

Early draft, please do not quote.

What concept of disease should politicians use? Norman Daniels and the unjustifiable appeal of naturalistic analyses of health

1. Introduction.

One of the central question of evidence-based policy is the extent to which the contents and priorities of health care should be based on scientific criteria. Norman Daniels's theory of just health care is particularly interesting in this respect, because it involves a significant commitment to naturalism in the definition of health and disease. Daniels's goal is to set limits to what justice requires with respect to meeting citizens' health needs, or in other words, to define the boundaries of citizens' reciprocal obligations with respect to those needs (Daniels 2000; Daniels 2008, 147-155).¹ Daniels's solution to these normative questions involves treating pathologies differently from unfavorable conditions that are still normal, like bad memory or an ugly outlook.² He claims that this distinction is sufficiently objective for political purposes if it is based upon bio-medical criteria, a solution which must look problematic to those who suspect that bio-medical science is not value-neutral.

One ground for this suspicion may be the idea that the distinction between health and pathology cannot be explained by appealing to the categories of natural science. Some philosophers think, for instance, that health must be defined relative to society's norms and requirements or to a person's well-being or goals. In support of naturalisms about the health/pathology distinction, Daniels invokes the authority of Christopher Boorse, perhaps the most prominent champion of this position. Boorse's theory, the Bio-Statistical Theory (in short, BST), aims to provide an analysis of the concepts of health and disease, which would explain why pathologists can distinguish the corresponding conditions without relying on values, whether their own, the patients, or society's. Daniels commitment to naturalism may appear less stringent than Boorse's because Daniels claims that health justice is compatible with theories that, unlike the BST, maintain that the concept of

1 Moreover, this goal is part of a more inclusive objective, namely showing that Rawls's "Two Principles of Justice" (Rawls 1999; Rawls 1993) can be extended to cover issues of justice posed by illness and disability.

2 In other words, the goal of curing or compensating for pathological conditions represents the "primary rationale" of health care. This does not exclude the relevance of other sorts of considerations when establishing concrete allocative criteria for health care resources. First of all, under a reasonable budget constraint it would be impossible to address all conditions that biomedical science classifies as diseases, since society ought to pursue other important goals beside promoting the health of its citizens (such as free education, considered a prerequisite for fair opportunities). Hence further normative criteria are needed to set priorities among conditions that are identified as diseases. Second, there might be medical services that society ought to make available because they protect citizens' opportunities even if they cannot be said to promote their health, such as abortion. (Daniels 2000, 313-314; Daniels 2008, 146-155)

health has both descriptive and evaluative components.

I shall argue that Daniels's commitment to a qualified form of naturalism lacks an adequate justification, because of its dependency from a naturalistic account of normal functioning à la Boorse. I shall proceed as follows: first, I shall specify what Daniels's commitment to naturalism amounts to. Then, I shall present a recent criticism of the BST (Kingma 2007), which shows that the Boorsian analysis of normal functioning is not value-free or naturalistic. Elselijn Kingma's thesis, I shall argue, leads to challenging Daniels's commitment to naturalism, since the BST represents the most influential attempt to define normal functioning in value-neutral terms. In particular it leads us to reject Daniels's argument - presented in his last book *Just Health* (Daniels 2008) - according to which the distinctions that we make in practice support a naturalistic analysis of normal functioning (à la Boorse) .

2. Daniels' commitment to naturalism.

Daniels's starting point is Boorse's theory, the BST, which defines health as the absence of pathology and pathology as a departure from normal human functioning (Daniels 2008, 38; Boorse 1975; Boorse 1977; Boorse 1997). According to Boorse, the concept of normal functioning belongs to natural science, with "normal" construed statistically and "functioning" biologically. Hence the BST allegedly treats the boundary between health and disease as entirely independent from the values held by doctors, patients, and society in general.

Daniels's commitment to naturalism is weaker than Boorse's. It does not demand that "disease" be defined naturalistically and as a mere departure from normal functioning³; rather it takes departure from normal functioning as a necessary condition that must be satisfied for something to count as disease.⁴ In this way Daniels can include views, like Wakefield's, that define disease as a condition both dysfunctional and harmful to its bearer (Wakefield 1992; Daniels 2008, 39). According to Wakefield's view, dyslexia (a departure from normal functioning) does not count

3 To be more precise, there is no substantial distinction between Boorse's and Daniels's view on this point, since Boorse claims that his naturalistic analysis applies only to the distinctions used in *theoretical* physiology and pathology. Clinical *practice*, on the contrary, involves several value-laden concepts of disease, such as "deviation from normal functioning worthy of being examined and treated", (Boorse 1997, 11-12; cf. Boorse 1975, 61) . Hence Daniels's concession to normativism is equivalent to the reformulation of an analogous point by Boorse. Moreover, Daniels avoids a commitment to subtle details of Boorse theory, that he considers irrelevant for the more limited purposes of political theory "Fortunately, for our purposes in bioethics and political philosophy, we do not have to resolve all disputes in the philosophy of biology before we can safely employ a widely used notion such as 'normal functioning.'" (Daniels 2008, 38, cf. 39 n20; cf. Daniels 2000, 318). These details are "its avoidance of an etiological or "natural selection" account of biological function and its avoidance of all normative judgments in identifying departures from normal functioning" (Daniels 2008, 38).

4 "[...] the normative approach I do consider a threat to public agreement is not constrained by an independent account of departures from normal functioning" (Daniels 2008, 40). Further textual evidence leaves no doubt that the adjective "independent" is meant here as implying "naturalistic": see for instance the passage quoted in note 6.

as a disease in those illiterate societies where it does not lead to any substantial disability.⁵

Daniels's compromise with normativism does not touch the distinction between normal functioning and what counts as a departure thereof, which he – like Boorse – views as naturalistic.⁶ This commitment I shall call “weak naturalism”. Weak naturalism justifies the idea that most bio-medical classifications are grounded, ultimately, in scientific knowledge of facts independent from the patient's, the doctor's, or society's values.⁷ If weak naturalism were correct, it would ground people's faith in the objectivity and value-neutrality of bio-medical distinctions and justify defining health needs on that basis.⁸

3. Normal functioning and evaluative assumptions.

Boorse's BST represents the most influential analysis of normal functioning alleged to be naturalistic. Hence, I shall assume that criticizing the BST amounts to criticizing weak naturalism in its most plausible form.

The BST defines pathology as an impairment or limitation of normal functional ability. The normal function of a part or process in an organism is defined as its normal contribution to the survival and reproduction of that organism, where by “normal contribution” one means a statistically normal contribution for species members of the same reference class. Reference classes are said to be, for humans, sex and age group (Boorse 1977, 562; Boorse 1997, 7)⁹. This means that Obama is in full health if and only if all his functions are statistically normal for a 45 year old male human beings. BST needs reference classes because, for instance, the level of testosterone which is normal for an adult male is not the same as that which would be normal in an adult female or in a male child.

The choice of reference classes is a crucial element in the BST definition of health, because different reference classes result in different boundaries between the healthy and pathological. For instance, if the ability to see is selected as a reference class, short-sightedness becomes the

5 According to Daniels, individual harm should be conceptualized as loss of opportunities, at least in the context of political justice. (Daniels 2000, 315; Daniels 2008, 42-46)

6 "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." (Daniels 2008, 42)

7 One may concede that biomedical distinctions are not strictly independent from society's values, since a change in social values may facilitate the recognition of pre-existing objective natural facts. But this is different from claiming that social values are among the facts to which biomedical classifications refer.

8 As Daniels writes: “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” (Daniels 2008, 42; cf. Daniels 2000, 317-318).

9 Although in the most recent discussion of the BST, Boorse concedes that it might be appropriate to add ethnic group as a reference class. (Boorse 1997, 8)

statistically normal condition for members of a legitimate reference class (that of short-sighted people), and hence it ceases to be considered a pathology.

It has been argued that the concept of statistical normality used by the BST is not value free, because Boorse's choice of reference classes has no empirical justification (Kingma 2007, 131). To fully grasp Kingma's point, it is useful to distinguish two rather different cases in which we would say that a definition of disease is value laden. The first case is when it is impossible to apply the definition to a concrete case without answering a value question. This happens, for instance, when the definition mentions a value, as with Wakefields' "harmful to its bearer" clause.

The second is when a value judgment is appealed to in order to justify the choice of using a certain definition instead of a different one. There are cases in which the appeal to values to justify the use of a certain definition – or a whole conceptual framework – does not worry us. Simplicity, accuracy and usability can be legitimately invoked in choosing between Newtonian physics or general relativity to solve a concrete engineering problem. Things get interesting, however, when one has reasons to suspect that the choice of a conceptual framework is not justifiable in terms of ordinary epistemic or pragmatic considerations.¹⁰

According to Elselijn Kingma, Boorse's choice of reference classes "is an evaluative choice which may reflect some deep underlying normative commitments" (Kingma 2007, 132). Imagine that you have to decide whether to count homosexuality as a pathology and that you can choose whether to adopt the criteria offered by the BST or by a slightly different theory, which we shall label XST, identical to the BST but for counting sexual inclination as an additional reference class. According to XST homosexuality, understood as a sexual drive, is not pathological because it does not impair the reproductive success of individuals in that condition as measured against the norm for their reference class. Deciding whether homosexuality is a pathology, hence, amounts to deciding whether to employ one or the other set of criteria, or in other words deciding which choice of reference classes one finds more reasonable.

Since Boorse defines a reference class as "a natural class of organisms of uniform functional design" (Boorse 1977, 562; Boorse 1997, 7), the question is whether it makes sense to treat a group of individuals who share similar sexual drives as a natural class. According to Kingma, here we

¹⁰ The idea that natural science is not absolutely value-free is a familiar one in epistemology. For instance simplicity is a meta-theoretical value that, according to most epistemologists, can be invoked in favor of theoretical choice. Moreover if, as some philosophers think, truth is always truth relative to a conceptual scheme, and the choice of conceptual schemes is the outcome of a convention, the truths of natural science may be thought to depend in general from the values which ground the convention. Boorse turns the argument that health cannot be value free because all science is value laden against its proponents, by claiming that the BST reaches its purpose if it can show that medicine is only as value laden as the rest of science (e.g. astrophysics) (Boorse 1997, 55 cf. 75). The point of the following argument is that there are reasonable grounds for suspecting that this proviso is not satisfied.

have a problem, because it is not clear what the definition means. Moreover, if we try to clarify it by means of a naturalistic paraphrases we end up classifying certain obvious pathologies as varieties of natural species design and viceversa.¹¹ If the definition of a reference class does not have a satisfactory naturalistic translation, as Kingma shows, we should conclude that the choice of reference classes is arbitrary or value-laden (Kingma 2007, 132). If Boorse replies that the choice is not arbitrary because it is the one that best fits our current medical classifications,¹² then we should conclude that these classifications are to some degree arbitrary or that they rely on value premises that Boorse's analysis fails to reveal.

4. Troubles for Daniels's argument.

Let us now go back to Normal Daniels's naturalistic commitment. I shall now argue that Kingma's critique of the BST leads to rejecting Daniels's justification for it. In Daniels's last work one finds two explicit arguments in support of the position I have called "weak naturalism": one appeals to the existence of practices where people make clear distinctions between pathologies and other causes of dissatisfaction. The other says that bio-medical distinctions define the focus of the existing public consensus concerning the extension of medical treatments. Reasons of space force me to consider only the first argument.

In my reconstruction, this argument involves three main claims:

- 1) We ought to distinguish those analyses of the meaning of the health/disease distinction which appeal to a naturalistic account of normal functioning from those which do not.
- 2) Theories of the second group imply that, in everyday contexts, we are not able to draw clear distinctions between pathologies and other conditions deemed undesirable (by the patient, the doctor, or society).¹³
- 3) That is in tension with the sociological observation that, for a central range of cases, doctors, patients and other health professionals seem comfortable with making and accepting the distinction

11 More precisely, Kingma considers three possible interpretations of "natural class of organism of uniform functional design": as statistically common characteristics, as classes characterized by a high degree of uniformity among class members, and as classes which are natural, that is, belong to the natural design of the species. The first interpretation is unacceptable, because some age groups and the queen design in the bee have very few members. The second must be rejected because many diseases, especially genetic ones, can be remarkably uniform. The third appeals to either a theological concept of design or an evolutionary one. If the latter, it must be rejected because some pathologies (e.g. sickle cell anaemia) result from adaptation.

12 This objection is modeled upon Boorse's reply to an analogous objection concerning the evaluative presuppositions of the analysis of biological functions. Cf. "there is no choice here - that is simply what disease is, as the concept is best reconstructed from medical classifications." (Boorse 1997, 28).

13 "If the extreme normative view were true, it would show up in our practice in a very different way. We would talk and behave differently than we do" (Daniels 2008, 40); "Were the normative view correct [...] we would not draw the reasonably clear distinction we do." (Daniels 2008, 40). Daniels's "extreme normative view" is by definition the denial of weak naturalism.

in question.¹⁴

To show that we should reject Daniels's argument I shall employ Kingma's critique of Boorse in two different ways. At first, I shall accept Kingma's conclusion that the BST is "in all relevant ways evaluative" (Kingma 2007, 132). Later, I shall concede that the concept of normal functioning defined by the BST is naturalistic and argue that Daniels's position is untenable, provided that, as Kingma shows, the choice of reference classes cannot be justified from a naturalistic standpoint.¹⁵

The first counter-argument is very simple. Boorse claims that the BST definition of normal functioning fits the standard usage of "healthy" and "pathological" in theoretical medicine, that is, in physiology and pathology. If that is true, it must be true irrespective of whether the choice of reference classes is fully justifiable from a naturalistic standpoint. Since theoretical pathology distinguishes pathologies from other conditions regarded undesirable, the BST is incompatible with at least one practice involving the distinction in question. In conclusion, the BST is not naturalistic, as assumed, and is compatible with distinguishing pathological conditions from undesirable ones. Hence, if Kingma is right, the BST *itself* qualifies as a counterexample to Daniels's second claim.

Let us now adopt the second strategy and assume that the BST concept of normal functioning is naturalistic even if the choice of reference classes cannot be justified from within a naturalistic standpoint. If that is true, the same can be said about XST, identical to BST in all respects except for counting sexual inclination as a reference class. The question is therefore how to choose between BST and XST, given that Daniels's argument against non-naturalistic theories cannot be used to discriminate between the two. This choice matters politically because it implies a redrawing of the boundary between health needs and other conditions.¹⁶

14 Daniels claims that women who very much desire a breast enlargement do not normally view their actual condition as a disease and that current laws and insurance practices do not call pregnancy a disease, even when they are dictated by politicians who think abortion services should belong within basic health insurance packages. (Daniels 2008, 41-41) Daniels's conclusion is that "in our language and practice, as these examples suggest, we do not confuse unwanted conditions with pathology. We do not expand our category of diseases or pathology to include all the conditions we want to change medically." (Daniels 2008, 40) . Notice the use of the term "confuse" to characterize the consequences of rejecting weak naturalism.

15 Boorse has written that "when a concept is precisified one way rather than another for evaluative reasons, the result can still be a value-free concept: cf. "meter," "degree C," or virtually any other unit of measure" (Boorse 1997, 28). Hence, he may argue that Kingma's analysis shows, at most, that we should distinguish two equally legitimate concepts of normal functioning, normal functioning₁ and normal functioning₂, and that if medicine has chosen one of them for evaluative reasons, the result can still be a value-free concept.

16 In a certain respect XST would deny homosexual people one or several "rights to medical treatment" (rights to be cured "of one's homosexuality" or of other conditions resulting from it) that the adoption of the BST may justify. One may claim that a theory which ascribes additional rights to a minority cannot be criticized since it does not force anybody to take advantage of such rights, thus protecting the integrity of homosexual people. Things however are not so simple: a society which regards homosexual people as biologically defective individuals and, therefore, as legitimate recipients of health care is less likely to treat homosexual people with equal dignity in other areas of political life. For instance it may allow for the selective screening of embryos with a "gay gene", in the name of the

The question is therefore what degree of disagreement concerning the distinction between normal functioning and pathology is compatible with its alleged naturalistic grounding. Daniels's position is that naturalism is compatible with much argument on how to draw this distinction (Daniels 2008, 42).¹⁷ But Daniels also claims that "disputes about it can generally be resolved by the publicly accessible methods of the biomedical sciences" (Daniels 2008, 42).¹⁸

The last claim, however, is unconvincing: if different ways of drawing the distinction between normal functioning and pathology look equally arbitrary from a naturalistic standpoint, then disputes about where we should draw this boundary cannot be resolved by appealing to biomedical science.

The only way to escape this conclusion is to define the methods of biomedical science so broadly that they include a substantial amount of what is commonly regarded as ethical and political reasoning. But this epistemological idea returns a much blurred picture of the distinction between the scope of biomedical science and the scope of moral and political theory, which is incompatible with Daniels's idea that biomedical distinctions enjoy a privileged condition of objectivity¹⁹.

References.

- Boorse, Christopher. 1975. On the Distinction between Disease and Illness. *Philosophy and Public Affairs* 5, no. 1 (Autumn): 49-68.
- . 1977. Health as a Theoretical Concept. *Philosophy of Science* 44, no. 4 (Dicembre): 542-573.
- . 1997. A Rebuttal on Health. *BIOMEDICAL ETHICS REVIEWS*: 1-134.
- Daniels, Norman. 2000. Normal Functioning and the Treatment-Enhancement Distinction. *CAMBRIDGE QUARTERLY OF HEALTHCARE ETHICS* 9: 309-322.
- . 2008. *Just Health: Meeting Health Needs Fairly*. Cambridge, UK: Cambridge University Press.
- Kingma, Elselijn . 2007. What is it to be healthy? *Analysis* 67, no. 294: 128-133.

more general principle that parents may select against pathological or pathogenic characteristics.

- 17 As Daniels rightly points out, the fact that we have ceased to consider pathological several conditions which were called diseases in the past does not imply that pathologies are relative to social values, or that to call something a disease amounts to evaluate it. The change in our beliefs may simply entail that in the past we have made errors which later we were able to correct (Daniels 2000, 318; Daniels 2008, 40).
- 18 It is noteworthy that there are passages in Daniels's previous writings that seem to imply a slightly different position. In the 2000 article, he seems to concede that, for the purposes of health policy, the concept of normal functioning does not have to be naturalistic, but merely independent from parochial values: "suppose that the apparently natural baseline appealed to here does, in various ways, as it has in the past, contain hidden appeals to the values of special groups. [...]. Then our only recourse is to hope that over time there are internal critical pressures within the biomedical sciences that work to expose the special role played by these valuations. [...] The optimistic view is that there are pressures here that tend to work against any values that are not at least widely shared. This is a partial recognition of the tendency of the sciences to be compatible with pluralism." (Daniels 2000, 319) This view is rejected in favor of a clearer commitment to naturalism in Daniels's most recent work, as shown by the passages cited in the text.
- 19 "Health needs are objectively ascribable, on [my] approach, since we can ultimately rely on the scientific methods of the biomedical sciences to characterize pathology, as well as on our growing understanding of epidemiology, including social epidemiology, to clarify what we need to function normally." (Daniels 2008, 37)

Rawls, John. 1993. *Political liberalism*. The John Dewey essays in philosophy, no. 4. New York: Columbia University Press.

---. 1999. *A Theory of Justice*. 2° ed. Cambridge, MA: Harvard University Press.

Wakefield, JC. 1992. The concept of mental disorder. On the boundary between biological facts and social values. *The American psychologist* 47, no. 3: 373-88.