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VALUES, HEALTH, AND MEDICINE*

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This paper argues for the importance of approaching medicine, as a theoretical science, through values. The normative concepts of benefit and harm are held to provide a framework for the analysis of medicine which reflects the obligations of the doctor-patient relationship, suffices to define the key concept of medical relevance, yields a general necessary condition for the basic concepts of medicine, explains the role of such nonnormative conceptions as discomfort, dysfunction, and incapacity, and avoids the mistakes of other normative approaches which hold that unhealthy conditions are disvaluable or should be treated. Neutralist analyses are criticized, especially those approaching health through proper functioning.

1. Normativist versus Neutralist Analyses of Medicine. The philosophy of medicine has an important and distinctive contribution to make to the larger issue of what role values play in the analysis of science. Whereas methodologists have argued on general grounds that the evaluation of scientific hypotheses presupposes values or that programs for research incorporate values as a component, philosophers of medicine, such as Engelhardt and Margolis, suggest that the nature of medicine cannot properly be understood, not just as a professional practice but as a science, without values. Foundational concepts, such as health and disease, are held to be normative.

While there are broadly normativist and neutralist positions on the role of values in medicine, two separate issues have been insufficiently distinguished. One has been put variously as whether calling a condition unhealthy or a disease is in part to “condemn” it (Boorse 1975, p. 50), whether health can be defined in “nonevaluative” terms (Boorse 1975, p. 50), and whether diseases are not “desirable” or “ought not to be” (Engelhardt 1975, p. 127). Although none of these specific questions are equivalent, they raise a common issue. Does the application of concepts of medicine entail any normative claim? This issue is whether medical *concepts are normative*. An independent issue is whether the extension of a key medical term in any way

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depends upon the values of either societies or individual persons. This is the issue of *value relativity*. That a concept is normative does not entail value relativity, simply because the analysis may involve values which do not vary with persons or societies. Moreover, that concepts are nonnormative is consistent with value relativity. For example, suppose a neutralist holds that diseases are a form of biological maladaptation. Since adaptation is a relation between an organism and an environment and the values of a society are as much a part of an environment as topography, of course the explanation of why a condition is a disease may have to involve a reference to values. Still, diseases then vary with values only because values contingently connect to concepts which are nonnormative. Another issue about value relativity is whether a proper analysis of medical concepts should entail (rather than just allow) that diseases vary with the values of persons or societies. One possible position, combining both normativism and conceptualism, would be that the right analysis of disease must entail both a normative claim and value relativity.

A recent paper by Whitbeck (1978) illustrates the danger of confusing these issues. She claims to argue that, contrary to Boorse, medical concepts are "value-laden", and to give an account of the "normative component" in the concepts (p. 210). But her definitions are then framed in terms of incapacities and what persons "wish", "want", "expect", and "hope", none of which are normative concepts! Since they simply empirically describe the states of persons, the analyses proposed are neutral, not normative. The source of her confusion is probably that wants and wishes do duty for valuing. Very loosely, the analysis of the medical concepts then involves values. But for the concepts to be normative, their analysis must *use* normative concepts, whereas a claim about what persons value at best *mentions* values. That the values persons actually hold need to be mentioned commits Whitbeck conceptually to value relativity, but the analyzed concepts are no more normative than a business term defined by consumer preferences.

Since the issue of value relativity can be answered only with some understanding of medical terms, this paper focuses on the prior question of how values figure in the analysis of medical concepts, approaching the debate between normativism and neutralism by considering not so much specific terms like "health" and "disease" as the functional role these kinds of terms have in medicine. Although we shall favor a normativist analysis, both camps will be criticized. A central conceptual thesis of normativists is that unhealthy conditions (or more narrowly, disease) are in some sense disvaluable. But advocated versions of this thesis are untenable, and a considerably more sophisti-

cated account is needed of how health could connect to values. We shall argue broadly against neutralists, but center the attack on approaching health through functioning. To anticipate, while proper functioning may be a concept fundamental to physiology, medicine in contradistinction requires the superimposition of normative concepts of benefit and harm which cut across, override, and explain the relevance of nonnormative considerations.

2. Difficulties with the Disvaluation Thesis. Engelhardt has proclaimed that “Health and disease are normative as well as descriptive” (1975, p. 125). The fundamental reason is that being diseased “indicates a state of affairs as undesirable and to be overcome. It is a normative concept; it says what ought not to be. As such, the concept incorporates criteria of evaluation, designating certain states of affairs as desirable and others as not so” (p. 127). Briefly, diseases are disvaluable.¹ This *disvaluation thesis* is presumably not empirical, but a consequence of a proper understanding of the term “disease.”

The disvaluation thesis must contend with the fact that diseases can have benefits. For example, epilepsy might confer the benefits of esteem and wealth in a society believing its victims to be gods. Even improved health can be a result of disease. Cowpox remained a disease even when the immunity it gave to smallpox made it beneficial. While the existence of benefits refutes some ways of construing the disvaluation thesis, a defender might well respond as follows.

The disvaluation thesis does not deny that a disease can have any benefits, nor does it require that the benefits can never compensate for drawbacks. Faced with the option of having a disease or not, to hold that having it was never preferable would be tantamount to the fantastic claim that the unhealth of a disease overrode all other values. The thesis is not that a disease is always on the balance disvaluable, but only that each disease involves something disvaluable, in order to be a disease at all. The point is then that diseases must have compensations in order to be desirable. So explained, the disvaluation thesis may seem to be defensible, yet it must contend

¹This ignores Engelhardt’s comments using “ought” in favor of those about desirability. To claim that some diseases ought not be makes sense as a sad comment on the waste and irresponsibility of persons when, for example, diseases are due to ignorance, negligence, or foolishness, as in the case of cancer from smoking or cirrhosis from drinking, or when diseases could be prevented, as with vaccines for smallpox or diphtheria. But what it even means to say that multiple sclerosis or influenza “ought” not exist, when there is no failure of responsibility, I do not know.

with a more penetrating argument that there can be cases of a disease with nothing disvaluable.²

The body can be divided into subsystems, such as the nervous and digestive systems, where the parts contribute to a common goal. One standard kind of disease is produced by an invasion of a foreign microorganism which disrupts the functioning system. While many infectious diseases, such as malaria and pneumonia, interfere broadly with the ability of persons to engage in daily activities, there is no limit in principle to how confined the disruption can be, depending on the uniqueness of the biosynthetic pathways involved. Where the impairment is only in an area in which the "victim" suffers no loss, we have a case of a disease with nothing disvaluable. For a plausible kind of example, the fact that many persons use physical, surgical, or chemical means for birth control shows that they value not reproducing themselves. Many simply regret postponing reproduction, but for some there may be nothing valuable about having babies. But the means employed have some drawbacks, including side effects detrimental to health, monetary costs, and interference with the pleasure of copulation. In contrast, a "natural" infectious sterility could be free, leave the pleasures of sex unaffected, and have no other effect. Sterility is definitely a medical condition, and cures would be sought. Nonetheless, for some persons, having the disease is rightly valued without there being anything about the condition which requires compensation.

3. What the Difficulties Show. Neutralists, like Boorse, would like to conclude from the above argument that considerations of disease can sometimes be totally separated from questions of value. The functioning of the parts is a question for biology, and at least one sufficient condition for being diseased is that functioning be impaired by means of infection. As we shall show in section 5, these conclusions are unwarranted. But the points that there is no general connection between disease and values on the level of net desirability and that not every case of a disease need have something disvaluable, refute ways in which normativists have tried to connect health and values.

The previous argument is even more decisive against a related normativist thesis that the concept of disease has a connection to action. Engelhardt especially has pushed this line, claiming that the

²The argument that follows expands on some suggestions by Boorse (1975, p. 53) that a disease may be on the balance desirable, and that a disease with infertility as its sole effect would not even be *prima facie* undesirable.

“concept of disease acts not only to describe and explain, but also to enjoin to action” (Engelhardt 1975, p. 127). Also, “Choosing to call a set of phenomena a disease involves a commitment to medical intervention” (p. 137). And finally, “Disease concepts are . . . pragmatic concepts whose truth is found in action directed to the elimination of illness and toward the establishment of health” (p. 138). Whether Engelhardt intends there to be some relationship between the disvaluation and this *intervention thesis*, is not clear. Regardless, any such thesis connecting disease to action is not just intellectually mistaken but dangerously presumptive. Even granting that medical concepts are normative, the existence of values other than medical ones undermines a connection to action. Nothing can be said about intervention without considering effects on a person’s standard of living, interpersonal commitments, and aspirations. Commitment to action should be based on an overall consideration of values, probabilities, and consequences. If the medical profession is committed to intervention, then, when having a disease is preferable, the profession is actually a threat to the best interests of its patients.

The idea that the concept of disease is connected to action is allied with the view that medicine has the practical goal of treating and preventing disease. Margolis, for example, has claimed that there is a sense in which “medicine is primarily an art and dependently a science: it is primarily an institutionalized service concerned with care and cure of the ill and the control of disease, in facilitating which certain purely descriptive and causal inquires are pursued” (1976, p. 242). Wartofsky likewise favorably considers the view that “the object of medical theory and practice is treatment of disease” (1975, p. 69). My disagreement with these claims is not over the importance of the fact that medicine is a service, but with the characterization of the goal of medicine. As will be argued, the goal of medicine allows concerns beyond health and even against it. But the fatal objection against binding the goal to treatment is the point that diseases can be beneficial. Consequently, one cannot hold that the goal of medicine is to treat disease and that the goal is rational. Either medicine is blindly bent on curing disease, oblivious to other consequences, or medicine serves the best interests of its patients, but not both. Medicine may even have distinctive values, but surely the goal of medicine does not ignore values not distinctive.

The normativist may reply that this criticism mistakenly thinks that a genuine commitment cannot be overridden. Commitments can conflict and be resolved, so that there is *a* commitment to intervention does not deny recognition of other, even more important commitments. But the criticism does not rest on this mistake. When a person

inadvertently makes promises not all of which he can possibly keep, his action breaks one of his commitments. The normativists cited would have it that, as a medical practitioner, one is committed to oppose disease. This view has two false consequences. First, when a doctor decides not to treat or even to induce disease, he thereby breaks some commitment. Contrary to this, inducement of desirable disease breaks none. Instead, the decision to treat and not to treat both follow from the same single commitment medicine genuinely has. The second mistaken consequence is that a doctor, in order to override his commitment to cure disease, must step outside his role as doctor, finding some higher commitment outside medicine. While medicine has a local expertise about how states of a person bear on his life, its practical goal is not correspondingly local but rather to serve humanity. Thus I reject not just as false, but as misguided, any analysis of medicine which attributes to it commitments which conflict with serving the best interests of patients. There is just no theoretical presumption that, because a condition is unhealthy or a disease, it should be treated. At most medicine has a conditional commitment to treat disease, when it harms the patient. But when it does not, there is no commitment to treat.

4. A Normative Approach to Medicine. One major intuition behind normativism is that medicine is preeminently a practice, and that treatment makes no sense unless what is changed or prevented is disvaluable. But, as argued in the two previous sections, this intuition cannot be converted into a disvaluation or intervention thesis about diseased or unhealthy conditions, chiefly because the required premise cannot be made good that all such conditions need treatment. Thus far we have roundly criticized normativist theses in ways neutralists could. But on the issue of the dispensability of values for explaining medicine, we part ways, for reasons basic to normativism.

Medicine is founded on an interaction in which one person seeks the aid of another. The nature of this interpersonal relationship makes the person giving the aid have the special obligation to consider the best interests of the person seeking the aid. Unlike a prostitute or cab driver, the doctor does not merely do the bidding of another, but initiates advice and responses, and even paternalistically intervenes in the lives of persons. And unlike tax consultants, where concern for the advisee is limited, there to financial well-being, the doctor should look unrestrictedly at general well-being. Many balk at this last claim, suggesting instead that doctors are concerned more narrowly with health. I have already broached part of my reason for disagreeing with this proposal. Doctors may have a special knowledge about health,

but their concern is with how this bears on well-being. Otherwise medicine is a provincial threat to well-being. But the main reason is that concern with well-being answers both a need and a unique opportunity. No problem of the patient is isolated from his life as a whole. He wants and needs advice as it affects his entire well-being. All consultation turned into a profession has an obligation to cultivate an expertise which makes the advice more likely to be good, and the expertise distinguishing the medical profession is about the workings of the mind and body. To stop the concern with health is to deny that there is a further goal explaining why doctors are concerned with the effects of mind and body on health. Only the medical profession has the scientific knowledge of the workings of mind and body. Therefore the patients not only need their well-being to be considered, but no other group is in as good a position as doctors to consider it. For doctors not to concern themselves with how the workings of mind and body affect general well-being is to leave this task to those less qualified, and to knowingly harm their patients as a whole by their "professional" stance.

When people come to you in need, you do what you can. This simple humanitarian concern is part of what forces medicine beyond health, since the states of mind and body have an impact on well-being other than through just health. This is why medicine corrects grotesque noses, flattens bellies, and straightens and whitens teeth. That the treatments are for the health (usually mental) of the patient, while sometimes true, is a flimsy and unnecessary rationalization. The sound theoretical rationale is directly to further the well-being of the patient (financial in the case of entertainers). This branch of medicine has a low reputation not because going beyond health is theoretically unjustified, but because many unscrupulous doctors ignore the obligation to consider the patient's true interests and merely, like prostitutes, do nearly whatever the clients are willing to pay for.

The very point of recognizing certain mental and physical states as medically significant is that they have an effect on well-being, either to benefit or harm.³ Persons seek aid partly because they believe states to be disvaluable, and the concepts of medicine arise from, respond to, and have their content fixed by this kind of interaction. Concepts of language do not arise in a vacuum, but respond to concrete human needs. Categories mediating the interaction between patient and doctor, like "disease", "injury", "sick", and "health", do not make functional sense unless there is some connection to benefit

³For an excellent analysis of the role concepts of well-being, benefit, and harm play in ethics in general, see von Wright (1963).

and harm. Since medicine naturally responds to pressing needs, most key medical concepts are negative and connect to harm.

Together, the nature of medicine and the nature of language make normativism extremely attractive, though not necessarily right, as a program for the analysis of medicine. Why, then, do particular normativist theses fare so poorly? One reason is that the right normative concepts have not been deployed, but the main reason is that there has been a too limited conception of how medical concepts could connect to normative ones. Some diseases, like arthritis, harm by their very presence. Others, like arteriosclerosis and the inability to make some kinds of antibodies, may produce no actual harm, but raise the probability of being harmed. Yet others, like tumors, may be dangerous for what they can lead to. What connects these medically significant conditions to well-being, however, is that they are *some threat* to well-being.

Let us unpack this proposed analysis of the normative connection by explaining how it is not subject to the difficulties of the other disvaluation theses. First, *some threat*. This allows positive contributions to well-being, and leaves open the relative proportions of harm and benefit. Second, *threat*. Threats need not produce any actual harm. Clouds threaten picnics even when no rain occurs. Moreover, to be a threat to persons in general does not require that most persons be threatened, much less every person. Medicine, since it treats individuals, is concerned with how states of a person threaten anyone, so that threatening some is enough to constitute a threat. Infectious sterility, for example, is a disease partly because of the harm it does to some persons. The same condition in others, including those for whom it is only advantageous, is still a disease. Consistent with the fact that a disease may in cases have no disadvantageous facet, the threat of a disease applies to the potential patients as a collective, and need not apply through each case of the disease.

To head off potential misunderstandings, let me make it clear what I am not proposing. The position here is normative in that no analysis of negative medical concepts is held to be correct unless it entails a connection to harm. Nothing is thereby proposed about the taxonomy of these concepts. How threats are medically classified as unhealthy conditions, diseases, or injuries, or none of these, is left open. Being a threat to well-being is proposed broadly as a necessary condition for negative medical concepts, but not as a sufficient condition for any particular one.

Even this limited proposal shows a fundamental flaw in Whitbeck's approach to basic medical concepts, which analyzes them in terms of what persons "wish" to be able to prevent or terminate because

of interference with what they “want” or “expect” to do (Whitbeck 1978). Persons’ wishes can be unwise, and at best are based on limited knowledge of what harms and benefits them. But what defines diseases are true benefits and harms. Whitbeck’s analysis therefore is closer to being a definition of belief than truth about what, for example, a disease is.⁴

This proposal readily avoids the problems Boorse (1975, 1977) cites against approaching medical concepts through values. The sound premises on which Boorse’s objections are based are that many detrimental states are not recognized as kinds of corruptions of health, and that having a corruption of health can sometimes be desirable. The first shows that being harmful is not sufficient for being a corruption of health, and the second shows that it is not necessary. Using “disease” to stand generically for what all is opposed to health, Boorse concludes that it “remains to be seen how values can enter into the concept of disease, let alone constitute the whole of it” (1977, p. 545).

The chief flaw in Boorse’s criticism is its limited view of how one concept can conceptually connect to another. Being harmful is not the only possible connection, so Boorse fails to overturn the thesis that a condition is a disease only because of its connection to harm when he does show that not all and only harmful conditions are diseases. Since our proposal is only for a necessary condition to being unhealthy, Boorse’s objection to sufficiency is irrelevant, and since our specific proposal for a necessary condition (being a threat to well-being) does not entail actual harm, Boorse’s objection to necessity does not apply. But this formally correct reply to Boorse is too quick. We need to consider whether the ideas in Boorse’s criticism could be adapted against our analysis.

Behind Boorse’s objection to sufficiency is a query that merits reply. Conditions whose adverse effects on well-being are minor, such as the presence of warts, are recognized kinds of ailments. Yet many conditions of the body that do far more harm seem not to be recognized as specific ailments at all, such as shortness and the inability of the body to manufacture some compounds essential to health, including some vitamins and proteins. In addition, some conditions that cause pain and threaten not just the health but the life of a person, are not counted as diseases, such as pregnancy.

⁴Another fault with Whitbeck’s approach is that she tries to force the liabilities of disease into incapacities to act. Both clauses are wrong. Against incapacities in general, see section 6 of this paper. Against incapacities to act, consider that diseases damaging part of a redundant system can leave unchanged what the person can do.

If well-being is the general concern of medicine, why is there this differential classification of conditions?

An answer to this query is important for understanding specific terms, like “disease”, but, again, this paper is concerned less with how medically relevant conditions are classified than with what makes classifications medically relevant categories. Still, at the level of general medical significance, there is a challenge. Since having benefit or harm is here taken to be not just necessary but sufficient for being medically significant, conditions ought then to be graded for at least theoretical significance by degree of harm or benefit, and each benefit and harm ought to find some place among medical categories. Let us then examine the cases given of harms to see whether they undermine our position. Pregnancy is the easiest case to handle. The pressure to see a doctor, the monitoring of the mother’s condition, and the frequency of visits, for not just the sake of the baby but the mother, show that pregnancy is highly medically significant and appreciably risky. As for the universal inability of a species to produce essential nutriment, the threat of harm is that it allows a host of diet deficiency diseases. The inability is highly significant to preventative medicine, and certainly would be an acknowledged fault which might motivate, for example, research in genetic manipulation to alter our intestinal bacteria so as to give off the desired nutriment as a waste product. I see no theoretical difference between beneficial abilities never had by a species and those lost by individuals, only a practical one. Restoring beneficial abilities is generally far easier than creating them. The moment a newly created beneficial ability became available, persons without the “treatment” would be considered as lacking something. As for shortness, I accept the consequence that evidence of harm argues for medical treatment, just as extreme cases of gigantism and dwarfism are treated. The trouble with the evidence for harm is that it is statistical, and doctors treat individuals, not statistics. Like the Supreme Court on discrimination cases, doctors want evidence that the particular petitioner is threatened, when some persons of the same stature seem not to be. In addition, one needs to know to what extent harm is self inflicted through one’s own attitudes. Although I doubt it, coping with shortness, overcoming its handicaps, and striving to reduce its frequency could be goals deserving the allocation of limited medical resources.

The disvaluation thesis that does survive scrutiny shows why no intervention thesis is true. Threats do not justify any action, though of course precautions or corrective actions can be called for. The most that follows is that the threat should be recognized, and risks of possible harm be considered when making decisions. The commit-

ment of the medical profession to further well-being leads it to recognize threats, but this commitment can be served sometimes by not intervening, and doctors have the obligation to consider whether in each case unhealthy or diseased conditions are beneficial. But without a connection to the normative concepts of benefit and harm through threat, a condition cannot be unhealthy at all.

5. A Critique of Neutralist Approaches. Neutralism, as a rival to normativism, approaches medicine with only nonnormative concepts. Neutralism is neither useless nor entirely misguided, for underlying each threat to well-being considered by medicine are states which can be nonnormatively described and whose causal effects are responsible for the threat. Consequently, at some level of specificity, threats to well-being can be nonnormatively characterized as the presence of a certain kind of state. Thus, it might be that arteriosclerosis is the hardening and narrowing of the arteries, or that German measles is an infection by some specific organism, or that paranoia is a false and delusive belief in persecution. A worthy form of inquiry for each specific medical category is to see whether, considering all of the neutralist descriptions for each instance to which the category applies, there is any common way to characterize all of those instances. By pursuing this line of inquiry through increasingly general medical concepts, one might discover that diseases are dysfunctions, incapacities, or whatever. Even the normativist concedes the value and truth of such accounts as a characterization of the kind of states which causally underlie these concepts, but not as a correct conceptual analysis.

Normativists hold in general that a necessary condition for medical concepts is some connection to values. For the same reason that if kidneys are just whatever performs a certain function, we should expect over species a great variation in the matter and structure of kidneys, we ought to expect that the nonnormative states underlying medical concepts to be complex, if these states are basically means by which connections to values are realized. What threatens the well-being of persons varies with their internal physical states, the environment, and their goals and aspirations. Of course, it is possible that there be a simple underlying basis. The normativist then relies on possible cases, arguing always that the normative connection is the first factor guiding what the medical concepts apply to.

To show how nonnormative approaches go astray, let us take on the General Motors of neutralism. The most widely endorsed approach to the analysis of health is based on the concept of functioning. Certainly knowledge of functioning is important to medical practice,

simply because most negative medical conditions threaten their victims through disruption of functions. But, because there is no conceptual connection between proper functioning and benefit and harm, this approach is radically wrong for foundational analysis.

The theoretical independence between values and functioning is a consequence of the nature of the process of natural selection responsible for the functions of bodily parts. Natural selection influences the frequency of genes over generations. The fitness or selective value⁵ of a gene solely concerns its reproductive effect, and the individual's survival and adaptation to its environment are components of selective value only insofar as they contribute to reproduction.⁶ Part of the significance of having a heritage of natural selection is then that one's parts have an overarching role of continuing the individual's lineage. The most dramatic confirmation of this fact is the existence of a specialized reproductive system, which is not generally an adaptation of the individual to his environment. Reproducing oneself not only requires a large expenditure of resources but often lessens the individual's adaptation.

The individual's disposition to contribute genes to future generations must be sharply distinguished from the interests of the individual, and subjugation of the individual's interest to his reproduction is amply evident in biology. The female octopus, for example, guards the eggs she lays to the point of drastically reducing her intake of food and dies of starvation about ten days after the eggs hatch. The males of some species of salmon develop a hooked jaw used in competition for females but which makes them unable to eat. The vicious degenerative death many species of salmon undergo upon spawning is genetically controlled and favored by selection.⁷ Mothering

⁵ Unfortunately the term "value" in the context of "selective value" is too entrenched to avoid. Of course, it has nothing to do with the values relevant to normativism.

⁶ Confer Williams (1966, pp. 22–27). This fine book soundly argues that not every beneficial effect of a functioning system should be counted as a part of its function. I argue further that functions may have nothing to do with benefits to the individual.

⁷ That conditions like dying have selective value is not without controversy in biology (see Williams 1966, pp. 26–7, 225–8). It is not enough that selection maintain the detriment. Genes usually have a combination of advantages and detriments, but are selected for their net effect and in spite of their detriments. What is clearly true is that what is detrimental to selective value requires some compensation. But not all that has value to an organism figures in selective value. Nor do I think that Williams is biologically right that threats to the individual's survival are always a selective detriment and so are always regrettable side effects (p. 27). Suppose an insect puts dead food in a cocoon for its young to eat when they hatch, and that the young can eat only decayed flesh. Now, suppose a gene arose that had the mother die to provide food for her young if she had none when the eggs were laid. The gene would have selective value because of death, not in spite of it. The important theoretical

animals are notorious for the extra risks they will take to protect their young. The general point is that what furthers the individual's lineage may work against its own interests. Nature favors the adaptation and survival of the individual only as a part of maximizing reproductive potential, and in fact sacrifices the individual's interests to the individual's reproduction. The probability that the biological end of reproduction conflicts with the individual's best interests only increases for reflective species, capable of conceiving and pursuing their own goals, such as intellectual research, artistic creation, hedonistic pleasure, and competitive sports. An individual could believe himself to have no interest in reproduction at all and could rightly value not reproducing. And since evolution does not maximize either environmental adaptation or the interests of the individual, but nevertheless equips the individual with the physiological systems he possesses, there are sound theoretical grounds for an individual to disvalue the functioning of his biological parts.⁸

Suppose in an intelligent and reflective species a structure evolved which, about twenty years after sexual maturity, altered the immunological system so that blood cells destructively attacked the membrane of the brain. The individuals, let us suppose, suffer greatly and eventually die. Surely they die of a hideous genetic disease, whose only distinction from others is its timing, latency, and frequency. It makes no difference to this judgment if we add that the condition was spread by natural selection and that it continues to promote the reproduction of the individual and even the survival of the species. The normal functioning of the bodily parts can then be a disease because of the harm produced to the individual. Likewise, if the function of a hormone is to regulate the rate of aging, the disruption of this function, say by infection or drugs, would not be a disease if its effect were only to extend a robust life by delaying a normal rapid acceleration of aging. Or suppose that the reflective species, in order to reproduce, had to undergo an irreversible metamorphosis into a sluglike creature. Each of these genetically induced conditions could as well be produced by disruption of functioning, say through chromosome damage or diet deficiency. We might even imagine that the reflective species subject to these bodily afflictions has no knowledge of how or why they are produced. Whether they are

point is that selective value is logically independent of what is good for the individual. The only "survival" natural selection promotes is reproductive, and a loss in individual survival may or may not be a loss in selective value.

⁸I could not disagree more with the claim of Boorse (1977, p. 550) that the "mode of internal functioning typical of our species, by definition typical, has by natural selection given us abilities adapted to a way of life in our environment that we value."

produced by functioning or dysfunctioning should not and would not make any difference in the basic assessment or response of the medical profession to these afflictions.

The functionalist position also has the objectionable consequence that whether a condition is a disease depends not solely on the state of the world at the time the condition exists, but on the past history of the world. To illustrate, suppose a step in a chemical reaction is controlled by a gene, and part of the function of the organ in which the reaction takes place is to make the products of the reaction. When that gene first arose, say by mutation, the process occurred in the organ fortuitously and not by any design. So the process had beneficial effects but no function, and the disruption of the process produced no form of ill health. But, when that exact process proved to have selective value and as a result was incorporated into the species design, the process became a function and disruption became a disease. On the functionalist view, then, how a condition became fixed in a population matters whether its disruption is counted as unhealthy. If by some improbable coincidence, the gene were simultaneously and fortuitously fixed into the population, disruption is irrelevant to health, but if the identical condition were produced by generations of selection, disruption is unhealthy.

The past is not the only thing extraneous to health that functionalism makes relevant. Medicine serves not the species nor the individual's lineage, but the individual patient. Others are relevant only because they influence how the patient's state affects his well-being. Accounts that define health in terms of comparison to others (e.g. by normality) fail to allot supremacy to the individual. The concepts that define health should make sense applied to the individual, considered alone, as do the notions of benefit and harm. But the biological parts which the individual inherits (rather than creates) have functions only in virtue of contributing to some design for a population, with the result, as we have seen, that so-called health is allowed to jeopardize even the individual's survival.

6. Prospects. Failure of the functionalist approach to medicine no more condemns neutralism than cutting a head of a hydra kills it. Neutralism has indefinite resources to draw upon, including concepts of pain, maladaptation, and incapacity. But no matter what resources are deployed, two flaws will not be eliminated.

The potential means by which states of an organism can harm it are as indefinite as the neutralist's resources, so that a neutralist analysis will not exhaust the forms of harm. Neutralist positions will never succeed in finding a condition conceptually necessary for

negative medical relevance in general, nor for unhealth or disease. For example, not everything valuable can be construed as adaptive. Activities like playing chess or proving theorems in set theory have an excellence, but doing them well may be adaptively neutral. Yet persons keenly engage in them and even stake their happiness on them. Because of the value persons invest in them,⁹ infectious impairment of these abilities should count as a disease, even if it leaves unaffected both adaptation and the functional goals for which the affected parts were selected. Likewise, harms like pain are independent of capacity to act.

Since the means for benefits are likewise indefinite, the neutralist, if he proposes a sufficient condition for some negative medical concept, may well include wholly beneficial conditions that serve the overarching interest the individual has in living well. To illustrate, impairment of a capacity may not be harmful. A parasite, for example, would have its interests greatly enhanced by losing the capacity to exterminate all of its potential hosts. As evolution shows, genetic fixation of behavior, reducing the capacity of organisms to react, can promote adaptation and survival.

Our general objections to neutralism ultimately reflect the truism that nonnormative concepts cannot substitute for normative ones. As long as we look at the afflictions of patients nonnormatively, we find a puzzling diversity and no natural kinds. Just as pain is a form of affliction, so is the surest freedom from pain, namely the inability to feel it. We find not just discomforts, maladaptations, dysfunctions, and incapacities, but opposites of these. But, augmented by the concept of what is good and bad for individuals, a unified explanation can be given of the medical relevance of all of these nonnormative factors. As we have tried to argue, anything less fails the needs of the patients which medicine ultimately serves.

REFERENCES

- Boorse, C. (1975) "On the Distinction Between Disease and Illness" *Philosophy and Public Affairs* 5: 69–89.
 Boorse, C. (1977) "Health as a Theoretical Concept" *Philosophy of Science* 44: 542–73.
 Engelhardt, H. T., Jr. (1975) "The Concepts of Health and Disease" in *Evaluation*

⁹I do not hold that the mere act of taking something to be a goal makes contributing to the goal beneficial. Persons can have goals whose satisfaction does not benefit them. Still, benefits do partly vary with goals, which, incidentally, is one way value relativity is true. Engelhardt (1976, pp. 264–67), in response to Boorse (1975), has held that values attach to disease through the individual, and I concur strongly. But Engelhardt claims that being a disease is relative to value judgments of individuals, which is not exactly right. Believing a condition to be a disease can be relative to judgments, but being a disease is relative not to judgment but to harm.

- and Explanation in the Biomedical Sciences* (ed. H. T. Engelhardt and S. F. Spicker.) Reidel: Dordrecht, Holland. Pages 125-42.
- Engelhardt, H. T., Jr. (1976) "Ideology and Etiology" *Journal of Medicine and Philosophy* 1: 256-68.
- Margolis, J. (1976) "The Concept of Disease" *Journal of Medicine and Philosophy* 1: 238-55.
- Wartofsky, M. W. (1975) "Organs, Organisms and Disease: Human Ontology and Medical Practice" in *Evaluation and Explanation in the Biomedical Sciences* (ed. H. T. Engelhardt and S. F. Spicker.) Reidel: Dordrecht, Holland. Pages 67-84.
- Whitbeck, C. (1978) "Four Basic Concepts of Medical Science" in *Proceedings of the 1978 Biennial Meeting of the Philosophy of Science Association*, vol. 1, (ed. P. D. Asquith and I. Hacking.) Philosophy of Science Association: East Lansing, Michigan. Pages 210-22.
- Williams, G. C. (1966) *Adaptation and Natural Selection*. Princeton University Press: Princeton, N.J.
- Wright, G. H. von (1963) *The Varieties of Goodness*. Routledge & Kegan Paul: London.