a diagnosis for homosexuals who are unhappy about being gay, was added. On becoming chairman of the D.S.M.-III Task Force, Spitzer returned to his definition repeatedly to defend decisions to include or omit conditions from the classification system.[11] In due course, a version of Spitzer's definition came to be included in the introduction of the D.S.M.-III.

2.SHOULD MENTAL AND BODILY DISORDERS BE CONSIDERED TOGETHER?

The D.S.M.-III definition speaks only of mental disorders, but the D.S.M.-IV includes a note distancing the A.P.A. from the idea that any meaningful distinction can be drawn between disorders that are mental and those that are physical. Thus, by implication, the current A.P.A. position suggests that mental and bodily disorders are fundamentally similar.

One of the main reasons for thinking that mental and bodily disorders should be considered together is that it is difficult to find any coherent criterion for deciding

[9] These debates over homosexuality are described in detail in Bayer 1981.

[10] Spitzer 1973, 1981

[11] See Spitzer and Endicott 1978 for a version of the definition used in the construction of the D.S.M.-III. In this paper the definition is used to defend the inclusion of diagnoses for people who lack sexual responsivity, tobacco use disorder, and anti-social personality disorder.

which disorders are bodily and which mental. One cannot simply divide diseases into those that have psychological and behavioural symptoms on the one hand and those that have bodily symptoms on the other, as many diseases have both psychological and physical effects. People with Down Syndrome, for example, suffer from mental retardation, but also have a distinctive appearance and often have heart problems. Epilepsy causes fitting but also mental confusion. Flu causes a temperature and makes our noses run, but it also makes us tired and irritable.

Nor can diseases be split on the basis of whether they have physical or psychological causes. Many, if not most, diseases will be affected by both psychological and physical causal factors. The risk that someone will develop schizophrenia, for example, is increased by social stressors, and also by drug abuse, birth complications, and genetic factors. Many diseases that are generally considered to be physically caused are made worse by stress, for example allergies and high blood pressure.

The D.S.M.-IV notes that there seems to be much that is "physical" in "mental" disorders, and much that is "mental" in "physical" disorders, but then it goes on to condemn any attempt to distinguish mental and physical disorders as a "reductionistic anachronism of mind/body dualism".[12] Here the D.S.M. errs. The physicalist is simply committed to the claim that minds are made from physical things (neurones, whatever). It is quite compatible for a physicalist to also hold that the mental can be distinguished from the non-mental, for example by features such as intentionality. If the mental and the non-mental are ultimately made from the same stuff this no more implies that they cannot be distinguished than the fact that chairs and tables are both physical implies that chairs and tables are indistinguishable. Physicalism itself does not imply that one account of disorder should encompass both mental and bodily disorders.

I suggest that the A.P.A. is right to think that mental and physical disorders should be considered together, but wrong to think that this conclusion follows from adopting physicalism about the mind. Rather the reason why it seems sensible to seek one unified account of disease is simply that attempts to find a clear-cut distinction between bodily and mental disorders have failed.

It is often thought that if mental and bodily disorders are considered together, political implications follow. Generally speaking, in the 1970s, psychiatrists were keen to consider mental and physical disorders as being similar, while psychologists preferred to consider them quite distinct.[13] The debate was seen as linked to the question of who should treat mental disorders. Tensions came to a head in a controversy regarding the wording of the introduction to the D.S.M.-III. Originally the introduction was going to contain the claim that mental disorders are a sub-set of medical disorders.[14] When they heard about this, the American Psychological

[12] A.P.A. 1994 p.xxi.

[13] This may well no longer be the case. A recent special edition of the *Journal of Abnormal Psychology* (1999, Vol. 108 No.3) was devoted to discussion of accounts of disease. In it many psychologists expressed the view that mental and physical disorders should be considered together.

[14] In a letter from Jack Weinberg, the President of the A.P.A., to Theodore Blau, President of the American Psychological Association (Weinberg 1977) it is claimed that the statement that mental disorders are a sub-set of medical disorders was never intended to be included in the D.S.M., but was

Association wrote and complained to the A.P.A., sought legal advice, and began lobbying for the claim to be removed.[15] The psychologists feared that any statement that mental disorders are medical disorders might be taken to imply that only psychiatrists should treat mental disorders and that potentially this could lead to insurance companies refusing to reimburse for treatment undertaken by psychologists. The Presidents of the A.P.A. and American Psychological Association exchanged a flurry of strongly worded letters.[16] In their defence the psychologists pointed out that the etiology of many mental disorders is unknown and claimed that "although there may be justification for considering mental disorders to be health disorders there is no justification for any attempt to equate mental disorders with medical disorders".[17] That the debate was motivated by concerns over professional control is made clear by the request of the Chairman of the D.S.M.-III committee, Robert Spitzer, that the exchange between the Presidents of the two associations be made public to the A.P.A. membership because this would "be another way of demonstrating our conviction that psychiatry is a specialty within medicine. It would also make clear to our profession that D.S.M-III helps psychiatry move closer to the rest of medicine."[18] Eventually, however, the psychiatrists were forced to back down and agreed not to include the offending sentence in the D.S.M. Unfortunately, the A.P.A. archives contain no documents that outline the reasons for this decision.

Psychologists have also mounted parallel attacks on psychiatrists. In the introduction to his 1960 *Handbook of Abnormal Psychology*, Hans Eysenck argues that psychologists, not psychiatrists, should treat the majority of mental disorders. Eysenck claims that psychiatry should be divided into two: a medical part "dealing with the effects of tumours, lesions, infections, and other physical conditions", and a behavioural part under which would fall most neurotic disorders as well as some or most of the functional psychoses. He accepts that physicians should be left to deal with the medical part, but when it comes to the treatment of the behavioural disorders he claims that "psychology is the fundamental science, and rational methods of treatment have to be based on a thorough knowledge of modern psychological theory".[19]

Whether mental and physical disorders are fundamentally similar or dissimilar is also often thought to have implications for patients. Being mentally ill is stigmatised in a way that being physically ill is not, and the mentally ill are often denied benefits that are granted to physically ill people. As a consequence, patient support groups for the mentally ill are often moved to argue that "mental illness is illness like any other", and that thus psychiatric patients should be treated like other patients. Claiming that mental disorders are biologically based and describing them as "brain

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rather merely a claim made in a paper by Robert Spitzer. Seeing as Spitzer's paper is included in the draft of the D.S.M.-III held in the A.P.A. archives (A.P.A. 1976) there are reasons for thinking that Weinberg's claim is untrue.

[15] Carter 1977

[16] Psychiatric News 1977

[17] Blau 1977

[18] Spitzer 1977

[19] Eysenck 1960 p.3

disorders" play an important role in the rhetoric used by such groups. For example, in 1999 Senators Domenici and Wellstone proposed a bill that would require U.S. medical insurance coverage for some mental illnesses to be equal to that granted for other medical disorders. The senators reasoned that "severe mental illnesses are biologically based illnesses and should be treated like any other medical illness".[20] Similarly, The National Alliance for the Mentally Ill, one of the best known U.S. mental health charities, states, "Just as diabetes is a disorder of the pancreas, mental illnesses are brain disorders...".[21]

Other patient groups have found their interests to be better served by arguing that mental and physical disorders are quite distinct. Often this strategy is employed by patients who suffer from disorders that are borderline between being considered as mental or as physical disorders and that can reasonably be claimed to have strong physical components. Such patients tend to argue that they are significantly unlike psychiatric patients and thus should not be treated like them. For example, The National Association of Councils of Stutterers appealed to Robert Spitzer when they found out that stuttering was to be included in D.S.M-III, and asked that stuttering be removed, because they wished to avoid the stigma attached to suffering from a mental illness.[22] They argued that stuttering probably has a neurological basis and is thus not a mental disorder. They lost the argument, and stuttering became disorder number 307.00. More recently, some patients with Chronic Fatigue Syndrome and some transsexuals have been campaigning for their conditions to be recognised as physical as opposed to mental disorders.[23]

These arguments put forward by professional groups and patient support groups are invalid. Even if someone doesn't suffer from a medical disorder it might be appropriate for them to see a psychiatrist. Healthy people visit doctors for immunisations. There is no reason why they shouldn't visit psychiatrists for help with problems in living. Equally, mental disorders might be a sub-set of medical disorders and it still be the case that psychologists are the best people to treat them. Psychologists already play a lead role in treating certain medical disorders, for example those incurable disorders where the only possible treatment is Cognitive Behavioural Therapy aimed at helping patients adapt to a new way of life.

The arguments put forward by patient support groups are also dubious. Patients with prototypical physical conditions are considered eligible for medical insurance payments and other benefits primarily because their conditions are thought to be involuntary and disabling. Thus, when considering whether other patients should be granted the same benefits, what is relevant is whether their conditions are also disabling and involuntary, not the general degree of similarity between their condition and prototypical physical disorders.

With these preliminary issues dealt with, I shall shortly move on to consider accounts of disease. First, however, it is worth briefly summarising the discussion so far. I have explained that I will be using the terms "disease" and "disorder"

[20] N.A.M.I. undated a.
[21] N.A.M.I. undated b.
[22] Psychiatric News 1980
[23] Chronic Fatigue Syndrome: Tucker 1996; Transsexuals: Gendertalk 1996, Minter no date.

throughout to refer to all injuries, disabilities, and diseases in the narrow sense. This usage is in line with that of much of the philosophical and medical literature on disease. I shall be looking for an account of disease that encompasses both mental and physical diseases. This seems the most reasonable path to take as it is plausible that mental and physical disorders cannot be cleanly distinguished. The claim that physical and mental disorders should be considered together has often been taken to imply that psychiatrists should treat mental disorders and that psychiatric patients should be granted the same benefits as patients with prototypically physical conditions. Neither of these conclusions necessarily follows.

3. ACCOUNTS OF DISORDER

This section examines existing accounts of disorder. Although my ultimate aim is to assess, and where necessary improve on, the D.S.M. account, I will not start with a consideration of that here. This is because the D.S.M. account can only be understood as a reaction to biological accounts, and so it is with these accounts that I shall begin.

3.1 Biological Approaches To Defining Disorder

Early biologically-based accounts of disease claimed that a condition is a disease if and only if it is statistically infrequent and reduces an organism's life-expectancy or fertility.[24] Some proponents of such an account have thought that it could work for mental disorders as well as physical disorders. In a 1975 paper Robert Kendell uses such a biologically-based account to defend psychiatry from claims that it only treats problems in living.[25] He argues that manic-depression and schizophrenia are genuine diseases because sufferers live less long, and have fewer children, than the rest of the population.

The claim that diseases are conditions that reduce life-expectancy or fertility must be rejected, however. Reduced life-expectancy is neither a necessary nor a sufficient condition for a person being diseased. People with minor diseases, for example warts and athletes foot, live as long as anybody else. On the other hand mercenaries and rock-climbers may be healthy but have short life-expectancies. Neither are health and fertility necessarily linked. Choosing to be celibate reduces someone's chance of having children but plausibly is not a disease.

A more sophisticated biological account of disease has been proposed by Christopher Boorse.[26] In line with the earlier biological accounts, Boorse seeks to construct an account whereby value judgements have no part to play in deciding whether a condition is a disease. Whether a condition is a disease is to be determined solely by biological facts.

[24] Scadding 1967
[25] Kendell 1975
[26] Boorse 1975, 1976a., 1977, 1997

Boorse urges us to think of the human body and mind being made up of numerous sub-systems. "Sub-system" is used in the broadest sense imaginable, referring to organs, systems in the body such as the nervous system, and sub-systems of the mind, for example those devoted to memory or language comprehension.[27] According to Boorse each sub-system has one or more functions that it performs in a healthy human.

How do we identify the function of a sub-system on Boorse's account? Boorse defines "function" thus:

> 'X is performing the function of Z in the G-ing of S at t' means 'At t, X is Z-ing and the Z-ing of X is making a causal contribution to the goal G of the goal-directed system S'.[28]

In other words, according to Boorse, the function of a sub-system is whatever it does that contributes towards achieving the goal of a goal-directed system. At first sight "goal" and "goal-directed" systems suggest that the sub-systems can only have functions if there is some conscious purpose behind them. Boorse, however, uses Ernst Nagel's notion of a "goal-directed system" as one that "tend[s] to persist in some integrated pattern of behaviour of activities in the face of environmental changes" and in which "the constituents of the system...undergo mutual adjustments so as to maintain this pattern in relative independence from the environment."[29] Homeostatic systems, such as the system that normally acts to maintain body temperature, are goal-directed systems in Nagel's sense. At a higher level, Boorse claims, the human being as a whole can be seen as a goal-directed system that tends to act to counteract threats to its continued survival and reproductive ability. Thus, on such an account the function of the heart is to pump blood, and this is because this is what the heart does that contributes towards the organism's goal of staying alive. When we are healthy each of our sub-systems performs its proper functions and all is well.

Sometimes, however, a sub-system dysfunctions. In such cases there is a disease (in the broad sense of "disease" in use here, i.e. a pathological condition). Thus, a heart attack is pathological because it prevents the heart pumping blood. As another example, a cut in the skin reduces the ability of the skin to perform its function of preventing pathogens entering the body.

In the remainder of this sub-section I shall argue that Boorse's account is unacceptable. Although I shall argue that it is wrong, Boorse's account is sophisticated and can be adapted in various ways. Thus in the course of arguing against Boorse it will be necessary for me to explore ways in which his account

[27] Boorse is not entirely consistent with respect to whether he thinks his account can be used for mental disorders. In Boorse 1975 and 1977 he limits his account to physical disorders. At other times he takes it to also apply to mental disorders (Boorse 1976a. and 1997). Most of those who have been influenced by Boorse take his account to apply to both mental and physical diseases, and even in those papers where he takes his account to apply only to physical diseases he gives no reason for this restriction. Thus it seems fair to here consider the adequacy of Boorse's account as an account of both physical and mental disease.

[28] Boorse 1976b.

[29] Nagel 1961 p. 408

might be improved, but it should be borne in mind that in all such cases I will eventually go on to show why these adaptations will not be enough to save him.

3.1.1 First Problem For Boorse – Finding An Account Of Normal Function

A fundamental problem with Boorse's account may lie in the account of function that he adopts. Much of the following discussion will revolve around the question of whether there is any account of function can be used to formulate a value-free account of disease, and so this point must be examined in some detail. As mentioned earlier, Boorse considers the function of a sub-system to be whatever it does that contributes towards achieving the system's goals. As Larry Wright has pointed out, this account of function cannot distinguish accidental from non-accidental contributions to the goal of the system. [30] According to Boorse's definition sweating has the function of cooling down the body, but this function would also be attributed to my accidentally knocking a bucket of water over myself when I happened to be hot.

There are two possible ways of dealing with this objection, and I shall consider the plausibility of each in turn. Boorse deals with the objection by claiming that the normal function of some system is whatever it *typically* does that promotes survival and reproduction in an appropriate reference class of organisms.[31] Boorse claims that the appropriate reference class for an organism is the group consisting of individuals of the same species, sex, and age. Thus accidentally knocking water over myself is not a normal function as it is not something that members of the reference class, that is organisms of the same species, sex, and age as myself, typically do. In contrast the normal function of my heart is to pump blood round my body because that's what hearts in members of the reference class usually do that contributes to the goals of the organisms. If my heart stops pumping blood then I am diseased, if I fail to knock water over myself I am not.

There are, however, reasons to doubt that Boorse's reference class trick will do the job required. Boorse claims that the reference class for an organism consists of individuals of the same species, sex, and age. However, reference classes are going to need to be far more fine-grained than this. What is normal depends on a host of additional factors. Masai are naturally sensitive to growth hormone, pygmies are not. Athletes normally have a lower heart rate than other people. People who live at high altitude, or in hot climates, adapt in various ways. Thus the organisms in a reference class must not only be of the same species, sex, and age, but must also be of the same race, and must have undergone similar training, and have lived in the same kind of environment. This means that some reference classes are going to turn out very small. Elderly female Masai mountain-bikers, Asian male teenagers who have been brought up in Wales, and half-Chinese half-Eskimo boy toddlers will all need their own reference classes. In those cases where a reference class consists of just one individual, accidental benefits and normal functions cannot be distinguished by appealing to what is normal for the reference class, as whatever occurs in the

[30] Wright 1973
[31] Boorse 1977 pp.556-7

individual will thereby occur in 100% of the reference class. Small, but non-singular, reference classes also present problems. In such classes the probability of the same accidental benefit occurring in the majority of the class is far higher than it is in a larger class. Thus, where the reference classes are small, Boorse's method of distinguishing accidental benefits from normal functions becomes unreliable. To sum up, Boorse's claim that accidental benefits will be statistically rare in the reference class and can thereby be distinguished from normal functions is only plausible when the reference classes are assumed to be large. Often, however, the reference classes will be small and in some cases they may consist of just one organism. For these reasons Boorse's suggestion for overcoming the problem of distinguishing normal functions from accidental benefits must be rejected.

The second way of dealing with the problem of distinguishing accidental benefits from normal functions is to reject accounts of functions that are based on contributions to goals altogether. We have only been led to the current problems through our acceptance of Boorse's account of function. As readers familiar with the literature on biological functions will be aware, Boorse's definition of function is not generally accepted (because of the problems it has with distinguishing functions from accidental benefits). Many theorists would instead adopt an evolutionary-based account of function. According to such theorists,

> The function of X is Z means:
> (a) X has been naturally selected because it does Z
> (b) Z is a consequence (or result) of X's being there.[32]

In other words, the function of a sub-system is whatever it does that it was naturally selected to do. Thus, the function of our eyes is to enable us to see. This is what eyes do, and is what they were naturally selected to do. This is the account of function that has been adopted by most theorists (apart from Boorse) who favour disease-as-dysfunction accounts.[33] However, I shall argue that it is also unacceptable.

There are difficulties with claiming that the function of a sub-system is whatever it evolved to do that while recognised by philosophers of biology have generally been ignored by disease-as-dysfunction theorists. The difficulties arise because selection pressures are seldom constant. As such, it is necessary to state the time period in which selective pressures must have promoted an ability for it to be

[32] This account of function has been proposed by a number of writers. It is most often attributed to Millikan 1984

[33] For example Papineau 1994, Wakefield 1993. Accounts of disease that employ an Aristotelian account of function have also been proposed (see, for example Megone 1998, 2000). On an Aristotelian account, functions are value-laden, and so such accounts do not seek to provide a value-free account of disease. Aristotelian accounts of disease are not discussed in detail here because they can only be understood within an Aristotelian framework, and setting out such a framework would simply take too long for a book of this kind. For those familiar with such accounts, however, I have two reasons for thinking them problematic. First, Aristotelian accounts of disease require one to adopt an Aristotelian metaphysics – and such a metaphysics is uncomfortably distant from that informing most contemporary philosophy. In addition, an Aristotelian account considers both diseases *and vices* to be states that diminish human flourishing, and I suggest that it will be problematic for the Aristotelian to adequately distinguish between the two kinds of state.

counted as a function. There are a multitude of options. For example, one could hold that the function of a sub-system depends on any of the following:

(a) Original selection pressures.
(b) Selection pressures in the recent past.
(c) Current selection pressures. [34]

It is not clear which of these options is to be preferred. All have unwelcome implications for a disease-as-dysfunction account. Appealing to original selection pressures leads to difficulties because in some cases a sub-system that originally evolved for one purpose later comes to be used for another. For example, it has been suggested that flies originally evolved wings to help cool them down. Only later were wings used for flying. If one claims that the function of a sub-system is whatever it originally evolved to do, then one must claim that flying is not a function of a fly's wings. As a consequence, and counterintuitively, on a disease-as-dysfunction account a healthy fly may be flightless.

Claiming that functions are determined by current selection pressures also leads to problems. In modern societies, humans are affected by selection pressures very differently from in previous times. Some risks have disappeared. While shortsighted people would once have been eaten by sabre-tooth tigers, today glasses correct their vision. Other risks are new. Those who are boring, have no sense of humour, or forget their partners' birthdays, would have been able to get away with it in the Pleistocene, but today risk reproductive failure. Coupling a disease-as-dysfunction account with the claim that the function of a sub-system is determined by current selection pressures results in the wrong conditions being classified as diseases. Being boring ends up as a disease, while shortsightedness doesn't.

Claiming that the functions of sub-systems are whatever they did that caused them to be selected in the recent past is also unsatisfactory. The period that counts as the "recent past" must be carefully selected in order to avoid both the problems posed by relying on original selection pressures, and those caused by relying on current selection pressures. Maybe it will not be possible to find such a time period at all. Even if such a time period can be specified, an account of function that makes use of it will have a somewhat arbitrary appearance. The account will end up claiming that the function of a sub-system is whatever it did that caused it to be selected between, say, 2000B.C. and 1000A.D. The proponents of disease-as-dysfunction accounts were motivated by a desire to show that disease is a natural category. An account of disease that makes essential reference to a time period that has been carefully selected so that the "right" functions are obtained does not seem consistent with this original desire.

Nor will it do to hold that selection pressures at all times are important. If this option is taken we may well end up with too few functions – plausibly in evolutionary history many attributes have been selected at one time but not at another – and if there are too few functions our account will provide too few diseases.

[34] List of possibilities adapted from Kitcher 1993

At this point all suggestions for determining the "normal" function of the sub-systems have been explored and none is suitable for incorporation in a disease-as-dysfunction account. This is a major problem for Boorse. Boorse claimed that a disease occurs when a sub-system fails to fulfil its normal function, but no current account of normal function can do the work he requires of it. It is possible that some other, acceptable, value-free account of normal function will be forthcoming. The present absence of such an account, however, provides a reason for beginning to suspect that disease-as-dysfunction accounts such as Boorse's should be rejected.

3.1.2 Second Problem For Boorse: Biological Accounts Of Disorder And Homosexuality

Biological accounts of disease might be expected to be highly attractive to psychiatrists. If it could be argued that there are biological facts that make it the case that mental diseases are "real" diseases then this could be used to defend psychiatry from anti-psychiatric attacks. However, since the 1970s, American psychiatrists have tended to reject biological accounts. I suggest that this is because these accounts suggest that homosexuality is a disorder, a view that has become increasingly untenable in American psychiatry.

According to the early biological accounts a condition is a disease if it is unusual and reduces life-expectancy or fertility. As only a minority of people are homosexual, and homosexuals have fewer children than other people, on such accounts homosexuality is a disease. Indeed Kendell makes it clear that he accepts this as a consequence of the account in the same article that he argues that manic-depression and schizophrenia are diseases.[35]

It is less clear whether someone who accepts Boorse's account must consider homosexuality a disorder.[36] According to Boorse's account there is a disease whenever a sub-system of the body or mind fails to fulfil its biological function. Maybe some sub-system of the mind has evolved to make sure that individuals are attracted to members of the opposite sex, and this sub-system dysfunctions in cases of homosexuality. But, of course, it might not be the case that there is any such sub-system. It might even be the case that homosexuality can be an evolutionary advantage. Maybe homosexuals are good at helping their relatives to raise children, for example. In the present state of knowledge, however, no one can be sure whether or not homosexuality is a dysfunction in evolutionary terms. Thus someone who accepts Boorse's account is forced to admit that homosexuality might be a disease.

As discussed earlier, in the early 1970s, the A.P.A. came under attack from Gay Liberation groups who wanted homosexuality removed from the D.S.M. Following its removal it soon became unacceptable for American psychiatrists to publicly express the view that homosexuality is a disorder. I suggest that this is why American psychiatry has largely rejected biological accounts of disease. Instead, within American psychiatry a consensus emerged that for a condition to be a disorder there must not only be a dysfunction but the dysfunction must be *harmful*.

[35] Kendell 1975a. p.310
[36] For a more detailed discussion see Ruse 1981

In the case of homosexuality there may or may not be some biological dysfunction, but even if there is a dysfunction, this need not be harmful, and so homosexuality need not be a disorder.

Boorse himself pursues an alternative option.[37] He claims that homosexuality is a disease but adds that his value-neutral account of disease means that this does not imply that it is bad thing. However, if Boorse's account is to be an account of *disease*, as opposed to an account of some quite distinct concept, it cannot stray far from our normal concept. As such, Boorse's value-free account will only be an account of disease at all if it is the case that the normative implications of our current concept of disease are slight. The furore surrounding the debate over the disease-status of homosexuality reveals that this is not the case. Gay rights protesters wanted homosexuality removed from the D.S.M-II because it seemed clear to them that calling something a disease implies that it is a bad thing. Their anger implies that it is part of out concept of disease that diseases are bad. Thus, I suggest, Boorse's account must be rejected. Despite Boorse's claims, that a condition is an evolutionary dysfunction is not a sufficient condition for it to be a disease, as a dysfunction that did no harm would not be considered to be a disease. In the next section we must consider whether an evolutionary dysfunction is even necessary for a disease. In considering this we come at last to the D.S.M. definition of disease.

3.2 D.S.M.-III And Disorder As Harmful Dysfunction

The introduction to the D.S.M.-III defines disorder thus:

> In D.S.M-III each of the mental disorders is conceptualised as a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that is typically *associated with either a painful symptom (distress) or impairment in one or more important areas of functioning (disability).* In addition there is an inference that *there is a behavioural, psychological, or biological dysfunction*, and that the disturbance is not only in the relationship between the individual and society. (Emphasis added). [38]

This definition is a descendent of the definitions produced by Robert Spitzer in the debates concerning the disease status of homosexuality. In slightly modified form it is also included in the introductions to the D.S.M.-III-R, the D.S.M.-IV and the D.S.M.-IV-T.R. In a series of articles, Jerome Wakefield has convincingly argued that the core idea behind the D.S.M. definition is that a condition is a disease if and only if it is a harmful dysfunction.[39]

As has already been argued, for a condition to be a disorder it is not sufficient for there to be an evolutionary dysfunction. An evolutionary dysfunction that did no harm would not be considered a disease. On Wakefield's interpretation the D.S.M. definition recognises this and takes disorders to be *harmful* dysfunctions. Now, however, I shall argue that evolutionary dysfunction is not necessary for disease either, and that thus the D.S.M. definition must also be rejected.

[37] Boorse 1975 p.63
[38] A.P.A. 1980 p.6
[39] Wakefield 1992a., 1992b., 1993

The problem for the D.S.M. definition is that in some cases the genetic bases of conditions that we would normally class as diseases may confer an evolutionary advantage and thus be selected. In such cases, from an evolutionary point of view, there may be no dysfunction when cases of the disease occur. Evolutionary psychologists have been struck by the fact that many mental diseases appear to have a genetic basis and yet occur at prevalence rates that are too high to be solely the result of mutations. Examples include manic-depression, sociopathy, obsessive-compulsivity, anxiety, drug abuse, and some personality disorders.[40] This means that the genetic bases of these mental diseases must be promoted by natural selection, which implies that the genes are adaptive in some way or other.

The evolutionary hypotheses concerning particular diseases that I shall discuss here are controversial. Still, even if the hypotheses turn out to be false, that counterfactually they might have been true will be enough to show that it is not *necessary* that a condition be an evolutionary dysfunction for it to be a disease. Even if sociopathy, for example, is not selected in the way described, we can imagine a hypothetical disease very like it that is.

A condition might be an evolutionary advantage in all environments, or it might just confer some biological advantage to sufferers in some present environments, or it might just have conferred benefits in the past. As discussed earlier, an evolution-based account of function must specify the time period in which selection pressures are going to be taken to be important for determining the functions of sub-systems (that is it must specify whether the function of a sub-system is what it was selected for originally, or what it is selected for in the present, or in the recent past). That a condition has been evolutionarily advantageous at some time, *t*, will only show that the condition is no dysfunction if *t* falls within the time period within which selection pressures are taken to determine the functions of sub-systems. As such, not all the cases of selected-for diseases that I shall discuss will disprove all disease-as-dysfunction accounts. Still, I hope to discuss enough cases to make it plausible that whatever the time period that is taken to determine functions, within that period some disease will have been, or at least counterfactually could have been, evolutionarily advantageous.

A condition may be selected because it benefits sufferers in some present environment. Mealey suggests that the genes for sociopathy are selected for this reason.[41] It makes sense to suppose that in a tough environment males who are violent and promiscuous may live longer and have more children than their milder-mannered counterparts. If this is the case then sociopathy may increase the biological fitness of otherwise disadvantaged males. If Mealey is right, and if functions are taken to be determined by current selection pressures, then in sociopathy there is no evolutionary dysfunction.

Alternatively, a condition might be of no benefit currently but have been biologically beneficial in earlier times. It has been suggested that agoraphobia and other anxiety disorders were adaptive when humans lived in more dangerous

[40] Wilson 1993 p.45 in reprint.
[41] Mealey 1995

environments.[42] In dangerous environments anxious people have a better chance of avoiding danger and so live longer and have more children than others. Whether diseases that were beneficial in earlier times can be said to be dysfunctions depends on the account of function adopted. If the time period within which anxiety disorders were biologically beneficial falls within the time period within which selection pressures determine functions, then anxiety disorders cannot be said to be dysfunctions.

A condition might be selected through kin selection processes. Through kin selection a condition that is of no direct benefit to an individual may be selected because it benefits the individual's relatives. Such mechanisms can occur because individuals are genetically similar to their kin. As such, an individual can increase the number of copies of their genes through helping their relatives to breed successfully. It has been suggested that the genetic basis of Generalised Anxiety Disorder is promoted for this reason.[43] People with Generalised Anxiety Disorder spend a lot of time worrying, often about the welfare of their relatives. It is possible that although their anxiety does not benefit people with Generalised Anxiety Disorder directly, it does help their relatives to have someone looking out for them. Again, if a disorder were selected through kin selection mechanisms within the period of time considered important for determining functions there would be no dysfunction from an evolutionary point of view.

Finally, we should consider conditions that are caused by several genes acting together in which the detrimental consequences to an individual who possesses all of the genes are offset by the advantages to relatives who just possess a subset. Sickle-cell anaemia is the classic example of such a condition. Individuals with two copies of the sickle-cell gene suffer from the disorder, but those with only one copy are protected against malaria. Simon Baron-Cohen has hinted that the genes that cause autism may similarly be advantageous to those who just possess a sub-set. He found that the relatives of autistic children have an increased probability of being gifted in areas such as engineering.[44] Whether such conditions should be thought of as being selected depends on whether one thinks of selection as acting on phenotypes or on genes. If we consider selection to act on phenotypes, then autism itself is not selected, as autistic people themselves are at an evolutionary disadvantage (the case is different from kin-selection as in kin-selection the individual with the disease has a high *inclusive* fitness).[45] On the other hand, if we think of selection as acting on the genes, then autism is selected; the genetic basis of the disorder causes proficiency in engineering and autism, and the genes exist because they do this. Here I do not wish to argue that the situation should be considered in one way or in the other. The case is just mentioned here because it tends to be discussed by evolutionary psychologists. Readers who think that selection acts on genes can consider it alongside the other cases, those who do not can reject the case and just consider the others.

[42] Nesse 1987, Marks and Nesse 1994.
[43] Akiskal 1998
[44] Baron-Cohen 1997
[45] Wakefield 1999 p.389 takes this line.

These examples show that whatever evolutionary account of function is adopted, it is plausible that in at least some cases the mind of an individual who suffers from a condition generally considered to be a disease will be fulfilling its evolutionary function. As such, we should conclude that it is not *necessary* that there be an evolutionary dysfunction for a condition to be a disorder. Thus the claim that a disease is a harmful dysfunction must be rejected. The D.S.M. account of disease is inadequate.

I have now completed my argument against the idea that whether a condition is a disease depends on whether it is a biological dysfunction. First, I have pointed out that providing a satisfactory account of normal function is problematic. This should make us doubt whether a satisfactory disease-as-dysfunction account will be possible. Second, even if some account of normal function is forthcoming, being a biological dysfunction is neither sufficient nor necessary for something being a disease. That a condition is a biological dysfunction is not sufficient for it being a disease because we would not consider harmless dysfunctions (e.g. possibly homosexuality) to be disorders. This shows that Boorse's account, according to which for a condition to be a disease it is necessary and sufficient that it be a biological dysfunction, must be rejected. The D.S.M., with its disease as harmful dysfunction account, recognises that harmless conditions are not diseases, but holds that being a biological dysfunction is at least necessary for a condition to be a disease. However this is also false. There may well be conditions that are diseases, but that are not biological dysfunctions, because they confer some biological advantage.

Thus, Boorse's account of disease and the D.S.M. account must be rejected, but what are the prospects for finding a better account? In a much cited recent article, Scott Lilienfeld and Lori Marino suggest that the failure of the D.S.M. account is symptomatic of a deeper problem.[46] They suggest that all proposed accounts of mental disorder have been wrong-headed, because it is in principle impossible to give a set of necessary and sufficient conditions for something being a "mental disorder". Lilienfeld and Marino claim that "mental disorder" is what they call a "Roschian concept". In this context by "Roschian concept" is meant something very close to a Wittgensteinian family resemblance concept.[47] Famously, Wittgenstein argued that there are no necessary and sufficient conditions for something being a game. Many, but not all, games are fun; many, but not all, have rules; many, but not all, have a winner. Rather than it being possible to give necessary and sufficient conditions for something being a game, games are united by a network of similarities, in the same kind of way that the members of a family share family resemblances. The members of the family need have no one feature in common, but any two members will be similar in a variety of ways. Similarly, Lilienfeld and Marino claim, necessary and sufficient conditions for something being a mental disorder cannot be given. Rather whether a condition counts as a mental disorder depends on how similar it is to prototypical cases, such as psychotic depression and

[46] Lilienfeld and Marino 1995. Most of the articles in a recent special edition of the *Journal of Abnormal Psychology* (1999 Vol.108. No.3) devoted to discussion of accounts of disorder discuss this idea.

[47] Rosch 1978, Wittgenstein 1953 §66, 67.

schizophrenia. Conditions that seem like these central cases get counted as disorders, but there are no general rules that determine what it takes for something to be a disorder.

Although Lilienfeld and Marino's paper has been influential, their main argument for the claim that "mental disorder" is a Roschian concept is flawed. They claim that no account of disorder in terms of necessary and sufficient conditions can be given because whether a condition is a mental disorder may be vague - normal sadness shades into depression, normal drinking shades into alcoholism. Characteristically whether something falls under a Roschian concept may also be vague and so Lilienfeld and Marino conclude that mental disorder is a Roschian concept. As has been pointed out by Wakefield this argument is completely confused.[48] That a concept has vague boundaries does not show that necessary and sufficient conditions for something to fall under it cannot be given. All it shows is that at least one of any necessary and sufficient conditions must also be vague. Thus, to use Wakefield's example, it may be vague whether an unmarried, seventeen-year old male counts as a bachelor. Still, necessary and sufficient conditions for being a bachelor can be given. We can still say that someone is a bachelor if they are an unmarried adult male. Whether a particular individual is a bachelor may then be vague because it may be vague whether or not they are an adult.

The only other reason Lilienfeld and Marino give for thinking that mental disorder is a Roschian concept is that attempts to provide necessary and sufficient conditions for the concept have repeatedly failed. Arguing that a concept is a family resemblance concept because necessary and sufficient conditions cannot be found ties in with Wittgenstein's approach in *Philosophical Investigations*. Wittgenstein asks his reader to "look and see whether there is anything common to all [games]".[49] It is because games can be seen to have nothing in common that he concludes that "game" is a family resemblance term. I shall argue that this is not the case with "mental disorder". In the next section I will give an account of mental disorder in terms of necessary and sufficient conditions that works. As mental disorders do have something in common, I argue, the claim that mental disorder is a Roschian concept should be rejected.

3.3 A Better Account

I suggest that a tidy definition of "disease" cannot be achieved. By "disease" we aim to pick out a variety of conditions that through being painful, disfiguring, or disabling are of interest to us as people. This class of conditions is by its nature anthropocentric and corresponds to no natural class of conditions in the world.

I shall argue that by "disease" we mean a condition that it is a bad thing to have, that is such that the afflicted person is unlucky, and that can potentially be medically treated. All three criteria must be fulfilled for a condition to be a disease. The criterion that for a condition to be a disease it must be a bad thing is required to

[48] Wakefield 1999 pp.377-378
[49] Wittgenstein 1953, §66

distinguish the biologically different from the diseased. The claim that the sufferer must be unlucky is needed to distinguish diseases from conditions that are unpleasant but normal, for example teething. Finally, the claim that for a condition to be a disease it must be potentially medically treatable is needed to distinguish diseases from other types of misfortune, for example economic problems and legal problems.

All three of my criteria, or criteria close to them, have previously been employed by other writers to provide accounts of disease. These writers' accounts will be referred to as I develop my own. The novelty of my account lies not in the criteria themselves but in their combination, in the arguments for them, and in the development of their implications. Now the outlines of my account have been sketched, I shall discuss each of my three criteria in more detail.

3.3.1 Diseases Are Bad Things To Have

A condition can only be a disease if it is a bad thing for the potential patient. The fact that a person is biologically different from others can never be sufficient to establish that they are diseased. Ginger haired people are different from other people but having ginger hair is not a disease. Similarly geniuses might plausibly all have something similar about their brains, but they are perfectly healthy. For something to be a disease, sufferers must both be different from most people and worse off. Many writers agree with me that a condition can only be a disease if it is harmful.[50] However, the discussion given here of the implications of this claim is novel.

Sometimes it is suggested that something can be a disease if it is a bad thing for society even if it isn't necessarily a bad thing for the potential patient. Here proposed examples include personality disorders and pedophilia.[51] This is a mistake. Although some behaviours that are bad for society are symptomatic of diseases, others are not, but are rather behaviour that is criminal or otherwise anti-social. Whether behaviour is symptomatic of disease cannot be determined by the type of behaviour - someone might set fire to buildings because they suffer from pyromania, or they might do it as an act of terrorism. Behaviour that is symptomatic of a disease can only be distinguished from behaviour that is not by its failure to be under normal voluntary control. And, if someone does not have normal control over their behaviour then this is a bad thing not only for society but also for the individual. Thus, something cannot be a disease just because it is bad for society, it must also be bad for the individual potential patient.

Sometimes it has been thought that for a condition to be a disease it must be a bad thing for most, or typical, potential patients.[52] On this view someone might have a disease even though in their particular case this was not a bad thing, so long as the

[50] King 1954 p.109 in reprint, Flew 1973 p.437 in reprint, Sedgwick 1973 p.123ff in reprint, Veatch 1973, Engelhardt 1974, Reznek 1987 ch.9, Wakefield 1992a., 1992b.

[51] For example, Spitzer 1999 claims that pedophilia is a disorder because it seems reasonable to suppose that there is an evolutionary dysfunction and "Because pedophilic behaviour results in the victimization of children, the dysfunction also represents a harmful condition by social standards." p.431

[52] Spitzer and Williams 1982 p.20

majority of the people with the condition were harmed by it. This is a mistake, as can be seen by considering the case of sterility. Some people who are sterile are deeply unhappy about it, for others it is a good thing (indeed many people choose to be sterilised). Quite conceivably it might be the case, or come to be the case, that being sterile is a good thing for the majority of sterile people. Still, regardless of this, those for whom it is a bad thing to be sterile would still suffer from a disease. Thus, someone can have a disease even if their condition is a good thing for most people. For someone to have a disease it is only necessary that the condition be a bad thing in their particular case.

How should it be determined whether a condition is a bad thing for the individual potential patient? This is a very difficult question and one that I will not be able to answer fully here. It should be noted that the question of what is good for an individual is not only a problem for me, but is a problem that arises in many other areas of philosophy. The question has been much debated by moral philosophers, particularly by utilitarians who must determine the nature of happiness if they are to have much chance of maximising it.[53]

Various accounts of the good for an individual have been proposed. All of them are problematic. The nature of the difficulties can best be grasped by thinking of the possible ways of determining what is good for an individual as varying along a scale. At one end of the scale lie methods that rely on asking actual people what they want. At the other end of the scale lie methods that claim that something is good for an individual if it helps that individual to meet some ideal standard of human flourishing. In between these two extremes lie methods that claim that something is good for an individual if that individual would judge it to be good in ideal circumstances, for example if they had all the information, and were calmer and wiser than they probably are.

Methods that rely on asking actual people are unattractive because it is plausible that actual people often do not know what is in their own best interest. They may make mistakes because they lack essential information. Thus Rene Dubos reports on a South American tribe who valued dyschromic spirochaetosis for the pretty coloured spots it produced on their skin.[54] However, in this case it seems the tribe only valued their condition because they were ignorant of some of its consequences; if they had known that the spot-producing condition had a tendency to kill them they would probably have decided that it was not, after all, a good thing to have.

Actual people are also notoriously prone to self-deception. Psychologists have repeatedly found that the vast majority of people believe they are cleverer and better looking than average.[55] Self-deception is perhaps particularly likely to arise when people are faced with making judgements regarding their health as within our society whether someone views themselves as being healthy or not has profound consequences. Sick people may both be stigmatised and receive certain social

[53] See, for example, Griffin 1986 for a fuller discussion of these issues.

[54] Dubos 1965 p.251

[55] For a study demonstrating such effects, that also reviews some of the literature in this area see Alicke, et al. 2001.

benefits. Thus people are often motivated to either consciously lie or to deceive themselves regarding whether or not they are sick.

Finally, it seems that some actual people are simply incompetent to judge the quality of their bodily and mental states. A lobotomised patient may sit around all day doing nothing and claim to be perfectly content, but here we feel that something has gone wrong with the individual's ability to evaluate their condition. Similar problems arise with all diseases that might themselves impair someone's ability to judge their condition.

Once the problems of relying on the judgements of actual people are realised, it becomes tempting to move to the opposite end of the scale and claim that something is good for someone if it helps that person meet some ideal standard of human flourishing. Here too, however, there are problems. Relying on the judgements of actual people to determine what is good is satisfyingly down to earth. On such a view if we want to find out whether a condition is good we have only to ask actual people in order to find out. In contrast appeals to "ideal standards of human flourishing" seem disturbingly anti-naturalistic. It is not at all clear how the ideal standards are fixed, nor is it clear how we can find out about them.

To a greater or lesser extent all other methods on the scale are beset by the problems of the extreme methods. When a method requires idealisation, epistemic problems arise. I know what I actually value, but how can I know what I'd value if I were more knowledgeable and wiser than I actually am? When a method relies on the judgements of actual people it risks giving the wrong answers; after all actual people make mistakes.

The problem of how to determine what is good for an individual will not be solved here. Rather I shall go on developing my account of disease and just make use of our everyday intuitions concerning the badness of various conditions. When, and if, some acceptable account of the good for an individual is developed this account can be plugged into my account of disease.

However the issue is eventually decided, plausibly it will be possible for one and the same condition to be a bad thing for one person but a good thing for another. Different people have different aims, different abilities, and different preferences. In addition, the same biological condition may produce varying experiences in different people - some schizophrenics see terrifying creatures, others see angels.

In *An Anthropologist on Mars* Oliver Sacks describes several cases of "patients" in whose cases it is plausible to think that a condition that would generally be considered a disease is a good thing. One chapter describes an artist who loses his colour vision following a head injury. After several years the artist adjusts to his new state and eventually he turns down a proposed new treatment. Sacks writes that "Mr I...has come to feel that his vision has become 'highly refined', 'privileged', that he sees a world of pure form, uncluttered by colour. Subtle textures and patterns, normally obscured for the rest of us because of their embedding in colour, now stand out for him."[56]

Similarly a few schizophrenics value their hallucinations to the extent that they would prefer to be schizophrenic than normal. One schizophrenic writes:

[56] Sacks 1995 p.35

> Hallucinations can be good or bad. The world can be transformed into heaven or hell at the drop of a hat...The plus side to them is certain moments of vividness that can turn a walk through a park, or whatever, into a walk through paradise…It's a type of drug, something that people would pay money for...I consider myself the luckiest of individuals, and am most pleased with this mind...My life is an adventure, not necessarily safe or comfortable, but at least an adventure. [57]

Often people with schizophrenia suffer cognitive deficits in addition to their positive symptoms.[58] Thus, it may well be that schizophrenics who value their hallucinations suffer other symptoms that must be weighed against any enjoyable aspects of their condition. Still, some people diagnosed as schizophrenic do not suffer from detectable cognitive deficits, and in others the deficits may be slight. Thus, in some cases, an individual who experiences enjoyable hallucinations might on balance benefit from having schizophrenia.

As discussed earlier, individuals may say that a condition is good for them when it is not. Here I am citing Mr I and the person with schizophrenia not simply because these people say that it is a good thing to be like them, but because they have given us good reasons for thinking that in their cases their condition may actually benefit them. Both Mr I and the person with schizophrenia have supplied us with a plausible explanation of why it might be a good thing for them to be as they are.

The best thing to say about cases where it seems that a condition is good for some people but not for others is that one and the same condition can be pathological for one person but not for another. The schizophrenic for whom it is a good thing to be schizophrenic is not diseased, while another for whom it is a bad thing is. Here I am suggesting that we should think about diseases in a way analogous to the way in which we think about weeds. A plant is only a weed if it is not wanted. Thus a daisy can be a weed in one garden but a flower in another, depending on whether or not it is a good thing in a particular garden.

This claim, that one and the same condition can be pathological for one person but not for another, may initially seem counterintuitive. I suggest that this implication of the concept of disorder has been easy to overlook because in the vast majority of cases there will be no disagreement between people as to whether or not a condition is a bad thing. So far as I know no one has ever claimed that cancer, or tuberculosis, or depression, or flu are good things to have. In addition, people who have a condition that is a good thing for them have largely been ignored by medicine because these people do not seek, nor need, help.

Still, that the same condition can be pathological for one person but not for another is recognised in some cases. Sterility is a disorder if it is not chosen, but not if it is the result of sterilisation. A scar may be a deformity if the person doesn't like it, but not if they do (perhaps, for example, it is a tribal marking). Occasionally people will be said to hear voices or to be a transvestite without there being any suggestion that they are sick. That a condition might be a disorder in some cases but not in others was recognised in the diagnosis of Ego-dystonic homosexuality, a diagnosis for homosexuals who didn't want to be gay, that was included in the

[57] Romme and Escher 1993 pp.130 and 133-4
[58] Lewis 2004

D.S.M. from 1980-1987. It is also recognised in demands made by Transgender pressure groups that only those who are distressed by their condition should be considered disordered.[59]

My suggestion that the same biological condition may be a disease for some individuals but not for others implies that we need to slightly rethink how we describe research on diseases. For example, epidemiologists are often said to study the incidence of disease. In measuring the incidence of a disease they count everyone who meets the appropriate diagnostic criteria. Asking whether the condition is a good thing in an individual case simply doesn't come into their work. I suggest that I can get around this potential problem in the following way: Instead of thinking of epidemiologists as studying the incidence of a disease, we should think of them as studying the incidence of conditions that are frequently diseases. To take a concrete case, suppose an epidemiologist is counting cases of schizophrenia. I accept that everyone who meets the diagnostic criteria for schizophrenia should be counted. All these people have schizophrenia (baring diagnostic error, of course). Still, it is consistent for me to hold that while these people all have schizophrenia it is possible that not all of them have a disease. For some individuals schizophrenia may be a good thing, and these individuals, while schizophrenic, are not diseased on my account. As a consequence, rather than saying that the epidemiologist is counting cases of a disease, I would say that they are counting cases of a condition that is of interest because it is normally a disease. This remains a useful activity on my account. Although I think that some cases of schizophrenia may not be pathological, I accept that the incidence of schizophrenia is of interest because incidence measures are of use for health planning, and for their value to those investigating the causes of schizophrenia, and so on.

I hold that for a condition to be a disease it must be a bad thing for the individual patient. Whether this criterion is met will not always be clear cut. In some cases some aspects of a condition may appear good but not others. The obvious example would be manic-depression. Many "sufferers" enjoy having manic episodes, but dislike the depressed periods that are normally part-and-parcel of their condition. Here whether or not their condition is a disease depends on whether they would be better off without it all things considered.

At this point one possible source of confusion should be cleared up. When I say that whether a condition is a disease depends on whether it is a bad thing for the "sufferer" I mean that disease-status depends on how the condition in and of itself is evaluated. Any secondary gains achieved via possession of the condition should be ignored in this evaluation. Thus, if someone has food poisoning they can consider this to be a bad thing in and of itself, even though they are glad to be poisoned because this gets them out of sitting a difficult exam. In such cases the food poisoning is a disease, because the condition is only valued because it just so happens to be linked to other benefits.

As mentioned earlier a disease must be a bad thing for the individual patient, and not just a bad thing for society. This might be thought to lead to difficulties with conditions such as pedophilia and personality disorders. If someone is a pedophile

[59] The House of Sissify, undated.

then this is bad for society, but it's not clear whether it need be bad for the pedophile who, after all, presumably acts in accordance with his desires. On some notions of the good for the individual this will not be a worry. An Aristotelian, for example, may claim that pedophilia is always bad for the pedophile because the condition reduces the degree to which the pedophile meets ideals of human flourishing. On other notions of the good for an individual, however, the worry remains. If, for example, it is thought that something is good for an individual if it fulfils their desires then it appears that having sex with small children need not be bad for the pedophile. I suggest that desire-fulfilment based accounts of the good can nevertheless adequately deal with conditions such as pedophilia so long as the disorder is thought of as being characterised primarily, not by a person's actions, but rather by their desires. Thus whether someone is a pedophile depends primarily on whether they want to have sex with small children, rather than on what they actually do. Whether pedophilia is a bad thing for the patient can then be taken to depend on their higher-order desires. A pedophile is diseased if they don't want to desire children as sexual objects but find that they can't help themselves, but not diseased if they are happy with their desires. All other conditions that are characterised by disordered desires (paraphilias, addictions, personality disorders) can be dealt with similarly. This stance comes very close to that adopted by the D.S.M.-IV. According to the D.S.M.-IV someone can only be diagnosed as having the disorder of pedophilia if "The fantasies, sexual urges, or behaviours cause clinically significant distress or impairment in social, occupational, or other important areas of functioning."[60]

Claiming that pedophilia need not be a disease is fully consistent with claiming that it is a bad thing for other reasons. This point is often missed by pressure groups who feel that it is necessary to claim that a condition is always a disease if they are to be able to voice disapproval of it. For example, in 1995 a Dallas-based Christian radio talk-show, *Point of View*, organised a petition campaigning against the D.S.M.-IV diagnostic criteria for pedophilia. The petitioners protested that the D.S.M.-IV "left an apparent loophole for certain child molesters who might escape being considered 'mentally disordered'".[61] More recently "Dr Laura", a radio talk-show host with an estimated audience of 18 million, has been campaigning against the same D.S.M.-IV criteria.[62] Quite rightly the American Psychiatric Association has responded to these allegations by claiming that it is perfectly consistent to hold that pedophilia need not always be a mental disorder while holding that "An adult who engages in sexual activity with a child is performing a criminal and immoral act".[63] All diseases are bad, but not all bad things are diseases.

[60] A.P.A. 1994 p.528
[61] Corbett 1996
[62] Saeman 1999
[63] A.P.A. 1999

3.3.2 The Afflicted Person Is Unlucky

My second criterion is that for someone to have a disease they must be unlucky. We only consider someone to be diseased if they could reasonably have hoped to have been otherwise. Thus ninety-year olds who can't walk as far as when they were younger are not diseased because we expect old people to become increasingly frail. Similarly baldness in men is not considered a disease, although it is in women.

Someone is unlucky if they could easily have been better off. In technical terms, their miserable state is not counterfactually robust. Talk of possible worlds is useful for making such claims precise. A possible world is a way in which things could have been different. One can imagine all the possible worlds as being arranged in a series of concentric spheres, with the actual world in the centre. In the actual world, things are as they are. The layer of possible worlds nearest to it differ in the myriad possible ways in which things could have been slightly different – in this one the cheese in my sandwich is a micron thicker, in that it is a micron thinner. A possible world must be fully consistent – in the world in which I have extra cheese in my sandwich, there will be less cheese left in the fridge, I will get a bit fatter, and so on. As one travels through the layers of possible worlds, and gets further from the actual world, the possible worlds differ more and more markedly from actuality. While the world in which I have extra cheese is quite close to the actual world, the world in which I joined the army rather than becoming a philosophy lecturer is further out, and the world in which I have wings and can fly yet more distant. As one moves away from the actual world one first passes through worlds that are physically possible (worlds in which the physical laws remain as they are), and then eventually through worlds that are physically impossible (worlds in which the physical laws differ).

When I say that for someone to suffer from a disease they must be unlucky I mean that there must be a good number of possible worlds at the right distance from the actual world in which they are better off. Which layers of possible worlds are the ones that we ought to be considering in such an evaluation? I suggest that the ones we need to consider are those that are consistent with the laws of human biology. We should ignore far distant worlds in which people live forever, or in which human anatomy has been re-jigged to make giving birth painless. Rather we should focus on worlds in which there are humans designed like us and ask whether we are badly off compared to them. Thus, an infant who is teething is not unlucky. In possible worlds consistent with the laws of human biology, young children go through teething. As such, while it can be unpleasant, teething is not a disease. In contrast, a child who has teeth growing from the roof of her mouth does suffer from a pathological condition. She is unlucky, because in possible worlds consistent with the laws of human biology most children have teeth that grow in at least roughly the right place.

Claiming that someone must be unlucky to suffer from a disease helps make sense of those disorders that afflict individuals who lie at the extreme ends of bell-curve distributions, of height, or I.Q., for example. Consider how we think of people who are severely mentally retarded because they are at the extreme end of the normal distribution of intelligence (as opposed to those who suffer from some

distinct condition such as Down Syndrome). When someone has an I.Q. that is very low we think of them as being disordered, although we think of someone with a slightly lower than average I.Q. as being healthy. I suggest that this is because people who have a very low I.Q. are unluckier than those who have a slightly low I.Q. There are more possible worlds in which people who are very stupid are cleverer than there are possible worlds in which people who are slightly stupid are cleverer. At the other end of the scale, people who are unusually clever are of course considered healthy, because we think that intelligence is a good thing.

For some, talk of being unlucky has connotations that I must distance myself from here. In moral philosophy, discussion of luck has become linked to discussion of responsibility – thus someone is said to have suffered moral bad luck if their action turns out to have been bad for reasons beyond their control. When I talk of unluckiness here, however, I don't want to link it with questions of responsibility. Rather for me to say that someone is unlucky just means that their bad state is not counterfactually robust, and this implies nothing about the person's responsibility for their state. To take an example, if someone shoots himself in the foot he can be both responsible for his injury and unlucky in my sense. His injury is not counterfactually robust because there will be plenty of possible worlds in which his foot is intact (mainly worlds in which he didn't pull the trigger, but also worlds in which the bullet jams, and so on). Despite the potentially misleading connotations of talking about "luck", I think it is the best I can do here. Saying that someone has been "unlucky" is the closest one can get in everyday English to saying that there are possible worlds in which they are better off.

There are a variety of grounds we might have for thinking that our bad physical or mental state is not counterfactually robust, and that we are thus unlucky. The first, and probably most usual ground, is that we subjectively feel worse than we did yesterday or a week ago. When this happens we have reason to believe that we can, and indeed generally do, feel better. Second, we may consider ourselves to be unlucky because we have reason to believe that other people generally are in a better state than ourselves, for example someone born blind might consider themselves to be unlucky because other people generally can see. Third, we may have reasons for thinking that although many other people are in the same miserable condition as ourselves there is a good chance that everyone could have been better off. For example, we have theoretical reasons for thinking that although dental caries is an almost universal condition it is perfectly feasible for humans to be without it. Often, all three kinds of reasons will be available together; if I have flu, or suffer a panic attack, I will know that I myself am usually in a better state, that other people generally are in a better state, and that there are reasons for thinking that everybody could be in a better state.

For someone to be unlucky it needs to be the case that they could have been otherwise – there need to be a good number of possible worlds consistent with the laws of human biology where people like them are in a better state. Whether this is the case depends on objective facts, and is something that people can get wrong. On occasion, people have taken something to be a necessary part of human life when it is not, and so wrongly thought a condition to be normal. For example, as late as the 1960s, some branches of Chinese folk medical thought took measles to be a normal

part of child development.[64] While it was recognised that measles was a bad thing, it was so common that it was taken to be something that humans just had to go through if they were to develop normally. Here, a mistake was made. The Chinese folk thought that children get measles in all possible worlds consistent with the laws of human biology, but actually this is not the case. As a result, they thought that measles is normal, when actually it is a disease. Equally, it is possible for people to think that something is abnormal, and a disease, when it is not. Thus some girls have taken themselves to be in an unusual and dire condition when they started menstruating, because they had not been warned that it is normal for women to menstruate.[65] These girls think they suffer from a disease when they do not, because they think they are unlucky, but they are not. For a condition to be a disease the individual with the condition actually needs to be unlucky – whether they think they are unlucky is a different issue.

At this point a possible objection needs to be dealt with. Some philosophers have claimed that there may be no possible worlds in which individuals who suffer from genetic diseases are better off. [66] This is because they think that the genetic make-up of a person is essential to them, so if someone had a different genotype they would be a different person. Thus, according to this account, if Fred has Huntington's chorea, he has Huntington's chorea in all possible worlds that are consistent with the laws of human biology – in worlds in which his genotype is different, Fred doesn't exist. If this is correct it looks like it causes trouble for me; Huntington's chorea is certainly a disease, but there are no possible worlds in which individuals with Huntington's are better off.

I'm not sure whether it is true that a person's genotype is essential to them, but here I will accept that this is the case for the sake of argument. Still, I think I can say that Fred is unlucky if he has Huntington's chorea. Even if there are no healthy Freds in any possible worlds consistent with the laws of human biology, there are still many people very like Fred in other possible worlds who are better off. These people are like Fred except that they lack the Huntington's gene – and these people generally have better lives. I suggest that this means that Fred is justified in thinking himself to be unlucky. There are many possible people like him who are better off.

I have now fleshed out what I mean when I say that for someone to suffer from a disease they must be unlucky. Somewhat similar criteria for a condition being a disease have been proposed by other authors, and I will now finish this section by examining how my own criterion differs from theirs.

First, claiming that a diseased person is unlucky is reminiscent of the idea that a condition must be statistically infrequent in order to be a disease.[67] However, although the two concepts overlap to a considerable extent, the notion of being unlucky is more flexible and for that reason preferable. Claiming that disease conditions must be statistically infrequent runs into well known difficulties. The requirement implies that if the only survivors of a nuclear holocaust were the

[64] Topley 1970
[65] While such cases are hopefully rare these days, March 1916 p.61 considered them common.
[66] Parfit 1984 ch.16
[67] Kendell 1975a holds this view, as does Taylor 1976 p.581 in 1981 reprint.

inhabitants of a remote leper colony the lepers would be cured by virtue of the new-found statistical normality of their condition. Employing the notion of being unlucky avoids this objection. Even though the lepers have survived the holocaust, they are still unlucky to have leprosy because there are many possible worlds consistent with the laws of human biology in which people like them are better off.

Second, in *The Nature of Disease* Lawrie Reznek suggests that something cannot be a disease if it is normal. Reznek claims that we choose what we will consider normal.

> We choose one norm rather than another because we wish to create certain priorities in dealing with all those conditions that we would be better off without...we would be better off without dental caries, but we regard it as an abnormal process because we choose to give its cure the same priority as we give to the cure of TB and multiple sclerosis. And so we regard it as a disease. We regard the process of ageing as normal, because we consider it more important first to rid ourselves of those processes we take to be abnormal. On the other hand, if it became as important to us to reverse the ageing process as it was to reverse cancer, we *would* come to think of ageing as an abnormal process, and classify it as a pathological condition.[68]

I suggest that Reznek's suggestion is unsatisfactory. Plausibly it is not true that the cure of dental caries is granted a higher priority than reversing ageing. In any case, and more importantly, here Reznek has got things back to front. Conditions are not abnormal because we aim to cure them, rather we can reasonably hope to cure some conditions because they are abnormal. Those with diseases are unlucky. This implies that they could have been healthy, and this suggests that it might be possible to find a cure.

3.3.3 The Condition Is Potentially Medically Treatable

For a condition to be a disease it must be such that it could potentially be treated by medical science.[69] A cure need not be presently available, but the condition must be such that there is reasonable hope that a medical treatment might become available in the future. This condition is required to distinguish diseases from other types of misfortune - economic problems, social problems, and so on. This criterion implies that conditions can sometimes come to be thought of as diseases as a result of treatments for them being discovered. Following the discovery that Paroxetine can be used to treat shyness, social anxiety disorder is a condition that is coming to be thought of as a disease for this reason.[70] Prior to the discovery no one thought of shyness as being something that might be treated by physicians, but the discovery of the drug-action proved them wrong.

I had been tempted to think that diseases must be presumed to have a biological basis, but such a claim is in fact both too strong and too weak. Claiming that

[68] Reznek 1987 p.94

[69] This view is also held by Reznek 1987 p.163. Veatch 1973 p.101 in 1982 reprint, notes that for a condition to be encompassed by the medical model physicians must be the technically competent experts, Taylor 1976 p.581 in 1981 reprint holds that diseases are the object of "therapeutic concern", Spitzer and Endicott 1978 p.18 note that when someone has a disorder there is a "call to action on the part of the medical profession".

[70] Irwin 1998

diseases must have a biological basis would be too strong because there might be some mental diseases where there is nothing wrong with the patient's brain. For example, it might well turn out that irrational phobias are completely indistinguishable from reasonable fears by the neurosciences.

Claiming that diseases must have a biological basis would also be too weak a requirement. Having a bad haircut and being unable to fit into last year's clothes are bad things and the sufferer may be unlucky. They have a biological basis, but they are not diseases. They are not diseases because we do not rely on medical help to fix these problems. The claim that diseases must be potentially treatable by medical science is made still more plausible when we consider how we think of conditions like acne, dandruff, and being over-weight. Acne, dandruff, and being over-weight are not thought of as diseases until non-medical means of dealing with them fail. It's only when we think the sufferer should resort to visiting the doctor that we think of them as suffering from a disease. The class of conditions that is "potentially medically treatable" is, of course, vague and messy. Is speech therapy for stuttering a medical treatment? Is corn-removal by a chiropodist? This indeterminacy as to what constitutes medical treatment may make it indeterminate whether or not some condition is a disease.

I claim that for a condition to be a disease it must be potentially medically treatable. This, of course, should not be taken to imply that someone must seek medical help in order to count as suffering from a disease. Some people who have a disease avoid treatment altogether, or treat themselves, for example by buying drugs over the internet. Still, on my account, someone with untreated syphilis, say, can count as having a disease. Their condition may be medically untreated, but it is still a condition that is potentially medical treatable.

If having said that diseases must be potentially medically treatable I went on to define "medicine" as the art of treating diseases, my account would be circular. However, there are other ways of giving content to "medicine". One possibility would be to take medicine to be the discipline practised by doctors and other medical personnel, and to adopt a sociological approach to deciding who counts as "doctors and other medical personnel". Very roughly, we would end up saying that doctors are those people who trained at medical school and are experts in human physiology and biology and other sciences.

Reznek, who also holds that for a condition to be a disease it must be potentially medically treatable, suggests that medical intervention can be defined "purely enumeratively without reference to the notion of disease - in terms of pharmacological and surgical interventions".[71] This suggestion must be rejected. Some medical interventions cannot be distinguished from some non-medical interventions in terms of what is actually done. If someone is given amphetamines by their doctor this is a medical intervention, if they are given them by their drug-dealer it is not. These interventions can only be distinguished sociologically.

Treating some conditions is technically feasible but socially unacceptable.[72] Thus technically it is possible to treat violent people with brain surgery. Someone who is

[71] Reznek 1987 p.163
[72] This point is also noted by Reznek 1987 p.167

violent may wish that they weren't, may be unlucky and may have a condition that is technically treatable, but still we don't think of them as having a disease. For a condition to be a disease it must be not only technically potentially treatable but also socially potentially treatable. Here homosexuality is an interesting case. As discussed earlier, in the 1970s, it was usual to consider homosexuals who were unhappy about being gay to suffer from a disease, and this disease could be treated by psychiatrists either through counselling to help the person accept their sexual orientation, or through therapy aimed at changing it. More recently it has become socially unacceptable for therapists to aim to change their clients' sexual orientation even at their clients' request.[73] At the same time homosexuality has ceased to be considered a condition that can be a disease. Here we have an example of a condition that ceased to be considered a disease as it became socially unacceptable to treat it.

My basic account of disorder has now been developed, but some further work is needed to make it plausible. To this end I will first re-examine how the account proposed here differs from the accounts of disease that I rejected earlier in this chapter. Then I will go onto show how various potential counterexamples and problems can be overcome.

3.3.4 How The Account Differs From Others

I have claimed that for a condition to be a disease three criteria must be met. First, the condition must be bad for the individuals with the condition. Second, the individuals with the condition must be unlucky. Third, the condition must be at least potentially medically treatable. These criteria, I claim, are jointly necessary and sufficient for a condition to be a disease.

This account differs most obviously from biologically-based accounts of disease. I have suggested that there are problems with the whole notion of "biological dysfunction". In any case, in so far as any sense can be made of dysfunction-talk, on my account this is not directly relevant to determining whether a condition is a disease. I have argued that it is neither necessary nor sufficient for a condition to be a disease that it be a biological dysfunction.

This being said, I do not want to imply that whether a condition is a disease has nothing to do with biology. On my account, facts concerning human biology can come into determining whether a condition is a disease at several points: Facts concerning human biology can be relevant to determining whether a condition is a bad thing for an individual. Thus, harbouring a few cancer cells is a bad thing because facts about human biology mean that such cells may well multiply and eventually cause death. Whether we can be considered unlucky also depends on biological facts – we are only unlucky if there are a good number of possible worlds consistent with the laws that govern human biology in which people like us are better off. Finally, biological facts have a role to play in determining whether a condition is potentially medically treatable. Medical treatments are prototypically

[73] For statements by professional organisations condemning "reparative therapy", that is therapy that attempts to change the sexual orientation of homosexuals, see Robinson 2000.

those that involve bringing about changes in our biological natures. On my account, biological facts thus remain relevant to determining whether a condition is a disease. Still, my account is not a biologically-based account, because on my account the question of whether a condition is a disease is divorced from the question of whether the condition is a biological dysfunction.

The account I have proposed also differs from the family resemblance account proposed by Lilienfeld and Marino. A family resemblance term is one for which a definition in terms of necessary and sufficient conditions cannot be given. Here I think I have provided a set of conditions that are jointly necessary and sufficient for something to be a disease, and thus I do not think that "disease" is a family resemblance term.

Having said this, I accept that my account of disease is not a "tidy" account. On my account, in many cases it will be indeterminate whether a condition is a disease or not – because it may be indeterminate whether the condition is bad, or whether sufferers are unlucky, or whether the condition can be appropriately medically treated. Some of this indeterminacy arises because my criteria are vague. Whether something is bad, whether there are a good number of possible worlds in which people like me are better off, and whether a condition is potentially medically treatable, may all be a matter of degree. Another possible source of indeterminacy is that my account of disease makes use of concepts for which a family-resemblance based account is plausibly appropriate. Most obviously, "medical treatment" looks like a family resemblance term. Thus, while my account is not a straightforward family resemblance account – because I have provided necessary and sufficient conditions for something being a disease – I accept that the messiness of some of my criteria means that my account has some similarities with family resemblance accounts.

3.3.5 Potential Counter-Examples And Problems

Unwanted Pregnancy Unwanted pregnancy may appear to cause problems for my account. A pregnant woman may wish she wasn't pregnant, if she used contraceptives she may well be unlucky to be pregnant, and her condition is medically treatable. Still, we don't normally think of unwanted pregnancy as a disorder.[74] Does this mean that my account has gone wrong?

I suggest that it does not. The pregnancy-objection can be rebuffed in at least two ways, with the appropriate reply depending on the account of the good that is adopted. On some accounts of the good for an individual it is possible to claim that an unwanted pregnancy need not be a bad thing for a woman. For the Aristotelian whether something is good for a person doesn't depend on whether it satisfies her desires, but on whether it helps her to approach an ideal standard of human flourishing. Some Aristotelians claim that having children is an intrinsic human

[74] Veatch 1973 p.89 in 1982 reprint cites unwanted pregnancy as a dubious candidate for the category of illness.

good, along with things like health, knowledge, pleasure and virtue.[75] From such a position it becomes plausible to claim that in most cases a pregnant woman who does not want to be pregnant has made a mistake in the same kind of way that a school-child who wants to be severely ill so he doesn't have to go to school has made a mistake. Both are mistaken about what is in their own best interest. They think they are badly off in being pregnant, or in being healthy, but they are wrong.

It should be noted that the Aristotelian does not need to take this line. An Aristotelian need not think that having children is a good thing, or, more plausibly, they might think that it is only a good if it is wanted, and then the above reasoning will not be attractive to them. Still, the position outlined above illustrates that it is possible to accept my account of disease and to also deny that unwanted pregnancy is a disease.

What, however, if one is an Aristotelian who denies unwanted pregnancy is a good, or if one adopts a desire-satisfaction account of the good? Then the second way of rebuffing the pregnancy-objection must be employed. From such stances an unwanted pregnancy is a bad thing, the pregnant woman may also be unlucky, and the condition can be medically treated. Thus unwanted pregnancy, at least in cases of contraceptive failure, counts as a disease. Admittedly our intuitions do not cohere with this result. However, I suggest that this is only to be expected because even if unwanted pregnancy is a disease now it will only have become a disease comparatively recently, and there can be expected to be a time-lag between changes in the disease-status of a condition and changes in our intuitions. Prior to the invention of effective contraceptives those who had unwanted pregnancies were not diseased because they were not unlucky. In addition, until comparatively recently it has been socially unacceptable to treat unwanted pregnancy (and to a certain extent this is still the case).

Animal And Plant Diseases According to my account a disease is a bad thing, the sufferer is unlucky, and the condition is such that it could potentially be medically treated. All these criteria can be met by animal diseases. If a dog has a bone stuck in its throat this is a bad thing, the dog is unlucky, and a vet can probably get the bone out.

It is harder to see how my account can work for plant diseases. Plants don't have a point of view and so it is hard to see how a condition could be a bad thing for a plant. Boorse takes this point to show that only a biologically-based account of disease can work for plant diseases.[76] He claims that plants, like humans, can be said to have sub-systems that have evolved to fulfil particular functions. According to Boorse when these sub-systems fail to fulfil their functions the plant suffers from a disease.

Boorse's account of plant diseases must be rejected, however. There are many conditions that render plants less able to fulfil their evolutionary function but that are not considered pathological. Many varieties of fruit and vegetables have been

[75] For example Hursthouse 1987 p.309
[76] Boorse 1975 p.53

developed that are good to eat but that are not very good at reproducing, for example seedless grapes and varieties of vegetable that are slow to bolt. Although these plants often fail to fulfil their evolutionary function they are not considered to suffer from some genetic disease. This shows that a biological account of plant diseases is inadequate.

My account of disorder can work for plant diseases so long as the criterion that a disorder be a bad thing is understood rather differently in the case of humans and of plants. For a condition to be a bad thing for a human means that they would have been better off being otherwise. For a condition to be a bad thing for a plant means that the condition causes the plant to deviate from an ideal standard. I suggest that ideal standards for domestic plants are determined by plant breeders; roughly the ideal standard for a plant corresponds to the picture on the seed packet. Even though seedless grapes cannot reproduce, they are not diseased because they are as plant breeders want them to be.

In some cases a similar notion of a condition being a bad thing can be used for animal diseases. Some domestic animals are bred to meet standards that put them at a biological disadvantage and may plausibly be supposed to cause them pain. For example, the British Rabbit Council standards for Netherland Dwarf rabbits dictate that the ideal weight for a Netherland Dwarf is 2lbs.[77] As they are so tiny, Netherland Dwarf does have smaller litters than larger rabbits and have more problems giving birth. Still, the small Netherland Dwarf rabbit is not considered to suffer from a genetic disorder, as she is as the rabbit breeder wants her to be.

Are Mental Diseases Particularly Problematic? Often it has been thought that mental disease is more problematic than bodily disease. As my account treats mental and bodily disease together I am under some pressure to provide reasons why deciding whether someone suffers from a mental disease might appear particularly difficult.

I suggest that questions concerning mental disease are especially frequent for rather mundane practical reasons. We debate whether someone suffers from a mental disease more often than whether someone suffers from a bodily disease because suffering from a mental disease carries heavier social and legal consequences within our society. The existence of the insanity defence, and of compulsory treatment orders, and the stigma attached to mental disease, all make it more important to decide whether or not someone suffers from a mental disease. In addition, problems linked to deciding whether or not someone suffers from a mental disease have received far more publicity than those linked to deciding whether or not someone suffers from a bodily disease. R.D.Laing, Thomas Szasz, Michel Foucault, and other influential authors chose to write about mental and not bodily disease. The emphasis of public debate is now perhaps beginning to shift; debates as to whether deaf children should be given cochlear implants, which are often in effect debates concerning the disease-status of deafness, have recently received widespread media

[77] British Rabbit Council undated

attention.[78] I suspect that deciding whether someone suffers from a bodily disease can be just as problematic as deciding whether they suffer from a mental disease.

Having said this, I should point out that it is not an integral part of my account of disease and I shall now outline how my account of disease is compatible with Foucault's and Laing's accounts of mental disease. I do not wish to commit myself to accepting these accounts, but they have been influential and so it is worth pointing out that they are compatible with my own. If acceptable, any of these accounts would explain why mental disease is more problematic than physical disease.

In *Madness and Civilisation* (1961 as *Histoire de la Folie*, 1967 in English) Foucault argued that contemporary notions of mental illness are rooted in contingent, historical developments. According to Foucault, prior to the Enlightenment the mad were tolerated and seen primarily as different, and possibly gifted, rather than as ill. The Enlightenment idolisation of reason then rendered society newly incapable of coping with the "unreasonable" in its midst, and so vagabonds, delinquents, and the mad came to be shut away in huge institutions. Of this mixed group, the mad alone were unable to fit into institutional life and so, through forming a residual problem population, became visible as a group for the first time. Following various inter-professional power struggles, the medical profession eventually gained authority over this group, who came to form "the mentally ill" as we know them today. If Foucault is right, then the mad have not always been seen as suffering from mental diseases. The reasons Foucault cites - that madness was not always seen as a bad thing, and that madness was not thought of as being a medical problem - are precisely the kinds of reasons that my account suggests should lead us to think of a condition as a non-disease. Thus his account is compatible with my own.

My account is also compatible with Laing's accounts of schizophrenia. Laing developed two completely different and influential accounts of schizophrenia during his career. First, with A.Esterson in *Sanity, Madness and the Family* (1964) he developed an account according to which, rather than there being something wrong with schizophrenics as individuals, there is something wrong with their families. According to Laing and Esterson the families of schizophrenics present them with confused and impossible demands. The schizophrenic in the family tries to make the best sense possible of an insane situation. Still, since you can't make a silk purse out of a pig's ear, the best sense possible isn't very good and so the schizophrenic ends up appearing to be insane. This account can be glossed as claiming that schizophrenics are not suffering from a disease because they do not require medical treatment - there isn't actually anything wrong with them as individuals. Again, this is the kind of reason that my account suggests should lead us to think of a condition as a non-disease.

Later, in *The Politics of Experience* (1967) Laing developed an account according to which schizophrenia is a mystical journey to a higher form of sanity. According to this account it is us "normals" who are truly alienated from ourselves. From childhood on we have been conditioned, first by our family, then at school, then at work, to act in ways that do not conform with our experiences, for example

[78] For example Weale 1999

we are trained to be polite to people who offend us. Under such pressures we create a false-self to present to the world. Schizophrenics are people who have refused to construct a false-self and as such are better off than the rest of us. Their experiences are part of a healing spiritual journey that can potentially lead them away from normality and into a higher form of sanity. This account is also compatible with my own. Laing can be understood as claiming that schizophrenia is not a disease because it is not a bad thing and, if this were so, I would be forced to agree with him.

My account is not compatible with Thomas Szasz's account of mental illness. In a series of influential publications, spanning from the 1960s to the present day, Szsaz has argued that mental diseases do not exist.[79] According to Szasz, talk of sick minds is merely metaphorical, in the same way as is talk of sick economies. Szasz claims that someone can only be said to have a disease, in the literal sense, if this disease is caused by some physical abnormality. Claiming that someone has a mental disease is taken to imply that they literally have a disease but that this disease has no physical basis. Thus Szasz concludes, while there may be brain diseases, there can be no mental diseases.

Szasz promotes his ideas as if they are extremely radical. His slogan that mental illness is a "myth" implies that psychiatrists are charlatans and/or agents of social control and, not surprisingly, psychiatrists have often been insulted by this. Still, I think that on the most plausible reading Szasz's claims turn out to be fairly moderate, and the disagreement between his account and my own will be slighter than might have been expected. Szasz accepts that if schizophrenia, depression, autism, and so on turn out to have some physical basis then they are real diseases. He just chooses to refer to any real diseases that have psychological symptoms as brain diseases rather than as mental diseases. As there is increasing evidence that a great many of the conditions that psychiatrists treat have some kind of physical basis, this means that Szasz will have to accept that much of the time psychiatrists treat real diseases.

Much of Szasz's anger has been directed at those who have claimed that what he thinks of as being symptoms of social discord, such as war, crime, and relationship problems, are in fact symptoms of mental illness. Such attempts to put medicine in the place of politics and ethics are dangerous, Szasz thinks, because their implicit denial of the importance of individual responsibility and of free-will is dehumanising. Here I can agree with Szasz. On my account social problems and problems in living are not diseases either, because they are not appropriately medically treated.

The only remaining disagreement between myself and Szasz concerns the possibility that some genuine diseases might have no biological basis. Szasz claims that all real diseases have a physical basis; I claim that it is conceivable that some diseases do not. For example, I think that quite possibly we will never be able to distinguish phobias from rational fears by looking at someone's brain, but that phobias can still be diseases.

[79] Szasz 1960, Szasz 2000

I shall try to make it plausible that Szsaz makes a mistake in claiming that all genuine diseases have a physical basis by showing that this claim does not actually satisfy the motive that lies behind it. Szasz's ultimate aim is to distinguish behaviours for which individuals should be held responsible from those for which they should not be held responsible. He thinks that the class of behaviours for which individuals should not be held responsible can be equated with the class of behaviours that are caused by physical abnormalities, and that diseases are conditions for which individuals cannot be held responsible. This leads Szasz to claim that all diseases have a physical basis. I suggest that Szasz has made a mistake and that it is in fact highly implausible to think that an individual is not responsible for some behaviour if and only if it is caused by a physical abnormality. On the one hand it seems that there are physical abnormalities for which I might be to blame - if I don't take my tablets, or if I shoot myself in the foot, then it can be my own fault if I am physically abnormal. Conversely, it is plausible that there might be involuntary behaviours that are not produced by physical abnormalities. Plausibly there are mental mechanisms that are not under our conscious control, for example at least part of our memory system. When something goes wrong with such mechanisms the behaviours produced might well be involuntary and yet mentally caused. As such, I suggest that the class of behaviours produced by physical abnormalities need not be the same as the class of involuntary behaviours. The motivation for Szasz's claim is thus lost, and there is no reason to think that diseases must have a physical basis.

4.IMPLICATIONS OF ACCOUNTS OF DISEASE FOR THE D.S.M.

Before examining the implications of accounts of disease for the D.S.M. it will be useful to review the argument of this chapter so far. In this chapter I have argued that it is neither a sufficient nor a necessary condition for something to be a disease that there be an evolutionary dysfunction. That something is an evolutionary dysfunction is not a sufficient condition for it to be a disease because some evolutionary dysfunctions, for example plausibly homosexuality, do not harm the dysfunctioning individual and these dysfunctions are not diseases. As such, biologically-based accounts of disease must be rejected.

The claim that diseases are harmful dysfunctions, a claim that is implicit in the definition of disease included in the D.S.M., must also be rejected. This is because it is not even necessary that there be an evolutionary dysfunction for a condition to be a disease. Some diseases may increase the inclusive fitness of an organism and in such cases there may be a disease but no evolutionary dysfunction. Having rejected these accounts, I have argued for a new account of disease according to which for a condition to be a disease it is necessary and sufficient that it be a bad thing, that the sufferer be unlucky, and that it be potentially medically treatable.

If the definition of disease used by the D.S.M. must be rejected, what implications does this have for the D.S.M? Does it imply that the D.S.M. includes the wrong class of conditions? I suggest that the implications for the D.S.M. are limited. The D.S.M. committee employed an account of disease according to which a disease is a harmful dysfunction. I have argued that this is the wrong account of

disease and that instead a condition is a disease if and only if it is a bad thing to have, sufferers are unlucky, and it is potentially medically treatable. As they stand these two accounts of disease are quite different. However, it turns out that in order to be practically useful the D.S.M. account has to be revised, and the revised version is fairly close to the account I have been promoting. An account that claims that diseases are harmful dysfunctions is of little practical help in deciding whether particular conditions are diseases because in most cases we lack sufficient knowledge to know whether or not a condition is a dysfunction. As was seen in the earlier discussion of homosexuality, in many cases we just don't know whether or not a condition is biologically advantageous. As a result, the dysfunction part of the D.S.M. account can do little work. I suggest that in practice a condition is assumed to be a dysfunction if it is unusual and if it appears to be a biological or psychological problem. These proxy criteria would have seemed attractive to the D.S.M. committee because it is often assumed that the majority will function normally and that an evolutionary dysfunction will manifest itself at the biological or psychological level. These criteria, it turns out, are very close to my criteria that those who suffer from a disease should be unlucky and that diseases should be potentially medically treatable. Thus in practice it is unlikely that the dysfunction-criterion would have led the D.S.M. committee far astray.

The D.S.M. account and my own account both claim that diseases are bad things to have. I take it to be a consequence of this claim that one and the same biological condition can be a disease for some individuals and not for others (depending on whether it is a bad thing for the individual). At many points the D.S.M. takes the same line. Ego-dystonic homosexuality is a classic example of a condition that was only taken to be a disease so long as it was bad for the individual, although as discussed this diagnosis was dropped in 1987. Similarly, as we saw, the D.S.M. considers pedophilia to only be a disease when it is bad for the pedophile.

The account of disease used by the D.S.M. committee in practice, I suggest, was not far wrong. This being said, there may be reason to doubt the extent to which decisions to include particular conditions in the D.S.M. were influenced by accounts of disease. The A.P.A. archives contain files full of letters to and from the D.S.M-III committee. Many of these letters argue for the inclusion or exclusion of particular disorders. The archives contain letters arguing that disorders should be included because psychiatrists see patients with the condition, or that the condition is required for insurance purposes, or that research on the condition is being carried out. However, there are no letters, either to or from the D.S.M. committee, that argue that conditions should be included because they are diseases or excluded because they are not diseases. This suggests that accounts of disease may have been little used in deciding the conditions to be included in the D.S.M. As I have argued, during the 1970s and 1980s, in public, the A.P.A. found defining "disease" a useful rhetorical strategy, but this is compatible with A.P.A. committees paying little attention to accounts of disease behind closed doors.

During the 1990s the A.P.A. begun to lose interest in defining "disorder" even for rhetorical effect. I have suggested that psychiatrists became interested in defining "disorder" during the 1970s and 80s because they needed to defend themselves from the claims of the anti-psychiatry movement and because they wanted to determine

whether homosexuality is pathological. These concerns were peculiar to a specific time in American history and by the late 80s had largely disappeared. Right on cue the A.P.A. started to loose interest in defining "disorder". The introductions to the D.S.M-IV and the D.S.M.-IV-TR include a definition of "disorder" but add "no definition adequately specifies precise boundaries for the concept 'mental disorder'" and admit that "the definition of *mental disorder* that was included in D.S.M.-III and D.S.M.-III-R. is presented here because it is as useful as any other available definition".[80] These comments scarcely give the impression that the definition of "disorder" was considered of much importance by the committees responsible for these editions of the D.S.M.

There are some signs that interest in defining "disorder" is once again increasing. In 2002 the A.P.A. published *A Research Agenda for D.S.M.-V*. This brings together a series of "white papers", produced by committees of experts, that lay out some of the most pressing research problems for psychiatric classification. The first of these "white papers" is concerned with issues of basic nomenclature, and argues that a revised definition of "mental disorder" should be developed for inclusion in the D.S.M.-V. The committee think that such a definition is needed to justify why some conditions but not others are included in the D.S.M. in the face of "rising public concern about what is sometimes seen as the progressive medicalization of all problem behaviours and relationships".[81] Once again defining "disorder" has become a matter of political importance.

The A.P.A.'s interest in defining "disorder" varies with the political climate. However, I suggest that providing an account of disorder is always a matter of importance, whether this is recognised in particular periods or not. First, an account of disease can be helpful in determining which conditions should be considered to be diseases. As an example of a condition which has plausibly been wrongly included in the D.S.M. take hypomania. Hypomanic episodes are characterised by a mood that is "unusually good, cheerful, or high...The expansive quality of the mood disturbance is characterized by enthusiasm for social, interpersonal, or occupational interactions."[82] The person may have a decreased need for sleep and be more talkative than normal. Hypomanic episodes are distinguished from manic episodes in that there is no, or little, impairment in the person's social or occupational functioning, and there are no psychotic features. Quite simply, a hypomanic episode is generally a great thing to experience. Many psychiatrists believe that it is important to record hypomanic episodes because if a depressed person has been hypomanic in the past then this can have implications for their treatment. I have no quarrel with such claims. However, I suggest that hypomania in and of itself should not be considered to be a *disease* because it is not a bad thing to have. Such conclusions are of practical importance because many benefits and costs accrue to those who are considered to suffer from a disease.

Second, it is important to develop an account of disease because this is relevant to the discussion of various ongoing social and political problems. Take, for

[80] A.P.A. 1994 p.xxi
[81] Rounsaville 2002, p.3.
[82] A.P.A. 1994 p.336

example, the question of who should determine whether a condition is a disease. Depending on the account of disease adopted different answers to this question will seem attractive. Boorse, for example, argued that whether a condition is a disease is a matter of biological fact. On such an account of disease it will seem appropriate for experts in biology to tell us which conditions are diseases. In contrast, I have argued that whether a condition is a disease is in part a value-judgement. As doctors are not experts in making value-judgements, it follows from my account that it not appropriate for them alone to have a say in deciding which conditions are diseases. Similarly, an account of disease will be of use in determining whether, and why, diseased people should be eligible for various benefits, or excused from wrongdoing, although exploring such issues is beyond the scope of this book.