

Does the Human Right to Health Include a Right to Biomedical Enhancement?

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Biography

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Abstract

If we grant that there is a human right to health then we are committed to a human right to biomedical enhancement. In particular, I argue that the human right to health should be interpreted to include biomedical enhancements within its scope in the sense that there is a limited liberty right to pursue biomedical enhancements and a rights-based justification for limited entitlements to biomedical enhancements. I begin with a discussion of the human right to health in international law and practice and assume for the sake of argument that the legal human right to health is morally justified. After discussing the human right to health in international law, I argue that the underlying functions that we value when we value health are scalar and do not provide a threshold between therapy and enhancement. I go on to consider various principles philosophers and policy analysts have used to apply the human right to health equitably. None of principles provides a threshold between therapy and enhancement. I end by suggesting that if there is a moral human right to health it too must include biomedical enhancements within its scope.

Keywords

Biomedical Enhancement, Health, Human Rights, Right to Health

Introduction

Much of the work on human rights and biomedical enhancement has argued that various aspects of biomedical enhancement pose dangers that require the protection of human rights or even that human rights themselves are threatened by biomedical enhancements. George Annas et al, for example, argue that there should be an international treaty prohibiting germ-line genetic engineering (Annas, Andrews and Isasi 2002, 151-178). Article 13 of the European Council's Convention on Human Rights and Biomedicine states, "An intervention seeking to modify the human genome may only be undertaken for preventive, diagnostic or therapeutic purposes and only if its aim is not to introduce any modification in the genome of any descendants" (European Council 1999). Notwithstanding such skepticism about biomedical enhancement, I argue that biomedical enhancement falls with the scope of the human right to health. If we grant the human right to health, then we are committed to a human right to biomedical enhancement. In particular, I argue that the human right to health should be interpreted

to include biomedical enhancements within its scope in the sense that there is a limited liberty right to pursue biomedical enhancements and a rights-based justification for limited entitlements to biomedical enhancements.

The right to biomedical enhancement is a limited right. It is certainly true that biomedical enhancement could be used in ways that violate human rights, but this is true of a variety of human rights. Important activities protected by human rights such as speech, religion, and participation in government can be used to violate rights. The human rights that protect such activities need to be limited and balanced with other rights. This is no less true of the human right to biomedical enhancement.

I begin with a discussion of the human right to health in international law and practice and assume for the sake of argument that the legal right to health is morally justified. It is worthwhile beginning with international law because of the degree to which a right to health has been worked out and put into practice by international organizations such as the World Health Organization (WHO). After discussing the right to health in international law, I argue that the underlying functions that we value when we value health are scalar and do not provide a threshold between therapy and enhancement. I go on to consider various principles philosophers and policy analysts have used to apply the human right to health equitably. None of principles provides a threshold between therapy and enhancement. Although I do not assume that the legal human right to health mirrors a moral human right to health or even that there is a moral human right to health, I end by suggesting that if there is a moral human right to health it too must include biomedical enhancements within its scope. In the end, we are better off considering biomedical interventions on a case-by-case basis without worrying about whether the intervention is therapy or enhancement.

The Right to Health in International Law

Article 12.1 of the International Covenant on Economic, Social, and Cultural Rights (ICESCR) provides for "...the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" (UN General Assembly 1966b). The human right to health is a complex right with several component rights that present different challenges for financing health care and limiting the scope of the general right to health. These component rights include a liberty right to pursue health, a socioeconomic right to guaranteed access to health-related goods and services, and a right not to be subject to discrimination on grounds of race, ethnicity, gender, religion, or national origin in the

distribution of health-related goods and services. The component rights can be partially understood in terms of the corresponding duties they impose on states.

For the interpretation of Article 12 it is helpful to turn to General Comment 14 of the UN Committee on Economic Social and Cultural Rights as well as various UN resolutions and declarations.¹ General Comment 14, which has been particularly influential, provides that states have duties to respect, protect and fulfill the right to health (CESCR 2000, Paragraphs 33-37). States have a duty to respect the right to health in part by not interfering with attempts by individuals to provide for their health. In addition, states have a duty to protect individuals from coercive interference with the enjoyment of the right to health by third parties. These duties create a liberty right to pursue one's health. In this regard, General Comment 14 states, "The right to health contains both freedoms and entitlements. The freedoms include the right to control one's health and body..." (CESCR 2000, Paragraph 8).

The duty to fulfill the right to health requires states to ensure access to health services, and this threatens to create enormous budgetary pressure. Fortunately General Comment 14 takes account of this and distinguishes two sorts of duty regarding the fulfillment of the right to health. States have a core obligation to ensure primary health care, including the provision of adequate food to prevent hunger, adequate shelter, essential drugs as defined by WHO, immunization against common childhood diseases, and safe water regardless of budgetary constraints (CESCR 2000, Paragraphs 43-44). States cannot justify non-compliance with these core obligations on financial grounds (CESCR 2000, Paragraph 47). Beyond this basic duty states under budgetary pressure are to progressively realize the fulfillment of the right to health. It creates, in effect, a goal that states are obligated to pursue within reasonable budgetary constraints.

Article 12 of the ICESCR does not spell out what is meant by health, and we need to turn to documents such as the Alma Ata Declaration, the World Health Organization Constitution, and General Comment No. 14. These documents provide two characterizations of health. The broadest and most controversial is the WHO definition, which defines health in terms of complete physical, psychological, and social wellbeing (WHO 1946). The WHO definition gained influence when it was codified in the Alma

^{1.} While the general comments of UN treaty committees, resolutions and declarations are not binding international law they do carry legal weight because they are often cited by lawyers in international tribunals and influence adjudication and state practice as well as the practice of UN agencies such as the WHO. They can also evolve into international customary law as they are adopted by state practice and acknowledged at least implicitly by states as legally authoritative. As a result, these instruments are often referred to as soft law, as opposed to binding international law (Blake 2008).

Ata Declaration, which was adopted shortly after the ICESCR went into effect (WHO 1978, Article 1). A second approach is exemplified by General Comment 14, which notes that Article 12 of the ICESCR did not adopt the WHO definition (CESCR 2000, Paragraph 4). Although General Comment 14 does not give a specific definition of health, its explanation of what counts as a violation of the duty of states to respect the right to health makes it clear that health should be characterized in terms of preventing bodily harm and unnecessary morbidity and mortality. Paragraph 50 of General Comment 14 states, "Violations of the obligation to respect [the human right to health] are those State actions, policies or laws that contravene the standards set out in article 12 of the Covenant and are likely to result in bodily harm, unnecessary morbidity and preventable mortality" (CESCR 2000).

The Value of Health and Biomedical Enhancements

It is unfortunate that the meaning of "health" is not spelled out more clearly because whether the human right to health provides for entitlements to bioimedical enhancements and a liberty right to pursue enhancements depends on how health is characterized. If one follows ordinary usage and regards health as the absence of disease, disability and psychological disorder (i.e., the absence of pathology), then it is obvious that the scope of the human right to health does not include biomedical enhancements.² Enhancements by definition go beyond what is necessary to cure or prevent disease and disorder. This is also true of Norman Daniels' characterization of health as species typical functioning (Daniels [1985] 2008, 37). Enhancements aim at improvement over species typical functioning or normality.

If, on the other hand, the WHO definition of health is adopted, there is a straightforward argument for including biomedical enhancements within the scope of the right to health. Since, on the WHO definition, the human right to health protects complete physical, mental and social wellbeing, it clearly includes enhancements. This is true whether one adopts an objective list account of wellbeing or a subjective account. Subjective accounts of wellbeing characterize wellbeing in terms of mental states such as satisfied preferences or pleasurable states. If the right to health is taken to include satisfied preferences, for example, it is clear that biomedical enhancements are within its scope. Objective list theories characterize wellbeing in terms of states that make a person's life better even if the person does not desire or prefer them. Relevant examples

^{2.} Norman Daniels is right that it is closer to ordinary usage to characterize health as the absence of pathology rather than merely the absence of disease (Daniels [1985] 2008, 36).

might include clarity of mind and having temperaments that help one to act virtuously. If health includes such things, then biomedical enhancements are also included along with therapies insofar as they can increase mental or physical qualities that contribute to objective wellbeing.

The WHO definition is open to plausible counter examples, however. If wellbeing is taken to mean what philosophers often mean—the extent to which a person's life is going well for that person—then it is not a necessary condition of health. A person could lack complete wellbeing because the person is unhappy or has an inadequate standard of living and yet be healthy (Bognar and Hirose 2014, 31). Unless wellbeing is characterized in terms of an objective list that includes health, it is also arguable that complete wellbeing is not sufficient for health. A person could have complete wellbeing in terms of preference satisfaction or pleasurable states and yet be disabled or unhealthy because of an undetected disease (Houseman 2006, 254).

Even if we reject the WHO definition of health, however, it still makes sense to say that in valuing health we value more than the mere absence of pathology. As various writers have noted, pathology undermines valuable human physical and psychological functioning (Daniels [1985] 2008, 37; Yamin and Norheim 2014, 30). I shall call these "health-related functions" and speak in terms of health-related functioning. These are the functions for which biomedical interventions can be relevant. But, in valuing healthrelated functioning we value more than mere species typical functioning (normality) or the absence of pathology. We value being as high functioning as possible. Depression, for example, tends to undercut one's motivation and rob one of vitality. In valuing vitality, however, we do not simply value normal vitality. Increases in vitality above the normal level are also valuable. Buchanan et al get at this when they note that Prozac was originally used solely as an anti-depressant, but was eventually also prescribed to make non-depressed people feel better. They claim that what people care about is whether a biomedical service is beneficial and affordable, not whether it cures disease (Buchanan, Brock, Daniels and Wikler 2000, 98). The same is true for physical conditions. Loss of vision is disvalued in large part because it impairs a variety of functions that we can accomplish with vision such as easy mobility within our physical surrounding. Once again, however, enhanced vision would add value. The things we value in valuing health have positive scalar values that do not establish a threshold at the absence of disease and infirmity or at species typical functioning. Of course, there is a maximal level of functioning beyond which further visual acuity, for example, is counter-productive, but that level is not at the level of the absence of disease and disability or species typical functioning. Health-related functions are valuable whatever account we give of the

ultimate importance of health. Whether, for example, health is necessary for fair equality of opportunity, as Norman Daniels claims, or for wellbeing health-related functions are a valuable component (Daniels [1985] 2008, 42-46). Call this the "expanded notion of health." On the expanded notion of health, health includes the degree of function one has regarding health-related functioning (those functions that are threatened by pathologies such as disease, disability and psychological disorder).

The expanded notion of health fits well with the capabilities approach developed by Amartya Sen and Martha Nussbaum (Nussbaum 2000, 2011; Sen 1985, 1992). A person has health-related capabilities by having access to what is needed to attain a physical and psychological functioning of the sort disease and infirmity undermine. As Sen and Nussbaum note, the capabilities approach provides for individual freedom to choose whether to pursue various functions (Sen 2004, 334). The right to health does not require states to provide people with health-related functions. Rather what the right to health requires is access to what is necessary for those functions. Put in terms of the capabilities approach, it covers capabilities for health in the expanded sense. Nussbaum claims that human rights generally provide for basic capabilities and that insofar as human rights are respected by states they can be analyzed in terms of capabilities (Nussbaum 2002, Sec. 4; Sen 2005). According to Nussbaum, appealing to human rights is a way of making justified claims to treatment respecting one's basic capabilities (Nussbaum 2002, 138-139). On Nussbaum's approach, it could be argued that human rights protect capabilities and that the human right to health protects capabilities relevant to health. Characterized in this manner, the human right to health includes both biomedical therapies and biomedical enhancements within its scope. Both are means to attaining high levels of physical and psychological functioning.

The expanded notion of health also fits with ordinary language. We often use the word "health" to describe the state of being free of pathology, and this produces counterexamples to the WHO definition of health. Note, however, that it also makes sense to say that someone is extremely healthy or super healthy. Such a person has a high degree of health-related functions.

Emphasizing the expanded notion of health is respectful of individual autonomy. Individual autonomy is best characterized as control over one's health and body limited by risks posed to others. Individuals exercising the right to liberty component of the human right to health might well decide to opt for safe and effective means of biomedical enhancement should they become available in the future. Note also that the value of health for a person depends in part on the person's other values and life projects (Broome 2002, 95). Complete health for an athlete requires access to different medical

treatments than full health for a monk. This is part of the justification for the stress international health agencies place on participation in the adoption and application of the human right to health. The expanded notion of health takes account of individual autonomy by giving people a greater range of access to biomedical interventions in order to control their health and bodies.

In addition, the expanded notion of health does not rely on a shaky conceptual distinction between therapy and enhancement. It is notoriously difficult to draw a clear conceptual distinction between biomedical enhancements and therapies. Just when does the use of antidepressants or growth hormones shade off from therapy into enhancement? There are, of course, paradigm cases of enhancement and therapy, and in a rough and ready way we can continue to speak of therapies and enhancements. Setting a broken tibia is clearly therapy while blood doping to increase cycling performance is clearly enhancement. Yet, the distinction lacks the clarity to be a basis for policy in the distribution of health-related services or the adoption of prohibitions on biomedical enhancements generally. If an expanded notion of health is accepted, the good news is that we do not need to worry about precise definitions of biomedical enhancement and biomedical therapy because the distinction is not normatively relevant.

How does the expanded notion of health relate to the human right health? Human rights protect valuable interests, and the human right to health protects the value of health-related functions. Since the functions that give health its value are scalar, biomedical interventions that improve those functions are within the scope of the right to health whether or not they go beyond the prevention of disease and disorder and hence count as enhancements. Ultimately the right to health protects what enables health-related functions. Given the values protected by the right to health it would be arbitrary to limit the scope of the right to health to prevention or cure of pathologies or to species typical functioning. What is plausible about the WHO definition of health is not that complete wellbeing is a necessary and sufficient condition of health, but that health should not be restricted merely to "...the prevention of disease and infirmity" (WHO 1946). In short, the expanded notion of health does not draw a distinction between therapy and enhancement.

Limits to the Human Right to Health

There are, of course, limits. With several exceptions such as the human right to be free from torture and the human right against slavery, states may derogate or limit human rights under certain conditions. Article 4 of the International Covenant on

Civil and Political Rights provides that with certain restrictions human rights in that covenant may be derogated in national emergencies that threaten the nation as a whole, and international customary law has extended this to include public health emergencies (WHO 2005; UN Economic and Social Council, 1985, sec. IB, iv). International customary law also provides that states may derogate rights when essential to maintain respect for the fundamental values of the community (UN Economic and Social Council, 1985, sec. IB, v). None of these limits provides a reason for drawing a line between biomedical enhancement and therapy. States may prohibit putative therapies as well as enhancements that are clearly ineffective or that are dangerous without overriding benefits. In addition, prohibitions essential to maintain respect for fundamental community values might rule out some therapies such as xenotransplants from the great apes as well as some enhancements such as the blood doping of athletes.

Moreover, regulations to prohibit enhancements in general, as opposed to specific enhancements, are likely to be over-inclusive in that they would prohibit medical interventions that are justified. Enhancements ranging from plastic surgery for cosmetic purposes to dental braces are biomedical enhancements, though we would not be justified in prohibiting such practices.³ This sort of over-inclusiveness results in a violation of the right to health, since it does not provide adequate reason for derogating the right to health in such cases.

The most severe constraints on the implementation of the human right to health are budgetary. Norman Daniels makes a good point when he states in *Just Health: Meeting Health Needs Fairly* that we cannot infer specific healthcare entitlements from a human right to health (Daniels [1985] 2008, 15 and 317). Other than the minimum core of primary health services specified by General Comment 14, this is certainly true. Even in the case of life-saving therapies such as a pancreas transplant, to use Daniels' example, it does not follow from the human right to health that one is entitled to a pancreas transplant (Daniels [1985] 2008, 317). Healthcare entitlements depend, at least in part, on the ability of states to finance them. Beyond the nonderogable core obligations, states need to adopt principles of distributive and procedural justice to prioritize various health interventions to determine which ones will be adopted as entitlements.

Since prioritizing is required because of budgetary constraints, an obvious approach is to use a cost-effectiveness analysis to determine what health-related entitlements are necessary in order to satisfy the duty of progressive realization of the human right to

^{3.} The use of braces for cosmetic purposes is Daniel Tobey's example, though he defends distinguishing therapy and enhancement for the purpose of regulating genetic enhancements (Tobey 2003-2004, 158).

health. A common way to do this is to measure health outcomes in terms of quality-adjusted life years (QUALYs) that take account of both the quality of life before and after a medical intervention and the number of additional years of life that can be secured by the intervention. First, the analysis determines quality of life from 0 (death) to 1 (full health) that an intervention will likely secure. The quality of life at issue can be determined through surveys and public discussions. One way of doing this is to use the standard gamble approach and ask people what risk of death they would accept if it meant a possible cure of their disease or disability. Another way is the time trade-off approach that asks how many years of life a person would sacrifice for a treatment that cured a disease or disability. The QUALYs associated with a particular pathology are then compared with the QUALYs of the health state after a therapeutic intervention to determine how many QUALYs a therapy will provide. The final result of the QUALY analysis is the product of the number assigned to the quality of life secured by a particular type of intervention and the number of years that intervention will add to life. Medical interventions can then be ranked on the basis of cost per QUALY.

QUALY analysis is typically used when the issue is cost-effective treatments of pathologies, but QUALY analysis can be applied more broadly to include biomedical enhancements. What constitutes maximal health-related functioning can be characterized in terms of the level of functioning that could be achieved by adopting safe and effective biomedical interventions including enhancements. In the case of biomedical enhancements a state of health without disease or disability could be compared with an enhanced state to determine the number of QUALYs produced by the enhancement.

Although I am focusing on QUALY analysis as a cost-effectiveness tool for the application of human rights, a similar expansion could be used in the case of cost-effective analysis in terms of disability-adjusted life years (DALYs). DALY analysis provides a way of assigning a numerical value to the number of years lived at a certain level of disease or disability. The cost per DALY averted can then be determined. Although DALY analysis is currently used to measure the burden of disease or disability for a person or society, DALY analysis can be expanded to take account of the expanded notion of health. DALY analysis requires setting a base point for life expectancy and a way of determining disease or disability burden. Usually the life expectancy of the nation with the highest life expectancy is used. If the expanded notion of health is adopted, however, life expectancy could be set in terms of life expectancy that would result from the use of safe and effective biomedical interventions including enhancements. The degree of burden can be determined by comparing the present state to an ideal of full health, which can be characterized as maximal functioning possible with safe and effective biomedical

enhancements. This can be done with the same methods used for QUALY analysis. Note that, on the expanded analysis, "disease" and "disability" are not the best terms to refer to states that are simply sub-optimal because they are not enhanced.

Since the right to health requires progressive realization of maximal health-related functioning, neither QUALY nor DALY analysis will draw a sharp line between biomedical enhancements and therapies. Some biomedical enhancements may be more likely to increase health-related functioning on a cost-effective basis than some therapies and may have priority some biomedical enhancements over some therapies. This might result in such biomedical enhancements becoming entitlements. This is because some enhancements may be more likely to increase health-related functioning at a cost-effective basis than some therapies. Safe, effective and moderate memory enhancement may eventually be more cost-effect and produce more QUALYs than aromatherapy, for example. What matters is the equitable distribution of biomedical interventions ranked in terms of their effect on the quality of life relative to the number of years of life added by the intervention. Each sort of intervention needs to be evaluated on its own terms. Although I have focused on QUALY and DALY analysis because of their common use, a similar argument could be given for any sort of cost-effectiveness analysis.

It should be noted that QUALY analysis has been subjected to a variety of objections. These include claims that QUALY analysis discriminates against persons with disability and the elderly, is overly subjective and even arbitrary, and confuses preferences with values (Harris 1987; Daniels and Sabin 2002, Chapter 3). It is not my purpose, however, to defend QUALY analysis, but to show that its adoption, as an example of cost-effectiveness analysis, does not justify excluding biomedical enhancements from the scope of the human right to health.

Alternatives to Cost-Effectiveness Analysis

Deliberative Democratic Process: It might be argued that deliberative democratic processes constrained by principles of distributive justice should be the primary method of applying human rights to health when there are budgetary constraints, and Daniels adopts a version of this approach that he calls "accountability for reasonableness" (Daniels [1985] 2008, Chapter 10). The central element of accountability for reasonableness is a process of fair deliberation that requires policies to be adopted on the basis of rationales that are publicly accessible and reasonable in the sense that they appeal to "evidence, reasons and principles that are accepted as relevant by ('fair minded') people who are disposed to finding mutually justifiable terms of cooperation" (Daniels 2008, 118).

In addition, the policies adopted must be open to revision, and the process must be governed by public regulation (Daniels [1985] 2008, 118; Daniels and Sabin 1997, 322-343). Note, however, that once the expanded notion of health is adopted along with a right to fulfillment of health, reliance on accountability for reasonableness will not distinguish enhancement from therapy. It is easy to imagine, for example, a fair deliberative procedure resulting in the outcome that life-extending enhancements should be adopted as an entitlement. Unless enhancements are ruled out prior to using the fair deliberative process, as Daniels does, it cannot be assumed that such a process will distinguish enhancements and therapies (Daniels [1985] 2008, 149-155).

Dignity-Based Sufficientarianism: In light of the financial concerns generated by the expanded notion of health and its incorporation into the human right to health, it might be objected that we would be better off adopting a view that the human right to health requires only the minimum of health care necessary for a life worthy of human dignity (Nickel [1987] 2007, Chapter 9). Since on this interpretation the human right to health guarantees only what is sufficient for a life worthy of human dignity and no more, I will follow philosophical usage and refer to this as the sufficientarian interpretation of the human right to health.

Sufficientarianism has several advantages. It provides a way of limiting healthcare expenses by the state at a time of tightening budgets. States need only guarantee access to the minimum level of health care specified by the right. In addition, the human right to health gains strength because it can be rigorously enforced without making it virtually impossible for the state to pursue other goals. Basing sufficientarianism on what is necessary for a life worthy of dignity also seems plausible because human rights covenants that specify the right to life are based on human dignity, though the meaning of dignity is not spelled out (UN General Assembly 1948, Preamble; UN General Assembly 1966a, Preamble and 1966b, Preamble).

It might also be claimed that the sufficientarian alternative presents a problem for the thesis I have defended since biomedical enhancements are not necessary for a life worthy of human dignity. On the surface, pain and suffering seem to undermine a life worthy of dignity in a way that forgoing biomedical enhancements does not. Moreover, the moral and legal distinction between therapy and enhancement is intuitively appealing on the ground that alleviating the suffering and incapacity caused by disease and disability should be given priority over the joys of enhanced health-related functioning.

The problem with this objection is that there are therapies that ought to be within the scope of the human right to health even if they are not necessary for a life worthy of human dignity, and there can be enhancements that ought to be covered because they

are necessary for a life worthy of human dignity. Being a person with a disability, for example, is certainly compatible with human dignity, but access to therapy to alleviate a disability is clearly within the scope of the right to health. This is also true of various conditions such as mild to moderate arthritis that are painful but nonetheless compatible with a life worthy of human dignity.

Access to some enhancements might also become necessary to ensure dignity. A life worthy of dignity requires the capabilities necessary to participate in society as a free and equal person. This includes being able to compete for positions in society as well as take part in political processes and being free from oppressive discrimination and prejudice. As Dan Wikler has argued, radical increases in intelligence through enhancement by the majority of a population may adversely affect the requirements for civic participation and hence the equal status of those who are not enhanced; and, as Christine Overall has argued, enhancement might subject already marginalized groups to increased discrimination and prejudice (Overall 2009, 327-340; Wickler 2009, 352). Hence the adoption of biomedical enhancements by some, especially those who are already privileged, in the exercise of the liberty right to health creates a strong reason for guaranteeing access to such enhancements for all citizens when it is necessary to ensure equality under law. If, however, equal access cannot be guaranteed, this constitutes grounds for restricting the liberty right regarding those enhancements. In general, entitlements to enhancements result from the way in which component rights of the right to health interact with one another and with other human rights.

Opportunity-Based Sufficientarianism: It might be thought that the problems noted above could be avoided by spelling out dignity in terms of having access to a certain range of opportunities or capabilities. This is the approach taken by Norman Daniels who argues that justice requires that people be treated equally in the sense of having access to the normal opportunity range presented by their society (Daniels 2008, Chapter 2). The normal opportunity range is the range of opportunities afforded by a society to persons on the basis of their ability (Daniels [1985] 2008, 43-44). Health care, according to Daniels, is special in terms of justice because its goal is to restore people with pathologies to typical species functioning (normality), and this is necessary for having access to the normal range of opportunities (Daniels [1985] 2008, 44-46).

Attempting to restrict this version of sufficientarianism to health defined in terms of pathology also conflicts with the liberty right to health combined with the right to equal respect regarding health policy. The liberty right to health, as noted, protects the interest people have in controlling their health and bodies. It follows that people have a right within limits to use biomedical enhancements to enhance their health and bodies

even when it is not necessary to prevent disease or disorder. Moreover, if some people use their liberty to pursue enhancements that give them more opportunities treating people equally may require that all have access to the enhancements. In short, if the liberty aspect of the right to health allows people to engage in biomedical enhancements, this will affect what counts as fair equality of opportunity.

Prioritarianism: It is plausible to suppose that with limited healthcare budgets we should give priority to those who have the most serious health problems. Prioritarianism in the allocation of healthcare resources assigns weight to recipients of healthcare resources in proportion to the severity of their health conditions. If prioritarianism is accepted for the allocation of health care it might be thought that enhancements would be excluded from the scope of a right to health care because they would carry little weight in the allocation process. Although prioritarianism gives more weight to those with severe health problems, it does not follow that no weight is given to health-related concerns addressed by biomedical enhancement. Moreover, some enhancements might be so significant that they would outweigh some therapies even in prioritarian terms. An enhancement that would significantly extend longevity might receive greater weight than therapies for minor ailments. In fact, those who did not receive the enhancement for longevity could be regarded as worse off than those who did. As people exercise their health-related right to liberty to enhance themselves, the unenhanced become worse off.

Buchanan's Enhancement Enterprise

The analysis I have offered provides a reason for accepting what Allen Buchanan calls the "enhancement enterprise." The enhancement enterprise, according to Buchanan, allows considerable freedom to develop enhancement technologies and devotes significant public resources to research on enhancement technologies and policies for coping with enhancements (Buchanan 2011, Chapter 2, especially 60-63). Buchanan defends the enhancement project on pragmatic grounds based on the benefits of enhancement for both individuals and society, while I provide a specific reason for the enhancement project based on the human right to health.

Buchanan also restricts the enhancement enterprise to liberal democratic societies because of his concern that other societies will abuse enhancements (Buchanan 2011, 63). This seems to follow from Buchanan's pragmatic defense of the enhancement enterprise. A defense of enhancements in terms of human rights, however, does not limit enhancements to liberal democracies. Instead the analysis I have offered would limit the enhancement project in a different way. All states are under a duty to pursue the

health of their citizens in accord with the human right to health, and this duty includes biomedical enhancements as well as therapies. All of these interventions, however, need to be pursued within a human rights framework that includes rights that protect individuals from various forms of oppression and inequality. The human right to health is best conceived as part of a suite of human rights, all of which are necessary for wellbeing. In short, all states are under a duty based on the human right to health to pursue the enhancement enterprise in the context of the relevant rights necessary for the protection of individuals.

Is the Human Right to Health a Genuine Right?

Those who see rights as trumps along the lines in which Ronald Dworkin has analyzed U.S. Constitutional rights might object that the human right to health is not a genuine right at all (Dworkin 1977, xi). On Dworkin's analysis, rights trump considerations of welfare. If this is applied to the human right to health it raises an obvious problem since increasing wellbeing and hence welfare is a central component of the right to health. When rights are analyzed as trumps this component of the human right to health looks more like a mere policy goal than a right. Even the liberty component of the right to health is problematic. In human rights law the liberty right to control one's health does not trump considerations of welfare, but can be derogated by considerations of public health and even fundamental community values.

Although the right to health is not a right in the sense in which rights trump all considerations of welfare, it is nonetheless a right and not merely a policy goal. If not trumps, human socioeconomic rights such as the right to health are what James Nickel calls high priority norms (Nickel [1987] 2007, 41). The human right to health requires states to prioritize the wellbeing of their citizens over other objectives not grounded in human rights with a few exceptions for limitations that are generally consistent with wellbeing and hence with the right to health. Also, human rights, unlike mere policy goals, empower citizens to demand state action to provide for the interests protected by human rights. The right to health is no exception. While the right to health does not entail a particular treatment, it nonetheless empowers citizens to demand that the state create institutions that provide for health, protect the health of citizens, and create a reasonable minimum level of health care within the constraints of available resources (Gunderson 2011, 49-62).

The liberty to control one's health care presents more of a challenge since the right can be derogated by fundamental community values. John Harris, for instance, argues for

a human right to reproductive liberty that includes the use of enhancement technologies and bases this on a version of Mill's harm principle that he calls "the democratic presumption" (Harris 2007, 72-79). According to Harris, "only serious real and present danger either to other citizens or to society is sufficient to rebut this presumption. If anything less than this high standard is accepted, liberty is dead" (Harris 2007, 27). On Harris's view, permitting derogation of the liberty right to health on the basis of community values would completely eviscerate the right.

The community values limitation is best interpreted by claiming that the community values that could justify a restriction of liberty are themselves constrained. Article 4 of the International Covenant of Civil and Political Rights, which provides for the derogation of the human right to health, states that no derogation may "...involve discrimination solely on the ground of race, colour, sex, language, religion or social origin." The Siracusa Principles also state that the margin of discretion left to the states to limit derogable rights does not apply to the rule of non-discrimination (UN Economic and Social Council, 1985, Part IB, sec. 28). Hence restricting the liberty right to health to prevent enhancement on the ground that it violates religious percepts of the community, for instance, would not be justified. Harris has a good point, however, concerning the extent to which deference to community values and majority rule can threaten the right to liberty. In light of this concern the relevant community values must be fundamental in the sense that they are a component of the identity of the community and therefore vital for the preservation of the community. In short, the community values exception should be regarded as agreeing with Harris's democratic presumption with the caveat that one of the ways in which society can be threatened by serious real and present danger is to have the values on which society depends undermined. This is no different from various other rights. Germany, for instance, respects the freedom of expression while prohibiting the advocacy of Nazism. Another example would be the use of medical enhancements to create people with abilities so superior and a temperament so aggressive that they threaten to undermine democracy and respect for individual rights.

A Moral Right to Health

I have assumed that the human right to health embodied in international law and practice is morally justified and argued that it is best interpreted as containing a right to biomedical enhancement within its scope. The same argument could be used to show that if it is assumed that there is a moral human right to health it should also be interpreted as containing a right to biomedical enhancement. The scope of a moral

human right to health will be determined in large part by the nature of health, and, as I have argued, there is good reason to adopt what I have called the expanded notion of health. The expanded notion of health, whether legal or moral, contains health-related enhancements including biomedical enhancements. An analysis of the moral right to health will also need many of the features of the legal human right to health. It will, for example, need to be a socioeconomic right that functions as a high priority norm rather than a right that trumps reasons based on human welfare. The human right to health is, after all, a right that seeks human welfare. The moral human right to health, like the legal human right to health, will also compete with other moral human rights and therefore be limited in various ways.

In addition, the moral human right to health, like the legal right to health, will be subject to budgetary constraints. Defenders of a moral human right to health might rely on various strategies to limit the moral human right to health such as cost-effectiveness, sufficientarianism, prioritarianism, democratic deliberation or even a combination of some of these. None of these analyses, as I have argued, provides a reason to create a threshold between biomedical enhancement and biomedical therapy. As a result, the moral human right to health will not draw a sharp line between biomedical enhancements and therapies any more than does the legal human right to health.

Conclusion

At first glance it sounds outlandish to maintain that the human right to health entails a right to biomedical enhancement. It would seem to justify the demand that the state provide access to whatever transformative enhancements a person wants regardless of cost. Once the nature of the human right to health and the constraints on its application are taken into account, however, the claim is far less troubling than it first appears. Moreover, safe, effective, and affordable biomedical enhancements that are transformative are still somewhere in the future.

There are also good reasons to think that the claim that the human right to health includes biomedical enhancements is justified. One reason is based on the value of health. Philosophers have offered a variety of justifications of a right to health ranging from utilitarian considerations of the importance of health for human wellbeing to contractarian considerations of the importance of health for fair equality of opportunity. All of these require placing value on health-related functions, and consequently there is good reason to characterize health in terms of health-related functions. Whatever its ultimate philosophical justification a human right to health protects these functions.

Since these health-related functions are scalar and can be improved by biomedical enhancements as well as biomedical therapies, a human right to health is best understood as including biomedical enhancements within its scope.

Another reason is based on the principles of justice that might be used to apply the human right to health under budgetary constraint. Biomedical enhancements are included within the scope of the human right to health whether we adopt cost-effectiveness principles such as QUALY analysis, or principles based on deliberative democracy, sufficientarianism, or prioritarianism. In the end, the human right to health does not make or justify a normative distinction between enhancement and therapy.

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