Justice, Health, and Normal Function:
A Political Foundation for Just Health Distribution

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Dedication

To my wife, Elizabeth, who moved across the country, away from her family to a place where “I don’t care to” actually means “I don’t mind” so that I could pursue a lucrative career as a philosopher. Who loves and supports me in my triumphs and in my defeats. I could not have done any of this without you. You believed in me when I lost faith and your love and support kept me going when I had run out of steam.

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Abstract

Health is a particularly important social good, not least because it protects equality of opportunity: whatever goals we have, we need health to pursue them. Justice requires that we protect equality of opportunity, and so a just society must protect the health of its citizens. However, health resources are scarce; hence, theories of justice must consider how to distribute them fairly. Such distributional schemes must meet two requirements: first, they must fix what counts as a health need, and second, they must determine how to prioritize health needs. Existing discussions often focus on the second requirement alone, but this risks producing an arbitrary and illegitimate distribution. Those who do try to meet the first requirement typically offer naturalistic accounts of the distinction between health needs and non-health needs. However, I argue that this distinction cannot be read off of the natural world without taking a controversial stand with respect to metaphysical and normative assumptions about which reasonable people disagree. In response to these views, I contend that agreement among reasonable people can itself serve as an objective standard for a distinction between health needs and non-health needs. Using a Rawls-inspired reasoning game, I argue that reasonable people would agree to a conception of health that marries a statistically derived goal-directed notion of function to a set of inputs and goals to which rational, reasonable, and impartial contractors could unanimously consent.

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Introduction:

"At Least You Have Your Health"

At an intuitive level, we all seem to recognize that there is something about health which separates it from among the other social goods which are distributed, one way or another in our society. Though it is clear that good health is something which we prefer to illness, it is also clear that our preference for health is not like our preference for other goods and services bought and sold on the open market. But what is it that is so special about health? Why do most of us have these intuitions? Norman Daniels argues that health is special because, like education, it is necessary to protect fair equality of opportunity. Whatever goals we have, we need health to be able to pursue them. What is more, if justice requires that we protect opportunity (as most theories of justice – most notably the theory of justice as fairness offered by John Rawls – seem to indicate) then justice gives special importance to meeting health needs.

But meeting health needs requires resources and insofar as health resources are scarce, justice also requires that we construct a distributive scheme for meeting these health needs when we cannot meet them all. Any strategy for offering such a distributive scheme will need to involve a two step process. In the first step, it must determine what constitutes a valid health need in order to exclude non-health needs from consideration for funding. The second step involves determining which valid health needs to fund. Typically, it is the second step which has received the most attention, because it is in this step that the distributive criteria offered by various theories of justice compete. Though I am of course interested in solving this problem, I'm inclined to believe that there are

questions with respect to the first step of this two step process which need to be engaged before we can even begin to work out the kinks at the second stage.

In *Just Health Care* (1985) and in its 2007 update *Just Health*, Norman Daniels contends that a genuine health need is one which is needed to restore normal functioning – an objective notion which he, in agreement with Christopher Boorse, Jerome Wakefield, and the biomedical sciences as a whole, believes can be read off of the natural world without reference to potentially controversial normative categories. Normal functioning is important according to Daniels because departures from it constitute an arbitrary restriction on one's access to his/her shares of the normal opportunity range – the range of opportunities which one would have been able to pursue. Since resources are limited, difficult decisions will still need to be made as to which genuine health needs should be met under what conditions. So, once we have settled on the set of genuine health needs and have excluded from consideration those conditions which should not qualify as diseases, Daniels argues that the next step involves making these distributive decisions according to a fair procedure. To that end, Daniels offers what he calls "accountability for reasonableness conditions," a set of criteria which are designed to ensure that distributive decisions are made for reasons that everyone can regard as legitimate.

I take issue with the conception of health which Daniels takes for granted for the purposes of excluding non-health needs from consideration. Daniels needs a conception of health which is objective in order to avoid intractable disagreement about what does and does not constitute a genuine health need. If no such agreement can be reached, and

certain conditions are excluded from the category of genuine health needs for arbitrary reasons, the legitimacy and the fairness of the outputs of Daniels's accountability for reasonableness procedure could be called into question, along with the justice of Daniels's overall distributive scheme. I argue that the background theories to which Daniels appeals for objectivity fail to provide a conception of health to which rational and reasonable persons would agree. Despite his claims to the contrary, the conception of health which Daniels endorses harbors controversial commitments to metaphysical and/or normative positions which make room for intractable disagreement with respect to which conditions should count as genuine health needs and therefore which needs should be met.

Christopher Boorse's biostatistical theory acts as the primary source upon which Daniels relies for the substance of the conception of health which he assumes. On Boorse's view, health and departures therefrom can be measured empirically, by way of a properly organized statistical analysis of a species population. An organism functions normally when its parts and processes contribute to the overall goals of individual survival and reproduction in a way that is statistically typical for members of its reference class. A reference class, according to Boorse, is a natural class of organisms of uniform functional design; specifically, an age group of a sex of a species. Boorse contends that since his view explains normal functionality by way of a statistical analysis of the natural world, it is objective in a way that other conceptions of health are not.

In what follows, I will take aim at this claim, arguing that in fact Boorse's conception of health harbors problematic assumptions most notably with respect to what,

upon analysis, proves to be an arbitrarily selected reference class. That Boorse needs this idea of a reference class for his statistical analysis of function to work is clear. The human species shows a wide variety of function. The parts and processes of men function differently than those of women, and children of each sex function differently from their adult counterparts (as well as each other). A statistical analysis which ignored these distinctions would provide little if any consensus on normal human functioning. The problem is that there seem to be any number of additional reference class divisions which Boorse has no reason to exclude. And this presents a serious obstacle for Daniels's use of Boorse's view. If reference class divisions for blind persons, particularly heavy drinkers, and/or persons with pneumonia cannot be excluded, then Boorse (and by extension, Daniels) has no choice but to conclude that blindness, liver disease, and pneumonia may not in fact be health needs at all. This is because the proliferation of reference class divisions almost always results in the elimination of one or more disease classifications. The problem is that Boorse's theory cannot, in and of itself, justify the inclusion of species, sex, and age as reference class divisions nor can it justify the exclusion of everything else. If it turns out that the reference classes at the center of Boorse's theory are arbitrarily chosen, or chosen for reasons over which rational and reasonable citizens might reasonably disagree, this opens the door to the prospect of intractable disagreement with respect to the set of genuine health needs which Daniels uses Boorse's theory to undergird.

In an attempt to rehabilitate Daniels's theory, I will examine five alternative conceptions of health. The first two approaches appeal to an etiological notion of

function, according to which the normal function of a part or process would be determined with reference to the evolutionary explanation for its existence. Though the weakly normative version of this etiological approach offered by Jerome Wakefield is initially promising both on its own merits and due to the fact that Daniels endorses it as an alternative conception of health to which he would be amenable, I ultimately conclude that etiological approaches in general fail to ground Daniels's view in a way that avoids the sort of controversy that Daniels's distributive project requires us to avoid.

Following Rawls's strategy with respect to the construction of a political, not metaphysical conception of justice, the final three political conceptions of health which I propose seek to ground the objectivity of the health and disease judgments which they reach from within the realm of the maximally intersubjective. Just as the veil of ignorance forced Rawls's contractors to select a candidate conception of justice from an impartial shared point of view, I argue that a conception of health which is derived in a similar fashion will be sufficiently objective to ground Daniels's overarching theory without taking potentially controversial positions with respect to disputed metaphysical claims.

The first two political conceptions which I propose seek to explain health needs not as whatever is necessary to restore biological functioning (an unanalyzable notion – or at least a notion which is primed for intractable disagreement) but rather as whatever is necessary in order to ensure that individuals can function normally as citizens. Unfortunately, depending on how one construes the goals of citizenship, the resulting set of genuine health needs turns out to be either too broad (including any condition which

interferes with a citizen's ability to pursue any reasonable conception of the good they might have) or too narrow (excluding a variety of disabilities and many otherwise uncontroversial disease categories which do not necessarily impair one's capacity for a sense of justice or one's ability to have, revise, and rationally pursue a conception of the good).

The final political conception of health which I propose is born out of a Rawls-inspired original position reasoning game which charges rational and reasonable contractors behind a moderately lifted veil of ignorance with the task of selecting a conception of health for use with Daniels's theory. I conclude that these contractors would be amenable to a conception of health which married the statistical goal-directed methodology used by Boorse with a set of reference class divisions and functional meta-goals to which the contractors could provide their unanimous consent.

In the final analysis, the conception of health which I develop reaches practical judgments which are very similar to the Boorsian conception of health which Daniels prefers. And this is ideal, insofar as it places Daniels's overall theory on firmer ground, without drastic modification to his theoretical apparatus. In the larger context, by providing Daniels with a conception of health which is objective in the maximally intersubjective sense, I will have strengthened the justification for the just distribution of health which he proposes.

Chapter 1:

Norman Daniels: Expanding “Justice as Fairness” to Health

Abstract

Chapter one recounts Daniels's view and the role of Boorse's theory within it. Given an objective baseline for normal human functionality, Daniels thinks we can show that a person's departure from that baseline prevents her from obtaining her fair shares of the normal opportunity range—that is, the range of life plans that one could pursue absent arbitrary barriers.

Introduction

In this chapter, I examine the theory of just health offered by Norman Daniels. Insofar as Rawls's conception of justice as fairness plays a central role in Daniels's theory of just health, it will be useful to provide a general outline of those parts of Rawls's view which are pertinent to Daniels's discussion. In the first section of this chapter, I will provide just such an outline with the goal of explaining why Rawls's theory is inadequate by itself to the task of providing guidance with respect to health care distribution. From here, I will discuss the role that the concept of health as normal functioning plays in Daniels theory. Finally I will examine the ways that Daniels augments Rawls's theory so that it can provide guidance in determining a just distribution of health in less than ideal circumstances. I will do this with an eye towards understanding the degree to which this expansion depends on the theory of health which Daniels endorses.

Rawls

Justice as Fairness

Rawls offers his theory of justice as fairness as a theory about the basic social structure of an ideal society. Rawls is concerned with determining the rules which govern the background institutions of such a society because it is these background institutions which both produce the goods to be distributed and which set the guidelines for that distribution. In the absence of a substantive antecedent fixed idea as to what justice requires, determining these rules requires an appeal to pure procedural justice. Such an appeal involves relying on the outcomes of fair procedures to provide a determinate

verdict as to what is and is not just. Rawls draws on pure procedural justice in two ways. First, he constructs a reasoning game which is itself an exercise in pure procedure in order to determine what principles rational and reasonable persons would recognize as constituting fair and therefore just terms of social cooperation. Second, a basic social structure which is faithful to distributive principles which are selected in this way itself constitutes a fair procedure for settling issues of allocative justice. That is, a just allocation is simply whatever results from playing fairly within a basic structure that is governed by the principles of justice which were selected as a result of the fair procedure reasoning game which Rawls proposes.

Though the terms distribution and allocation often act as synonyms in the popular vernacular, they reference two independent concepts within political philosophy. Allocative justice concerns the delivery of particular shares of specific goods to properly named individuals based on determinate criteria such as need, entitlement, and/or desert. Distributive justice concerns the rules which produce and distribute broad social goods. For Rawls, the distributive rules which produce and distribute social goods constitute the basic social structure of society. Rights and liberties, wealth and income, these are social goods which do not exist outside the confines of a societal structure. The relevant rules constitute the practice – both its productive and distributive dimensions – in and through which wealth comes to exist as wealth. And the way these goods are produced can vary from society to society. We might for instance choose as a society to produce wealth and income with or without a division of labor. A social contract which expects each individual to contribute to the social product in the same way and to the same degree

must distribute individual shares of that good equally in order to inspire cooperation from all parties involved. A society which divides labor to allow for specialization and the development of talents will probably produce more goods than a society with no such division but it will also distribute those goods in a way that takes into account the manner in which those goods were produced. Rawls was concerned with offering a set of principles designed to embody a social structure which would produce and distribute these primary social goods in a way that each citizen would see as both legitimate and fair. But while these rules do create and thereby determine the societal roles to be played, they do not specify which properly named individuals will play which roles or to what individuals will come to be "entitled" by virtue of what they do as they act within their roles and according to the governing rules. Though they are no less important than distributive concerns, these allocative choices arise only after the distributive rules have been put into place.

In constructing his pure procedural reasoning game, Rawls imagines a group of artificial persons who represent the interests of free and equal citizens. These persons have the following characteristics. They are rational, in the sense that they are motivated to look after their own interests, or in this case the interests of the parties they represent. They are situated symmetrically, in the sense that they each have an equal vote in deliberation. And they are behind what Rawls calls a "veil of ignorance." That is, they are constrained by the rules of Rawls's reasoning game so that they know neither the traits nor the specific interests of the parties they represent. These conditions insure that the original position participants are also reasonable, in the sense that their ignorance as to

who they represent creates incentive for them to propose and honor fair terms of cooperation. These participants in what Rawls calls the "original position" are then tasked with evaluating various candidate conceptions of justice with the goal of selecting one upon which to construct a basic social structure for the persons they represent. By placing these contractors behind this veil of ignorance Rawls "insures that their choice is impartial in certain ways and reflects only their natures as free and equal moral agents."[1]

Though the veil of ignorance "prevents the parties from knowing the (comprehensive) doctrines and conceptions of the good of the persons they represent, they must have some other grounds for deciding which principles to select in the original position."[2] Thus, Rawls proposes what he calls primary goods, "things which it is supposed a rational man wants whatever else he wants."[3] He notes further:

> Regardless of what an individual's rational plans are in detail, it is assumed that there are various things which he would prefer more of rather than less. With more of these goods men can generally be assured of greater success in carrying out their intentions and in advancing their ends,

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[1] Norman Daniels, *Just Health*, (New York: Cambridge University Press, 2008), 47.
[2] John Rawls, *Justice as Fairness*: *A Restatement*, (Cambridge: Harvard University Press, 2001), 88.
[3] John Rawls*, Theory of Justice: Revised Edition,* (Cambridge: Harvard University Press, 1971), 79.

> whatever these ends may be. The primary social goods, to give them broad categories, are rights, liberties, and opportunities, and income and wealth.[4]

Notice at this point that health is not included among Rawls's index of primary social goods. This is because Rawls is concerned with discovering which principles of justice should govern an ideal society consisting of free and equal citizens instilled with a sense of justice and the ability to pursue their own conceptions of the good life. As such, Rawls assumes that the original position participants represent individuals who are "normal, active, and fully cooperating members of society over the course of a complete life."[5]

Daniels notes that this idealization "allows Rawls to construct a theory of justice for the simpler, idealized case, and then to worry about extensions of the theory to contexts in which conditions are more realistic and people are not all normal."[6] In the next section, I will return to this point as part of my analysis of Daniels's extension of Rawls's theory. For now, it is sufficient to note that Rawls's index of primary social goods is meant to encompass those "things persons need as citizens" in order to develop

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[4] Ibid.
[5] John Rawls, as quoted in Daniels, *Just Health Care,* 43.
[6] Daniels, (1985), 43.

and fully exercise their capacity for political cooperation and their ability to pursue their own individual conceptions of the good.[7]

The Principles of Justice as Fairness

Insofar as the goal of deliberation for the original position participants is to secure the good of the parties they represent, and insofar as these participants are unaware as to which parties they represent, Rawls concludes that they will select principles of justice designed to ensure the greatest amount of good for all parties without relegating any group (s) to special disadvantage. Why? Because the original position participants would not choose a basic social structure which benefits some at the expense of others for fear that the group whose interests they represent might end up being the group which loses. Through a series of comparisons, Rawls concludes that the original position participants would be drawn to the principles embodied by his theory of justice as fairness over and above alternative conceptions of justice.

Rawls articulates the principles of justice as fairness as follows:

(a) Each person has the same indefeasible claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all; and

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[7] Rawls, *Justice as Fairness*, 88.

> (b) Social and economic inequalities are to satisfy two conditions: first, they are to be attached to offices and positions open to all under conditions of fair equality of opportunity; and second, they are to be to the greatest benefit of the least-advantaged members of society (the difference principle).[8]

The first of these principles would ensure each citizen an equal share of political liberties such as the freedom of speech and assembly, as well as an equal share of civil liberties such as liberty of conscience, freedom of association, and the freedom to choose one's occupation. Combined, these liberties enable citizens to judge "the justice of the basic structure of society and its social policies" and it enables them "to develop and exercise their moral powers in forming and revising and in rationally pursuing (individually or, more often, in association with others) their conceptions of the good."[9] The liberties described in the first principle of justice are essential features of free and equal citizenship and would thus be recognized by the original position participants as critical to the basic structure of society.

Whereas the primary goods associated with the liberties outlined in the first principle must be distributed equally among citizens in order for citizens to understand themselves as free and equal cooperating members of society, the primary goods of wealth and income need not be distributed in the same way. Rather, the original position

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[8] Ibid., 40.
[9] Ibid., 45.

participants would recognize that "inequalities in lifetime prospects (as measured by the index of primary social goods) are allowable if the inequalities work to make those who are worst off as well off as possible compared to alternative arrangements."[10] Rawls argues that one's share of wealth and income is determined in large part by one's access to jobs and offices, but he does not therefore believe that jobs and offices should be distributed without regard for the natural abilities of job candidates. Rather, Rawls is committed to the view that careers should be open to talents. He recognizes that some citizens will have a greater endowment of natural talent and that these talents make them better suited to more difficult but also more rewarding jobs. Since it is in everyone's best interests that these jobs be performed by the most qualified candidates, the economic inequalities which result from the distribution of jobs and offices are fair as long as everyone has a genuine opportunity to compete for the more sought after jobs. As such, an equal opportunity principle is a procedural requirement for justice. As Daniels notes, "if the basic social structure of society works to the advantage of all and in a way that is open to all, then the distributions of goods and the resulting life prospects for individuals will be the outcome of a fair process."[11]

But a principle of *formal* equality of opportunity, according to which all citizens may apply to the positions which confer superior advantages, would still leave open the possibility for an unjust distribution of social and economic inequalities. This is because

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[10] Daniels, *Just Health*, 53.
[11] Ibid., 51.

even in an ideal society, inequalities with respect to income and wealth would allow some, those with means and those born into families with means, the opportunity to nurture and further grow their natural talents, while prohibiting others, those without means, from doing the same. Rawls proposes a principle of *fair* equality of opportunity designed to both "moderate the morally arbitrary effects of otherwise acceptable inequalities in the basic structure…" and also to "…temper the effects of families, where specific cultural or religious attitudes permissible under conditions of justice, might work in part against…" one's access to certain careers and/or offices.[12] To do this, a principle of fair equality of opportunity requires that positive steps be taken to ensure that everyone can develop their natural talents. For Rawls, this includes a uniform and equitable public education system for children to ensure that everyone starts on equal footing, day care programs to provide career opportunities for citizens who would otherwise be relegated to traditional family roles and higher educational institutions to help citizens improve their opportunities later in life. This notion of fair equality of opportunity is important not only for Rawls, but also for Daniels, who, as we shall see in the next section, uses this notion of fair equality of opportunity to justify his health oriented expansion of Rawls's theory.

The latter part of the second principle of justice, which Rawls calls the difference principle, is no less important than the principle of fair equality of opportunity. Daniels notes that "the difference principle says that inequalities in lifetime prospects (as

[12] Ibid., 53.

measured by the index of primary social goods) are allowable if the inequalities work to make those who are worst off as well off as possible compared to alternative arrangements."[13] Even with the principle of fair equality of opportunity in place, winners and losers will still be largely determined by the natural lottery governing the distribution of talents and the social lottery which determines group membership. The Pareto principle of efficiency, a competing principle of justice which seeks to maximize efficiency by bringing about an arrangement where "no one's welfare can be improved without reducing the welfare of someone else,… is weaker than the difference principle since an efficient arrangement offers no assurance that the worst off are as well off as possible."[14] [15] In this way, Daniels notes that the difference principle better mitigates the effects of the natural and social lotteries, making it so that the basic structure works to the advantage of all.[16]

Daniels notes that the combined force of these principles of justice is what Rawls calls a very strong "tendency to equality" to which the participants in Rawls's original position reasoning game would be inclined. Moreover, a society well-ordered by the principles of justice as fairness would also demonstrate stability, a key touchstone for the feasibility of any conception of justice. Citizens living under the institutions of an ideal

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[13] Ibid.

[14] The Pareto principle doesn't even ensure that we actually maximize aggregate output. Pareto introduced it to get around the epistemic problems tied up in interpersonal utility comparisons. But he recognized that a Pareto efficient distribution might in fact not be efficient as such because it might be that there are still transfers between persons that would improve aggregate utility in fact even though there is always someone ready to object to any such transfer.

[15] Daniels, *Just Health,* 54.

[16] Ibid.

society well-ordered by the two principles of justice as fairness would come to do justice not for fear of retribution, but voluntarily, because they believe that they have good reasons to do so. This is because a well-ordered society is one which is effectively regulated by a public conception of justice designed to advance the good of all of its members. Like players of a game, each of the citizens has agreed to the rules, and is happy to abide by and uphold them. Moreover, because the rules are publicly agreeable, everyone accepts them and knows that the others accept them as well. This publicity supplies citizens with a robust sense of security because it removes the threat of mistreatment. A citizen who receives just treatment will begin to understand herself as a free and equal moral person. And because she understands herself in this way, she will see in those around her the same moral value and thus be more likely to treat them with fairness and respect. This is the sense of justice which an ideal and stable society, well-ordered by a conception of justice as fairness, inspires in its citizens.

The Four Stage Sequence

As we have noted above, the principles of justice as fairness form the backbone for the basic social structure of an ideal society. Unfortunately they do little by themselves to inform their practical application. And this is by design, insofar as the original position participants don't know any details about their society. Anticipating the concern that the principles of justice as fairness provide little practical guidance in and of themselves, Rawls imagines a four stage sequence for the selection and implementation of his two principles. The selection of the principles by the original position participants happens in the first stage of this sequence. In each subsequent stage, Rawls's veil of

ignorance is pulled back little by little to allow for greater specificity in the constitution and legislation of the societal institutions which make up the basic social structure. At the second stage, the Rawlsian contractors are allowed knowledge of "general facts about their society, that is, its natural circumstances and resources, its level of economic advance and political culture, and so on," so that they might select a particular constitution from among the range of constitutions which are consistent with the principles of distributive justice selected in the preceding stage.[17] The goal is to select a just constitutional arrangement, one which incorporates and protects the liberties of equal citizenship governed by the first principle of justice as fairness and one which would ensure just legislative outcomes. But while there are several political schemes for which the liberty principle is of tantamount importance, "there is no scheme of procedural political rules which guarantees that unjust legislation will not be enacted."[18] Even so, since it can be determined that some schemes have a greater tendency than others to result in unjust laws the contractors at this stage of the four stage sequence are equipped to choose the constitutional arrangement which is most likely to provide just legislative outcomes.

Once a constitution has been chosen, the contactors proceed to the third, legislative stage, where a legislative scheme is proposed and judged from within the deliberative boundary conditions set out by the two principles of justice and "whatever

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[17] Rawls, *A Theory of Justice,* 172.
[18] Ibid., 173.

limits are laid down in the constitution."[19] And all of this is still done by contractors who, knowing the range of reasonable conceptions of the good, do not know the particulars about who they represent. Even so, the legislative principles offered at this stage are not "value-free" in the sense that they are derived solely and completely from the pure procedure responsible for the two principles of justice. Rather, Rawls envisions the legislative process as interpretive in nature. The answer to the question as to whether a particular legislative scheme is just or unjust, will, more often than not depend upon "speculative political and economic doctrines and upon social theory generally," especially where economic and social policies are concerned (the primary domain of the second principle of justice).[20] These economic and social doctrines fall into the domain of what Rawls calls "public reason," the set of publicly acceptable standards which are well-established and uncontroversial. Though individuals might differ as to which economic or social doctrines should shape legislation, they can recognize that as long as these doctrines support the political conception of justice underwriting the basic rights of free and equal citizenship protected by the constitution, their application is reasonable and therefore legitimate. Though the principles worked out in this stage of Rawls's four stage process are clearly intermediary in the sense that they provide some measure of specificity to the broader principles of justice selected in stage one, they are no less

[19] Ibid., 174.
[20] Ibid.

distributive principles in the sense that they do not name the particular beneficiaries of the goods they both produce and distribute.

In the final stage the veil is lifted completely, and the legislative schema selected in the preceding stage is applied to particular cases and individuals. It is in this final stage alone that the decisions with respect to the allocation of the goods associated with the second principle - opportunity, wealth, and income - are made, and even then they are made in accordance with the distributive principles worked out in stages one through three.

For Rawls, the questions with respect to health which Daniels is interested in answering cannot be answered in stages one or two of the four stage sequence. Rather, Rawls believes that the principles governing the just distribution of health are better worked out at the legislative stage. With respect to "the medical and health needs of citizens as normal cooperating members of society whose capacities for a time fall below the minimum," Rawls says the following:

> This matter is to be decided at the legislative stage (*Theory*, §31) and not in the original position or constitutional convention, since the practicable application of the two principles to this case depends in part on information about the prevalence of various illnesses and their severity, the frequency of accidents and their causes, and much else. At the

> legislative stage this information is available, and hence the policies to protect public health and to provide medical care can be taken up there.[21]

In short, the idea here is that since determining a just distribution of health resources requires respect for the specific circumstances about which the original position participants have been made unaware, determining a just overarching principle for the distribution of health resources at the first stage of the sequence is an impossible task. If we can set up a society with social institutions which reflect the two principles of justice as fairness however, the legislative outputs of these institutions will be fair, insofar as they are made within the boundaries of a fair procedure. Rawls gives some hints about the content of such legislative principles for the distribution of health resources within liberal democracies, but leaves the details purposefully obscure. Nevertheless, what Rawls does provide is useful because it allows us to locate Daniels's project in Rawls's overall theory. As we shall see, Daniels's health oriented expansion of Rawls's theory falls right in line with what we should expect given Rawls's description of the legislative stage of the four stage sequence. Daniels's view offers a nuanced interpretation of the first part of Rawls's second principle of justice which depends on a theory of health which is presumably available to public reason. And it requires a suitably thinned veil in order to justify the distributive arrangement Daniels has in mind.

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[21] Rawls, *Justice as Fairness*, 173.

Daniels's Health Oriented Expansion of Justice as Fairness

One strategy for applying a Rawlsian conception of justice to the question of health involves adding health to Rawls's index of primary social goods. Daniels concludes that this strategy won't work for the following reasons. First, Daniels notes Rawls's claim that his index of "primary social goods – basic liberties, opportunity, powers and prerogatives of office, income and wealth, and the social bases of self-respect – include only all-purpose means that reasonable people in democratic cultures agree comprise the needs of free and equal citizens."[22] If we begin expanding this list to include goods or services which some (but not others) consider to be important, then we risk losing a "shared political conception of the needs of citizens."[23] Second, Daniels notes Arrow's contention "that adding health care to the index and allowing its trade-off against income and wealth, would force Rawls into comparisons of well-being (or utility) he had hoped his index would avoid."[24] It is important to remember that for Rawls, all of the primary goods, save income and wealth, are distributed equally. So, the only differential interpersonal comparisons are with respect to income and wealth, and thus free of any need to trade-off one good against another. But if we add other goods which won't be distributed equally - goods like health - then we face the problem of assessing trade-offs between more or less income/wealth vs. more or less health, and it is this sort of trade-off that Rawls had hoped to avoid.

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[22] Daniels56.
[23] Ibid.
[24] Ibid., 56-7.

Still, Daniels believes that Rawls's theory can and should be expanded to deal with the distribution of health resources. After all, if we drop Rawls's simplifying assumption that all people are fully functional over a normal lifespan, it does seem as though it would be better, at least in terms of one's opportunities, to be healthy but poor than to be wealthy and sick. Not surprisingly then, Daniels's strategy involves broadening the principle of fair equality of opportunity to help mitigate the effects of inequalities in health as it does inequalities in social circumstance. The basic structure of his argument then is as follows:

(1) Since meeting health needs promotes health (or normal functioning) and since health helps to protect opportunity, then meeting health needs protects opportunity.

(2) If justice requires society to protect opportunity (as the theories of Rawls and others indicate[25]), then justice gives special importance to meeting health needs.[26]

Daniels argues that just as advantages which result from the natural and social lotteries are morally arbitrary, in that they are not deserved, so too are the disadvantages

[25] In point of fact, Daniels overarching claim is slightly weaker than this, insofar as he does not himself offer a direct argument for the claim that justice requires protecting opportunity but rather conditions his argument on the plausibility of the theory of justice as fairness offered by Rawls as well as other theories of justice offered by Sen (1980, 1990a, 1992, 1999) Nussbaum (2000), Arneson (1988) and G.A. Cohen (1989) which also emphasize the importance of protecting opportunity.

[26] Daniels, *Just Health*, 29-30.

which result from pathological disease and/or disability. To allow undeserved advantages conferred by birth (whether social or natural) to "determine individual opportunity, and thus reward and success in life, is to make the outcomes arbitrary."[27] Now, in a sense, it is not solely the arbitrariness of these outcomes which makes them unjust. Even the outcomes of a fair procedure which enjoys universal consensus are arbitrary in a manner of speaking. Rather, the problem with these arbitrary outcomes is that they result from unfair circumstances. That is, the outcomes are arbitrary in the sense that they allow opportunity to be determined by good or bad luck rather than principles selected by way of a procedure which enjoys social consensus. And so, just as the principle of fair equality of opportunity warrants positive steps to ensure that everyone has the chance to nurture their talents, Daniels argues that it also warrants the use of resources "to counter the disadvantages induced by pathology."[28]

To make use of Rawls's principle of fair equality of opportunity in this way, Daniels will need to manage two objectives. First and foremost, to show that fair equality of opportunity should be extended to meeting health needs, Daniels will need to provide an objective conception of health capable of establishing "normal functioning" as a baseline which explains the degree to which a principle of fair equality of opportunity will be necessary to correct for departures therefrom. That is, he will need to offer an argument for his conception of health as normal functioning in order to explain why our

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[27] Ibid., 58.
[28] Ibid.

fair share of the opportunity range depends on our attainment and maintenance of health. As we shall see, the concept of health, indeed, the very notion of normal functionality which Daniels uses to bridge his own view with Rawls's principle of fair equality of opportunity is open to a serious set of objections. Insofar as this first task serves as the impetus for my project, I will save the bulk of my discussion of the conception of health to which Daniels appeals for the next chapter. In the remainder of this chapter, I will focus on the ways which Daniels uses this conception of health to connect with and augment Rawls's theory.

Second, Daniels will also need to establish a modified notion of fair equality of opportunity which is not limited, as it is for Rawls, to one's access to jobs and offices. Though being healthy does contribute to one's ability to perform most jobs, a principle which distributes health resources with the sole goal of providing access to careers will likely ignore both certain conditions (like infertility) which have little impact on job prospects as well as certain groups (like the elderly) who are no longer in competition for jobs. Thus, expanding Rawls's use of fair equality of opportunity requires a change in the justification for such a principle. To offer such a justification, Daniels will need to put forward a slight modification of Rawls's original position reasoning procedure which would inform the original contractors as to some basic facts about the parties they represent.

Health as Normal Functioning

Though it is very easy to think about health issues at the allocation level only, Daniels is interested primarily with providing a just distributive scheme for health and

health care. He is not so much concerned with providing judgments with respect to the allocation of particular health related goods to properly named groups and/or individuals. As we noted above with respect to Rawls's four stage process, if we can construct a fair distributive system, these sorts of allocative issues can be settled by looking to what people actually do within such a system. But without a basic understanding about what constitutes health and why it is important, the prospect of defining such a distributive scheme becomes impossible insofar as there are all manner of opinions with respect to what constitutes a valid health need and what does not. Daniels pursues a deeper understanding of just what kind of a good health is with the hope that there is something in the nature of this good that sets constraints or terms for making all of the troubling distributive decisions which need to be made.

The conception of health to which Daniels appeals rests on the "basic" idea that "health is the absence of disease" or more precisely the absence of pathology. On this conception, pathology should be understood to "refer to any deviation from the natural functional organization of a typical member of a species."[29] Accordingly, "health needs, and thus the narrower class of health-care needs, are things we need to maintain normal functioning – or health – over the course of our lives."[30] Daniels derives this conception of health primarily from the thorough-going naturalism of Boorse's biostatistical (BST) account. He notes that on Boorse's view:

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[29] Ibid., 37.
[30] Ibid.

> …a biological function can be defined as a causal contribution to a species-typical goal, such as survival or reproduction, and it is the task of the biomedical sciences, broadly conceived, to characterize these functions of organisms and their parts. A departure from normal functioning is then simply a statistical deviation from the causal contribution of the relevant part… This makes ascribing health or departures from it as objective and value-free as the biomedical sciences themselves. A claim on others based on health needs is thus an objective claim. Of course, our response to those needs and those claims, in clinical medicine or public health is not at all value-free… What attracts me about Boorse's account is *where* it locates normative judgments about health, not that it avoids them altogether.[31]

Daniels places special emphasis on this idea that ascriptions of health or departures from it must be objective/value-neutral. But it is important to note that Daniels is not here discounting the normative value of health generally. On any analysis, health is a good thing. What Daniels wants is a value-neutral analysis of what *constitutes* health. An objective analysis of what constitutes health and departures from it provides common ground for normative debates about what the absence of health entails. If we were to conceive of health as *fully normative* in the sense that we not only recognize it as a good,

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[31] Ibid., 38.

but we also *analyze* it in terms of other goods which are themselves unanalyzable, then we risk intractable disagreement with respect to whether or not health is a good at all. Even if we can agree on a set of fundamental goods from which to derive a fully normative analysis of health, there remains the possibility of not just disagreement, but reasonable disagreement about how to rank particular goods relative to one another and that would make it very difficult to come up with a univocal idea of what health is. Whether or not a given condition should count as a disease might turn on differential weightings of these various goods. Daniels is motivated to provide an objective conception of health, one to which everyone can agree, in order to make health distribution discussions tractable by avoiding these sorts of conflicts.

Daniels criticizes two variations of a thoroughly normative alternative to his conception of health as normal functioning. The first of these approaches capitalizes on the intuitive notion that "people seek medical attention… because they suffer from a condition they do not want to have."[32] Daniels argues that this approach makes the mistake of concluding that any unwanted condition qualifies as a disease. The problem with this view, according to Daniels, is that there are simply too many unwanted conditions. It doesn't allow us to distinguish between conditions which belong in the category of dysfunction and those which do not. And this is, of course, inconsistent with the way we practice medicine. We do not recognize most forms of cosmetic surgery as valid health care needs. That is, we don't see them as a means of correcting pathological

[32] Ibid., 39.

conditions which warrant public support. In much the same way, non-therapeutic abortions should also not be understood as therapies meant to correct for pathology. Despite the fact that pregnancy may be an unwanted condition, Daniels believes that something has seriously gone wrong were we to count it as a disease.[33]

Daniels also attacks what might be called a 'societal' version of the thoroughly normative view. This is the view which Daniels attributes to Engelhardt (1974) that "society may construct the notion of disease to reflect departures from any norms it holds."[34] Daniels characterizes this view as "citing historical examples of cases where a departure from a norm clearly was classified as a disease at least for a period of time." These examples include masturbation, which was believed in Victorian societies to contribute to any number of harmful symptoms especially in females, as well as "'draptomania,' the running-away disease of slaves," and until quite recently, homosexuality. Daniels does not however believe that these kinds of examples "prove the extreme normative view of how to understand disease."[35] Rather, Daniels believes that "these same examples are fully compatible with the judgment that societies sometimes make grievous errors about diseases or egregiously abuse disease classifications."[36] The problem with this type of view, according to Daniels, is that it prevents us from

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[33] Daniels does not necessarily dispute the idea that our society may choose to fund such things as abortions and or contraception on the basis of political preference or even as a separate extension of the fair opportunity principle. He only means to argue that abortion (and the like) does not, strictly speaking, meet a health need, in that they do not restore normal functioning.

[34] Daniels, 40.

[35] Ibid.

[36] Ibid.

criticizing what the recognized methods of public reasoning, including the biomedical sciences, have shown to be false.[37]

At any rate, Daniels concludes that his/Boorse's conception of normal functioning is adequate for his needs:

> My purposes are satisfied when the line between the normal and the abnormal or pathological is, for most cases, uncontroversial and ascertainable by publicly acceptable methods, such as those of the biomedical sciences. It will not matter if what counts as a disease category is relative to some features of social roles in a given society, and thus to some normative judgments, provided that the basic notion of normal functioning is left intact. In any event, the importance of treating pathology depends on just such normative judgments… For our purposes in this account of just health, it is enough to know that the intuitive distinction underlying the biomedical view of health – that health is the absence of pathology – can be reformulated into a nonnormative (or naturalistic) distinction between normal functioning and pathology, even if this departs from some features of ordinary usage.[38]

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[37] Ibid.
[38] Ibid., 42.

Daniels thus fashions his appeal to biostatistical theory as an appeal to public reason. The defining characteristic of public reason is its being acceptable to citizens from all walks of life. In justifying to one another their collective coercive action with respect to constitutional essentials and basic justice, citizens may not appeal to reasons which presuppose the exclusive correctness of their individual conceptions of the good to the exclusion of others. Rather, in order to respect the ideal of free and equal citizenship, citizens may appeal only to the judgments of public reason for the exercise of their collective political power. The content of public reason consists in the set of publicly acceptable standards which are well-established and uncontroversial. Because the reasoning of scientists qua scientists belongs to the background culture of civil society, these standards would presumably include the expert opinions offered by the biomedical sciences with respect to what counts as normal human functionality, opinions which Daniels thinks are best grounded in the statistical naturalism offered by the BST.

In a later chapter, I will call into question whether the conclusions offered by the BST are as non-controversial as Daniels needs them to be, but assuming, for the moment, that Daniels's conception of health as normal functioning does in fact provide objective and widely agreed upon judgments as to which of our claims count as valid health needs and which do not, we are still left with difficult questions as to which health needs should be met when we can't meet them all. Since there are no clear limit setting principles that enjoy widespread consensus, what we need, according to Daniels, is a fair process capable of providing reasonable principles for determining the basic structure with respect to the production/distribution of health in light of the full range of valid health

claims persons might press against the system as a whole. If we can develop such a process, insofar as it is recognized by reasonable affected parties as fair, its output will be regarded as legitimate.

The fair process which Daniels proposes aims for a robust form of public accountability which Daniels calls "accountability for reasonableness." Accountability for reasonableness requires that limit-setting decisions be made on the basis of publicly available reasons that "fair-minded people can agree are relevant for appropriate patient care under resource constraints."[39] Daniels explains this notion further in terms of four conditions:

1. *Publicity Condition:* Decisions regarding both direct and indirect limits to meeting health needs and their rationales must be publicly accessible.
2. *Relevance Condition:* The rationales for limit-setting decisions should aim to provide a *reasonable* explanation of how the organization seeks to provide "value for money" in meeting the varied health needs of a defined population under reasonable resource constraints. Specifically, a rationale will be "reasonable" if it appeals to evidence, reasons and principles that are accepted as relevant by ("fair minded") people who are disposed to finding mutually justifiable terms of cooperation.

[39] Ibid., 117.

Where possible, the relevance of reasons should be vetted by stakeholders in these decisions – a constraint easier to implement in public than in private institutions.

3. *Revision and Appeals Condition:* there must be mechanisms for challenge and dispute resolution regarding limit-setting decisions, and more broadly, opportunities for revision and improvement of policies in the light of new evidence or arguments.
4. *Regulative Condition:* There is either voluntary or public regulation of the process to ensure that conditions 1-3 are met.[40]

In this way, the public is given an opportunity to deliberate on the legislative principles used to distribute health resources in a way that does not resort to arbitrary rationale (i.e. the market, simple majority, cost-value methodologies) which make unacceptable moral assumptions.

Normal Functioning and the Opportunity Range

Daniels wants to argue that health, understood as normal functioning, protects opportunity, and is thus something that we have an interest in maintaining. Though normal functioning has a definite *tendency* to promote happiness or the satisfaction of preferences, Daniels argues that this is not strictly speaking what qualifies health as

[40] Ibid., 117-8.

something that we need. Rather, Daniels argues that "impairments of normal functioning reduce the range of exercisable opportunities from which individuals may construct their 'plans of life' or 'conceptions of the good.'"[41] This is because:

> …life plans for which we are otherwise suited, and that we reasonably hope to find satisfying or happiness-producing, are rendered unreasonable by some impairments of normal functioning. Consequently, if people have a fundamental interest in preserving the opportunity to revise their conceptions of the good over time (Buchanan 1975), then they will have a pressing interest in meeting whatever needs are required for normal species functioning.[42]

Daniels argues in effect that there is a normal opportunity range which everyone has an interest in preserving. He defines this normal opportunity range as a society relative "array of life plans reasonable persons are likely to develop for themselves."[43] It is society relative in the sense that the range of life plans available to reasonable persons will depend, in important ways on certain "key features of the society – its historical development and its material wealth and technological development, as well as important

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[41] Ibid., 35.
[42] Ibid., 36.
[43] Ibid., 43.

cultural facts about it."[44] Normal functioning, on Daniels's view, is one of several parameters which affect "the *share* of the normal range open to a given individual."[45]

One's share of the normal opportunity range is determined in a fundamental way by one's talents and skills, and these are in no way distributed equally. Recall that Rawls's second principle of justice, which combined a principle of fair equality of opportunity with the difference principle, was designed to help mitigate the arbitrary nature of the natural lottery for talents and skills. Even so, the goal of these principles was not to level the talents and skills of citizens but rather to ensure that citizens were given the opportunity to use and develop their skills for the benefit of the society as a whole. This was accomplished by providing compensatory educational or job-training programs in order to correct for social circumstances which inhibited the development of these natural talents.

Assuming, as we must, that people are not all healthy over a normal lifespan, we see that pathology has an effect on one's share of the normal opportunity range which is similar to the effect which Rawls's principle of fair equality of opportunity was designed to mitigate with respect to the development of one's talents. That is to say that just as social conditions, "such as family background or racist educational practices" can inhibit one's share in the normal opportunity range by inhibiting one's ability to develop one's natural talents, so too disease, injury and/or disability "restricts individuals' opportunity

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[44] Ibid., 44.
[45] Ibid.

relative to the portion of the normal range that their skills and talents would have made available to them were they healthy."[46] Daniels argues that "if individuals' fair shares of the normal range are the life plans they may reasonably choose, given their (corrected) talents and skills, then disease and disability shrink their shares from what is fair."[47] And so, just as fair equality of opportunity requires that we take positive steps to mitigate social hindrances to the development and use of natural talents, it also requires that we work to mitigate and/or eliminate pathological hindrances as well. But, again, this does not entail a leveling of shares in the normal opportunity range. Daniels argues:

> Maintaining normal functioning by meeting health needs, including providing health care, has a particular and *limited* effect on individuals' shares of the normal range. It lets them enjoy that portion of the range to which their skills and talents would give them access, assuming that these too are not impaired by special social disadvantages. It does not presume that we should eliminate or level natural individual differences, which act as a baseline constraint on individuals' enjoyment of the normal range. Where, however, differences in talents and skills are the result of

[46] Ibid., 44-5.
[47] Ibid.

> pathology, not merely normal variation, we should make, resources permitting, some effort to correct for the effects of the "natural lottery."[48]

Daniels emphasizes that an individual's fair share of the normal opportunity range should not be limited by the life plans that he/she does in fact choose. Rather, preserving one's fair share of the normal opportunity range also involves preserving one's opportunity to revise their conceptions of the good over time. The normal opportunity range is thus different from what Daniels calls the "effective opportunity range." Daniels notes that "for an individual who has a particular plan of life and who has developed certain skills accordingly, the effective opportunity range will be only a part of his fair share of the normal range," specifically, that part of the opportunity range which the individual has chosen to pursue.[49] Were the principle of fair equality of opportunity limited to providing shares of one's effective opportunity range, we would be left with the unpalatable conclusion that one's access to health resources would depend in important ways on one's chosen profession. But this is a conclusion that we should want to deny. We want to say, argues Daniels, that though "the impairment of the effective range for a skilled laborer who loses manual dexterity due to a disease may be greater than for a college teacher…, if both originally had comparable dexterity, their fair shares

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[48] Ibid.
[49] Ibid.

of the normal range would be equally diminished."[50] Should the deliberative process determine that one such individual deserves treatment, the other should deserve it as well. Individuals' divergent conceptions of the good should not shape the distributive categories which determine whether one's disease warrants treatment.

Thinning the Veil

As we have already noted, Rawls's principle of fair equality of opportunity is strategically focused on producing fairness in the competition for jobs and offices. That is, Rawls is concerned with mitigating the effects of advantages conferred by one's social circumstances to ensure that everyone has the opportunity to develop their natural talents and abilities, abilities which make one eligible for the more prestigious and economically lucrative careers. But this strategy won't work as we seek to expand Rawls's theory to include health care distribution. Daniels notes that if we were to apply the principle of fair equality of opportunity to the question of health care without expanding its justification beyond its importance for ensuring access to jobs and careers, it "would yield what many would see as an age-biased and morally objectionable account of health care: Job and career opportunities are more important in early and middle stages of life than in later ones, but our health care needs increase later in life."[51]

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[50] Ibid.
[51] Ibid., 60.

But if we broaden the application of the fair equality of opportunity principle to ensure fair shares of the normal opportunity range generally rather than simply those shares which are strategically important because they offer access to careers and offices, we will also need to "broaden the grounds on which we justify the importance of opportunity."[52] Daniels believes that Rawls's theory can be modified to encompass this broader notion of opportunity with few negative consequences. To do this, Daniels suggests a slight modification to Rawls's original position reasoning game. Rawls's contractors chose principles of justice for their society while behind a thick veil which made them ignorant as to the abilities, talents, and societal status of the parties they represented as well as the historical, geographic and economic details of the society to which these parties belonged. Rawls's reasoning game was set up this way to ensure impartiality and to ensure that the principles chosen reflected the natures of the contractors as free and equal moral agents.[53] Insofar as his distributive project falls within the legislative stage, Daniels suggests a slightly thinner veil of ignorance for selecting principles to govern health-care resource-distribution decisions, one which offers some additional insight into certain features of the society.[54]

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[52] Ibid., 59.
[53] Ibid., 61.
[54] Ibid.

Daniels argues that "using the normal opportunity range and not just the effective range as the baseline for measuring the importance of health-care needs has the effect of imposing a suitably thinned veil."[55]

> Individuals' fair shares include the full range of life plans they might reasonably select, not just the ones they actually select. The normal range reflects basic facts about the society – since the normal range is socially relative – but it keeps facts about an individual's particular ends from unduly influencing social decisions.[56]

In this way, Daniels contends that the thinner veil used to determine the normal opportunity range, reflects the same underlying account of persons which Rawls's original position reasoning experiment was designed to isolate. Insofar as Daniels agrees with Rawls's account of moral agents as essentially free and equal, he contends that individuals have a "fundamental interest in maintaining conditions under which they can revise their life plans as time goes on."[57] As such, "health care should aim at normal

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[55] Ibid.
[56] Ibid.
[57] Ibid.

functioning and not select for those functions most important to individuals' past choices about plans of life."[58]

Conclusion

In this chapter, we have reviewed Daniels's expansion of Rawls's theory. Daniels wants to allow Rawls's original position participants a glimpse at what Daniels calls "the normal opportunity range," the range of life plans that the parties they represent might reasonably select. By thinning Rawls's veil of ignorance in this way, Daniels gains the foothold he needs to expand Rawls's principle of fair equality of opportunity to address distributive questions with respect to health. But as we have also seen, this notion that we can isolate the normal opportunity range and make sense of health related departures from it for a given society, depends, in a fundamental way, on the conception of health at the center of Daniels's theory. In the next chapter, we will examine this conception of health in greater detail, with the aim of reaching a better understanding of its theoretical content.

[58] Ibid.

Chapter 2:

Christopher Boorse: A Biostatistical Conception of Health

Abstract

Chapter two lays out the Boorsian conception of health on which Daniels's theory depends. Boorse thinks that health and departures therefrom can be measured empirically through statistical analysis of a species population. An organism functions normally when its parts and vital processes contribute to its survival and reproduction in a statistically typical way for members of its reference class. (An organism's reference class is a natural class of organisms of uniform functional design—usually, an age group of a sex of a species.) Boorse thinks that this approach offers a more objective account of health than alternative approaches.

Introduction

In the previous chapter we saw that Daniels needs an objective account of health with which to establish a non-controversial baseline for normal functionality. He needs this in order to distinguish between valid health needs – needs which mark a departure from this baseline, and non-health needs which are to be excluded from evaluation with respect to health resource distribution. Insofar as Daniels seeks to use such a baseline to explain how departures from normal functioning inhibit one's ability to attain his/her fair shares of the normal opportunity range, without it, he cannot make use of Rawls's fair equality of opportunity principle to justify his distributive scheme. In this chapter I examine the theoretical groundwork for Daniels's health related expansion of Rawls's theory of justice as fairness; Christopher Boorse's biostatistical theory of health. In a series of articles written nearly forty years ago, Christopher Boorse constructs a conception of health which trades on the intuitive notion that health is the absence of disease. Health, on Boorse's theory, is best understood in terms of normal functioning: the statistically typical contribution of an organism's parts and processes to the organism's overall functional goals of individual survival and reproduction. Disease involves statistically significant departures with respect to the ability of an organism's parts or processes to play their species typical role in meeting these overall goals.

The structure of my analysis of Boorse's position will largely follow his own though I will attempt to integrate some of Boorse's later additions and changes into the more detailed articulation of the thesis outlined in his earlier work. I will begin with Boorse's critical analysis of the normativist conception of health, the other main

contender for the concept. I will then provide a detailed and substantive analysis of Boorse's core theory followed by a more detailed examination of his theory of mental health.

Naturalism vs. Normativism

In "Health as a Theoretical Concept" Boorse frames the discussion of his own conception of health with a brief critical analysis of what he calls "the received view."[1] According to the received view, judgments about health and disease are at least in part, value judgments. The intuition behind this line of thought is that "diseases are *bad* conditions of the organism – physiological evils, or psychological evils in the case of mental health."[2] This view is born out of the idea that the natural world has no meaning and/or value in and of itself. According to Sedgwick, whose stance on this issue Boorse recounts in a later essay, "natural events, do not – prior to the human social meanings we attach to them – constitute illnesses, sicknesses, or diseases. The fracture of a septuagenarian's femur has, within the world of nature, no more significance than the snapping of an autumn leaf from its twig."[3] On this view, the causal processes at work in nature have been in motion long before our existence and will continue long after we are gone. It is only by virtue of our nonscientific imposition of human values that they have

[1] Christopher Boorse, "A Rebuttal on Health," *Biomedical Ethics Reviews: What is Disease?*, eds. James M. Humber and Robert F. Allmeder, (Ottowa: Human Press, 1997), 5.

[2] Christopher Boorse, "Concepts of Health," *Health Care Ethics: An Introduction,* eds. Donald VanDeVeer and Tom Regan, (Philadelphia: Temple University Press, 1987), 366.

[3] Peter Sedgwick, "Illness – Mental and Otherwise," *Hastings Center Studies,* I (1973), 30-31, in Boorse, "Concepts of Health," 367.

any meaning at all. And it is this imposition of human values which is at work when we use the words 'health,' and 'disease.' On this view then, physical health should be understood as "physical well-being or welfare."[4] Disease, on the other hand is usually understood as an undesirable condition, one which causes its subject to feel afflicted.

The problem with this normative conception of health according to Boorse is that it does not conform to medical usage – that is, it does not fit the stock of recognized pathological conditions.[5] He notes that "on the one hand… there are whole broad classes of undesirable physical conditions, conditions that restrict one's physical well-being, which do not appear as diseases in medical texts."[6] Below average height, strength or endurance, indeed, even "such universal human weaknesses as a need for sleep and regular access to food and water" are conditions which one might find undesirable but which should certainly not therefore qualify as diseases. On the other hand, Boorse notes that there are some diseases which under certain conditions might contribute to one's physical well-being.[7] Nevertheless, just because sterility "might be a heavenly blessing to parents of large families," it would cross conceptual boundaries to claim that such a condition was consistent with good health.[8]

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[4] Christopher Boorse, "Health as a Theoretical Concept," *Philosophy of Science,* 44, no. 4 (1977), 544.

[5] Boorse, "Concepts of Health," 366.

[6] Boorse, "Health as a Theoretical Concept," 544.

[7] Ibid., 545.

[8] Ibid.

Perhaps, Boorse concedes, the normative view would be better served by qualifying disease language as appropriate for undesirable conditions which "for historical or sociological or technical reasons," fall within the domain of medical practice. On this view, which Boorse calls "a sort of medical positivism," the human conditions which qualify as a disease are those for which we seek medical help. Boorse notes that insofar "as medical practice varies over time with evolving social institutions and values" this conception of health allows for a certain degree of cultural relativity with respect to disease diagnosis.[9] Unfortunately for the normativist, Boorse concludes that this conception of health fairs no better than the previous value-charged analysis for at least two reasons. In the first place, we do sometimes bring non-disease complaints to our doctors with the hope that we will receive treatment, as is the case with naturally occurring hereditary shortness, despite the fact that the medical establishment resists providing treatments for such conditions.[10] More importantly, there are a variety of conditions that doctors do treat which they do not regard as diseases. Boorse lists "circumcision, cosmetic surgery, elective abortions, and the prescription of contraceptives" among these sorts of treatments. Boorse tips his hand here with respect to his own conception of health when he notes that in all of these types of cases, the "diseases" treated are in fact normal human traits and/or functions. As Boorse notes, "the fact is that physicians distinguish, even among conditions they treat, between some they

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[9] Ibid.
[10] Ibid.

consider pathological and others they do not."[11] He concludes then that "treatment in medical practice is neither necessary nor sufficient for something to be a disease."[12]

Boorse provides similar arguments against the clinical intuition that health is properly understood in contrast to the pain, suffering and discomfort of illness. Though these sorts of symptoms are often diagnostically valuable in the clinical setting, here again, there are clear cases of disease for which these criteria do not apply and clear cases of normal functionality for which they do. Boorse lists tuberculosis, diabetes, liver cirrhosis, breast cancer and various forms of heart disease among those diseases which need not produce symptoms of pain and/or discomfort at all, or at least not in their early stages. By way of contrast, there are a wide variety of normal human processes which can cause quite a bit of pain and discomfort. These include, "teething, menstruation, and childbirth," to name but a few.

What we need then, according to Boorse, is an alternative analysis of health and disease, one which is value-neutral, in the sense that it reads disease classifications off of the natural world, and one which is consistent with the standard medical usage of health and disease terminology. Boorse argues that "at the theoretical foundation of modern Western medicine, health and disease are value-free scientific concepts."[13] Contrary to the value-charged normativist conceptions of health, Boorse argues that "the classification of human states as healthy or diseased is an objective matter, to be read off

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[11] Ibid., 546.
[12] Ibid.
[13] Boorse, "Rebuttal on Health," 4.

the biological facts of nature without need of value judgments."[14] The theory of health which he develops is thus aimed at reflecting this core commitment of western medicine.[15]

Biological Function

Boorse's theory of health, for which he has only recently adopted the title "biostatistical theory (BST)," is an analysis which rests on the concepts of *biological function* and *statistical normality*. It originates out of the ancient typological and teleological intuitions behind the notion that "the normal is the natural."[16] The general idea here is that each species has a natural functional design which can be empirically discovered. This "species design" is best understood as the "internal functional organization typical of species members."[17] A healthy member of a given species functions normally. That is, all of its parts and processes work in the way that we would expect them to work for members of that species. By way of contrast, a member of a given species is diseased when one or more of its parts performs its function at a level below what is normal for that species.

In a lengthy article entitled "Wright on Functions," Boorse defends Sommerhoff's basic notion of a function as a "contribution to a goal." Boorse notes that Sommerhoff

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[14] Ibid.
[15] Ibid.
[16] Ibid., 7.
[17] Ibid.

"saw goal-directedness as the key feature dividing living organisms from dead or inorganic matter."[18] In stark contrast with Sedgwick, Sommerhoff explains the difference between inorganic material events which have no meaning apart from that which we ascribe to them, and living organic systems whose goal directedness can be measured independently of our valuations. Simply put, Boorse believes that this goal directedness which characterizes living organic systems provides a value-neutral baseline by which health and departures from health can be measured.

Boorse argues with respect to biological function that "organisms are goal-directed in the sense that… they are disposed to adjust their behavior to environmental change in ways appropriate to a constant result, the goal."[19] Boorse sees this goal directedness in the basic structure of all living organisms. He argues that this structure "shows a means-end hierarchy with goal directedness at every level."[20] Boorse explains this goal directed hierarchy as follows:

> …Individual cells are goal-directed to manufacturing certain compounds; by doing so they contribute to higher-level goals like muscle contraction; these goals contribute to overt behavior like web-spinning, nest-building, or prey-catching; overt behavior contributes to such goals as individual and species survival and reproduction. What I suggest is that the function

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[18] Ibid., 9.
[19] Boorse, "Health as a Theoretical Concept," 556.
[20] Ibid.

> of any part or process, for the biologist, is its ultimate contribution to certain goals at the apex of the hierarchy. That is why the function of the heart is to pump blood rather than to produce heart sounds, and the function of the kidney is to eliminate wastes rather than to keep the bladder full. It is the former effects, not the latter, which typically contribute to the organism's highest level goals.[21]

But what happens, we might ask, when the goals at the highest level of the hierarchy conflict? Boorse himself admits that "most behavior of organisms contributes simultaneously to individual survival, individual reproductive competence, survival of the species, survival of the genes, ecological equilibrium and so forth."[22] Though the goals of individual and/or species survival *can* align nicely with each other and with ecological equilibrium, there is no shortage of examples where they conflict (as is the case when the survival of the species requires the elimination of its weakest members). Nevertheless, Boorse sees these types of conflicts as no cause for concern with respect to his theory of health. Rather, he argues that while "different subfields of biology (e.g., genetics and ecology) may use different goals as the focus of their function statements," it is the subfield of physiology alone, for which individual survival and reproduction are

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[21] Ibid.
[22] Ibid.

the relevant goals, which is pertinent to health.[23] In a later chapter, I will offer an alternative conception of health which borrows Boorse's idea that function is best explained in terms of a goal-directed hierarchy. Insofar as the alternative conception of health which I ultimately endorse favors an appeal to political foundations over Boorse's reliance on naturalistic biology, determining the proper set of functional meta-goals will involve a slightly different process. I will return to this issue in chapter five.

Though Boorse thinks his own analysis of goal-directedness is the best explanation of biological function, he is nonetheless open to the possibility that another analysis of function may prove to be superior. In his most recent work defending the BST against almost thirty years of criticism, Boorse notes that his "analyses of health and function are separable, in that one could ground the BST on a different analysis of function."[24] Though his earlier work was largely critical of Wright's popular "etiological" understanding of function whereby "the functions of a part of an organism are the effects which, through evolution, fixed it in the population," Boorse see's Wright's analysis as fully compatible with the theory of health outlined below.[25] In fact, Boorse argues that with respect to the concepts of health and disease, the conclusions reached by an etiological notion of function are nearly identical to his own. I will examine two versions of Wright's etiological analysis of function in a chapter four.

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[23] Ibid.
[24] Boorse, "Rebuttal on Health," 10.
[25] Ibid.

The Reference Class

Boorse argues then that "the physiological functions of a trait are causal contributions it makes to its bearer's survival and reproduction."[26] But this notion of function is still too broad for Boorse's purposes. Indeed, there are a wide variety of instances where a trait's making a causal contribution to its bearer's survival and or reproduction should not qualify that trait's effects as a normal physiological function. As Boorse notes, "one squirrel might catch its tail in a crack *en route* to being run over by a car, but that would not make defense against cars a function of the squirrel tail."[27] Rather, Boorse argues that "physiological function statements are about a trait's *standard* contribution [to individual survival and reproduction] in some population or reference class."[28] This notion of a reference class plays a pivotal role in Boorse's theory, insofar as statements with respect to normal functioning must be relativized to the type of organism in question. As Boorse explains:

> …the subject matter of comparative physiology is a series of ideal types of organisms: the frog, the hydra, the earthworm, the starfish, the crocodile, the shark, the rhesus monkey, and so on. The idealization is of course statistical, not moral or esthetic or normative in any other way. For each type a textbook provides a composite portrait of what I will call the

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[26] Boorse, "Health as a Theoretical Concept," 556.
[27] Ibid., 557.
[28] Ibid., 556.

> *species design*, i.e. the typical hierarchy of interlocking functional systems that supports the life of organisms of that type.[29]

According to Boorse, the functional design of a given species can be abstracted from a statistical analysis of the particular members of that species both past and present. The result of this abstraction is a statistical idealization of the species, a "composite portrait" which may not exactly resemble any individual member of the species but which nonetheless embodies the functional ideal by which dysfunction can be measured.[30] Individual deviations from the functional characteristics of a given species do not disprove the functional design of the species. Rather they indicate pathology. It is thus fair to say that on Boorse's view no individual member of any species is perfectly healthy insofar as no individual can measure up to the statistical ideal. Individual members of a given species have "suffered the ravages of injury or disease" to one degree or another.[31] But by abstracting from individual differences and from disease by averaging over a sufficiently large sample of the population, we can generate an empirical ideal by which to measure health and departures therefrom.[32]

Boorse contends that his notion of species design is consistent with evolutionary biology insofar as "the typical result of evolution is precisely a trait's becoming

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[29] Ibid., 557.
[30] Ibid.
[31] Ibid.
[32] Ibid.

established in a species, only rarely showing major variations under individual inheritance and environment."[33] He notes further that "on all but evolutionary time scales, biological designs have a massive constancy vigorously maintained by normalizing selection," and that "it is on this short-term constancy on which the theory and practice of medicine rely."[34] So, while Boorse recognizes that a species' functional design may be in long term flux, he argues that this fact has little relevance with respect to the purposes now in question.

But the notion of *species design* explained above is not yet complete. Boorse describes what he calls "polymorphic functional traits," traits which are not fixed within a species population.[35] He argues that most of these sorts of traits can be handled disjunctively. For example, Boorse notes that "it is typical of human blood to be either A or B or AB or O, typical of human irises to be either blue, brown or green, typical of human skin to have some amount of pigmentation from small to great."[36] The natural variation of these sorts of traits leads us to the conclusion that "no one version of the trait can be required for health… [and]… correspondingly, no version is a disease unless it depresses some function far below the group mean."[37] With respect to the traits relevant to age and gender characteristics, however, Boorse argues that a disjunctive strategy doesn't work. Rather, Boorse describes sex and age as additional reference class

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[33] Ibid.
[34] Ibid.
[35] Ibid., 558.
[36] Ibid.
[37] Ibid., 563.

categories to which species design seems to be relative. With respect to sex, Boorse notes that female characteristics "occur together and constitute a single coherent functional design," which is distinct from the functional design characteristic of males.[38] Elsewhere, Boorse illustrates this point by explaining that "normal males must have prostate glands though most humans (females) do not."[39] Boorse also argues that "functional design varies with age."[40] He notes that though it is "less obvious than it is in species whose life stages are as dissimilar as caterpillars, pupas and butterflies," there is a great degree of variance in functional design demonstrated by "functions performed in the human infant and not in the adult, e.g. enlargement of the skeleton, and also the reverse, e.g. sperm production or ovulation."[41] Though he does not defend it as vigorously as age or sex, Boorse also leaves open the possibility for the use of race as an additional reference class category. Boorse concludes however that at minimum the reference class for the abstraction of species typical design should be "restricted by sex and age because of differences in normal physiology between males and females, young and old."[42]

Statistical Normality

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[38] Ibid., 558.
[39] Boorse, "Concepts of Health," 370.
[40] Boorse, "Health as a Theoretical Concept," 558.
[41] Ibid.
[42] Boorse, "Rebuttal on Health," 8.

With this notion of reference class in mind, we are now prepared to understand Boorse's theory of health as normal functioning. Boorse notes that "our interest in species design is that we wish to analyze health as conformity to it."[43] Boorse provides a formal definition of normal functioning as follows:

> *Normal functioning* in a member of the reference class is the performance by each internal part of all its statistically typical functions with at least statistically typical efficiency, i.e. at efficiency levels within or above some chosen central region of their population distribution.[44]

Boorse notes, with respect to the clause "within or above," that "superior functioning is consistent with health."[45] Though in a sense "the unusual cardiovascular ability of a long distance runner" marks a deviation from the norm, Boorse argues that it should not, as a consequence of its superior functioning count as a disease. Boorse explains that the term 'function' can be defined in two very different ways, and understanding the notion of normal function which he proposes requires that we avoid conflating these two definitions. On the one hand the word 'function' has been used to describe a "concrete process that makes a physiological contribution."[46] Accordingly it would possible for a part or process (i.e. the thyroid gland) to exhibit too much function

[43] Boorse, "Health as a Theoretical Concept," 558.
[44] Ibid., 558-9.
[45] Ibid., 559.
[46] Ibid.

(hyperthyroidism) or too little function (hypothyroidism).[47] This is not the notion of function which Boorse has in mind. Rather, Boorse argues that "since for us the function is the contribution to physiological goals, and too much thyroid secretion damages these goals as much as too little," what we need is a notion of function which captures the idea that what we want is for our organs to operate as they are supposed to operate. The terms 'functional efficiency' fit this role nicely. Boorse explains that "what health always allows is unusual efficiency of a process in serving physiological goals, not unusually much of the process itself."[48] The cardiovascular functioning of the long distance runner is superior because it is more efficient in the runner than is statistically typical.[49] A function is abnormal when it is performed with a significantly lower degree of efficiency than it is in other members of the population. As the dysfunctional thyroid illustrates, this inefficiency can take several forms, all of which are harmful with respect to the functional goals of survival and reproduction.

Boorse's final comment with respect to his definition of normal functioning addresses the question as to what counts as a significant departure from normal functional efficiency. He argues that this measure is one of convention. Specifically, he argues that "the precise line between health and disease is usually academic, since most diseases involve functional deficits that are unusual by any reasonable standard."[50] So there is

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[47] Ibid.
[48] Ibid.
[49] Ibid.
[50] Ibid.

some statistically derived range of functional efficiency which we will call normal for the various systems/parts of sex and age differentiated species. Determining the exact boundaries of that range is something that should be determined by convention and will vary from part to part. That said, we would expect that while conditions at the boundaries of this range might be a bit controversial, most cases of dysfunction are uncontroversial enough on this standard.

Disease/Pathology

It is at this point that Boorse turns his attention to the task of supplying a definition of disease:

> A *disease* is a type of internal state which impairs health, i.e. reduces one or more functional abilities below typical efficiency.[51]

Boorse himself concedes that this notion encompasses a much larger set of conditions than we might normally be inclined to group under the heading, 'disease.' If indeed, health should be defined negatively as the absence of disease we will need a conception of disease which encompasses "not only infection syndromes like malaria and syphilis, but also birth defects like spina bifida, growth disorders like cancer, functional impairments like limb paralysis, and all kinds of injuries and causes of death," including,

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[51] Ibid., 555.

but not limited to, "gunshot wounds, foreign bodies in the stomach… animal bites, drowning, electrocution, asphyxiation, incineration…" and so on.[52] In his early work Boorse uses the term 'disease' in a "generic" sense for all of these conditions despite the fact that the last set of injuries stretches our concept of disease well beyond the familiar. Though he defends this usage as being fully consistent with the AMA *Nomenclature*, and therefore the medical sciences, it is clear that Boorse is not entirely comfortable with this use of the term disease. In his later work, Boorse offers a welcome terminological shift away from the health/disease distinction in favor of a distinction between normal function and pathology, a distinction which he claims is the "basic theoretical concept of Western Medicine."[53] Accordingly he defines pathology as follows:

> A condition of a part or process in an organism is *pathological* when the ability of the part or process to perform one or more of its species-typical biological functions falls below some central range of the statistical distribution for that ability in corresponding parts or processes in members of an appropriate reference class of the species.[54]

So, on Boorse's view, in order to determine whether any of my parts or processes exhibit pathology, I must compare the functional contribution that that part or process

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[52] Ibid., 551.
[53] Boorse, "Rebuttal on Health," 7.
[54] Boorse, "Concepts of Health," 370.

makes to my body's overall survival and ability to reproduce with the functional contribution made by the same part or process in other members of my reference class. Since I am a thirty-two year old male member of the human species I would thus be comparing the function of my parts or processes with all of the other thirty-two year old males currently alive as well as all of the previous members of that reference class. So, I would be comparing the current function of my heart, for instance, with the heart function of other male individuals who share my birthday, the heart function demonstrated ten years ago by someone who is currently forty-two, as well as the time-indexed heart function of other male individuals who have long been dead and buried. I am comparing the function of my heart against all of the other members of my reference class both past and present. If my heart's functional efficiency is statistically lower to a significant degree from the heart function of every other member of my reference class, then its function is pathological.

Boorse argues that this definition of pathology seems clearly adequate for describing "disease processes serious enough to cause… gross disturbances far enough up in the functional hierarchy that the patient feels their effect."[55] And in this respect Boorse's BST is consistent with virtually every account of health ever proposed. Indeed, a theory of health which did not classify such obvious cases of disease as pathological would be seriously deficient. But it is with respect to "latent or asymptomatic" diseases which involve pathology at lower levels of the functional hierarchy that Boorse's BST

[55] Boorse, "Health as a Theoretical Concept," 559.

demonstrates its advantages over alternative analyses of health. Boorse notes that though "hepatic cirrhosis, nephritis, pancreatic cancer, and countless other pieces of local pathology can progress for a long time without depressing gross functions enough to be detected… they do make standard tissue functions decline and fail in the affected part of the organ."[56]

Additionally, Boorse's BST can also account for the fact that "at any one time an organism might be functioning normally with respect to its current situation, yet be incapacitated from doing so on occasions yet to arise."[57] Insofar as Boorse's notion of pathology applies to the functional *ability,* or readiness, of an organism's part or process, "an inability to perform a function remains a disease even if the occasion to perform it never arises."[58] Hence, the BST conforms to medical practice in classifying hemophilia as a pathological condition even for those who never have occasion to bleed.[59]

Boorse provides an analysis of a fairly lengthy passage from Engelhardt's "Is There a Philosophy of Medicine?" in which Engelhardt lists off several diseases which he classifies as diseases for a variety of reasons ranging from their being unpleasant and fatal in the case of rabies to their being painful and unsightly in the case of herpes to their tendency to compromise normal human functioning as is the case of phenylketonuria. Boorse notes that with a proper understanding of normal function whereby function is

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[56] Ibid.
[57] Ibid., 562.
[58] Ibid.
[59] Ibid.

understood in terms of goal-directedness, all of Engelhardt's disease classifications could fit nicely under one category – the very category which Engelhardt himself uses to describe phenylketonuria. That is, each of these diseases is best explained not by how painful, unpleasant and/or unsightly a condition it is, but by the ways that each of them compromises normal functioning.

> Rabies moves in three days from partial dysfunctions, hydrophobia and convulsion, to the complete dysfunction of death. Phenylketonuria… is an inborn deficiency in one of the enzymes of a standard metabolic pathway… This deficiency is itself a dysfunction on the biochemical level, and it leads, as Engelhardt says, to the gross dysfunction of mental retardation. Herpes zoster, a viral infection of posterior nerve ganglia, produces a vesicular skin rash above the affected nerves and also neuralgic pain, often chronic and severe. Leaving the pain aside, zoster involves two kinds of local dysfunction, neural and dermal. The skin rash alone violates the definition of normal function. Viewing the skin as an organ there is no difference between failure of skin functions in a set of vesicles and failure of liver or kidney functions in local areas of those organs. Our definition counts every such skin rash as a disease and medicine seems to agree with this prediction… All of Engelhardt's examples involve failure of parts of

> the body to perform biological functions which it is statistically normal for them to perform.[60]

But recall that the goals to which biological functions are directed on Boorse's BST are individual survival and reproduction. Certainly having a skin rash need not put these goals in jeopardy. Indeed, we can think of any number of diseases/pathological conditions, particularly of the latent and/or asymptomatic type, with which many individuals live and reproduce without problem. Should this shed doubt on the BST? Boorse argues that the organs we have and the functions they serve have been naturally selected because they increase the chances of reproduction and survival at the biological, or species level. At an individual level one or another of our organs may operate below the level of statistically normal function without detriment to our ability to survive or reproduce. To illustrate, a deaf person may not necessarily have a shorter than average life nor may he fail, as an individual, to reproduce. But this doesn't change the fact that his lack of hearing marks a pathological condition. Organ failures like those involved with deafness are not only statistically anomalous but they also have a tendency to prohibit survival/reproduction. That is, from a statistical point of view, individual members of the species saddled with these traits are less likely to survive and reproduce for reasons directly attributable to the impairment of these organs. Insofar as having fully functional organs generally (or perhaps better – statistically) allows for increased

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[60] Ibid., 561.

likelihood of survival/reproduction such a dysfunction in an individual is properly understood to be pathological even though it need not result in a hastened death or a failure to reproduce in individual cases.[61]

Mental Health

So far we have focused almost exclusively on Boorse's analysis of health and disease, of normal functioning and pathology, as it pertains to somatic medicine. And insofar as Boorse's BST tracks the judgments of medicine it has all seemed fairly intuitive. But in the area of mental health, our intuitions with respect to normal functioning and pathology are often less clear. Boorse notes:

> The influence of values on health judgments has usually seemed most potent in the area of mental health. This is one reason why so much work on the topic is by psychiatrists and psychologists and tends to ignore physical counterparts to the issues it discusses. By contrast with somatic medicine, it is felt, ordinary mental-health practice involves very controversial value commitments, which surface when one deals with any of a whole spectrum of social *causes célèbres* from criminal insanity to homosexuality and feminism. But this 'problem of values' is only one aspect of a special pressure on mental-health professionals to deal with

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[61] Ibid.

> foundational issues. Another aspect is the recurrent controversy, most recently revived by Szasz, about whether the notion of mental health is legitimate at all. Underlying the charge that it is not is the assumption – which I accept… – that a legitimate notion of mental health must be a faithful analogue of the established physical conception.[62]

Though Boorse agrees with Szasz that "a legitimate notion of mental health must be a faithful analogue of the established physical conception," he does not share Szasz's pessimism with respect to the prospects of formulating such a notion. On the contrary, Boorse argues that so long as we can construct a plausible theory explaining the structural hierarchy of the mind, he sees no reason to suggest that the overall functional goals with respect to mental health are any different from the overall functional goals of physical health, namely, individual survival and reproduction.

The first obstacle to a biostatistical theory of mental health, and, indeed, the reason for Szasz's and others' skepticism of psychiatry generally, arises in the form of an objection to the idea that the mind has a functional hierarchy apart from the functional hierarchy which has already been explained with respect to physiology. This is to say that "…if mental states are states of the body rather than of a soul, then mental diseases must

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[62] Ibid., 543.

be diseases of the brain or nerves."[63] Unless we affirm the existence of a metaphysically separate Cartesian soul, "there is no need for a concept of mental health distinct from physical health."[64] Boorse finds this line of reasoning, which he attributes to Szasz and his cohorts, to be seriously defective. Boorse concedes that his notion of mental health relies unequivocally on the idea of mental causation, but he sees no reason why this concession should commit him to any problematic metaphysical assumptions about the existence of immaterial minds. Rather, Boorse argues that mental causation is not only compatible with a materialist identity theory of the mind, but that it offers a far more plausible explanation as to the nature of human action.

Following Putnam and Davidson, Boorse argues that even if a mental disease is a physical state this does not imply that it is a physical disease.[65] As Boorse notes:

> …every mental state is a physical state. But the states thus claimed identical are to be particulars, i.e. dated conditions of specific persons, rather than universals, i.e. types of conditions. Not *the* desire for a lobster dinner, but *Smith's* desire for a lobster dinner as felt between 4 and 5 p.m. on February 1975, is claimed to be identical to his being in some neural configuration during this period. This distinction is crucial, for if types of

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[63] Christopher Boorse, "What A Theory of Mental Health Should Be," *Journal for the Theory of Social Behavior,* 6, no. 1 (1976a), 67.

[64] Ibid.

[65] Ibid., 66.

> mental states are defined by their functional properties, type-type identity statements are unlikely to hold. If Smith's current neural state is a desire for a lobster dinner, that is probably not because of any anatomical feature, such as its containing a lobster-shaped nerve net. Rather, on the view we are considering, it is because of the motivational role this state plays in producing a search for seafood restaurants or other lobster-obtaining behavior. Now the same motivational role might be played by quite different neural configurations in different people. Hence the neural state in Smith that is his desire for a lobster dinner may bear no anatomical resemblance to the neural state in Jones that is his desire for a lobster dinner. And so there may be no set of anatomical properties that could define the mentalistic term 'desire for a lobster dinner'; the mentalistic vocabulary, even for a materialist, may not be neurologically definable.[66]

The mentalistic term 'desire for a lobster dinner' cannot be neurologically definable because it refers to a universal condition. In much the same way, Boorse notes that "diseases, e.g. tuberculosis or cancer or schizophrenia, are essentially universals rather than particulars" because they are "types of states which are instantiated in particular patients."[67] As was the case with the desire for a lobster dinner, a particular

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[66] Ibid.
[67] Ibid.

instance of a mental disease can be instantiated in a wide if not infinite variety of physical states. What these states have in common is the pathological role they play with respect to the functional goals of the individuals having them. Thus, if we can establish that "mental processes perform standard functions in human behavior [then]…unnatural obstructions to these functions" should be classified as mental diseases.[68]

Psychoanalysis: Providing a Functional Model of Mental Health

Boorse notes that, with respect to physical disease, "the functional organization typical of a species is a biological fact" making the concept of disease value-free.[69] Though Boorse is confident that "mental processes contribute to action in a sufficiently species-uniform way to have natural functions," he recognizes that the functional organization of the mind is far from settled with respect to the biomedical sciences. Boorse does however believe that we can "draw some of the outlines of human mental functioning… without relying on any controversial psychological theory:"[70]

> Perceptual processing, intelligence and memory clearly serve to provide information about the world that can guide effective action. Drives serve to motivate it. Anxiety and pain function as signals of danger, language as a device for cultural co-operation and cognitive enrichment and so on.

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[68] Ibid., 64.
[69] Ibid., 63.
[70] Ibid., 64.

Though Boorse believes that this basic outline is sufficient for establishing the concept of mental health, he recognizes that a deeper, more detailed theory of psychology will be necessary to reach definitive judgments about specific pathologies and the degree to which those pathologies obstruct mental function. Boorse argues that "the best example of a personality theory with specific mental part-functions is psychoanalytic theory developed by Sigmund Freud and his followers from about 1890 onward."[71] About this theory Boorse notes:

> Current psychoanalysis divides the mind into three substructures – the id, an unconscious system of primitive sexual and aggressive drives, serves as a reservoir of motivational energy. The superego, a punitive agency arising in the Oedipal phase by internalization of parental values, confines behavior within socially acceptable bounds by means of feelings of guilt and shame. The ego serves many integrative and self-preservative functions, including perception, reasoning, and reality testing; its prime job is to coordinate drive gratification in the least destructive channels.[72]

Boorse argues that if we conceive of biology as "the study of inherited functional structures of organisms produced by evolution" then the activities of the id, ego, and

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[71] Boorse, "Concepts of Health," 376.
[72] Ibid.

superego "are correctly called biological functions."[73] So, just as physiological dysfunctions indicate physiological pathology, "psychoanalysts view all forms of psychopathology as involving dysfunction in these three subagencies or their relations."[74]

> A relatively mild weakness in the ego's ability to resolve conflicts among the demands of id, superego, and reality may result in symptom neurosis, character neurosis or perversion. A massive ego defect constitutes a psychosis, which may involve a break with reality manifested in hallucinations or delusions.[75]

Deep personality theories such as psychoanalysis offer several advantages over and above alternative theories of mental health. In the first place, as noted above, psychoanalysis establishes clinical psychiatry as an independent and autonomous field of medicine by offering a comprehensive explanation as to the normal structural hierarchy of the human psyche and of pathological deviations from that hierarchy. In short, psychoanalysis provides an answer to those like Szasz who contend that "the whole idea of mental illness has outlived its usefulness and become both 'scientifically worthless and socially harmful.'"[76]

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[73] Ibid.
[74] Ibid.
[75] Ibid.
[76] Thomas S. Szasz as quoted in Boorse, "What a Theory of Mental Health Should Be," 61.

Another advantage of a deep personality theory like psychoanalysis is its ability to respond to what Boorse describes as "the paradoxes of cultural variation."[77] Citing examples of Western "psychopathologies" which are tolerated and/or rewarded in various other cultures, American anthropologist, Ruth Benedict concludes that "each culture selects a certain range of 'normality from a continuum of human personality types and condemns the rest as deviant."[78] Though Boorse agrees that "cultural *variation* in judgments of normality is a fact, even in the realm of ordinary medicine," he rejects the further thesis that "no culture's views about normality are objectively right or wrong," arguing that "any culture can be wrong about biological function and dysfunction – including Western psychiatry when it relies on social values to define abnormality."[79]

Part of the appeal of psychoanalytic theory is that it interprets Benedict's cross-cultural data as informing a distinction between overt behavior and deep psychodynamics:

> A form of behavior (homosexual acts) or even surface personality trait (paranoia) may have different psychodynamic significance in different cultures. For example, a Plains Indian shaman who sees visions of, say, tree spirits is likely to have a much healthier personality and psychodynamics than a New York investment analyst who has the same

[77] Boorse, "Concepts of Health," 377.
[78] Ibid.
[79] Ibid.

> vision. The latter is schizophrenic or organically psychotic; the former, not necessarily… Psychoanalysts agree with Benedict that the 'definite fixed symptoms' of Western descriptive psychiatry may change their diagnostic significance across cultures. But it may be possible to state universal criteria of normality at a deeper level of psychological theory. In nontechnical terms, psychoanalytic universals of health might include freedom from crippling anxiety, deep and stable love relations, full and unconflicted development of one's abilities, and the capacity for orgasmic sexual release.[80]

The idea here is that it is these universal criteria of normality which contribute to our ability to achieve the goals at the top of our psycho-dynamic hierarchy, the same goals which Boorse has already sought to establish with respect to physiology – individual survival and reproduction. As with physical pathology, psychopathology involves a failure to achieve these goals. In Western cultures schizophrenic symptoms usually limit one's achievement in these areas. In non-western cultures, it need not.

Psychoanalysis is also appealing insofar as it separates the concept of normality from the concept of social acceptance. Though mental pathologies often produce judgments of deviance within various societies they can sometimes garner praise as well.

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[80] Ibid., 378.

> In Western society…'abnormals of extreme fulfillment of the cultural type' might, to the psychoanalyst, include compulsively ambitious politicians and business executives, fanatical intelligence agents, and religious extremists such as fundamentalist preachers, priests, and nuns. Such individuals find their personal psychopathology rewarded in their culture with a special, even prestigious, niche, as did Greek epileptics…[81]

Boorse notes that the universal criteria of normality derived from psychoanalytic theory "will locate the abnormal of each culture not only among its outcasts but also in its most prestigious members."[82] It doesn't matter whether one's pathological traits are allowed or even rewarded by one's culture, the BST supplemented by psychoanalysis will correctly classify these traits as functionally deviant.

The DSM and Problems it Poses for Contemporary Psychiatry

Despite these advantages, Boorse notes that mainstream psychiatry has sought to classify mental disorders apart from any deep theory of psychological part-function, preferring instead to take an atheoretic approach to the diagnosis of mental pathology. This turn of events is deeply troubling to Boorse. Indeed, in what Boorse calls a "striking paradox," the very idea which he believes "generates an autonomous field of clinical

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[81] Ibid., 379.
[82] Ibid.

[psychiatry]," namely, that the human psyche has a functional structure that is roughly analogous to the goal-directed functional hierarchy which characterizes physiological systems, has been abandoned in favor of a value-charged approach which places far less emphasis on understanding psycho-pathology in terms of "the normal functional organization of the human mind."[83] This atheoretic approach to psychopathology lies at the heart of the Diagnostic and Statistical Manual of Mental Disorders (DSM), a document which is widely revered as the definitive source for mental health evaluation.

Boorse notes that this "current canon of psychopathology... [rests] "mainly on two criteria of abnormality: social values and faculty psychology."[84] According to faculty psychology, mental functioning should be divided along the lines of commonsense into "'faculties' such as sensation, perception, memory, reason, belief, imagination, and will."[85] Though Boorse sees this theory as "primitive," he admits that it may be sufficient for the task of identifying "catastrophic psychiatric disorders (e.g., psychoses) as pathological," but he argues that it provides far less guidance with respect to less severe impairments:

> The delusions, hallucinations, and bizarre abnormalities of reasoning and speech in schizophrenia leave little doubt that species-typical human psychological functions are grossly impaired. However… should one

[83] Boorse, "What a Theory of Mental Health Should Be," 68.
[84] Boorse, "Concepts of Health," 379.
[85] Ibid.

> recognize a faculty of conscience, for example, or of heterosexuality or religious faith, in order to brand as abnormal psychopathy, homosexuality and atheism? Lacking a clear methodology for determining normal psychological faculties, nineteenth-century psychiatry in practice used social disfavor to classify perversions, addictions, and antisocial behavior as pathological.[86]

Boorse does note that in the wake of the 1973 homosexual controversy which was largely responsible for the depathologization of same-sex attraction in the DSM-III, "American psychiatry has [sought] to disavow social value judgments as a test of normality."[87] Nevertheless, he argues that "its attempts to justify the DSM classification on atheoretic nonevaluative grounds raise many of the classic difficulties of faculty psychology."[88] The definition of mental disorder provided in the most recent revision of the DSM (DSM-IV) remains essentially unchanged from earlier revisions:

> In DSM-IV, each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of

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[86] Ibid., 379-80.
[87] Ibid.
[88] Ibid.

> functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual. Neither deviant behavior (e.g., political, religious, or sexual) nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the individual.[89]

Though the word 'dysfunction' may at first seem to accommodate Boorse's functional theory of mental health, upon conceptual analysis, it becomes clear that there is a sort of circularity lurking behind the DSM's use of this term. In an article critiquing the DSM's definition of mental disorder, Jerome Wakefield offers just this sort of analysis:

> Despite [DSM's] commitment to defining *disorder* consistently with the principle that a disorder is a dysfunction, the dysfunction clause is not

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[89] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders,* 4th ed., text rev. (Washington: American Psychiatric Association, 2000), xxi-xxii.

> intended to be part of the formal definition… There is a serious problem with defining disorder directly in terms of dysfunction, if no analysis of dysfunction in simpler terms is provided. The problem is that the two concepts are so close in meaning that such a definition does not substantially advance understanding… Spitzer and Endicott [the architects of the DSM's definition of mental disorder] believed that they specified sufficient criteria for dysfunction in the rest of the definition, making the dysfunction clause redundant. This interpretation is consistent with Spitzer and Williams' (1982) claim that they are defining disorder in terms of the consequences of a condition; the consequences are the distress and disability, and these consequences, modified by the "unexpectable response" clause… are supposed to be sufficient by themselves to imply a dysfunction and thus a disorder. It may be concluded that the dysfunction clause is not intended to play a substantive role in the definition because its content is thought to be exhausted by the kind of distress and disability specified.[90]

Rather than offer an explanation as to the root causes of mental pathology, the DSM is set up around the idea that each mental disorder can be diagnosed by paying

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[90] Jerome Wakefield, "Disorder as Harmful Dysfunction: A Conceptual Critique of DSM-III-R's Definition of Mental Disorder," *Psychological Review*, 99, no. 2 (1992), 235.

attention to the negative external consequences which it exhibits. An individual who exhibits distress and/or disability in an unexpected manner, that is, in response to circumstances which are "statistically unlikely" to cause distress or disability, can be diagnosed as having a mental disorder according to the DSM. This notion that mental disorders result in "unexpectable" distress and/or disability is essential to the DSM's coherence, but it is also its Achilles heel on Wakefield's analysis. Indeed, without a clause which excludes "expectable and culturally sanctioned response[s]" of distress to particular events, the DSM would be forced to diagnose all manner of normal human reactions to stress as resulting from one or another mental disorder. But insofar as "the concept of expectability is supposed to operationalize the notion of normal functioning," Wakefield argues that it is both too broad and too narrow.[91] With respect to normal distress, there are a variety of "statistically deviant conditions that cause distress and other harms but that are not dysfunctions."[92] Among the conditions which Wakefield lists are "selfishness, cowardice, slovenliness, foolhardiness, gullibility, insensitivity, laziness, and sheer lack of talent."[93] Though they are all statistically deviant, none of these conditions qualify as disorders despite the fact that they may all involve distress. Ironically the DSM itself corroborates this claim in spite of itself, labeling these sorts of

[91] Ibid., 238.
[92] Ibid.
[93] Ibid.

conditions nondisorders, in direct contradiction to its own definition of disease.[94] On the other hand, it may turn out that most, if not all conditions the DSM *does* diagnose as disorders on the basis of the distress they cause, involve a statistically normal response to particular events.

> …a "merely expectable response" to many kinds of extreme trauma is PTSD (DSM-III-R, pp. 247-251), and an expectable response to lack of contact with a care giver in infancy is anaclitic depression. The same situation exists with regard to physical disorders: An expectable response to exposure to a flue virus is for a flue to develop, and an expectable response to extreme, sudden pressure on the arm is for the arm to break. Nonetheless, these conditions are disorders. What makes them disorders is that, even though expectable under the circumstances they are all clearly dysfunctions.[95]

But, since the DSM's definition of disorder cannot appeal to a notion of dysfunction apart from its resulting in unexpectable feelings of distress and/or disability it has no way to classify these sorts of conditions as disorders without resorting to circular

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[94] Ibid. Wakefield here is referring to conditions classified under Axis V – conditions such as "academic problems, professional thievery, malingering motivated by financial incentives, marital conflict in connection with divorce proceedings, internal conflict over career choice, conflicts between adolescents and parents over choice of friends, and problems of adjustment to retirement."

[95] Ibid.,239.

reasoning. Despite itself, the DSM does classify PTSD as a disorder, just as it classifies laziness as a nondisorder. As it stands, the DSM's categories of disorder don't meet the criteria of the definition it uses at the outset. The result is that the DSM's categories and criteria seem arbitrarily chosen to produce a certain psychiatric classification.

The allure of the DSM's methodology is that it supposedly provides a reliable set of necessary and sufficient criteria for correct differential diagnosis without appeal to partisan theoretical assumptions about pathogenesis.[96] But as Wakefield and Boorse have argued, a definition of mental disorder which fails to provide a theory of the normal functional organization of the human psyche simply cannot get off the ground. Boorse suspects that the real criteria motivating the DSM's classifications rest on social value judgments, a tenuous foundation for disease classification and a justification that the DSM's definition of disease was meant to avoid. With respect to homosexuality, a condition at the heart of the controversy surrounding changes made to DSM-III, Boorse notes:

> Why must normal sexuality be "interpersonal," so that homosexuals but not fetishist or bestialists can be normal? Among traditional interpersonal perverts, sadomasochists, transvestites, exhibitionists, and pedophiles are abnormal by the clause on atypical inflexible sexual behavior. But by this

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[96] Jerome Wakefield, "Diagnosing DSM-IV – Part I: DSM-IV and the Concept of Disorder," *Behavior Research and Therapy,* 35, no. 7, 634.

> clause, the authors let a social reaction to a condition (the "painful consequences") determine its normality. Spitzer and Endicott allow for normal homosexuality because although many social environments penalize homosexuals, more tolerant cultures or subcultures make their condition painless. By contrast, the authors believe no society can tolerate the other perversions or kleptomania or crime with equanimity. But this judgment is open to question, and so is the notion that social reaction should determine normality or pathology at all.[97]

Interestingly enough, Boorse's own definition of mental pathology, provides a clear but decidedly unpopular verdict on the disease status of homosexuality.

> We can agree with the new psychiatric view in DSM-III that mere social condemnation is not enough to make a condition pathological. Whether homosexuality is pathological depends on whether it involves a biological mental dysfunction. On general biological principles, the exclusive homosexual (but not the bisexual) looks pathological by virtue of his or

[97] Boorse, "Concepts of Health," 381.

> her reproductive failure… Exclusive homosexuality seems likely to be a form of mental pathology, as psychoanalysts have always maintained.[98]

Elsewhere Boorse explains that if we recognize the motivational function that desires have in producing action, and "one normal function of sexual desire is to promote reproduction" then if one lacks a desire for heterosexual sex, as is the case for exclusive homosexuals, this lack of desire indicates mental pathology, at least insofar as it makes a statistically significant impairment to the species typical goal of reproduction.[99] That said, Boorse explains further that insofar as his dual conceptions of health/disease and normal functioning/pathology are meant to be seen as value neutral distinctions, the mere fact that we judge a condition to be pathological has no normative bearing on that condition. Indeed, there are any number of minor pathological conditions which are fully consistent with happiness (Boorse lists warts and red-green color blindness as examples). Homosexuality may fall within this category. Though it is technically pathological in the sense which the BST has taken great pains to describe, in that it inhibits individual survival and/or reproduction relative to other members of one's reference class, it need not interfere with the happiness, social acceptance and/or life prospects of the homosexual person. Boorse notes:

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[98] Ibid., 385.

[99] Christopher Boorse, "On the Distinction Between Disease and Illness," *Philosophy and Public Affairs,* 5, no. 1 (1975) 63.

> We always have the right to ask, of normality, what is in it for us that we already desire. If it were possible, then, to maximize intrinsic goods such as happiness, for ourselves and others, with a psyche full of deviant desires and unnatural acts, it is hard to see what practical significance the theoretical judgment of unhealthiness would have… [W]e must be clear that requests to justify the value of health in other terms are always in order, and there are reasons to expect that such justification will require more evidence in the psychological domain than in the physiological.[100]

A Theoretical, Not Clinical, Conception of Health

On a normative conception of health according to which diseases are thought to be "*bad* conditions of the organism – physiological evils, or psychological evils in the case of mental health" to judge homosexuality as pathological is to express some notion of moral disapproval.[101] Not so on the BST. Boorse contends that his BST has always been aimed at explaining a "theoretical" notion of health. It was not meant as a substitute for the practical value judgments which abound in the clinical setting.

> Unlike chemists or astronomers, physicians and psychotherapists are professionally engaged in practical judgments about how certain people

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[100] Ibid.
[101] Boorse, "Concepts of Health," 366.

> ought to be treated. It would not be surprising if the terms in which such practical judgments are formulated have normative content. One might contend, for example, that calling a cancer "inoperable" involves the value judgment that the results of operating will be worse than leaving the disease alone. But behind this conceptual framework of medical practice stands an autonomous framework of medical theory, a body of doctrine that describes the functioning of a healthy body, classifies various deviations from such functioning as diseases, predicts their behavior under various forms of treatment etc. This theoretical corpus looks in every way continuous with theory in biology and the other natural sciences, and I believe it to be value-free.[102]

In his earlier work, Boorse sought to explain the distinction between the theoretical domain of the BST and the normative domain of clinical practice in terms of a distinction between "disease" and "illness."[103] According to this early distinction, disease should be understood as a theoretical concept which "applies indifferently to organisms of all species," whereas illnesses should be understood as a "subclass of diseases, namely, those diseases that have certain normative features reflected in the institutions of medical

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[102] Boorse, "On the Distinction Between Disease and Illness," 55-56.
[103] Ibid., 56.

practice."[104] Though Boorse has come to recognize his use of the terms "disease" and "illness" to mark this distinction as something less than precise[105], he maintains that the underlying distinction remains important.

> The short answer to all these writers [normativist critics of the BST] is that they confuse theoretical and practical, pathological and clinical, description. On the theoretical level where pathologists operate, it is false that pathology depends on what a person wants or should want to do, how he views a condition, or his life situation. Obviously, such factors determine the clinical or social importance of disease states – how much to care about them, how far to investigate them, what treatment to give them,

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[104] Ibid.

[105] In "Concepts of Health" (1987) Boorse replaces his disease illness distinction with a "grades of health" taxonomy according to which…

> …death, the complete cessation of organic functions, is the most extreme form of pathology. Second, pathological conditions may exist but be clinically undiagnosable, such as minor liver cirrhosis, tiny pancreatic cysts, transient cardiac arrhythmias, and early atherosclerosis. Patients with such undetectable abnormalities are *theoretically abnormal* but *diagnostically normal*. Third, diagnostic abnormalities, in turn, may need no treatment, as is the case with some benign tumors, small skin lesions, or gallstones in the elderly. Such patients are theoretically and diagnostically abnormal but *therapeutically normal.* Finally, a patient is *sick* or *ill* when pathological processes rise to a systemic level that produces global incapacitation of the whole organism. Athlete's foot, myopia, intestinal polyps, and bursitis are pathological (and disease processes), but they are not illnesses because they involve no systematic incapacitation. (365-366)

> whether insurance should pay for them – but they do not affect what is theoretically a disease in the first place.[106]

This distinction between value-free theoretical pathology and its normative implications in the realm of clinical practice has made Boorse's theory remarkably resilient with respect to many of the criticisms which have been raised against the BST. Even so, as I intend to demonstrate in the next chapter, the resiliency of the BST does not necessarily extend to the ways in which Daniels uses it to answer practical questions about just health distribution.

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[106] Boorse, "Rebuttal on Health," 46.

Chapter 3:

Biostatistical Theory: On Shaky Ground?

Abstract

Chapter three criticizes Boorse's conception of health by arguing that his selection of reference classes is not normatively neutral. Boorse includes species, sex, and age as determinates of the reference class by reference to which he defines proper function, and he excludes other properties of organisms. But rational and reasonable citizens can reasonably disagree over whether these are the reference classes by reference to which proper function should be determined. Hence Daniels's position, which relies on Boorse's account of proper function, opens the door to intractable disagreement over what counts as a health need.

Introduction

In the previous chapter we examined Boorse's Biostatistical Theory (BST) of health and disease. In this chapter we turn a critical eye towards Boorse's theory generally, and Daniels's use of Boorse's theory in particular. The critique presented in this chapter is divided into two parts. In part one, we consider what I call *practical* objections to Boorse's BST. As we noted at the end of the previous chapter, Boorse's BST is primarily a *theoretical* conception of health. As such it is generally immune to objections motivated by its practical application in the clinical setting and/or policy decisions. But, because Daniels's theory of just health uses Boorse's theory to generate practical judgments with respect to what should and should not count as genuine health care needs, Daniels's larger theory will prove to be vulnerable to several objections which Boorse avoids. In part two we discuss Elseljin Kingma's *theoretical* objection to Boorse's BST. As we shall see, Kingma delivers a critical blow to Boorse's claim to value neutrality by casting doubt on Boorse's choice of reference classes. In this section, I will recount Kingma's argument and analyze its repercussions not only for Boorse's BST, but more importantly for Daniels's theory of just health. In the end we will discover that Boorse's view, so weakened, will no longer be able to sustain the judgments which Daniels theory uses it to reach.

Practical Objections to Health as Normal Functioning

The Problem of Excluded Conditions

Recall that Daniels offered a fairly robust procedure for providing legitimate limit-setting decisions for scarce medical resources. The idea was that once we had

determined which of our claims should count as valid health needs we would still need a fair decision procedure for providing judgments as to which of these health needs should be met when we can't meet them all. The decision procedure which Daniels proposed involved active steps to enfranchise stakeholders by making the reasoning behind distribution decisions publicly available and by ensuring that decisions were made in such a way that even when one disagreed with the outcome he/she could recognize the relevance and the legitimacy of the reasons provided. In short, Daniels proposed a just deliberative process for choosing between what he takes to be valid health needs.

But notice again that Daniels excludes from deliberation those conditions which, as he has concluded, do not qualify as valid health needs. For Daniels, in order for a claim to qualify as a health need it has to meet two conditions. First, it has to be shown to be objectively deficient with respect to normal species functioning, and second there must be widespread agreement that it is a need that should be met. Daniels argues further with respect to this second condition that it is our interest in maintaining a normal range of opportunities which explains the widespread agreement that we have with respect to those conditions which we deem to be valid health needs as opposed to those conditions which we do not. After all, most (though perhaps not all) agree that things like cosmetic surgeries and/or treatments for baldness should not qualify as health needs. And at any rate, these sorts of treatments do nothing to restore normal functioning. Or do they?

If we can show that in fact many of the treatments which Daniels wants to exclude from the category of health needs do qualify as objective departures from normal species functioning, strictly speaking, then the only thing keeping them from qualifying

as bone fide on Daniels's account is the widespread agreement that they should be excluded. But then we have a problem, for surely, the individuals suffering from ugliness may sharply disagree with the judgment of their peers, and what is more, they may feel disenfranchised by the reasoning used to exclude them, for they have been denied what they take to be relevant justification for that decision. This is because any claims they might have made, have, by default, been excluded from the agenda of the public deliberation through which the basic structure is oriented toward some subset of the total class of valid health claims persons might press. This is a structural problem, one which calls into question the legitimacy of Daniels's "fair" distribution procedure at the deepest levels.

In a later section, I will press the case for why Boorse's biostatistical theory fails to provide Daniels with the foundation he needs in order to make objective judgments with respect to whether or not one or another condition constitutes a departure from normal functionality. In the remainder of this section, I point out that even if we assume, with Daniels, Boorse's biostatistical conception of health, there are good reasons to expect reasonable disagreement with respect to whether or not some conditions should qualify as valid health needs. In what follows, I will look at several conditions which have traditionally been excluded from consideration for societal resources on the grounds that treatments for these conditions do not in fact restore normal functioning. I will assess this claim in light of Boorse's BST, the very theory which Daniels uses to exclude them from consideration. If the BST, properly understood, calls these conditions pathological then we are left with the problematic conclusion that their non-disease status has been

determined by way of an aggregative procedure which ignores, off-hand, the reasonable judgments of a significant segment of society, and which therefore falls far short of Daniels's fair deliberative process.

Ugliness

In his most recent defense of the BST, Boorse discusses a criticism developed by R. M. Hare in which Hare argues from "the fact that ladies want to get rid of their hair, but balding men want to keep theirs" that disease and health are evaluative concepts.[1] Boorse is not overly impressed by Hare's primary argument, noting that if baldness does qualify as a pathological condition, it does so for the same reason as any other pathological condition: because it inhibits the ability of a part or process of an organism to perform one or more of its species-typical biological functions within a statistically derived range of efficiency. What is particularly interesting about Boorse's response are his comments with respect to the "can of worms" he would have liked to avoid opening having to do with the reproductive function associated with appearance. Boorse notes:

> Yet another point about baldness is that many women find bald men unappealing, while few men demand women with hairy legs. This too offers the BST a route to Hare's two disease judgments, if only baldness impedes reproduction. *Yet one cannot let the BST turn ugliness into a*

[1] R. M. Hare, "Health," *Journal of Medical Ethics,* 12, 178, in Boorse, "Rebuttal on Health," 70.

disease, especially not moderate or marginal ugliness, since it isn't one. But baldness, if ugly, is not simple ugliness; it is the absence of a normal body part, a discrete structural abnormality. One can see how a structural deviation from species design, coupled with damage to reproduction, might induce a BST inspired physician to call a trait pathological. Perhaps, then, this line of thought is one reason major deformities are seen as pathological. Structural defects much worse than baldness can be so hideous as to make reproduction almost impossible, though major structural defects (harelip, cleft palate) tend to involve dysfunction as well as deformity. *Still it seems odd to call attracting the opposite sex a biological (let alone a physiological) function of the mouth, face, scalp, fingers, spine, and so on.* So perhaps the BST does not, after all, entail that awful structural abnormalities are pathological, despite their antireproductive effect. One should note that this inference could only apply in any case to deformities that block reproduction throughout our species. The BST cannot make any one time's or culture's standards of beauty into requirements of health. And no such link between appearance and reproduction offers much comfort to normativism anyway, since a fact

> about what the human race finds intolerably ugly, though a fact about values, is a fact nonetheless.[2]

Though Boorse is quick to downplay the idea that "the BST turns ugliness into a disease," he may well have painted himself into a corner in the excerpt quoted above. For Boorse, and, by extension, Daniels, individual survival and reproduction are at the top of the functional hierarchy which determines normal functionality, and insofar as baldness, or ugliness more generally inhibits an individual's reproductive ability below a statistically derived range for members of a specific set of reference classes, it is hard to see how it might avoid disease classification by the BST's statistically derived functional criteria.[3] Boorse does make a half-hearted attempt to dismiss this conclusion on the grounds that it is a stretch to call attracting the opposite sex a biological function of the mouth, face, scalp, etc. But this line of reasoning (if we should even call it that) is easily invalidated. Boorse himself lists the BST's ability to explain disease judgments not only for the human species but also for plant and animal species as one of its strengths. But if this is the case, then we have numerous examples of biological parts and/or processes in other species whose function it is to produce attraction in the opposite sex. The peacock's tail is but one of many such parts for which sexual attraction is the primary function.

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[2] Boorse, "Rebuttal on Health," 71-2, emphasis mine.

[3] This criticism was first brought to my attention by way of an anonymous blog entry: *Health Selection and Sex Some Thoughts on Boorse's Rebuttal on Health,* (2008, November 14), Retrieved from: http://philosophicaljournal.wordpress.com/2008/11/14/health-selection-and-sex-some-thoughts-on-boorses-a-rebuttal-on-health-4/.

But perhaps Boorse can retreat to the claim that there is no standard of beauty or ugliness that applies across the human species. It would appear that the tails of male peacocks illicit the same response from female peacocks species-wide, but with the human species, there are almost as many standards of beauty as there are unique cultures. If there are no deformities which have a similar species-wide effect on one's reproductive ability then the peacock analogy breaks down. While I think that there are some physical characteristics which, statistically speaking, are in fact considered ugly across the human species I think there are good reasons to challenge the claim that conditions which only violate culturally specific standards of ugliness should not count as pathological. Indeed, this claim seems to conflict with an earlier argument offered by Boorse with respect to mental health.

Recall that Boorse praised psychoanalysis for its ability to respond to what he calls "the paradoxes of cultural variation." Boorse noted that various cultures give different psychodynamic significance to various behaviors and/or surface personality traits. The example he gives is of a Native American shaman whose visions of tree spirits need not indicate mental pathology in the same way that they would for a New York investment analyst who has the same visions. On the psychoanalytical model, there are universal criteria of normal functionality (freedom from crippling anxiety, deep and stable love relations, full and unconflicted development of one's abilities, and the capacity for orgasmic sexual release) which can contribute to the goals of individual survival and reproduction in very different ways from one culture to the next. Though schizophrenic visions would inhibit the New York investment analyst's ability to

function normally according to these universal criteria, they need not have the similar effect on the Native American shaman.

But if we allow for this kind of cultural variation with respect to mental phenomena, why shouldn't we conceive of beauty and ugliness in the same way? If we see certain deformities as having different psychodynamic significance from one culture to the next, it need not affect the deeper universal categories of beauty and ugliness which exist, albeit in different forms, across culture. So then, ugliness as a universal category would be pathological even if it was exemplified by different physical symptoms from one culture to the next. I suspect that Boorse might balk at the above notion as having no place in the discussion of normal functionality at the level of physiology.

But what if we modify our discussion slightly so that the focus falls on treatments for psychological ugliness as opposed to treatments for physical ugliness. It would seem that certain cultural attitudes about mental dispositions would inhibit one's ability to function according to these universal criteria in one culture and not another. General shyness, a condition which Daniels dismisses as a normal variation in human personality, one which doesn't qualify as needing medical intervention, might well inhibit one's ability to stay free from crippling anxiety, maintain deep and stable love relations, and/or develop one's abilities, in a culture which values extroversion and confidence. Different cultures will find different traits undesirable and therefore a source of inhibited functionality especially insofar as they limit one's ability to attract a mate. And this would seem to make treatment for some mental illnesses depend on societal norms.

Even if it does in fact turn out that ugliness, even culturally specific forms of ugliness belong in the category of pathological conditions for the reasons noted above, this does not amount to a refutation of the BST. Far from it. Rather, as Boorse eventually concludes, the notion that ugliness, cashed out in terms of structural deformity which causes rejection by the opposite sex, and which, as a result inhibits reproductive ability, is pathological only confirms the BST's theoretical validity. And this is in keeping with Boorse's objectives given that he is only interested in providing a theoretical, not a clinical conception of health and disease. Daniels cannot make the same concession.

Daniels argues repeatedly that medical interventions designed to enhance one's attractiveness should not count as meeting health needs, not only because, on his understanding of the BST, such interventions do not remedy dysfunction, but also because the idea that these sorts of interventions even might make a valid claim on social resources flies in the face of public consensus on the matter. Daniels dismisses the idea that cosmetic surgeries should qualify as health needs because they might improve the opportunities of those who receive them, on the grounds that offering such treatments would allow people with extravagant preferences to hijack the health care system. Daniels imagines perfectly normal people seeking nose-jobs or breast augmentations in order to pursue careers in modeling or acting which were previously closed to them. But this may be an unnecessary worry. While it is true that one's physical attractiveness has a substantial and well documented impact on one's career opportunities generally, not only

for fashion models, actors, broadcast journalists, and politicians but in virtually every other walk of life[4], the goal of cosmetic treatments to cure ugliness, in order to count as meeting a genuine health need according to Boorse's standard, is to correct for deficiencies in appearance which inhibit reproductive function, not to provide opportunities for certain careers.[5] That said, judging the degree to which appearance inhibits reproductive function may be a difficult proposition insofar as each individual may evaluate their own appearance, and by extension, their own ability to attract a mate according to different standards. If we limit appearance related health needs to those structural deformities which inhibit reproductive ability across cultures this may solve the above problem. At any rate, this move would require Daniels to modify his treatment of appearance related conditions in a way that seems to be at odds with his current view.

It is possible, of course, for Daniels to concede my point and allow the ugly to press their claims in public deliberation. I suspect that if he were to make this move, he would do so believing that even if we were to classify ugliness as a valid health need, other more pressing health needs would be assigned priority by the collective decision that is the output of the public deliberation in the second, accountability for reasonableness stage of the distributive process. But the conclusion that ugliness would be dismissed as unworthy of funding may be too quickly drawn. I imagine that the

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[4] See Daniel S. Hammermesh, "Ugly? You May Have a Case," *New York Times*, August 27, 2011.

[5] On the same token of course, it might be argued that if one's physical attractiveness limits one's access to lucrative careers, this would in turn limit one's chances of reproductive success in a culture which values earning potential as an evaluative category for reproductive fitness.

reason why the public tends to think that ugliness is not a disease has nothing to do with its impact on opportunity (which is significant) and everything to do with the seemingly common sense judgment it is not a disease. Were ugliness truly given a space at the distributive table, I think it would be telling just how quickly it would rise in the ranks of social importance. Indeed, one's physical attractiveness seems to have a tremendous impact on one's opportunity in this society and if individuals were to question the judgments of the biomedical sciences, as I suggest they should, consensus on this matter would be far from settled.

Homosexuality

A different, but related objection might be raised with respect to conditions like homosexuality, which qualify explicitly as pathological on Boorse's view but which Daniels and indeed society in general have concluded to be a normal variation in human sexuality. If exclusive homosexuality should in fact be considered a pathological condition for the reasons that Boorse explains – because a lack of heterosexual desire inhibits reproductive function – then Daniels has to recognize it as a dysfunction which at minimum should give those who want to change their homosexual orientation a seat at the deliberative table.

The problem is that homosexuality seems to encompass a broader set of personality traits/values than simple sexual preference, at least in modern western culture. So, regardless as to the value neutral manner with which Boorse and therefore Daniels would want to describe homosexuality, the fact of the matter is that in our culture,

homosexuality is extremely value charged. This presents several problems at the second stage of Daniels's heath care resource distribution procedure, as making treatments for homosexuality available for those who want them would call into question the conclusions of mainstream psychology (as embodied by the DSM) which paint such requests as an act of bad faith against a core characteristic of one's makeup. That is to say that there is a very real conflict between the Boorsian contention that homosexual desire is pathological and mainstream psychology's contention that the denial of one's homosexual desire is pathological. Indeed this points to a potentially much larger problem with respect to the state of the mainstream mental health profession.

The Problem of Professional Subjectivity

Recall that Daniels tied the objectivity of his conception of health and pathology to the objectivity of the biomedical sciences as an appeal to public reason. With respect to physiology, Daniels's conceptions of normal functioning and pathology are for the most part consistent with the conclusions of the biomedical sciences which give them grounding. The same cannot be said however with respect to the grounding for the concepts of *mental* function and *mental* pathology, despite Daniels's contention to the contrary. Daniels argues that "psychiatry has developed publicly accepted methods – currently embodied in the Diagnostic and Statistical Manual of Mental disorders (DSM-IV-TR) – to establish generally agreed-upon diagnoses. But recall that Boorse held the DSM in low regard, noting that its emphasis on finding common ground for the various conflicting theories of mental health left it with a non-existent theoretical core. As both Boorse and Wakefield noted, the DSM, though widely accepted by the profession of

psychiatry, is ultimately deficient because it cannot provide an objective model of normal mental functionality and cannot, therefore, provide a reliable account of mental pathology. That is to say that it can't offer a consistent view as to why some conditions should be classified as a disorder and not others. The result, Boorse argued, was a document which offered diagnoses of dysfunction without ever providing a definition of what dysfunction entails. Boorse suspects that the actual guidelines at work behind the diagnoses offered by the DSM involve the social judgments of disfavor which often accompany so-called perversions, addictions and antisocial behavior, and this is a far cry from the objective notion of health which Daniels needs.

Boorse himself argued for a return to psychoanalytic theory, a theory of mental health which could provide a model of normal mental functionality which paralleled the biomedical model of normal physiological functioning. But Daniels does not have this option. Rather Daniels seems wedded to whatever notion of mental health has managed to command wide assent within public reason as it is embodied by the mental health profession. But then he has a problem, because the notion of normal functionality upon which his theory of just health distribution depends, does not line up with the judgments of the scientific field to which he appeals for its grounding. Rather, as Boorse and Wakefield have argued, the atheoretic approach embodied by the DSM is incapable of grounding any sort of notion of normal mental functionality and/or mental pathology.

Now, none of the above arguments amounts to a definitive argument against Daniels. This is because it may turn out that Daniels and, to some degree, mainstream biomedicine is simply misinterpreting the objective/empirical data at the theoretical core

of the BST. While this response would amount to a capitulation with respect to my points about the disease status of ugliness and or homosexuality, doing so would allow Daniels to preserve the claim that the conception of health at the core of his theory is objective. At any rate, the next set of arguments prove to be far less amenable to Daniels's position.

A Theoretical Objection to Health as Normal Functioning

The Problem of Reference Classes

In an article entitled "What is it to be Healthy?" Elselijn Kingma raises a different kind of difficulty for Boorse and by extension Daniels. Specifically, Kingma challenges the BST's claim to value neutrality. She does this by calling into question the BST's appeal to reference classes in establishing the statistical grounds for normal species functioning. Recall that for Boorse's BST, an organism *functions normally* when its parts and processes contribute to the overall goals of individual survival and reproduction in a way that is statistically typical of members of its reference class. Boorse defines "the *reference class* [as] a natural class of organisms of uniform functional design; specifically, an age group of a sex [of a race] of a species." (Rebuttal 7 Boorse equivocates as to whether or not race should be used as a reference class.) Kingma summarizes the BST's dependence on this notion of reference class as follows:

> The BST needs reference classes because the human species shows a wide variety of functioning; what is normal in one group can be abnormal in another. A woman, for example who has the level of testosterone that is

> normal for men, is generally considered diseased. If normal functions were those that are statistically typical for the *entire* species, the BST could never account for such group-specific variations in healthy function; it could not tell us that a given level of testosterone is healthy in men but a disease in women. Therefore Boorse can only give an account of health as statistically typical functioning if he uses reference classes.[6]

But what is it about age, sex and possibly race which make them appropriate candidates for inclusion in this notion of reference class? Why, Kingma asks, shouldn't we include separate reference classes for uncommonly heavy drinkers, blind people, or those with pneumonia? If these conditions each constituted grounds for inclusion as reference classes, the BST would no longer be able to classify liver disease, blindness or pneumonia as pathological, because individuals having these conditions would no longer fall below the statistically derived level of function for members of their reference class. But if this is the case then the BST can no longer provide an account of health which is consistent with the judgments of the biomedical sciences. In order to provide an accurate account of health, the BST needs to explain *why* the reference class should include age, sex, and race and why it should exclude everything else. And it needs to be able to do this without appealing to our common-sense notions of health and disease. Kingma notes:

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[6] Elselijn Kingma, "What Is It To Be Healthy," *Analysis,* 67, no. 2 (2007) 128.

> …it makes sense to have a reference class based on age or sex, but not on being blind or having pneumonia, because the former are normal variations and the latter are diseases. This, however, is precisely what Boorse may not say. He aims to give us an account of health, and I have shown that the account he offers requires certain reference classes. If these reference classes can only be constructed based on some prior distinction between health and disease then his account is circular. Moreover, Boorse cannot merely state which are the appropriate reference classes. Instead, since he claims to offer an account of health that is grounded in empirical fact, not evaluative judgment, he must show that empirical facts underlie the distinction between appropriate and inappropriate reference classes.[7]

Following Boorse's own explanation of reference class as "a *natural* class of organisms of *uniform* functional *design*,"[8] Kingma considers three justifications that Boorse might try to provide in explaining why the reference class should be limited to age, sex and race: that as candidate reference classes they are natural, uniform and/or designed. With respect to the first of these justifications, Kingma explains three possible interpretations of Boorse's claim that age, sex and race are natural reference classes. First, if Boorse means by natural that appropriate reference classes are those which *occur*

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[7] Ibid., 129.
[8] Boorse, "Health as a Theoretical Concept," 562.

in nature, this fails to distinguish age, sex, and race from other "inappropriate reference classes (e.g. those comprising all and only people with a certain disease)" which also occur in nature.[9] Second, if Boorse means for us to understand natural in terms of statistical *normality*, whereby "only sub-groups whose members occur with sufficient statistical frequency in the species as a whole are appropriate reference classes," this justification cannot account for the fact that "some races and some age groups have very few members," whereas "some diseases… such as short-sightedness, are very common."[10] Finally, if Boorse means by natural that reference classes should be understood as *natural kinds*, he will need to be able to explain why sex, age and race qualify as natural kinds, and why people with Down's syndrome or diabetes do not. Kingma argues that this doesn't provide Boorse with a way to rule out inappropriate reference classes at all. On the contrary, Kingma doesn't see…

> …how such a claim could be defended; both men and people with Down's syndrome, for example can be identified by superficial characteristics caused by a genetic structure. A justification for reference classes that relies on natural kinds must therefore show that some natural kinds are the *right* natural kinds, whereas other natural kinds are the *wrong* natural

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[9] Kingma, "What is it to be Healthy," 129, emphasis Kingma's.

[10] Kingma also notes that if we look beyond the human species (as Boorse seems committed to doing), "it is clear that there is no link between statistical frequency and reference classes: the queen design in bees should certainly count as a reference class if anything does…" despite the fact that it is rarely encountered. (129)

> kinds. But if such a justification can be provided, it goes beyond the notion of natural kinds and brings us back at the starting point of our justificatory question: why are certain reference groups appropriate and not others? An appeal to what is natural fails to answer this question.[11]

The second justification Kingma considers points to uniformity as the basis for distinguishing between appropriate reference classes and inappropriate reference classes. Accordingly, sex, age and race would qualify as appropriate reference classes due to the fact that members of each of these reference classes are remarkably similar to each other. And indeed, this justification seems consistent with the depiction of reference classes explained in the previous chapter. Recall that Boorse contrasted the disjunctive strategy used to explain polymorphic traits such as eye color and blood type with the traits associated with sex and age. With respect to the traits associated with sex, Boorse noted that female characteristics "occur together and constitute a single coherent functional design," which is distinct from the functional design characteristic of males.[12] With respect to the traits associated with age, Boorse noted that there is a great degree of variance in functional design demonstrated by "functions performed in the human infant and not in the adult, e.g. enlargement of the skeleton, and also the reverse, e.g. sperm

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[11] Ibid., 129-30.
[12] Boorse, "Health as a Theoretical Concept," 558.

production or ovulation."[13] The problem with any argument for distinguishing valid reference classes from invalid reference classes is that so-called "inappropriate" reference classes can also show remarkably uniformity.[14] This is especially true for genetic syndromes like Down's which can be readily diagnosed with reference to a standard set of mental as well as physical characteristics.

Boorse's last option for justifying the reference class exclusivity of sex, age and race involves an appeal to some notion of design. The difference then between the reference classes of sex age and race and inappropriate reference classes such as pneumonia and blindness is that differences in sex, age and race constitute natural variants in the design of the human species, whereas pneumonia blindness and various other diseases constitute departures from that design. But as Kingma argues, the term 'design' needs cashing out. Boorse might try to cash design out in terms of innateness. Kingma responds to this option as follows:

> Naively, one might claim that a trait counts as 'designed' in an individual if and only if the individual has the trait innately. But an appeal to innateness will not suffice since, even if we can make sense of a distinction between innate and acquired, certain (genetic) diseases are certainly innate. At the same time some traits that define appropriate

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[13] Ibid.
[14] Kingma, "What is it to be Healthy," 130.

> reference classes, such as different ages, are in a way acquired… If we set aside other difficulties and take the simplistic view that design is what is written in our genes, the desired distinction will not be generated either. Masculinity, Down's syndrome and Huntington's disease are all written in the genes, and the complex genetic mix I share with other Caucasians may be no more or less uniform than an equally complex mix of genes that could predispose me to diabetes, and that I would share with other diabetics.[15]

If on the other hand, Boorse interprets design in terms of "*Nature's intent*," he might be able to argue that the differences between men and women were intended by Nature, but blindness and various other pathological conditions fall outside this intention. But this interpretation faces the following dilemma. Either this interpretation commits Boorse to defending the existence of some sort of intelligent designer, a prospect which presents its own set of difficulties for Boorse's value-neutral orientation, or this interpretation commits Boorse to an appeal to evolutionary biology. Though, as we will see, this second horn does not present a problem for somebody like Wakefield, Boorse has explicitly rejected "the idea that evolution is relevant to physiological function and

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[15] Ibid.

health.[16] And at any rate, an appeal to evolutionary biology "must give a non-question begging account that explains why certain traits that are maintained by natural selection, such as sickle-cell anemia, are nevertheless diseases."[17]

Kingma concludes that Boorse's BST isn't a value-free account at all, insofar as the distinction between health and disease is not, as Boorse claims, determined by empirical facts alone. Rather, Kingma accuses Boorse of smuggling values into his conception of health by way of an arbitrary selection of reference classes. She notes that "because the choice of reference classes determines the distinction between health and disease on the BST, and Boorse gives no empirical fact that justifies the choice of these reference classes over others, there is no empirical fact that determines the distinction between health and disease on his account."[18]

Nevertheless, Kingma concedes, Boorse might try to reply to this problem in a manner reminiscent to his reply to concerns with respect to his choice of functional goals. Recall that Boorse justifies his functional analysis of health on the basis of the goals of individual survival and reproduction. Boorse readily admits that "most behavior of organisms contributes simultaneously to individual survival, individual reproductive competence, survival of the species, survival of the genes, ecological equilibrium and so

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[16] That said, Boorse has stated on multiple occasions (1987, 1997) that he would be willing to take a different view of function (i.e. Wakefield's weakly etiological approach – see Chapter 4) but doing so would call into question many of his theoretical positions.

[17] Kingma, "What is it to be Healthy," 131.

[18] Ibid.

forth."[19] But even though these goals can conflict, as is often the case between the goals of individual survival and the survival of the species, it is the subfield of physiology alone, for which individual survival and reproduction are the relevant goals, which is pertinent to health. Similarly, Kingma notes that Boorse might try to contend that the reference classes which he proposes (sex, age and race) "simply *are* the reference classes that are relevant for the distinction between health and disease." Kingma continues:

> Different reference classes would generate different distinctions, but those are not the distinctions between health and disease. Although medicine might have chosen to engage with other distinctions and other concepts, this is only to say that medicine might have concerned itself with things other than health and disease. This does not make the distinction between health and disease evaluative. As he puts the point, '[to] choose wood over concrete to build your house with is an evaluative choice, but that does not make the concepts of wood and concrete value-laden.'[20]

Though Kingma accepts this reply, she doesn't think it gets Boorse off the hook. Rather she notes that Boorse's theory is supposed to give us a value-free account as to "whether a condition, for example homosexuality (to take a contested example), is

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[19] Boorse, "Health as a Theoretical Concept," 556.
[20] Boorse, "Rebuttal on Health," 27 in Kingma, "What is it to be Healthy," 131.

healthy or a disease."[21] The problem for Boorse, according to Kingma, is that we can construct another account of health, call it the XST, which is the same as the BST in every way except for its inclusion of sexual orientation as an additional reference class.

> Thus on the XST homosexuality is a normal, therefore healthy, function in the reference class of homosexual people. On the BST however, homosexuality interferes with statistically typical reproductive function in the reference class of all men and is therefore a disease. The question 'is homosexuality a disease?' then reduces to the question 'is the BST or the XST the right account of health?' or 'is sexual orientation an appropriate reference class or not?' Since… there are no facts that determine which reference classes are appropriate, there is no empirical fact that determines whether homosexuality is an appropriate reference class. Therefore there is no empirical fact that tells us whether the BST or the XST is correct.[22]

The upshot of Kingma's line of argument is that the objectivity of Boorse's conception of health is called into question. But while Boorse *may* be able to salvage his view to some degree by conditioning its validity on the appropriateness of the reference classes which he takes for granted, Daniels does not have the same luxury.

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[21] Kingma, "What is it to be Healthy," 131-2.
[22] Ibid., 132.

Repercussions for Daniels: The Problem of Reference Class Expansion

Kingma's criticism of Boorse presents two separate but related problems for Daniels's account of just health. The first of these problems results from the potential proliferation of reference classes. As Kingma's argument demonstrates, each time we expand the reference classes used by the BST to determine normal functional efficiency and departures from it, the result is the elimination of one or more disease classifications.[23] As we add reference classes for heavy drinkers, blind people, and people with pneumonia, liver disease, blindness and pneumonia become normal conditions for members of each of these respective groups. But now notice the problem that this presents for Daniels's account. If reference classes are arbitrarily chosen then any condition could be excluded from consideration as a valid health need by any given society. And insofar as the reasoning behind such exclusions would be arbitrary, Daniels's accountability for reasonableness condition cannot be met. Fair minded people would disagree about which conditions should qualify as valid health needs, but the reasons offered for excluding one treatment from consideration and not another could not be deemed acceptable by those whose conditions were excluded, insofar as the decision was made in an arbitrary fashion.

With the concept of normal functionality in flux, the exclusion criterion now becomes as subjective and politically motivated as the secondary selection process,

[23] Adding reference class divisions only serves to eliminate disease categories, it does not directly result in the creation of new disease categories. This aspect of reference class expansion will play an important role in the political variant of Boorse's functional methodology offered in chapter five.

whereby “genuine” health needs are evaluated by means of political deliberation after non-health conditions have been excluded. If we can exclude any number of conditions simply by modifying the reference classes to include said conditions, then we stand in danger of allowing bias to determine which conditions are being excluded.

Now, it might be argued that the three reference classes that Boorse uses (age, sex, species) have a tremendous amount of intuitive appeal. But it is unclear as to why they have such intuitive appeal given Kingma’s criticism, and at any rate, there are other reference classes for which the intuitive appeal is almost as strong. Indeed, sexual orientation is a reference class addition that many, if not most – at least in a group which is governed by public consensus which excludes religious reasons that not all reasonable people would be willing to accept - do in fact see as an intuitive reference class division. Hence the equivalence of Kingma’s XST with the BST in terms of consistency with Daniels’s theory of health care distribution. But why should it be the case that the XST is acceptable to the polity whereas the variant of the BST which posits heavy drinking as a reference class would not be? Notice that the XST would deny a homosexual individual who feels harmed by their homosexuality funding for treatment for their condition. And again, this seems generally intuitive to us. Indeed it solves the problem mentioned above that Daniels’s underlying conception of health compels him to recognize the desire for treatment of one’s homosexuality as a genuine health need. But now it would seem that the homosexual who feels harmed by his homosexuality would have grounds for claiming that he has been unjustly excluded from having his condition considered as a genuine

health need. And indeed, it would seem that the exclusion of this condition is now based more on cultural consensus rather than any sort of objective measure.

Repercussions for Daniels: The Problem of Reference Class Contraction

The second problem which Kingma's criticism of Boorse presents for Daniels arises not from the expansion of the set of reference classes used to determine statistically normal functionality, but from its contraction. If the BST's choice of reference classes is indeed as arbitrary as Kingma proposes then it may be open to individuals to claim that their conditions have been unjustly excluded from consideration as genuine health care needs because the reference classes at the heart of the BST are too broad already. This claim might be articulated in the following way: dysfunction should be determined with respect to sex and age without reference to species, species and sex without reference to age or age and species without reference to sex.

It shouldn't be too hard to imagine an elderly woman arguing that the ravages of age past the age of twenty (post-menopausal loss of reproductive ability, thinning of the skin, loss of muscle-tone, general loss of cellular integrity, etc) should be classified as a disease[24]. Since the BST classifies her symptoms as falling within the average functional operation for the parts of human women her age, she has been marginalized by an arbitrary selection of reference classes. On a variation of the BST which does not take

[24] Ironically this is in keeping with the judgment of the biomedical sciences which, to Boorse's disapproval has long classified aging, or at least the effects associated with aging as pathological.

age into account, she might have a valid claim to health resources which would restore her reproductive abilities, muscle tone, and/or skin elasticity. And indeed, as recent events have shown us, these goals are not outside the realm of medical possibility. The current record for the oldest women to bear and deliver a child is sixty-nine. Of course, our elderly patient would need a great deal of medical help to bear a child because she is way past menopause, but if she really wants to have a child and she postponed doing that too long, she might be inclined to make such a claim. And even if we find such a claim blatantly unintuitive, perhaps even offensive, if the reference classes informing the BST are in fact arbitrary, this kind of claim may have a level of validity that we generally aren't willing to give it credit for having.

Perhaps another possible example is in order. What if we determined that Alzheimer's disease is statistically normal for persons over the age of eighty? In which case, the BST would not classify Alzheimer's as a disease for those individuals. Clearly though, something is going wrong. Indeed, in the case of early onset of Alzheimer's, say in one's sixties, we would conclude that it was a pathological condition, at least with respect to the statistical averages in play for sixty year old males of the human species. If we have a treatment for Alzheimer's which we developed to cure sixty year olds, and if the reference class of age is arbitrarily chosen, the eighty-year-old (or someone representing the eighty-year-old's interests) might claim their own condition as one which deserves consideration for treatment on the grounds that they are being unjustly discriminated against by the BST on the basis of their age. Not only does it seem strange to say that a condition counts as a disease when displayed at age sixty but not at age

eighty, but, if it turns out that indeed the reference class division of age is arbitrarily chosen then it would seem that the eighty-year-old's Alzheimer's disease should in fact qualify as a genuine health need, one which, at minimum, should give him with a seat at the deliberative table with respect to resource distribution. To say otherwise is to exclude him for arbitrary and therefore illegitimate reasons.

Removing sex or species for that matter, as reference classes is a far more difficult task, from a conceptual standpoint, than the removal of age as a reference class. This is especially true insofar as the list of sex specific disease categories is huge. Indeed it is difficult to even conceive of how we might generate a statistical mean for the functional efficiency of human reproductive structures without an appeal to differences in sex. This is not to say, however, that we could not replace sex as a reference class with an analogous reference class which is capable of making some of the same distinctions. We might, for instance, choose to embrace a version of the BST which replaces sex as a reference class with something along the lines of mental gender or sexual identity. This would give us many of the same functional analyses of sex specific diseases for those whose sexual identity matches their physical sex characteristics, while giving us drastically different conclusions for those traditionally diagnosed with gender identity disorder. It would in effect pathologize the physical sexual features of male persons who identify as females and female persons who identify as males.[25] In so doing, it would

[25] Of course, I use the terms 'male' and 'female' here loosely as shorthand for a set of physical "polymorphic functional traits which almost always appear in tandem." Were we to espouse a version of

make transgender treatments, both surgical and hormonal, a valid health need for individuals who want them. While this may seem, on the face of it, to be a wildly unintuitive modification to the BST, if in fact the BST's choice of sex as a reference class is an arbitrary one, then it is open to those seeking public consideration for transgender treatments to argue that they have been unjustly excluded from the resource distribution conversation.

While it is certainly true that opening the door for the public consideration of these sorts of treatments as genuine health needs (transgender treatments and fertility treatments for the elderly being only the tip of the iceberg) threatens to overwhelm the deliberative process, especially insofar as that process is in keeping with Daniels's accountability for reasonableness condition, this should not count as evidence as to the appropriateness of the reference class divisions that Boorse, and, by extension, Daniels endorse. Rather, it points to conceptual problems with the overall theory of health at work front and center in Boorse's theory, and behind the scenes in Daniels's theory. But what, we might ask, is the alternative? Should we embrace a fully normative conception of health as a consequence of our rejection of Boorse's BST? Is this even an option for persons, like Daniels, who mean to expand Rawls's theory of justice as fairness to provide guidance for the just distribution of health? If not, is there an alternative conception of health which would provide Daniels with the means to this expansion without thereby committing him to the problematic conclusions that our evaluation of

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the BST which replaces physical sexual identity with mental sexual identity, the defining features for the categories of 'male' and 'female' would reflect the reference class choices at the root of our theory.

Boorse's BST has laid bare? These are questions which we will explore in the next chapter.

Chapter 4:

Does an Etiological Approach Fare Any Better?

Abstract

Chapter four considers an alternative naturalistic remedy for this problem that does not rely on Boorse. Specifically, I consider two versions of an etiological conception of health, on which a part or process's normal function is that which explains its existence from an evolutionary perspective. This type of approach initially seems both intrinsically plausible and a good fit for Daniels's view. However, upon further analysis it cannot avoid controversies of the sort that Daniels must avoid. As with Boorse's biostatistical theory, the health and disease judgments which result from etiological conceptions of health rely on metaphysical assumptions about which reasonable persons disagree, thus leaving room for the possibility of stakeholder disenfranchisement with respect to the distributive scheme which they underlie.

Introduction

Having identified some serious problems with Boorse's BST generally, and Daniels's use of the BST in particular, in this chapter I evaluate two etiological strategies for constructing a conception of health upon which to rest Daniels's health oriented expansion of Rawls's theory of justice. The problem with Boorse's conception of health is that it relies on a notion of goal-directed function which requires the use of a reference class, the categories of which require justification which Boorse's theory cannot provide. The conceptions of health to be discussed in this chapter rely on an etiological approach to function according to which a part or process's normal function is that which explains its existence from an evolutionary perspective. I begin with an evaluation of the standard etiological approach offered by Larry Wright. I then turn to the "weakly etiological" approach offered by Jerome Wakefield, which is unique among the etiological conceptions of health offered in that it has Daniels's explicit approval as an alternative to Boorse's BST. In the end, I find both of these views to be inadequate with respect to providing a conception of health to which rational and reasonable individuals could agree.

The Etiological Approach

One way that Daniels might respond to the criticisms I have raised is to distance himself from Boorse's analysis of normal functionality all together. In terms of providing a value-neutral analysis of normal functionality, the etiological approach represents the main alternative to Boorse's BST. Whereas Boorse saw function in terms of goal-directedness, the etiological approach construes function in terms of causal explanation.

That is, on the etiological view, a thing's function is the effect it has which explains its existence.

When we consider the function of an artifact, we typically explain its function in teleological terms. What is it designed to do? But in the absence of a clear blueprint for its design, we can still usually infer an explanation of an artifact's function by observing its effects. The effects of an artifact help to explain its existence, why it was designed in the first place and for what it was intended to be used. But any conception of functionality will need to provide criteria for distinguishing a thing's function from those of its effects which are superficial to its performing its function. Automobiles provide transportation but it is also the case that they consume fuel and release carbon emissions. Why should we therefore conclude that it is transportation and not fuel consumption or carbon emission which qualifies as its function? The function of an automobile is to provide transportation and we know this because this is the effect for which it was designed; it is the effect which explains its existence. The etiological approach argues that when we say of something, X, that it has function Z, we are offering an explanation for why X exists.[1] Larry Wright elaborates on this idea as follows:

> ...The ascription of a function must be explanatory in a rather strong sense… [I]f "Why do animals have livers?" is a request for a function, it cannot be rendered "What is the liver good for?" Livers are good for many

[1] Larry Wright, "Functions," *The Philosophical Review,* 82, no.2 (1973), 156.

> things which are not their functions, just like anything else. Noses are good for supporting eyeglasses, fountain pens are good for cleaning your fingernails, and livers are good for dinner with onions. No, the *function* of the liver is that *particular* thing it is good for which explains why animals have them.[2]

The causal nature of this sort of functional explanation is easy to see with respect to the functions of artifacts which are born out of conscious intention. When we say that the function of the safety on a rifle is to prevent accidental discharge we are saying that at least some conscious effort was made to include the safety mechanism because it accomplishes this task.[3] Where no conscious intention can be found, as with ascriptions of function to a part or process of a biological organism, natural selection can provide an explanatory analog. And this amounts to the central claim of an etiological conception of health as normal functioning. Over an extended period of evolutionary history, the parts and processes of biological organisms gain functionality not as a result of conscious intention but rather as a result of accidental mutations which confer reproductive advantages to those that have them. While it is true that insofar as these mutated traits are accidental they cannot be said to have a function for the first, or indeed the first few generations of organisms which exhibit them, over many generations the advantages

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[2] Ibid., 155-6.
[3] Ibid., 158.

which these traits confer become their function. This is because we can now tell a story with respect to how these traits, parts and processes became established in a species, and it is a result of what these traits do that members of that species survived.

> … those mechanisms that happened to have effects on past organisms that contributed to the organisms' reproductive success over enough generations increased in frequency and hence were "naturally selected" and exist in today's organisms. Thus, an explanation of a mechanism in terms of its natural function may be considered a roundabout way of referring to a causal explanation in terms of natural selection. Because natural selection is the only known means by which an effect can explain a naturally occurring mechanism that provides it, evolutionary explanations presumably underlie all correct ascriptions of natural functions.[4]

So, when we say that the function of the heart is to pump blood, what we mean is that the heart was naturally selected because it pumps blood the way that it does and that the pumping of blood is a consequence of the heart's being there. So far, so good. But how, we might ask, could Daniels leverage this etiological approach to function for his health related purposes? Wakefield, who offers a modified version of the etiological

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[4] Jerome Wakefield, "The Concept of Mental Disorder: On the Boundary Between Biological Facts and Social Values," *American Psychologist,* Vol 47. No. 3 (1992), 383.

approach which we will examine in the next section, argues that "the notion that something has gone wrong with the organism's internal functioning, which is critical for distinguishing between disorders and other negative conditions, can be captured only by comparing present functioning with what the organism's mechanisms were designed to do, and this requires a reference to the evolutionary explanation of the mechanism."[5] In order to construct an etiological conception of health which is suitable for Daniels's purposes, we need a causal history of sorts for the evolutionary development of the physiological and psychological mechanisms at work in members of the human species.

The main advantage offered by the etiological approach to function over and above the BST, comes by way of its avoidance of some of the deeper problems raised by Kingma against the BST. Kingma herself recognized the selecting forces of evolution as a potential determinant for reference class divisions. The fact that the etiological view can appeal to an evolutionary explanation for why some clearly distinct functional paradigms qualify as a normal functional variation (i.e. the difference between men and women, children and adults) and others (i.e. Down's syndrome) do not acts as a mark in its favor. Indeed, given its emphasis on natural selection, a purely etiological approach may be able to abandon the need for reference classes all together at least in the sense that they are used in Boorse's theory. Certainly the purely etiological approach might make use of similar reference classes for descriptive purposes, but they would not carry nearly as much theoretical import.

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[5] Ibid., 379.

The standard etiological approach outlined above is, however, not without problems of its own. In what follows, I will explain two categories of criticisms to which the standard etiological approach succumbs.

The Problem of Over-Inclusiveness

Insofar as the goal of any theory of function is to accurately explain the set of functional ascriptions we do in fact make, what we want is a theory the conclusions of which match our intuitions for the most part (leaving open the possibility that with respect to fringe cases our intuitions may not always be logically coherent and should thus be amenable to modification where it is warranted). What we do not want is a theory of function which ascribes functions where none exist nor do we want a theory which fails to ascribe clear cases of function accordingly. The first problem with the standard etiological theory of function is that it is overly broad in its functional ascriptions. Richard Manning provides several physiological examples of naturally selected traits the functions of which are either non-existent or antagonistic to the process of natural selection itself. He first points to “junk DNA, which, by sitting around doing nothing on the chromosome, is replicated in cell division and proliferates, without providing any

benefit to the containing system at all."[6] He notes that on the etiological view it would seem that…

> …current tokens of junk DNA have the function of doing what prior tokens were selected for, and which explains the existence of the current tokens; namely, nothing other than getting replicated. But for biologists, junk DNA is a paradigm case of a functionless item.

Indeed, it does seem odd to say that the function of a trait which does nothing but reproduce itself is its own reproduction, and while it is certainly true that the etiological view provides an historical explanation of junk DNA's existence it seems wrong to say that self-replication should qualify as its function. And this is reflected in the judgment of the biological sciences.

Manning's second example involves what are known as segregation distorter genes (SDs):

> A significant number of species which reproduce sexually are known to possess segregation distorter genes (SDs) which operate during meiosis, the process of cell division through which gametes (eggs and sperm) are created. In essence, SDs bias reproduction in favour of the proliferation of

[6] Richard N. Manning, "Biological Function, Selection and Reduction," *The British Society for the Philosophy of Science,* 48, no. 1 (1997), 74.

> individuals with SDs by sabotaging at creation those gametes which do not carry them. This gives them a more than representative chance of being present on gametes which enter into fertilization. Such biasing properties are known as "meiotic drive."[7]

Manning notes that though this seems to be a paradigmatic case of selection, to say that disrupting meiosis is the function of SDs is problematic for two reasons. First, it flies in the face of the typical judgments of biologists and is thus similar in this respect to the issues surrounding junk DNA. Second, and more importantly, Manning notes that "having SDs is, in at least some cases, positively correlated at the organismic level with the incidence of other fitness diminishing defects (e.g. sterility, death), and though it does not in all cases diminish actual reproductive numbers, it does skew the otherwise random genetic recombination [which usually results] from meiosis, and [which is] thought to be conducive to the adaptive efficiency of species."[8] What we have then is a naturally selected mechanism the main feature of which is to inhibit evolutionary adaptation.

Wakefield raises a related objection for the standard etiological view the focus of which is psychology rather than physiology. He notes that though "the natural functions of internal mechanisms were determined by the selective pressures that operated in environments that existed when the human species evolved… in some cases, those

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[7] Ibid., 75.
[8] Ibid.

selective pressures have changed so that a breakdown in a mechanism now does not have the negative consequences that it would have had then."[9] By way of an example, Wakefield describes the usefulness of high levels of male aggression for earlier members of our species. While he doesn't go so far to say that this sort of aggressiveness should be seen as a pathology here and now under different cultural circumstances, he does argue that "even if a disposition to highly aggressive responses is the natural function of some mechanism, the loss of that function might not now be considered a disorder."[10] And this is true for a wide variety of naturally selected traits, the normal functioning of which have been deemed socially maladaptive. The taste for fat and sugar is another example of a mechanism which was naturally selected for its ability to promote survival in an environment where calories were scarce but which has proven to be detrimental to survival in a world which is inundated with processed foods. It has also been suggested that there exists an evolved mechanism which motivates not only sexual promiscuity but possibly even rape in order to ensure the propagation of genes. A purely etiological view may have to recognize a failure in any of the above functions as candidates for disease classification. This marks a clear departure from the noncontroversial conclusions of the biomedical sciences.

The Problem of Under-Inclusiveness

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[9] Wakefield, "The Concept of Mental Disorder," 384.
[10] Ibid.

The second type of objection raised against the standard etiological view is that it offers an overly narrow view of biological function. That is to say that "biologists are willing to assign a trait a function for which it is either not known to have been selected or known not to have been selected."[11] Boorse notes that William Harvey, who, in 1628, "claimed that the function of the heart is to circulate the blood," could not have had natural selection in mind when he made these claims.[12] Rather, Harvey "was simply describing the organization of a species as [he] found it." He notes further that…

> ...even today physiological function statements are not usually supported by, or regarded as refutable by, evolutionary evidence. Suppose we discovered, for example, that at some point the lion species simply sprang into existence by an unparalleled saltation. One would not regard this discovery as invalidating all functional claims about lions; it would show that in at least one case an intricate functional organization was created by chance.[13]

With respect to functions which clearly were not naturally selected but which are functions nonetheless, Boorse lists exaptations (traits/functions which were initially

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[11] Christopher Boorse, "A Rebuttal on Functions," *Functions: New Essays in the Philosophy of Psychology and Biology,* by Andre Ariew, Robert Cummins and Mark Perlman, (New York: Oxford University Press, 2002), 66.

[12] Boorse, "Wright on Functions," 74.

[13] Ibid.

selected for one function but which were co-opted for another), genetic drift (randomized changes with respect to gene variation which provide no benefit with respect to survival and/or reproduction), peiotropy (genes which effect multiple traits) and genetic linkage (the tendency of certain genetic traits to be inherited together) as reminders that "traits can persist for a long time for reasons other than selection."[14] And this poses potential problems for an etiological account of function for which natural selection is of such explanatory importance.

We can thus dismiss the purely etiological approach to function as failing to adequately isolate function from dysfunction. Indeed, the etiological view cannot help but call some conditions which actually seem to confer advantages dysfunctional and it also fails to call certain clear cases of dysfunction what they are.

Wakefield's Weakly Normative Approach

Jerome Wakefield offers an alternative etiological analysis which incorporates both a factual component and a normative component. Like the standard etiological approach, assertions regarding the proper function of a part or process of an organism need not appeal to a goal directed hierarchy with individual survival and reproduction at the top. Rather, Wakefield's approach grounds the concept of function in the evolutionary process by which traits were naturally selected and fixed in the population. Wakefield's

[14] Boorse, "Rebuttal on Functions," 66.

view departs from the standard etiological approach by including what he calls weakly normative judgments.

> A condition is a disorder[15] if and only if (a) the condition causes some harm or deprivation of benefit to the person as judged by the standards of the person's culture (the value criterion), and (b) the condition results from the inability of some internal mechanism to perform its natural function wherein a natural function is an effect that is part of the evolutionary explanation of the existence and structure of the mechanism (the explanatory criterion).[16]

Wakefield argues that "disorder cannot be simply identified with the scientific concept of the inability of an internal mechanism to perform a naturally selected function. Only dysfunctions that are socially disvalued are disorders."[17]

One advantage of this strategy is that it reaches most of the same conclusions as does the BST with respect to the disease status of various conditions. And this is an aspect of the etiological approach that both Boorse and Daniels already recognize. Recall that despite his overall confidence in the goal-directed analysis of function offered by the

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[15] Wakefield's use of the term 'disorder' is roughly synonymous with Boorse's use of the term 'pathology.' Boorse himself draws this connection in his own analysis of Wakefield's view (see Christopher Boorse, "Four Recent Accounts of Health," 2004).

[16] Boorse, "Rebuttal on Functions," 66.

[17] Wakefield, "The Concept of Mental Disorder," 384.

BST, Boorse noted that his "analyses of health and function are separable, in that one could ground the BST on a different analysis of function."[18] Indeed, though Boorse's earlier work was largely critical of the "etiological" understanding of function in some of his more recent work, Boorse praises the work of Jerome Wakefield by name. Daniels too lists Wakefield's approach as an alternative to Boorse's BST to which he might appeal in the face of the BST's critics. Wakefield's approach requires what Daniels calls weakly normative judgments in order to reach the conclusions with respect to disease classifications which are consistent with those offered by the BST. That is, Wakefield's view reaches virtually identical conclusions to the BST with respect to health and disease classifications so long as disease/pathology is understood as a *harmful* departure from normal functioning. Hence, dysfunctions with respect to naturally selected mechanisms for male aggression and sexual promiscuity need not qualify as proper disorders because such dysfunctions do not qualify as harmful from the perspective of modern-day western societies (though they might qualify as such under less civilized circumstances).

Daniels argues that this weakly normative aspect of Wakefield's view does not at all count as an obstacle for his use of Wakefield's etiological account of health. This is because Daniels is more than willing to allow for such normative judgments so long as the underlying analysis of function is suitably objective. Nevertheless, as with the standard etiological view, I will argue that Wakefield's approach has problems of its own which make it a poor candidate for Daniels's use.

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[18] Boorse, "Rebuttal on Health," 10.

The Problem of Disease Attribution Failure

Recall that we criticized the purely etiological approach because it failed to accurately reflect the disease judgments of the biomedical sciences. The problem was that the etiological view was both overly broad and overly narrow with respect to its identification of disorders. It identified certain conditions as disorders when it shouldn't have and it failed to identify other clear cases of disorder as such. Though Wakefield's inclusion of a value criterion allows him to avoid, for the most part, the charge that his conception of disorder is overly broad, I will argue that he cannot escape the second problem facing etiological accounts generally, that the conception of disorder they offer is overly narrow. That is, I will argue that Wakefield's weakly normative etiological view fails to identify clear cases of disorder.

Staying true to his etiological roots, Wakefield rests his approach to health and departures therefrom on the basic claim that failure of a naturally selected function is necessary condition for disorder classification. And this, he admits, is a risky claim insofar as just one clear example of a disorder that is not an evolutionary dysfunction will have falsified his view. In what follows I will offer what I take to be one such example.

Critics of Wakefield have argued that his harmful dysfunction analysis of disorder cannot properly account for disorders such as acalculia (an impairment with respect to one's ability to perform mathematical calculations) and dyslexia (a reading disorder which effects one's ability to process written characters), which are presumably failures in exaptations, traits/functions which were not naturally selected, but which piggy backed on other naturally selected features. Wakefield responds by arguing that his analysis can

in fact account for these disorders by classifying them not as dysfunctions in and of themselves, but as culturally specified harms which accompany an unspecified dysfunction occurring within some other naturally selected faculty of the brain. So then, a dyslexic person's reduced ability to visualize written characters is not a failure with respect to some naturally selected functional apparatus dedicated to the task of interpreting written characters. This is because there is no such functional apparatus designed (via natural selection) for this specific task. The advent of the written word and the general imperative towards literacy in our species is a recent development evolutionarily speaking. Rather, according to Wakefield the dysfunction must involve some cognitive mechanism which was naturally selected for another reason but which has been co-opted within the human species for this specific task.

Nordenfelt responds to this strategy for explaining the nature of these sorts of learning disorders by noting that Wakefield has conveniently hidden behind an un-testable hypothesis. For any modern-day disorder which cannot be characterized as a dysfunction in a naturally selected human faculty, Wakefield can conveniently retreat to the claim that a dysfunction nevertheless exists in some evolved faculty which we do not fully understand but which nonetheless contributes to the modern day faculty in question.[19]

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[19] Leander Nordenfelt, "On the Evolutionary Concept of Health: Health as Natural Function," in *Dimensions of Health and Health Promotion,* eds. L. Nordenfelt and P. E. Liss, (Amsterdam: Rodopi, 2003), 50.

But I wonder if an even more effective reply might be in order. Wakefield claims that the dyslexic individual suffers from a dysfunction in a mental process which is currently utilized in the human species for the task of reading but which was naturally selected for other reasons entirely. But rather than simply concede this possibility while questioning the dialectical integrity of this response as Nordenfelt does, what if we were to construe the unspecified "dysfunction" at the root of Wakefield's explanation as a naturally occurring variation in function. Indeed, recent studies suggest that though individuals with dyslexia do have trouble with the tasks of reading and writing (the typical justification for its classification as a disorder) these troubles are often accompanied by a statistically significant tendency to excel at other tasks, most notably those tasks which utilize spatial visualization.[20] We might then make the case that the cognitive mechanisms responsible for dyslexia are not dysfunctions at all, but rather that they are part of a continuum of normal functionality with respect to cognitive adaptation.

Should Wakefield grant this move, he might, of course try to argue that if dyslexia is in fact the result of a normal functional variation in naturally selected cognitive mechanisms then it should not as a result qualify as a disorder. But this move would be a mistake, not only because it oversteps the bounds of his supposedly descriptive project (recall that his goal was to provide an analysis of disorder which coincided with our pre-philosophical but culturally consistent intuitions on the matter) but also because in a

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[20] See Catya Von Karolyi, Ellen Winner, Wendy Gray and Gordon F. Sherman, "Dyslexia Linked to Talent: Global Visual-Spatial Ability," *Brain and Language*, (2003).

society which values the skills involved with written language development as much as ours does, the developmental hindrances facing people with dyslexia clearly do constitute a disorder if anything does because it presents a tremendous disadvantage for individuals who are maladapted in this way.

Now Wakefield might try to respond by arguing that his harmful dysfunction analysis of disorder has nonetheless not been invalidated because the nature of my counterexample is hypothetical. He might try to argue that since our knowledge as to the causal history of the evolved functions of the human brain is limited, so long as he can provide a reasonable hypothesis as to how his harmful dysfunction analysis can explain such disorders (like the one already recounted), his view cannot be invalidated. But while this is true, strictly speaking, this potential response on the part of Wakefield saves his harmful dysfunction analysis at a significant cost to its explanatory usefulness generally and its ability to stand as an uncontroversial grounds for the distribution of health in particular. If it is the case that the disease status of not only dyslexia but a whole category of other mental disorders hinges on baseless conjecture about how evolved mechanisms at the root of contemporary disorders *might* be dysfunctioning, then resource distribution decisions made on this basis are perilous indeed.

The Problem with Harm

In defending his weakly normative etiological approach to disorder, Wakefield has typically focused on answering objections raised against the etiological features of his view. This is mainly because this is the part of his view upon which most of his critics have focused. Though he has often praised Wakefield for offering a theory of

disorder/pathology which largely parallels his own, Boorse raises a novel objection with respect to the often ignored normative aspect of Wakefield's approach. Though the concept of harm often goes unanalyzed, Boorse notes that if we construe harm as having a relatively uncontroversial "counterfactual element," [21] whereby harm involves one's being made worse off than one otherwise would be, then Wakefield's approach will not be able to account for "at least two types of human pathology [which] cannot harm their bearers: *essential pathology and contrasentient pathology*."[22]

Boorse notes that "pathology is essential when it is metaphysically necessary to one's identity."[23] If one's genome is an essential property, it is hard, if not impossible, to see how "the trisomy of Down's or Klinefelter's syndrome [or] the monosomy of Turner's" could count as a harm.[24] It cannot be the case that having Down's syndrome makes one worse off because it is an essential feature of one's genetic makeup and without it one would not have existed at all. But this is a problem for Wakefield. Surely these genetic conditions should qualify as pathological if anything should, but if they are not harms then they do not qualify as diseases on Wakefield's analysis. And this is especially problematic with respect to Daniels's ability to appeal to Wakefield as an alternative grounding for his conception of health. Indeed, this 'harm as counterfactual'

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[21] This is the conception of harm offered in Joel Fienberg's 1988 essay, "Wrongful Life and the Counterfactual Element of Harming," *Social Philosophy and Policy,* 4: 145-178.

[22] Christopher Boorse, "Four Recent Accounts of Health," Drafted paper delivered at the Conference On Medicine and Metaphyics, University at Buffalo, (2004, Nov. 13), 38.

[23] Ibid.

[24] Ibid.

argument may have even further reaching consequences for Daniels's health related expansion of Rawls's theory in general, at least insofar as Daniel's idea of fair shares of a normal opportunity range harbors similar counterfactual intuitions.

Boorse goes on to make the related point that "if a human embryo, fetus, or baby could never have been conscious, as in anencephaly and many other CNS defects, it seems odd to ascribe it harm."[25] What is it to say that a body without a brain would be better off with a brain? The very idea that a harm makes one worse off than one would otherwise have been seems to take some basic idea of sentience for granted – someone is being made worse off. But it seems more accurate to say that the anencephalic baby was never a person to begin with and as such could neither be harmed nor benefitted.[26] Nonetheless, clearly, anencephaly is pathological. At least, this is how it is treated by Boorse's BST and by the biomedical sciences generally.

The Problem with Weakly Normative Judgments

Though he explicitly argues against fully normative conceptions of health, we noted that Daniels approves of Wakefield's use of weakly normative judgments because the underlying notion of dysfunction remains intact and because these sorts of judgments are exactly the kind used to determine which types of health needs should be met when we can't meet them all. But I want to argue that this is precisely what Daniels may not

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[25] Ibid.
[26] Ibid.

concede. Recall that Daniels imagines the distributive process as happening in two logical stages. In the first stage, potentially treatable conditions are divided into two categories, (a) valid health needs which do merit consideration for resource distribution and (b) non-health needs which are to be excluded from consideration. In the second stage, the conditions from group (a) are then evaluated as to which valid health needs should be met and to what extent when we can't meet them all. It is for this second stage that Daniels proposes his accountability for reasonableness conditions, the fair decision procedure designed to enfranchise stakeholders by giving them input as to which conditions deserve treatment under existing circumstances. In this second stage normative judgments about desert, harm and utility are fair game with respect to the criteria used for the final distribution so long as the arguments used are reasonable and are made publicly available to all.

But Wakefield's "weakly" normative judgments aren't being used to select from among valid health needs. Rather, Wakefield uses a socially constructed judgment as to the harmfulness of various conditions to determine which ones qualify as valid health needs and which ones should be excluded. But just as with Boorse, now we have a problem insofar as we have allowed social norms to exclude potential stakeholders from the resource distribution conversation.

This problem closely resembles the problem of excluded conditions which I raised in the previous chapter against Daniels's use of Boorse's naturalistic analysis of health. For individuals who suffer from conditions which do qualify as dysfunctions with respect to evolutionarily selected mechanisms but which have not been deemed harmful

according to socially constructed norms, the denial of societal consideration for their condition let alone the denial of treatment, constitutes a serious disenfranchisement of citizens afflicted with these dysfunctions. Remember that Daniels's goal in establishing an objective, value-neutral conception of health is to establish common ground upon which resource distribution decisions can be made. And this is why he characterizes his conception of health as consistent with the uncontroversial judgments of the biomedical sciences which belong to public reason. If it turns out however that Daniels's conception of health fails to establish this common ground then he leaves open the possibility of intractable disagreement with respect to what counts as a valid health need and the resource distribution decisions which his proposed decision procedure is meant to provide cannot be characterized as fair.

By way of example, insofar as it represents a maladaptive breakdown in the motivational machinery which enables sexual reproduction, exclusive homosexuality should be classified as dysfunctional on the etiological view for most of the same reasons that it was classified as dysfunctional according to Boorse's BST. But society has determined that homosexuality, though dysfunctional, is not harmful, and that as such it does not warrant consideration for treatment. But consider the plight of the homosexual who disapproves of his own homosexuality and desires treatment for his condition, that is, he wants to undergo therapy to eliminate his homosexual desires and to foster a desire for relations with members of the opposite sex. Though this individual would of course be able to pursue such therapy with his own resources, his preferred treatment for his condition would not be deemed eligible for public funding insofar as this society has

deemed homosexuality to be harmless. What is ironic is that he may in fact be eligible for treatment in this society, not for the dysfunction itself (homosexuality) but for his attitude towards that dysfunction, an attitude which is at odds with the view of culture. Though homosexuality has been deemed harmless, the disapproval of one's own sexual orientation has not only been deemed harmful in our society but indeed it has been deemed pathological in the sense that it marks dissociation with essential features of one's identity.[27]

For these reasons we must conclude that the weakly normative harmful dysfunction etiological analysis offered by Wakefield, though initially promising, is ultimately insufficient for providing the objective conception of health that Daniels's view requires. In the next chapter, we encounter an approach which marks a significant departure from anything we have considered previously.

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[27] The DSM-III diagnosed ego-dystonic homosexuality, a condition characterized by having a sexual orientation or an attraction that is at odds with one's idealized self-image, as a disorder. With the advent of the DSM-III-R this category was removed, but it still potentially remains in the DSM-IV under the category of "sexual disorder not otherwise specified" one example of which is that of a person who experiences "marked distress about his or her sexual orientation." Kenneth Zucker, and Robert Spitzer, "Was the Gender Identity Disorder of Childhood Diagnosis Introduced into DSM-III as a Backdoor Maneuver to Replace Homosexuality? A Historical Note," *Journal of Sex & Marital Therapy,* (2005), 35.

Chapter 5:

A Political Foundation for Just Health Distribution

Abstract

In Chapter five, I reframe the issue of objectivity as one of maximal intersubjectivity and propose a political conception of health that is maximally objective in this sense. Using a Rawls-inspired reasoning game and a broadly Boorsian functional methodology, I develop such a view and show how it resists the problems that face the alternatives criticized earlier. Though it reaches health and disease judgments which depart slightly from those with which we are familiar, this alternative has the advantage of providing a firmer theoretical foundation which is grounded in an agreement that naturalistic accounts cannot achieve. This is significant not only for Daniels's Rawlsian account, but for any distributive theory concerned with distributing the thing we call health.

Introduction

The last strategy that I'd like to examine invokes a different way of thinking about Daniels's project altogether. Daniels insists that he needs an objective conception of health which, at most, only makes weakly normative judgments with respect to disease classification. As we noted earlier, without a univocal conception of health, one which acts as common ground by establishing which physiological and psychological conditions should and shouldn't deserve consideration, we can never get to the second step of determining actual distributions for health resources. The fear is that we would become mired in an intractable disagreement about what health is, let alone how it should be distributed. To attain the objectivity that his view requires, Daniels appealed to the naturalistic theoretical account of health offered by Boorse, but as we saw in the chapter four, Boorse's view was not up to the tasks Daniels needed it to perform. In the previous chapter, we examined two more conceptions of health, one which shared Boorse's naturalistic emphasis (the standard etiological approach), and one which had at its core a naturalistic account of function, but which attempted to appeal to weakly normative judgments as well (Wakefield's harmful dysfunction analysis). But again, we determined that neither of these views would suffice. Indeed, it is becoming clearer that most, if not all of the naturalistic strategies available with respect to providing an analysis as to what constitutes health will fail, in one way or another, to meet Daniels's threshold of objectivity. The boundary between health and disease on all of these views starts to look arbitrarily chosen, at least with respect to some conditions. And for reasons that Boorse

and Daniels have already articulated[1] the fully normative alternative isn't any better in this regard.

Maximal Intersubjectivity: Fully Normative and Fully Objective

It is clear then that another strategy is in order, one which seeks to ground objectivity in something other than scientific naturalism. Fortunately, in grounding the objectivity of his own political theory, Rawls himself offers us just such a strategy. In *A Theory of Justice* Rawls gives us an idea of what he thinks objectivity should entail:

> …we share a common standpoint along with others and do not make our judgments from a personal slant. Thus our moral principles and convictions are objective to the extent that they have been arrived at and tested by assuming this general standpoint and by assessing the arguments for them by the restrictions expressed by the conception of the original position.[2]

So then, for Rawls, though it might be nice for us to be able to ground objectivity in some irrefutable set of facts about the world, facts whose truth is established without regard to human sentiment, this is in no way a necessary condition for objectivity as theories with naturalistic tendencies would have us believe. Rather, for Rawls, all that is

[1] See chapters one and two.
[2] Rawls, *Theory*, 453.

required for objectivity of reasons is their being grounded in a non-subjective shared point of view.

In Lecture III of *Political Liberalism*, Rawls elaborates on this idea by noting that "political convictions (which are also, of course, moral convictions) are objective – actually founded on an order of reasons – if reasonable and rational persons, who are sufficiently intelligent and conscientious in exercising their powers of practical reason, and whose reasoning exhibits none of the familiar defects of reasoning, would eventually endorse those convictions, or significantly narrow their differences about them, provided that these persons know the relevant facts[3] and have sufficiently surveyed the grounds that bear on the matter under conditions favorable to due reflection."[4] Thus objectivity starts to look like what we might call maximal intersubjectivity. A maximally intersubjective norm is one which is recognized as binding by all persons engaged in reasoning which is collectively recognized as appropriate. Such a norm is objective in the sense that every member of society can appeal to it to settle disputes, but it is also normative in the sense that the grounds for its objectivity can be found in the collective assent of reasonable people. Certainly, there might be dissidents to these norms, persons who deny their bindingness, but presumably, such denials are born out of irrational and/or unreasonable attitudes. Take, for instance, the objectivity of the moral prohibition

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[3] With respect to political convictions knowledge of the relevant facts would include knowledge of the basic structure of society absent (in the case of Rawls's original position reasoning game) knowledge as to one's personal status in that society.

[4] John Rawls, *Political Liberalism*, (New York: Colombia University Press, 1993), 119.

on murder. Though some might try to argue that such a prohibition is somehow factual in the sense that it is written into the fabric of the universe, most would be content with grounding it in the maximally intersubjective sense outlined above. We might say then that given beings of our general make up, beings who are inclined to seek their own good (rational) and also inclined towards social cooperation (reasonable) in such a way as to give rise to widely shared social aims that engender a certain sort of respect for one another, it becomes impossible to see how such persons could fulfill a wide enough range of those aims for a population to be viable unless they entrench some such norm against murder. And though such a prohibition might be interpreted slightly differently between various people groups and there might be various exceptions in some societies, we have to recognize that a prohibition against murder is an objective normative feature of anything that we recognize as a human society.[5] Now certainly, there will be some who choose to disregard this norm, but notice that they cannot do so without thereby acting in a way that is unreasonable. And while this sense of objectivity is perhaps weaker than the "fabric of the universe" sense of objectivity that, say, gravity enjoys, for all practical purposes, it is sufficient for grounding the moral prohibition against murder.

There is a not so subtle call back to Rawls's original position reasoning procedure here as the model for this sense of objectivity. Remember that within the original

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[5] I am here referring to an admittedly narrow definition of murder as the intentional killing of an innocent fellow citizen with malicious intent. Some societies may of course allow for intentional killing, even of another member of society, as an act of self-defense, or, by way of the proper channels, as a means of capital punishment. But if these qualify as murder, they do so according to a broader definition than what I have in mind.

position, the contractors tasked with selecting a conception of justice with which to construct the basic structure of society do so from a place of ignorance as to who they are. Though they represent people from all walks of life, this ignorance forces them to be impartial. It forces them to take a shared point of view with respect to the question of justice posed before them. Perhaps this attitude can be extended beyond the original position in order to ground the objectivity of one or another conception of health.

What Maximally Intersubjective is Not

Now, given that Boorse and Wakefield seem to reach the same conclusions with respect to health and disease classifications despite the fundamental differences with respect to their theoretical approaches, Daniels might try to argue that the conception of health which he endorses already enjoys the kind of objectivity which Rawls has in mind. That is to say that Daniels could try to argue that the conclusions which Boorse, Wakefield and, indeed, the biomedical sciences generally have reached are objective in the sense that reasonable and rational persons can and do endorse them using publicly recognized forms of reasoning from within a shared point of view. Indeed, it would seem that Daniels's appeal to public reason already involves this move, at least insofar as he claims that his view of health embodies the non-controversial conclusions of the biomedical sciences.

But using the murder example explained above notice what an analogous argument for the maximal intersubjectivity of the health and disease conclusions reached by Wakefield and/or Boorse might look like. Though Boorse and/or Wakefield might try to argue that health and disease classifications are factual in the sense that they can be

determined either through statistical analysis of goal directed functions or through an analysis of harmful departures from naturally selected functionality, perhaps we should be content with grounding it in the maximally intersubjective sense outlined above. We might say then that given beings of our general make up, beings who are inclined to seek their own good (rational) and also inclined towards social cooperation (reasonable) in such a way as to give rise to widely shared social aims that engender a certain sort of respect for one another, it becomes impossible to see how such persons could fulfill a wide enough range of those aims for a population to be viable unless it recognizes the sort of division that Daniels has in mind between genuine health needs which should be considered for societal support and non-health related conditions which should not. And though this division might be interpreted slightly differently from one people group to the next and there might be various exceptions in some societies, we have to recognize that the conception of health which creates this division between genuine health needs and non-health conditions is nonetheless objective in the sense that its conclusions are endorsed by all rational and reasonable individuals who have thought about these questions in this way. Could Daniels use such an argument to affirm the objectivity of the health related conclusions which he gleans from Boorse and/or Wakefield? I think not.

The reason why this line of argument is problematic for Daniels's use of Boorse/Wakefield is that it takes for granted an agreement between rational and reasonable persons on these issues, something which, as I have argued at length, he cannot, in good faith, conclude. This is because there are grounds for reasonable disagreement as to the viability of the health and disease classifications that each of these

views make.[6] We cannot say of the homosexual seeking rehabilitation or of the transsexual seeking gender reassignment that they are simply acting unreasonably because everyone else thinks that their conditions should not count as a disease. As I have argued, these individuals can make a strong case to the effect that rational and reasonable contractors would not necessarily exclude their condition.

Political Conceptions of Health

Rather than offer a conception of justice which depends in important ways upon various metaphysical and/or epistemological claims about the truth of moral propositions, Rawls offers a *political* conception of justice which seeks to "serve as a basis of informed and willing political agreement between citizens viewed as free and equal persons." Rawls understood that if solving the practical question of justice depended on our being able to solve deeper metaphysical questions at various levels of abstraction, then our prospects of reaching any sort of agreement would be slim at best. The problem, according to Rawls, was "that just as on questions of religious and moral doctrine, public agreement on the basic questions of philosophy cannot be obtained without the state's infringement of basic liberties."[7] Thus, Rawls develops his political conception of justice by following what he calls a *method of avoidance.* According to this method, in solving a practical problem, it is better, all things considered, to avoid abstract metaphysical debate

[6] These grounds for disagreement have been laid out in detail in chapter three.

[7] John Rawls, "Justice as Fairness: Political not Metaphysical," *Philosophy & Public Affairs* 14, no. 3 (1985), 230.

than to have one's solution depend on one or another metaphysical view. This is because the solution will be such that all will recognize its bindingness regardless as to the philosophical positions they take. In developing a conception of health for use with Daniels theory, if we can focus on the substantive question with respect to what Daniels is trying to accomplish and avoid the abstract theoretical debate about whether or not health is, in essence, naturalistically determined, the resulting conception would, all things considered, be preferable to one which relied in important ways on the truth or falsity of one or another metaphysical claim. While it is not always possible to avoid deeper metaphysical questions with respect to a given practical problem, in what follows I will sketch out two of the best candidates for a fully political conception of health.

A Political Conception: Health Determined by The Higher Order Interests of Citizens

What if we were to say that health need not be whatever is necessary to restore normal biological functioning (an unanalyzable notion – or at least a notion which is primed for intractable disagreement) but rather whatever is necessary in order to ensure that individuals can function normally as citizens? A fully political conception of health is one which appeals, with Rawls, to a political conception of citizens rather than scientific naturalism to determine normal functionality. The immediate question to answer for such a *political* conception of health is this: What constitutes normal functionality as it pertains to citizenship? Fortunately, Rawls gives us a fairly detailed

description of what being a citizen entails for societies governed by the two principles of justice as fairness. In the first place, Rawls describes citizens as free and equal moral persons who are capable of engaging in social cooperation over a complete life.[8] Further, Rawls characterizes these citizens as having "three higher-order interests," the first two of which correspond to what he calls "the two moral powers:"

> 1. One such power is the capacity for a sense of justice: it is the capacity to understand, to apply, and to act from (and not merely in accordance with) the principles of political justice that specify the fair terms of social cooperation…
> 2. The other moral power is a capacity for a conception of the good: it is the capacity to have, to revise, and rationally to pursue a conception of the good.[9]

Thus, in accord with the first moral power, citizens have an interest in developing and exercising their capacity for the reasonable and in accord with the second moral power, citizens have an interest in developing and exercising their capacity for the rational. Finally, and of crucial importance to the conception of health now under consideration, Rawls characterizes citizens as having a third higher-order interest which

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[8] Rawls, *Justice as Fairness,* 5; 8.
[9] Ibid., 18-19.

involves the realization of the reasonable determinate conceptions of the good arrived at by exercising the two foregoing capacities.[10] In addition, Rawls characterizes citizens as having the companion powers of reason, inference and judgment, capacities which are necessary for the exercise of the two moral powers.[11]

So then, according to the political conception of health now under consideration, the terms, 'health need,' could be used to describe anything which inhibits a citizen's ability to engage in social cooperation as a free and equal person. Specifically this would refer to any condition which hinders the operation of the two moral powers or the ability of citizens to realize their individual determinate conceptions of the good. While this would certainly include conditions like dementia or mental retardation, conditions which constitute obvious disruptions to one's abilities to pursue the goals of citizenship, it need not be limited only to such gross disruptions. Rather, insofar as disruptions with respect to any of one's physiological and/or psychological parts or processes might interfere, directly or indirectly, with a citizen's ability to pursue his/her highest order interests, they would qualify as falling within the category of genuine health needs.

A political conception of health which uses the three higher order interests of citizens as the baseline to judge departures from normal functioning allows us to appropriately conclude, with Boorse, that the function of the heart is to pump blood, rather than to produce heart sounds, because the role the heart plays in pumping blood

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[10] John Rawls, "Kantian Constructivism in Moral Theory," *The Journal of Philosophy* 77, no 9 (1980), 525.

[11] Rawls, *Justice as Fairness*, 24.

contributes to the survival of the individual who's heart it is. It differs only insofar as it sees individual survival as an instrumental function of the grander political goals of citizenship, goals which ground the objectivity of ascriptions of normal functionality within the realm of the maximally intersubjective.

Further, by characterizing health and departures from it in terms of the higher order interests of citizens, this view avoids several of the problems which we raised earlier against naturalistic conceptions of health. Though individual survival maintains a role of central importance to the goals of citizenship, individual reproductive capacities need not. No question, the family, as a means of social reproduction, is an important concept for Rawls, as we should expect given the central role it plays in the creation of new citizens and the maintenance of societal population. Nevertheless, one need not be able to reproduce naturally in order to engage in social cooperation as a free and equal citizen. As a result, the lack of sexual attraction to members of the opposite sex which characterizes exclusive homosexuality need not qualify as a pathological condition. But at the same time, this doesn't rule out our characterizing various other forms of infertility as pathological. Treatments for infertility could be characterized as restoring reproductive functionality in accordance with one of many rational and reasonable conceptions of the good for which individual reproductive capacity is a necessary condition.[12] And indeed,

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[12] Interestingly enough, we could conceive of overpopulated societal situations where a conception of the good which involved reproductive capacity might not be deemed reasonable due to resource constraints. In such societies, infertility would not count as a disease. Alternatively, a population

for the exclusive homosexual whose conception of the good involves the desire for reproduction, the availability of non-sexual reproductive options all but eliminates the possibility of characterizing homosexuality as a pathological condition because of its effects on reproductive ability. And this is a conclusion that is unavailable to both Boorse and Wakefield who are constrained by a naturalistic definition of pathology.

Another benefit of the political conception of health now under consideration is its ability to properly identify disorders with respect to modern day maladaptations (i.e. dyslexia, acalculia) as genuine health needs. We argued previously that as dysfunctions in capacities which natural selection could not explain, these conditions posed a serious problem for Wakefield's weakly normative etiological view. But insofar as the abilities to read and write are essential, at least in this society, for meaningful political participation, it makes sense to recognize these conditions as genuine health needs.

But as the reader may already have surmised, a political conception of health which secures a baseline for judging departures from normal functionality by connecting health to a citizen's ability to achieve his/her three higher order interests begins to lose its luster when we consider the over-permissive boundaries imposed by the third higher order interest citizens have in achieving their determinate reasonable conceptions of the good. Recall that Daniels ruled out cosmetic surgery as a genuine health need in part because he feared that it would lead to a scenario whereby health resources would be hi-jacked by those with extravagant preferences. In a very real sense, a political conception

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crisis which might result in societal extinction might make a conception of the good which involved abstinence and/or resistance to the idea of reproduction generally unreasonable.

of health which allows citizens to make valid claims on health resources to meet needs imposed by their inability to meet their higher-order interest in realizing their individual determinate conceptions of the good could potentially make those fears a reality. Indeed, it would seem that the problem with the political conception of health currently under consideration is that it is overly broad with respect to the "conditions" which would qualify as genuine health needs.

Further, such a conception of health would be unable to exclude what we now consider to be enhancement technologies as a form of therapy to meet genuine health needs. One might, for instance claim that one's inability to run a three minute mile, bench press one thousand pounds and/or live to see one's three hundredth birthday interferes with one's pursuit of one's individual conception of the good. The problem is that this conception of health implies that fair equality of opportunity need no longer require that one's natural talent determine one's fair shares of the normal opportunity range. We could not, with Rawls argue that arbitrary social impairments to opportunity should be mitigated while natural disparities in talent levels should remain allowable. Rather, now, the especially dim witted could claim a valid health need for pharmacological enhancements which would provide him/her with the intellect needed to pursue a career in academia so long as such a career is consistent with the conception of the good he/she has elected to pursue. As our political conception of health expands beyond the boundaries of medicine to encompass all aspects of fair equality of opportunity, the very idea of a natural baseline with respect to talents as a limit to one's fair shares of the normal opportunity range gets replaced by a citizen relative baseline which is limited

only by the scope of one's ambition. This is because a conception of health which takes as its baseline the higher order goals of citizens would not be constrained as are the conceptions of health offered by Boorse and Wakefield to the physiological and/or psychological functions of biological organisms. Accordingly *anything* which could be seen as instrumental to a citizen's achieving his/her reasonable conception of the good would qualify as a valid health need on this conception.

The defender of such a conception might try to argue that this need not imply that resources would actually create a black hole for resource distribution. Presumably, any "valid" health need would still need to meet Daniels's accountability for reasonableness conditions in order to receive a share of a finite set of resources. Still, if the goal of developing a univocal conception of health was to avoid intractable disagreement with respect to resource distribution, a conception which includes any and all potential conditions will be unlikely to achieve any chance of agreement with respect to the reasons offered for any given resource distribution scheme. Thus, a conception of health which is broad in this way threatens to result in the kind of intractable disagreement that Daniels had hoped to avoid.

Another defense might be to attempt to specify a narrower range of goods that society must enable a citizen to achieve. Accordingly, society would not be obligated to enable its citizens to realize any conception of the good they might desire. We want to say to the short of stature relatively uncoordinated octogenarian who wants to pursue a career in professional basketball that he has not realistically considered his capabilities and that this conception of the good does not qualify as a valid claim on societal

resources. Unfortunately, specifying the range of conceptions of the good which do qualify as valid on the conception of health now under consideration will be difficult if not impossible given the range of conditions that could be said to limit one's capabilities. If you must choose a sedentary lifestyle because your defective heart won't enable you to do anything else, that could be said simply to be "your capabilities" within which you need to plan.

In the next section, we will elaborate on one way that we might specify a narrower range of conceptions of the good for specifying the set of genuine health needs. As we shall see, just as the preceding conception of health specifies a set of health needs which is overly broad, the conception of health which follows specifies a set of health needs which is overly narrow.

A Political Conception: Health Determined by the Two Moral Powers of Citizenship

In response to the failure of the political conception of health which uses the three higher order interests of citizens to construct a baseline for normal functionality, we might try to offer an alternative political conception, one which seeks to narrow the scope of the first by conditioning health on the normal functioning of citizens derived from the two moral powers of citizenship rather than the three higher order interests.

Rawls himself calls the two moral powers the *highest* order interests of citizens of societies governed by the two principles of justice as fairness, noting that the third *higher*

order interest citizens have in realizing their reasonable determinate conceptions of the good is "in essential respects subordinate to the highest order interests" embodied by the two moral powers.[13] Most notably with respect to the conception of health now under consideration, limiting the functions of citizenship in this way allows us to explain health needs as conditions which hinder citizens' capacity for a sense of justice and their capacity to have, to revise to rationally pursue, but not necessarily to realize a conception of the good.

The resulting conception of health would allow us to avoid the worry presented by an expansive category of health needs which included not only idiosyncratic medical therapies, but a variety of non-medical interventions as well. This is because such a conception would not grant health need status to any condition which inhibits a citizen's ability to realize their individual conception of the good. On the other hand, like the previous political conception of health, the conception now under consideration would give us intuitive judgments with respect to the disease status of those conditions which threaten to deprive the afflicted individual of a normal lifespan. As we noted earlier, this is because individual survival is a necessary condition for the operation of the capacities for a sense of justice and an individual conception of the good.

Unfortunately however, the two moral powers conception of health now under consideration does not fare as well with respect to some of the earlier problems raised against various naturalistic theories. Though it matches our intuitions with respect to

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[13] Rawls, "Kantian Constructivism," 525.

homosexuality insofar as the conception of health under consideration would not qualify homosexuality as a pathological condition on the grounds of reproductive failure, again, because the operation of the two moral powers does not require the ability to bear children, it would leave us with decidedly unintuitive conclusions with respect to every other biological hindrance to reproductive function. So long as some citizens are able to reproduce and therefore maintain societal population, the inability of individual citizens to bear children need not compromise their capacity for social cooperation or their ability to pursue *a* conception of the good. Infertile individuals would of course be unable to pursue a conception of the good which involved natural reproduction, but this does not preclude them from pursuing other reasonable conceptions of the good.

Further, the physical limitations which this narrower political conception of health would rule out as genuine health needs would not be limited to the ability, or in this case inability, to reproduce. A large number of conditions which we now consider to be clear cases of disease and/or physical disability would not necessarily qualify as pathological conditions under a conception of health for which the two moral powers act as the baseline for normal functionality. In our society, the inability to ambulate rules out a wide range of opportunities, but it does not limit one's ability to pursue the goals associated with citizenship. In no way does my ability to understand, apply and act from the principles of justice as fairness depend on my being able to walk. Nor does walking undermine my ability to have revise and rationally pursue a conception of the good. Indeed, to say that it did would be to marginalize the status of countless citizens who live with various untreatable disabilities under present circumstances.

In the same way that one's natural talents constrain one's share of the normal opportunity range, so too, there may be any number of physical limitations which produce similar constraints but which do not qualify as genuine health needs under the political conception of health now under consideration. So long as the baseline for normal functionality is embodied by the two moral powers of citizenship, the resulting set of health and disease classifications will be far narrower than we want them to be.

In no way do I expect that the above analysis constitutes a definitive conclusion as to the viability of a fully political conception of health. There may, of course, be a way to solve the problems facing either of these views which I have not considered. But should it turn out that no such political conception can be made available, must Daniels be content to condition the viability of his theory of just health distribution on the tentative naturalistic conceptions of health which I have sought to discredit? If so, given the criticisms which I and others have raised with respect to the theories of Boorse and Wakefield, does this not go a long way towards invalidating Daniels's view? Indeed, should it turn out that *any* distributive theory with respect to health and/or health care resources, Rawlsian or not, requires an objective conception of health in order to provide a baseline for judgments with respect to pathological functioning, the absence of a conception of health which does not depend, for its objectivity, on one or another problematic metaphysical view would seem to cast doubt on the viability of such projects altogether. Fortunately, I don't think that the hopes of developing a viable theory of just health distribution are so dim. In the absence of a fully political conception of health, I still think that we have some options with respect to grounding the objectivity of one or

another standard theory of health within the realm of the maximally intersubjective. In the next section, I offer one such option with respect to Boorse's BST. Though the aforementioned option is not ideal given that it is not, strictly speaking, a fully political conception of health, I will argue that insofar as it does provide an objective conception of health which is internally consistent, if not entirely convergent with our pre-philosophical health judgments, it provides Daniels with a firmer foundation upon which to construct his theory of just health distribution.

A Maximally Intersubjective Foundation for Boorse's BST

What we want is a conception of health which is objective in the maximally intersubjective sense that Rawls proposes. We want this because a conception of health which is grounded in this way could be recognized as binding insofar as the authority of its judgments stems from the collective assent of reasonable people rather than from the truth or falsity of one or another metaphysical view to which not everyone agrees. Previously, we considered and ultimately dismissed the possibility that the virtually perfect agreement between the statistical conception of health offered by Boorse and the weakly normative conception of health offered by Wakefield warranted our labeling the convergence of these two views objective in a maximally intersubjective sense. We dismissed this possibility because even though the two views do manage to reach practical agreement with each other from two very different theoretical backgrounds, as I have argued, there are nonetheless reasons to expect that reasonable and rational contractors would disagree as to the appropriateness of the health and disease classifications upon which these two views converge.

Indeed the best way to ensure that these sorts of rational and reasonable disagreements are not arbitrarily disregarded may be to borrow a methodology from Rawls himself with respect to the selection of a valid conception of health/normal functioning from among various candidates. We might imagine a fair procedure used to evaluate various conceptions of health, one which mimics in important ways the original position reasoning game offered by Rawls. Whereas the goal for Rawls's contractors was to select a conception of justice from among various candidate conceptions, the goal for these contractors would be to determine which conception of health should be adopted in order that a just distribution of health could be determined via the exclusion of non-health needs and then the implementation of the accountability for reasonableness criteria that Daniels proposes. Like Rawls's contractors, our contractors would have the following characteristics. They would be rational, in the sense that they would be mutually disinterested and concerned to advance their own interests (in this case, the interests they have with respect to selecting a conception of health from which they would benefit). They would be reasonable in the sense that the rules of our reasoning game constrain their rational self interest in such a way as to motivate them towards treating one another with the respect and deference necessary for seeking fair terms of cooperation. Finally they would be behind a moderately lifted veil of ignorance which denies them knowledge about who they are, but which provides some information with respect to the basic

structure of society and the incidence and prevalence of various conditions.[14] And these three traits would be brought to bear on the range of health conceptions they would be willing to consider.

It is important here to note that my contractors would not know the incidence and prevalence of various *pathologies* per se. The purpose of the reasoning game itself is to determine what counts as a pathology and what does not. The contractors would be aware of all of the conditions that *could* count as a pathological condition. They are aware, for instance, that some people are ugly and that ugliness has a tendency to inhibit mating success. They are also aware that some people have diabetes, and though they may not know everything about why diabetes is diabetes, they can conclude that it is a condition that they wouldn't want, or, more appropriately, that they might not want. They would not take for granted the actual conclusions of the biomedical sciences with respect to various conditions, but they would be aware of what conclusions each candidate conception of health would reach with respect to health and disease classifications, and this would include the set of conclusions the conception of health that I'm proposing would reach. Since the original position reasoning game which I am presently articulating is designed to be used by members of our non-ideal society now, to figure out which

[14] As with Daniels, since we're trying to find a univocal conception of health in order to determine a just distributive scheme for health resources it would be appropriate to conceive of this task as belonging to the legislative stage of Rawls's four-stage sequence. As such, the stipulation that the veil of ignorance be suitably thin is appropriate. To be able to decide between various conceptions of health on the basis of what they rule to be pathological conditions, the contractors would have to have some knowledge as to the larger set of conditions which may or may not count as pathological. What is important isn't that they not know what these conditions are but that they not know which conditions they themselves have, or more accurately which conditions those who they represent have.

conception of health to use, the data which is available to the contractors is going to be limited by what we can extrapolate from the current conclusions of the biomedical sciences as it pertains to the political conception of health being examined. That is to say that they will consider alternatives to the reigning/extant notions of health/pathology and insofar as those come from the biomedical sciences as they presently exist, they'll be imagining alternative notions of health/pathology which look different from the notions presently affirmed by the biomedical sciences as we have them today.

Insofar as they are constrained by the conditions of our reasoning game so as to be ignorant with respect to who they represent they would be unlikely to even consider the fully normative conceptions of health which Daniels and Boorse have already rejected. This is due to the fact that such conceptions rely on social judgments about which our contractors have purposefully been made unaware. Fully normative conceptions of health lack the theoretical undergirding necessary for even being considered absent input as to what society actually believes with respect to the proper attributions of health and disease classifications.

Insofar as our contractors are reasonable, the circumstances and constraints imposed on them by our new version of the original position would be such that they must reach agreement with respect to the conception of health they choose, that that conception of health must be chosen for public reasons (as opposed to private reasons), and that they must refrain from selecting a conception of health which they could not in good faith imagine real persons or citizens finding agreeable. This would rule out conceptions of health whose acceptability would depend on reasons offered from within

one or another religious and/or philosophical conception about which reasonable persons might disagree. That is, candidate conceptions of health must not depend, for their conceptual viability on controversial stances taken with respect to one or another metaphysical claim.[15] Conceptions of health which fail to meet this condition would not only include the various conceptions at root within much of Eastern medicine, according to which ailments are caused by blockages in pathways for spiritual energy, but also those conceptions which take for granted a strict commitment to naturalism and/or evolutionary theory to ground their objectivity (Wakefield, Boorse, and other etiological varieties).[16] A conception of health which meets this condition would thus need to posit a theoretical framework for reaching judgments with respect to health and disease classifications without postulating a metaphysically determinate set of inputs. The modified version of Boorse's BST which I develop in the next section might well constitute the only candidate capable of meeting this criterion.

Finally, insofar as they are rational, our contractors would also want to avoid conceptions of health which excluded potentially harmful conditions afflicting the actual persons which they represent. That is, they would want to ensure that no potential

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[15] This is not to say that any conception of health will be completely free of metaphysical claims. What is important is that it not rely on taking a controversial stance (one about which there exists room for reasonable disagreement) with respect to one or another metaphysical claim.

[16] With respect to etiological conceptions of health (Wakefield included) the reliance on the naturalistic foundations of evolutionary theory is obvious. With respect to Boorse, suspect metaphysical commitments occur both in his selection of meta-goals (individual survival and reproduction) and more importantly in his claim that the reference class divisions necessary to attain health and disease judgments can be read off of the natural world. As I have shown, this claim is not only metaphysically suspect, it is also entirely lacking in justification. With respect to etiological conceptions of health (Wakefield included) the reliance on the naturalistic foundations of evolutionary theory is obvious.

stakeholder could complain that they have been excluded from the distributive conversation. Doing this would involve selecting the conception of health which, in addition to meeting the above criteria, featured the loosest parameters for disease classification.[17] In what follows, I will propose a modified version of Boorse's biostatistical theory which I take to be one of the only candidate conceptions of health which is able to meet these criteria.

A Thoroughly Political Boorsian Approach to Health/Normal Functioning

As we noted above, the standard Boorsian conception of health would likely be rejected by the contractors constrained by the rules of our Rawls inspired reasoning apparatus. This is due to the naturalistic metaphysical commitments that it has to make not only with respect to the selection of reference classes necessary for providing the statistical analysis of function it offers but also with respect to the selection of meta-goals by which statistical deviations from normal functionality are measured. Recall that

[17] Hardwig worries that contractors behind the veil of ignorance would not opt for the most inclusive conception of disease. He reasons that as more and more conditions fall into the category of pathology, a contractor might worry that it will become less likely that his or her specific disease (whatever it might be) will receive funding. I'm inclined to dismiss this worry for the following reason. The goal of my original position analog is to provide a foundation for attributing the status of "genuine health need" to various conditions. This is the first, but no less important, step in a two step process, the second independent step of which involves public deliberation with respect to which of these health needs should be met when we cannot meet them all. Expanding the category of health needs need not imply that any one condition will be more or less likely to be funded. And at any rate the contractors don't know which condition/s they have. I contend that they would rather increase their chances of having a seat at the table during the second stage of the distributive process than risk losing their seat at the table entirely in exchange for the mere possibility that, if they do get a seat at the table, their particular condition would have a higher chance of receiving funding.

Boorse sees biological and psychological function as ultimately goal-directed in the sense that we can explain the function of a part or process in terms of its contribution to one or another goal along a nested functional hierarchy at the apex of which are the naturalistically derived meta-goals of individual survival and reproduction. But, insofar as the justification necessary for Boorse's meta-goals and reference classes harbor suspect metaphysical commitments the standard version of Boorse's BST would fail to find traction as a candidate conception of health. Nonetheless, if we could ground the objectivity of something like Boorse's chosen meta-goals and reference classes in a non-naturalistic way, we may be able to apply the statistical methodology offered by Boorse's theory in a way that requires the bare minimum of metaphysical commitments.

Selecting The Reference Class

With respect to reference classes, if we keep in mind our contractors' desire to ensure stakeholder inclusion, they would likely be drawn to a variant of the BST which, taking Kingma's criticisms of Boorse's choice of reference classes into account, selects reference classes in such a way as to ensure that more conditions would qualify, strictly speaking, as diseases rather than less. Insofar as each subsequent additional reference class essentially depathologizes various conditions (adding sexual orientation as a reference class eliminates the disease status of homosexuality; adding a reference class for heavy drinkers eliminates the disease status of liver disease for members of that

reference class, etc.) our contractors would be attracted to a version of the BST which appeals to the bare minimum of reference classes divisions.[18]

What combination of reference classes constitutes the bare minimum? Ironically, the reference classes that I'll suggest bear a striking similarity to the set of reference classes that Boorse himself endorses. Boorse allowed for separate reference classes on the basis of species, age and sex. Insofar as our rational and reasonable contractors presumably represent the interests of human stakeholders, I think species as a reference class is probably a given. Also, while it is true that the age of the individuals they represent is one of the characteristics about which our contractors are ignorant, since the human condition is such that we each naturally progress across the range of reference class divisions associated with age, it also seems as though age would be acceptable.[19] Now, in the previous chapter, I raised some potential problems for Boorse's use of age as

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[18] There would need to be a bare minimum in order for our conception of health to be operable. While it is true that a conception of health which eliminated reference class divisions would create an even more inclusive set of "valid health claims" it would also render public deliberation intractable and even unintelligible as the very diversity of claims, without a shared understanding of health, precludes assessing the claims against a common set of reasons. If we were to remove all reference classes entirely the proliferation of disease categories would be such that it would make agreement which respect to which conditions to fund impossible, in which case no one's conditions would be funded, at least not according to a legitimate decision procedure. It stands to reason then that the participants in my original position analog would be rationally motivated to agree to the set of reference classes constituting the bare minimum of reference classes to which everyone can agree.

[19] Keep in mind that this would not result in potentially ageist comparisons between the health needs of twelve year olds and the health needs of ninety year olds. We are evaluating a version of Boorse's conception of health (with all of the statistically relevant functional ascriptions intact). Age, used as a reference class division, would thus only be used to divide up the species for determinations of health and disease. Ninety year olds would be measured against other ninety year olds. Twelve your olds would be measured against twelve year olds. We as a society will still likely conclude that a disease in a twelve year old is more important to treat (given the accountability for reasonableness criteria) than a disease in a ninety year old. Nevertheless, the question at issue is whether the ninety year old really has a disease not whether that disease should be funded.

a reference class, evoking cases in which the aged might argue that they are being unfairly excluded from certain therapies which would restore them to the normal functionality of youth. Why couldn't Boorse offer a similar justification for age as a standard reference class in order to escape my objections? Keep in mind that Boorse wanted some sort of a naturalistic explanation for the reference classes he selected, one which as I argued was not available to him. But since I'm using the consensus of rational reasonable and disinterested agents to ground these reference classes, I'm allowed to appeal to the reasonableness of using a universal category like age, in a way that the standard version of the BST is not.

On the other hand, sex as a reference class may continue to be problematic. Recall that, in my criticism of Boorse's view, I objected that Boorse's set of disease classifications might be broadened further if we were to replace sex, as a reference class, with something like gender identity. Doing so would pathologize male physiological characteristics for those who identify as a female and vice-versa. Since using this reference class does, strictly speaking, make for a broader set of disease classifications, I would allow the possibility that a version of Boorse's BST which grounds its objectivity within the realm of the maximally intersubjective might in fact recognize trans-gender therapy as meeting a genuine health need.

Some might argue that this poses a problem for the maximally intersubjective version of Boorse's conception of health that I have been sketching. So far as it is possible, we typically want our conception of health to match the already widely held conclusions of the biomedical sciences. Indeed, believing that the conclusions of

Boorse's BST were co-extensive with the conclusions of the biomedical sciences, Daniels himself championed this view. But I submit that this may be asking too much of *any* conception of health. History is loaded with examples of erroneous doctrines which were once taken to be uncontroversial truths within the biomedical community. We must be prepared to admit that our current practice may involve similar errors. Indeed, the only conceptions of health which can lay claim to being truly descriptive are those which relativize health and disease ascriptions to the norms which vary from culture to culture. And while such a conception of health may be fully descriptive, its judgments with respect to what should and should not count as genuine health needs would be open to any number of objections posed by those who reasonably disagree with societal norms. Indeed, we begin to see that at most, coherence with current medical practice should count as a second-tier consideration with respect to the appropriateness of a given conception of health. In the first place, what we want is a conception of health which can provide methodologically consistent judgments with respect to health and disease classifications to which rational and reasonable contractors behind a suitably thick veil could agree.

Now, historically, errors with respect to erroneous disease attributions have been remediated as the result of improvements with respect to scientific understanding. One might object to my expanding the category of genuine health needs to include trans-gender therapy on the grounds that we face an epistemic limitation with respect to the current state of bioscience. Surely, we will make errors, but we have absolutely no idea what an ideal, completed bioscience would look like. As a result, my claim that the

exclusion of transgender treatments from the category of valid health needs is comparable to the litany of health judgments which scientific progress has proven to be erroneous is ungrounded. Science may one day discover that I am correct, but health judgments must be constrained by the science which we have at the moment. So, as Daniels had originally argued, we want our judgments with respect to health and disease to align with our current bioscience. And this is so even if we can assume that later generations will, no doubt, think we made very bad mistakes.

Two responses to this line of objection are in order. First, while it is true that I am making a comparison between the health judgments which scientific progress has shown to be erroneous and what I take to be an erroneous judgment as to whether transgender therapy meets a genuine health need, the reasoning behind my judgment with respect to transgender therapy is not grounded in some new scientific discovery. Rather, my claim that transgender therapy meets a genuine health need is grounded in the judgments of hypothetical contractors tasked with selecting a reasonable conception of health which they could live with not knowing what conditions they in fact had or would have. Second, even if it were the case that the claims that I am now making with respect to which reference classes hypothetical contractors would select constitutes a scientific discovery at some meta-level, then there is good reason to believe that my line of argument in this dissertation constitutes a scientific advance, one which may later be proven to be problematic, but which now should constitute the state of the art with respect to the judgments of the biomedical sciences. Now, I don't mean to insinuate that the view which I am proposing currently enjoys the full support of the biomedical sciences. Nor

can I give assurances that it ever will. Nonetheless, I have shown there to be some major problems with the conception of health at the root of the biomedical sciences, and it is not dialectically inappropriate for me to suggest my own solution to these problems as a scientific advance to which the contractors in the thought experiment that my arguments have motivated would be privy.[20]

At any rate, it is unlikely that adopting a conception of health which recognizes gender reassignment as a treatment for a genuine health need will actually result in a resource distribution which pays for sex change operations. Under conditions of scarcity with respect to medical resources, reasonable and rational individuals constrained by Daniels's accountability for reasonableness conditions are unlikely to grant funding to transgender treatments mainly because of the costs and dangers, both short term and long term, associated with these sorts of treatments. Though this might change in the future, given the rapidly evolving state of technology, by recognizing transgender disorder as a genuine health need now, and by giving those afflicted with this disorder a seat at the table, we eliminate one potential source of injustice.

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[20] I have been working under the assumption that in choosing between candidate conceptions of health, the contractors in my original position analog would have access to the conclusions which the biomedical sciences would reach with respect to health and disease judgments given the various conceptions of health under consideration. For example, in considering the maximally intersubjective Boorsian variant which I am currently suggesting the evidence which would sway them with respect to its being maximally broad would have to be the judgments that it would provide with respect to health and disease classification. But in order to get these judgments the contractors would have to assume the existence of a variant of the biomedicine which is in all relevant ways equivalent to biomedicine as it is practiced today with the exception that it takes the maximally intersubjective conception of health now under consideration as its theoretical core.

Homosexuality and forms of ugliness which create a statistically significant impairment to reproduction would also likely qualify as diseases on the maximally intersubjective approach to health now under consideration. And this would be true despite the antagonistic stance that our society has taken to such qualifications. Even so, as we noted with respect to transgender therapy, the likelihood, especially with respect to cosmetic surgery, that therapies designed to treat such conditions will receive a substantive share of the health resource distribution is small.

Whether or not this response is convincing is ultimately irrelevant since Daniels's original theory faces the same problem when the BST is applied consistently. Recall that I originally raised this issue of ugliness for Daniels in chapter three. There I noted that were we to recognize ugliness as a disease category, public consensus on whether or not it should qualify for funding would likely be far from settled. The fact of the matter is that we already treat certain skin conditions not necessarily because of their pathogenesis but because of their effects on our general level of attractiveness. Acne, a very common condition, usually manifests as small locally grouped skin infections which, if left untreated are easily handled by one's immune system. While technically pathological, acne is hardly incapacitating in any physical sense. Yet we as a society generally agree that this particular condition should be funded, not because it poses a risk to life or limb but because it has a detrimental effect on one's attractiveness. The total costs for acne treatment in the United States exceeded 2.2 billion dollars in 2004, more than 1.8 of

which resulted from prescription medication and the doctor visits.[21] If we assume that at least half of these visits (a very conservative estimate) were covered by private insurance (one of the admittedly less-than-ideal ways that Daniels sees public deliberation manifesting in a distributive scheme) we are left with the conclusion that almost 1 billion dollars has gone into the treatment of a skin condition that, while common, is hardly incapacitating. Acne can, of course, result in significant mental anguish and/or depression but it does so not because of physical pain but because of its effect on one's appearance.

So, while I still suspect that many cosmetic surgeries would continue to be denied funding even though they would now qualify as treating a genuine health need, I imagine that some cosmetic treatments might be deemed important enough to receive funding as a result of public deliberation. Nevertheless, should the conception of health now under consideration result in a distributive scheme that does pay for certain cosmetic treatments, it is in no way worse off in terms of overall feasibility than the standard theory of health it seeks to supplant.

Some might, at this point, be tempted to raise the following concern. We still face resource scarcity. Shouldn't we be worried that a conception of health which gives rise to a distributive scheme which funds certain cosmetic treatments will end up thereby eliminating the funding for some other condition which we currently treat? What if we as

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[21] The Lewin Group, "The Burden of Skin Diseases 2005," Prepared for: The Society for Investigative Dermatology and the American Academy of Dermatology Association (2005), 64.

a society decided, as a result of adopting the conception of health which I am proposing, that we should no longer fund dialysis treatments in order to pay for sex change operations and/or cosmetic therapies? Certainly this would be an injustice to those with malfunctioning kidneys.

In response, I should note that if we determine by way of a fair deliberative process that these therapies are more important than dialysis, so long as those in need of dialysis have had a chance to express their claims as part of the public deliberation the resulting distribution would be fair. To say otherwise, to say that dialysis should continue to be funded, public deliberation notwithstanding, is to look at this problem through the lens of the current system, one which operates with an inappropriately narrow set of disease classifications. Though it is understandable for someone with dialysis to want to discount this conception of health based on this hypothetical case in order to guarantee himself a higher chance of being treated by keeping the set of actual genuine health needs narrow, it would be unreasonable to do so. And at any rate, the participants in my original position analog would not know what diseases they might have. They would, however, trust that once they have chosen a conception of health, so long as the deliberative process which happens in the second stage is fair and open to public scrutiny, then the resulting distribution will also be fair.

Selecting the Meta-Goals

We noted that there were two areas of controversy with respect to the standard Boorsian conception of health. In the first place, Boorse's theory relied on a dubious commitment to reference classes which, at best harbored metaphysical bias and at worst

lacked justificatory grounding altogether. With respect to selecting the reference classes for our maximally intersubjective variant of the Boorsian conception of health, our original position strategy gave us reason to believe that rational, reasonable, and disinterested agents would be most attracted to a version of Boorse's view which was able to posit a maximally inclusive set of pathologies while staying true to his statistically derived functional methodology. Since the proliferation of reference classes narrows rather than expands the range of conditions which qualify as pathological, we concluded that our contractors would select a version of Boorse's theory which postulated the bare minimum number of reference classes. Thus, maximal inclusivity acts as a built in restraint with respect to the selection of reference classes on our view.

The same, unfortunately, cannot be said with respect to the selection of meta-goals. Insofar as we want to choose meta-goals which are maximally intersubjective we will want it to be the case that they would be deemed acceptable by our rational, reasonable and disinterested contractors. What then can we say about the acceptability of the overarching meta-goals which Boorse takes for granted? It is safe to say that our contractors, insofar as we characterize them as rational, would have an interest in continued survival, so I think it is fair to conclude that we could provide a maximally intersubjective justification for such a goal.[22] On the other hand, it is far less likely that

[22] In comments made on earlier drafts of this dissertation, John Hardwig has raised a potential objection to the maximally intersubjective acceptability of continued survival as a meta-goal. Hardwig's concern is that although one must be alive to pursue any other goals at all, almost everyone would acknowledge that there are conditions that are worse than death (though we would disagree about what

individual reproduction would achieve consensus as an overarching meta-goal to which all of our contractors would agree. Indeed, not only are there many conceptions of the good which find the prospect of reproduction unappealing, we can also conceive of persons whose conception of the good would prefer that reproductive ability generally be eliminated all together. Absent a reason to assume convergence with respect to the reasonability of individual reproduction as a meta-goal, we cannot assume that our contractors would agree to its selection. And while a Boorsian-style conception of health which takes individual survival alone to be the meta-goal at the apex of the goal directed hierarchy will give us some of the standard health and disease classifications with which we are familiar, its inability to offer judgments with respect to reproductive health will leave a whole category of health and disease judgments off the table. Fortunately, I don't believe that this is a bullet we will have to bite.

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to put on that list). Hardwig also worries that accepting individual survival as a meta-goal in our functional analysis threatens to underwrite all kinds of life-extending technologies and age-based rationing. In response, I would argue that if we focus on the overall role that these meta-goals are meant to play in our conception of health, these concerns, while important, are largely escapable. Certainly, some pathologies would be such that because there is no treatment for them, death would be preferable to continued living. But the point of these meta-goals is to give us judgments as to whether or not a condition should count as a pathology and thereby receive the status of genuine health need. They are not meant to make normative claims about the merits of continued living in the face of disease. Clearly Tay-Sachs disease is pathological because it marks a statistically significant inhibition on the parts or processes which are goal-directed in a hierarchy with survival at the top. This does not mean that we are thereby committed to the torturous continued survival of a newborn so afflicted. With respect to the concern that accepting individual survival as a meta-goal will underwrite life-extending technologies and age-based rationing, we must keep in mind that rationing decisions and decisions to fund life-extending technologies happen at the second stage of the distributive process after non-health needs have been excluded. Incorporating individual survival into our theory as a functional meta-goal helps us to determine whether or not a given condition is a genuine health need. It does not tell us whether or not we should fund it.

One way that we might provide a maximally intersubjective justification for individual reproduction as a meta-goal might be to follow the same strategy that we used with respect to selecting reference classes. That is, we might try to argue that our contractors would choose the variant of a Boorsian conception of health the meta-goals of which provided a maximally inclusive set of disease classifications. But while maximal inclusivity acted as a built in restraint with respect to reference classes, the proliferation of meta-goals has the opposite effect. As we add goals, the disease range gets larger and larger to the point of making every condition pathological in one way or another. But, as we noted earlier, a conception of health which includes any and all potential conditions as genuine health needs, will be unlikely to achieve any chance of agreement with respect to the second, accountability for reasonableness stage of resource distribution. In which case it would be impossible to determine which conditions deserve funding priority, at least not according to a legitimate decision procedure. It stands to reason then that the participants in my original position analog would be rationally motivated to agree to the set of meta-goals and reference classes which avoided this consequence. Thus, maximal inclusivity cannot operate as a built in restraint on our selection of meta-goals in the same way that it did for reference classes. How then can we expect our contractors to agree to a set of meta-goals which includes both individual survival *and* reproduction without thereby including any number of other meta-goals as well?

To solve this problem, it will be useful to once again remind ourselves that we are postulating our Rawls inspired reasoning game in order to provide Daniels with a maximally intersubjective conception of health which is adequate to ground a just health

distribution scheme from within a Rawlsian framework.[23] That is, we are developing a conception of health to ultimately solve a social problem with respect to the body politic. Given the scope of this aim, we should be able to derive the set of meta-goals by which ascriptions of normal functionality will ultimately be measured by asking what features a representative citizen needs to demonstrate in order for a just society comprised of such citizens to maintain its existence over time.

So what are the meta-goals which our contractors would select in the interests of the continued existence of an ideal society over time? Will this strategy provide us with a maximally intersubjective justification for the use of survival and reproduction as meta-goals? As part of the simplifying assumption that he makes with respect to the selection of the two principles of justice as fairness which would govern the ideal society, Rawls provides some insight into the basic characteristics that citizens of such a society would have to personify. His simplifying assumption describes citizens as "normal and fully cooperating members of society over a complete life, from one generation to the next."[24] Now, since the question with respect to what constitutes normality is exactly the question that we are attempting to answer, I will ignore that descriptor for now. I do however want to draw the reader's attention to the final two clauses of Rawls's description. In the first place Rawls describes citizens as cooperating members of society *over a complete life*.

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[23] Daniels wants his distributive theory to also work with various other political theories – including Sen's capabilities view, and there may be reason to believe that this is possible but engaging that question is beyond the scope of this dissertation

[24] Rawls, *Justice as Fairness*, 8.

And indeed, it does seem as though the continued existence of society depends on the survival of its citizens. Now, it is true that under non-ideal circumstances, the continued existence of society might actually be facilitated by letting some individuals die. So, one might argue that while it is in fact crucial that *many* individuals survive (at least to reproduce themselves), it may not be necessary that each individual citizen survive. That said, our contractors are not directly concerned, at least with respect to the selection of meta-goals, with the realities of non-ideal society. Rather, they are concerned with determining what meta-goals would need to be selected with respect to the notion of an ideal, *representative* citizen. Clearly, the continued existence of any society made up of representative citizens would depend on their being able to survive. Similarly, though it is true that societal reproduction "from one generation to the next" need not require that each and every citizen be able, or willing for that matter, to reproduce, it is clear that individual reproduction is necessary in some sense for the continued existence of society. Indeed, it is fair to say that a representative citizen, insofar as he/she would act as a stand in for society as a whole, would need to be able to reproduce him/herself.

The attentive reader would not be mistaken were she to note that we seem to be coming full circle here with respect to the two fully political conceptions of health which we dismissed earlier as offering a set of disease ascriptions which was either overly broad or overly narrow. With respect to these earlier views, we tried to develop a political conception of health by asking what constituted normal functionality as it pertained to citizenship by drawing on Rawls's description of what traits individuals would need to have in order to engage in social cooperation as free and equal citizens of a society

governed by the two principles of justice. With respect to the conception of health now under consideration, our purposes are different. Here we are concerned not with what traits individual citizens have in common, but with what traits society in general would need a representative citizen to have. As we noted previously, one need not be able to reproduce in order to engage in social cooperation as a free and equal citizen, despite the role that individual reproduction, as a means of social reproduction, plays in the creation of new citizens and the maintenance of societal population. So long as some citizens retain reproductive functionality, society will continue even if others cannot. But notice what happens when we pose a similar question with respect to whether a representative citizen would need to demonstrate reproductive functionality for the continued existence of society over time. Insofar as our contractors would recognize this trait as a political necessity, they would recognize individual reproduction as a socially valid and therefore reasonable meta-goal to be used in measuring health and departures therefrom.

But notice now that Rawls's idea of what a person is under ideal theory does not stop at individual survival and reproduction. In contrast with Boorse's original naturalistic emphasis, Rawls is not just talking about the survival and reproduction of biological entities. Rather, he is talking about persons who are surviving and reproducing, biological human beings with the social capacities and affective dimensions which are necessary to make a stable and just society possible. Rawls characterizes citizens as having the affective dimensions necessary to see themselves and their fellows as free, equal, and worthy of reciprocity and fair treatment. He also characterizes citizens as able

to make a social contribution in terms of work to the cooperative surplus. In addition to individual survival and reproduction, it is these attributes – the having of the proper affective dimensions, and the capacity to contribute by way of work – which are the traits which are necessary for the existence of a just political body.

So then, what happens when we add these additional meta-goals to the functional goal-directed hierarchy at work in the maximally intersubjective conception of health now under consideration? By adding these social dimensions do we drastically change the health and disease classifications which we would have made were we limited with Boorse to individual survival and reproduction? Yes and no. One of the benefits of adding these affective dimensions and the capacity to contribute by way of work to the overarching meta-goals of our theory is that they open up new avenues to pathologize certain recalcitrant conditions. Consider, for example, Boorse's claims with respect to mental health. Despite his confidence in the Freudian psychoanalytic theory which he uses to bridge his physiological conception of health to the domain of the mind, the controversies surrounding Freud's psychoanalytic approach are well documented. More importantly, insofar as psychoanalysis itself posits a wide variety of contentious metaphysical claims, there is little doubt that its use as part of the conception of health under consideration would be prohibited by the contractors in our original position analog. Fortunately, insofar as they would recognize the affective social dimensions of citizens as an overarching meta-goal, we will likely be able to get most of the same judgments with respect to mental pathology by measuring departures from statistically derived norms with respect to these affective social dimensions. Indeed, it may well be

that the meta-goals selected for the conception of health now under consideration provide a firmer foundation for the mental health judgments which we already make.[25]

With respect to the ability to make a social contribution to the cooperative surplus, the addition of this as a meta-goal need not contradict any of the judgments which we already have with respect to various physical and mental disabilities. As it is, we see such disabilities as interfering with one or more of the nested goals at lower levels within the functional hierarchy for individual survival. That many disabilities also interfere with the ability to work only serves to buttress these judgments. One advantage of adding this meta-goal, however, is that it may give us additional justification for the priority of remediary measures at the second stage of resource distribution. Daniels recognized that in cases where disabilities which interfere with a person's ability to socially contribute to the cooperative surplus cannot be cured in a cost-effective way or cannot be cured at all given the limits of medical technology, the best way to respond to valid health needs such as these may be to reorganize the work place so that these people can make a functional contribution. But it may well be the case that even where we can bring certain pathological individuals into a normal *mode* of function in a cost-effective way, we would still be better off using social resources to ensure that those individuals attain a normal *level* of functionality instead. Anita Silvers has criticized the precedence

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[25] I leave the explicit work with respect to deriving the actual set of mental health pathologies by way of a statistical analysis of departures from normal functioning with respect to the affective dimensions of citizenship to the reader's imagination and ultimately to the mental health profession. Though I would not be averse to returning to this topic at a later juncture, the scope of this current project prohibits me from offering such an analysis here.

which Daniels gives to restoring the mode of functioning over and above restoring the level of functioning. She notes that with respect to Daniels's view:

> …we first attempt to restore the patient's ability to function in the customary mode, seeing or walking or hearing the way other people do. Afterward, if a cure proves impossible, we apply prostheses – corrective lenses, artificial limbs and physical therapy, hearing aids, and lipreading lessons. These prostheses may restore the patient to the typical level of functioning… but not (quite) to the normal mode…[26]

Silvers even goes so far as to accuse Daniels of hypocrisy when he laments that social support services are allocated fewer resources than restorative treatment, noting that "on his own account, normalizing interventions do and should take precedence over interventions with any other kind of impact because their outcomes are assigned a higher social or political value."[27] Were we to recognize the broader selection of meta-goals which I am now introducing, interventions which normalize the level of functioning would likely be brought up to parity with those which normalize the mode of functioning. Indeed, they might even be reversed in terms of priority.

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[26] Anita Silvers, "A Fatal Attraction to Normalizing: Teating Disaibilities as Deviations from 'Species-Typical' Functioning" in *Enhancing Human Traits*, ed Erik Parens, (Georgetown: 1998), 101.

[27] Ibid., 102.

Some may try to find fault with a theory of health which includes the having of certain affective dimensions and the capacity to contribute to the cooperative surplus among the meta-goals at the top of such a goal-directed functional hierarchy. One might worry that including these meta-goals would put us in danger of losing the distinction between a health need and a non-health need. Ill health, as we traditionally understand it, need not be the only problem that keeps people from having the social and affective dimensions which I propose. And while some citizens are prevented from holding down a job and thereby contributing to the social product because of mental illness, it is just as likely that a citizen's inability to contribute is the result of such vices as laziness and the desire to free-ride on the social contributions of others. So the worry goes, such a conception runs the risk of pathologizing immorality in a manner that facilitates totalitarian oppression.

I have two responses to this line of worry. In the first place, regardless as to how it occurs, a citizen who lacks the affective dimensions necessary to see him/herself and his/her fellows as free, equal, and worthy of reciprocity and fair treatment, does seem to exhibit a mental deficiency. Indeed, I imagine that it would be completely understandable why someone who had been repeatedly swindled by his fellow man would be loathe to recognize others as worthy of reciprocity and fair treatment. But while his sense of mistrust is born out of his experiences rather than out of some chemical imbalance in his brain, if it causes him to retreat into paranoia and it impedes his ability to enter into cooperative social arrangements entirely it does seem as though he has a genuine mental

health need. Whether or not the solution to this mental problem complies with traditional sensibilities as to what counts as a medical intervention is irrelevant.

Second, maybe there is something pathological about lacking the motivational machinery necessary to contribute by way of work. Certainly free-riding on the work or the good will of others is morally problematic, but this need not rule out the possibility that it be pathological as well. Though we may encounter some pitfalls with respect to pathologizing immorality, it seems to me that these pitfalls already exist to some degree given the traditional conception of health currently in place. We generally hold serial killers, child molesters, and various other psychopaths responsible for their actions despite the fact that their actions are almost always, at least in part, the result of pathological factors beyond their control.

We must also keep in mind that were we to conclude that laziness and the desire to free-ride should in fact qualify as pathological, this in no way implies that we will thereby slide down a slippery slope towards totalitarian oppression. We must keep in mind that our overall goal is to offer a conception of health which identifies the set of pathological conditions the treatment of which is in no way required. Just because I might have a pathological condition does not obviate my choice with respect to whether or not it should be treated. Indeed, just because my condition is pathological, there is no guarantee that its treatment would even be funded. It just means that those who have my condition would then be given a seat at the table with respect to the deliberative process as to which genuine health needs should be funded under conditions of resource scarcity. Many, if not most, individuals who exhibit a pathological sort of laziness which prohibits

them from contributing by way of work to the cooperative societal surplus will likely leave their seat at the table open in a manner of speaking. Like most exclusive homosexuals, they are just fine with their particular pathology and would not seek treatment even if it were made available free of charge. That said, some will see their own laziness as despicable, as a weakness of the will which they feel powerless to overcome. A society which recognizes their condition not only as pathological, but, by way of the proper deliberative process, as worthy of funding, would allow such persons the opportunity to fulfill the duties of citizenship and so become a contributing member of society.

Conclusion

If the above analysis is valid, then we may very well have saved Daniels's overall project from the criticisms leveled in chapter three. Despite his confidence in the naturalistic objectivity of the health and disease judgments which exist at the conjunction of the conceptions of health offered by Boorse and Wakefield, I have shown that insofar as his theory of just health distribution depends on these views to ground an uncontroversial distributive legislative scheme within the confines of Rawls's principle of fair equality of opportunity, Daniels's view fails to get off the ground. The problem is that by conditioning the truth of their views on metaphysical commitments with respect to naturalism, both of the theories offered by Boorse and Wakefield run afoul of the sensibilities of reasonable and rational citizens. And if Daniels's distributive scheme depends on these theories to offer the criteria necessary to exclude certain conditions from the category of genuine health needs, this leaves his view open to the objections of

those who feel as though they have been unjustly excluded from the distributive conversation because their conditions have been deemed invalid according to criteria with which they reasonably disagree. In short, the problems infecting the naturalistic conceptions of health call into question the justice of Daniels's distributive conclusions.

I have offered a conception of health which, in accordance with Daniels's requirements, exhibits objectivity while avoiding metaphysical controversy. What is more, Daniels should have no problem incorporating the conception of health which I offer into his overall theory, insofar as it is grounded in a Rawlsian methodology, and insofar as it reaches most of the same judgments with respect to health and disease classification as did the problematic Boorsian theory which Daniels had endorsed. While it is true that the conception of health which I offer pathologizes certain conditions which contemporary medicine does not, I submit that the reason for these disagreements is not a fault of my own position but a blind spot with respect to the theoretical inconsistencies endemic of mainline medical opinion. At any rate, as I have already noted, the fact that we must construct a just distributive scheme for health within resource constraints, further mitigates the divide between my conclusions and contemporary sensibilities. By providing him with a maximally intersubjective conception of health I have thus placed Daniels's overall theory on firmer ground, saving him from the set of objections which I, myself, have raised.

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Vita

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