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Defining 'health' and 'disease'

Marc Ereshefsky

Department of Philosophy, University of Calgary, Calgary, AB T2N 1N4, Canada

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ABSTRACT

How should we define 'health' and 'disease'? There are three main positions in the literature. Naturalists desire value-free definitions based on scientific theories. Normativists believe that our uses of 'health' and 'disease' reflect value judgments. Hybrid theorists offer definitions containing both normativist and naturalist elements. This paper discusses the problems with these views and offers an alternative approach to the debate over 'health' and 'disease'. Instead of trying to find the correct definitions of 'health' and 'disease' we should explicitly talk about the considerations that are central in medical discussions, namely state descriptions (descriptions of physiological or psychological states) and normative claims (claims about what states we value or disvalue). This distinction avoids the problems facing the major approaches to defining 'health' and 'disease', and it more clearly captures what matters in medical discussions.

1. Introduction

How should we define the terms 'health' and 'disease'? This is a central problem in the philosophy of medicine and an important issue in bioethics. There are three main philosophical approaches to defining 'health' and 'disease'. Naturalists (Kendell, 1975; Boorse, 1976, 1977, 1997; Scadding, 1990) desire definitions based on scientific theory. Their definitions attempt to highlight what is biologically natural and normal for humans. Normativists (Margolis, 1976; Goosens, 1980; Sedgewick, 1982; Engelhardt, 1986) believe that our uses of 'health' and 'disease' reflect value judgments. Healthy states are those states we desire, and diseased states are those states we want to avoid. Hybrid theorists (Reznek, 1987; Caplan, 1992; Wakefield, 1992) define 'health' and 'disease' by combining aspects of naturalism and normativism. Their aim is to provide an account of health and disease that captures the virtues but not the vices of naturalism and normativism.

As we shall see, all three approaches to defining 'health' and 'disease' are problematic. Naturalism does not satisfy its own desideratum of providing naturalistic definitions of 'health' and 'disease'. Normativism attempts but fails to capture how the terms 'health' and 'disease' are used by lay people and medical practitioners. The hybrid approach, like naturalism, incorrectly assumes that we can give a scientific account of the natural states of organisms. There is also a more systematic problem underlying the debate over defining 'health' and 'disease'. When discussing controversial medical cases, two factors are salient: the physiological or psychological states of patients, and the values we attach to those states. Naturalists focus on physiological and psychological states—whether an organ or system is normal or properly functioning. Normativists focus on whether a psychological or physiological state is valued or disvalued. The debate is regrettably polarized: naturalism and normativism each focus on only one of the two factors that are important when discussing medical cases. Hybrid theorists do consider both components, but they do so in an overly restrictive way. For the hybrid theorist, disease only occurs when a state is both dysfunctional and disvalued. As a result, the hybrid approach to 'health' and 'disease' too quickly shuts down the discussion of controversial cases.

We could keep looking for the correct definitions of 'health' and 'disease', but this paper advocates a different approach. Instead of trying to find the correct definitions of 'health' and 'disease' we should explicitly talk about the considerations that are central in medical discussions, namely *state descriptions* (descriptions of physiological or psychological states) and *normative claims* (claims about what states we value or disvalue). Using this distinction

E-mail address: ereshefs@ucalgary.ca

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avoids the problems facing the major approaches to defining 'health' and 'disease'. Furthermore, this distinction more clearly captures what matters in medical discussions.

2. Naturalism

Naturalism is the most prominent philosophical approach to defining 'health' and 'disease' (Boorse, 1976, 1977, 1997; Kendell, 1975; Scadding, 1990; Wachbroit, 1994a, 1994b) and Boorse's definitions are the most influential and well developed naturalist definitions. Many have criticized Boorse's approach (for example, Reznek, 1987; Wakefield, 1992; Amundson, 2000; Cooper, 2002). We will turn to some of those criticisms shortly. First let us look at Boorse's most recent account of health and disease:

(1) The *reference class* is a natural class of organisms of uniform functional design; specifically, an age group or a sex of a species.
(2) A *normal function* of a part or process within members of the reference class is a statistically typical contribution by it to their individual survival and reproduction.
(3) A *disease* is a type of internal state which is either an impairment of normal functional ability, i.e., a reduction of one or more functional abilities below typical efficiency, or a limitation on functional ability caused by the environment.
(4) *Health* is the absence of disease. (Boorse, 1997, pp. 7–8)

In (1) Boorse introduces the idea of a reference class. He wants to limit the application of normal function to classes smaller than entire species because what is normal for one class within a species may be abnormal for another class in that species. For instance, normal reproductive capability varies among different age classes of humans. According to (2), normal function is the statistically typical contribution an organ or mental system makes to an organism's biological fitness. For example, the normal function of the human liver is the statistically average contribution livers make to the fitness of individual humans. According the first disjunct of (3), a diseased liver is one that functions below the species-typical or reference class-typical mean. A liver that makes a contribution that is at the mean or higher is healthy. (3) also contains an environmental clause to address diseases that are statistically common, for example, dental cavities, gingivitis, acne, atherosclerosis, and lung irritation. These are diseases that occur in most humans or most humans in a reference class.

A number of objections have been launched against Boorse's account and against naturalism more generally. The most common objection is that naturalism does not properly reflect our use of the terms 'health' and 'disease' because naturalism neglects the role values play in determining whether someone is healthy or diseased (Goosens, 1980; Reznek, 1987; Wakefield, 1992; Murphy, 2006, 2008). A stock example used against naturalism is homosexuality. For much of the twentieth century, the American Psychiatric Association (APA) considered homosexuality a disease. Now it does not. The change in classifying homosexuality as a disease was not accompanied by a change in our medical knowledge of homosexuality. What changed, some argue, is whether or not homosexuality is a disvalued state by the APA. Another example, discussed by Murphy (2006), is evidence showing that a specific kind of brain lesion turns a patient into a gourmet. These lesions cause patients to have a strong desire for fine foods (Regard & Landis, 1997). Such brain lesions are dysfunctional brain tissue, nevertheless we do not consider this trauma a disease because we do not think that being a gourmet is harmful to the patient (Murphy, 2006, p. 25). Again, values play an essential role in determining whether a state is a disease state.

A naturalist can dig in his heels and respond to such cases. The naturalist can argue that how we commonly use the term 'disease' is not relevant; it is a theoretical term. A brain lesion is a disease regardless of whether or not we value the outcome because a brain lesion is an instance of biological dysfunction. In the case of homosexuality, the naturalist can say homosexuality never was a disease. The fact that some people changed their minds about whether homosexuality is a disease does not impugn naturalism. Instead of focusing on these sorts of criticisms, I want to focus on a more fundamental problem with naturalism. Naturalists attempt to provide definitions of 'health' and 'disease' that rely exclusively on information from the biological sciences. However, naturalism lacks a basis in biological theory. Thus, naturalism fails to satisfy its primary aim of being naturalistic.

Naturalist accounts assume that biological theory will tell us what the natural traits of humans are. For example, in describing the motivation behind his account Boorse (1997, p. 7) writes that 'To capture the modern extension of "disease", what seemed requisite was a modern explication of the ancient idea that the normal is the natural—that health is conformity to "species design"'. Elsewhere Boorse (1976, p. 62) writes that 'a disease is a type of internal state of an organism which ... interferes with the performance of some natural function'. For Boorse, species design and natural functions are the products of biology. And for Boorse, those natural traits are the statistically normal traits for our species. Here we see that Boorse is using two senses of normality: statistical normality and theoretical normality. Statistical normality is the numerical average state found among the members of a reference class. Theoretical normality refers to the natural or normal traits of the members of a reference class where those traits are identified by the relevant scientific theory. For Boorse, theoretical and statistical normality are supposed to line up: statistically normal traits are the theoretically normal or natural ones.

Let us start with the requirement of theoretical normality. Does biology tell us what are the natural traits for a species, population, or reference class? Boorse often talks of 'species design'. Biological taxonomy is the discipline that sorts organisms into species. Does it tell us what are the natural traits for the members of a species? As many argue, biological taxonomy does not identify any such traits (Hull, 1978; Sober, 1980; Ereshefsky, 2001). In biological taxonomy, species and other taxa are considered first and foremost genealogical entities. Membership in a species turns on having the proper genealogical connections to other members of that species, not qualitative similarity. The problem here for the naturalist is not mere variation. Naturalism can accommodate variation, so long as there is an underlying nature among the members of a species. However, the Darwinian view of species is that species are evolving lineages such that there is no specific qualitative design or nature an organism must have to be a member of a species. If the members of a species share any sort of common nature it is a historical one: sharing a common ancestry and a unique genealogical heritage. Historical connectedness is a far cry from the sort of intrinsic natures Boorse requires.

Sober (1980) makes a similar point concerning genetics. He argues that in genetics no particular traits (phenotypic or genotypic) are considered the natural ones for a population. Sober employs the Norm of Reaction from genetics to make this point. The Norm of Reaction charts an organism's phenotype given a certain genotype in various environments. For example, genetically identical corn seeds are placed in different soils and the resultant phenotypes are then plotted. According to Sober, the Norm of Reaction does not single out any particular phenotype as the natural one for a given species (or gender or age class). Each phenotype is just the result of a particular genotype developing in a particular environment. Similarly, no particular genes are viewed as the natural ones for a population. Genetics just tells us that given the