

I. MORAL STATUS, MORAL EQUALITY, AND THE PROSPECT OF ENHANCEMENT

The terms 'moral status' and 'moral standing' are sometimes used interchangeably, but in the analysis that follows I will distinguish them. I will say that a being has *moral standing* if it counts morally, in its own right. For Bentham, all beings that are sentient count morally in their own right. For Kant, only persons, beings with the capacity for practical rationality, have moral standing. On both views, moral standing is not a comparative notion. Moral status, in contrast, is a comparative notion. Two beings can both have moral standing, but one may be of a higher moral status.

The idea that different beings with moral standing have different moral statuses is common to otherwise divergent moral theories and is implicit in much pre-theoretical moral thinking as well. A being's moral status can make a difference as to whether its behavior is subject to moral evaluation, how it ought to be treated, whether it has rights, and perhaps what kinds of rights it has. In moral views that include a plurality of moral statuses, it is human beings, or at least human beings who are persons, that are thought to occupy the highest status.

A few contemporary moral theorists have begun to develop nuanced views on moral status.¹ At the same time, concerns about moral status

I am grateful to John Arras, Gary Comstock, Stephen Darwall, Matthew DeCamp, David DeGrazia, Tom Douglas, Jeff McMahan, Russell Powell, Janet Radcliffe-Richards, and the Editors of *Philosophy & Public Affairs* for helpful comments on an earlier version of this article.

1. For some prominent and recent examples, see Jeff McMahan, "Cognitive Disability, Misfortune, and Justice," *Philosophy & Public Affairs* 25 (1996): 3–35, and *The Ethics of Killing: Problems at the Margins of Life* (Oxford: Oxford University Press, 2002); Martha Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Cambridge, Mass.: Belknap Press, 2006); Stephen Darwall, *The Second Person Standpoint: Morality,*

have surfaced in another, unexpected quarter: the debate about the ethics of using biotechnologies to enhance human beings. Some parties to this debate have voiced the concern that if some but not all were enhanced, the result might be not simply an exacerbation of existing *distributive* inequalities (inequalities in resources, opportunities, and welfare), but also a more profound inequality: the emergence of a group of beings (the enhanced) who would have a *higher* moral status than that possessed by normal human beings now. The idea is that if some but not others used enhancement technologies, the result might be a morally bifurcated world of (mere) *persons* and *post-persons*.² Such a prospect might be profoundly troubling from the perspective of the unenhanced (the mere persons) who would no longer enjoy the highest moral status, as they did when there were only persons and nonpersons ('lower animals'). Quite apart from that, the prospect of a distinction between (mere) persons and (higher moral status) post-persons is disturbing because it challenges the very widely held

Moral Equality Assumption: all who have the characteristics that are sufficient for being a person have the same moral status.³

Respect, and Accountability (Cambridge, Mass.: Harvard University Press, 2006); and Elizabeth Anderson, "Animal Rights and the Values of Nonhuman Life," in *Animal Rights: Current Debates and New Directions*, ed. Martha Nussbaum and Cass Sunstein (Oxford: Oxford University Press, 2004), pp. 277–98.

2. Expressing this worry, Francis Fukuyama suggests that, "The ultimate question raised by biotechnology is, What will happen . . . once we are able to, in effect, breed some people with saddles on their backs, and others with boots and spurs?" See Francis Fukuyama, *Our Posthuman Future* (New York: Farrar, Straus and Giroux, 2002), pp. 9–10. As stated, this statement is ambiguous. It could mean that some people will actually have a lower status, or that they would be simply treated as if they did. I will consider both alternatives in this article, but will focus on the former. Jeff McMahan also considers the possibility that enhancement could produce beings with a higher moral status than persons in "Cognitive Enhancement and Moral Status" (unpublished paper). Daniel Wikler explores the possibility that if some but not all were sufficiently cognitively enhanced, it might be justifiable for the enhanced to restrict the legal rights of the unenhanced. He does not frame his discussion in terms of different moral statuses, but as I argue below, it is directly relevant to that issue. Daniel I. Wikler, "Paternalism in the Age of Cognitive Enhancement: Do Civil Liberties Presuppose Roughly Equal Mental Ability?" in *Human Enhancement*, ed. Julian Savulescu and Nick Bostrom (Oxford: Oxford University Press, 2009), pp. 341–55.

3. In what follows, I examine both Kantian and utilitarian conceptions of moral status, in an effort to make sense of the worry that enhancement might produce beings with a higher moral status. It might be said that in doing so I have failed to consider two alternative sources of concern. The first is the idea, present in some variants of the Christian

On some accounts, the concept of human rights is an important articulation of the idea of equal moral status.⁴ Some participants in the enhancement debate have gone so far as to say that enhancements might render the concept of human rights obsolete.⁵ They worry about the obsolescence of the concept of human rights because they believe that enhancements could result in beings that were not human beings, and apparently assume that the concept of human rights applies only to human beings. Those who have expressed this worry have tended to use ‘human rights’ and ‘the rights of persons’ interchangeably. They have failed to acknowledge that some human beings (i.e., members of the species, *Homo sapiens*), including the profoundly demented and infants, do not have some of the characteristics that moral philosophers typically attribute to persons and that are thought to ground the distinctive rights that persons have. Nor have they considered the possibility that at least some of the rights that are called human rights are more properly

tradition, of a ‘great chain of being’, created by God, with human beings at the top, placed there in a position of rightful dominance over the rest of creation. On this view, for humans to create beings who were “higher” than human beings would be to act contrary to God’s design and would presumably be wrong for that reason. There is a familiar ambiguity in this first view: is it that humans are entitled to dominate lesser creation simply because God willed that those who were at the top of the great chain of being should dominate, or that God willed that we should dominate because it is fitting that those with ‘higher’ capacities should dominate those with lower ones? The latter alternative points toward a second view, reasonably attributed to Nietzsche, expressible in nontheological terms: those who have superior (more evolved or developed or more complex?) capacities are entitled to dominate. I will not consider the theological view here, not only because those bioethicists who voice the worry about enhancement producing unequal moral statuses insist that they are not relying on theological premises, but also because I think the descriptive idea of a great chain of being, and along with it the notion that nature is teleological in any way relevant to morality, has been irrevocably discredited by evolutionary science. I will engage the Nietzschean view to this extent: I will argue that the most familiar and plausible view of moral status rules out the claim that greater strength or power, or even virtue, itself entitles one to a higher status. At this point I will only say that the Nietzschean view seems either to confuse the possession of a rather arbitrarily constricted set of individual excellences with basic moral worth or to be the utterly implausible claim that power grounds right, that the more powerful are entitled to more because they are more powerful.

4. See, for example, Allen Buchanan, *Justice, Legitimacy, and Self-Determination: Moral Foundations for International Law* (Oxford: Oxford University Press, 2004), especially chapter 3.

5. See, for examples, Fukuyama, *Our Posthuman Future*; and Erik Parens, “The Goodness of Fragility: On the Prospect of Genetic Technologies Aimed at the Enhancement of Human Capacities,” *Kennedy Institute of Ethics Journal* 5 (1995): 141–53.

described as persons' rights. Nevertheless, their basic concern can be reframed to take this distinction into account: will enhancements lead to the obsolescence of persons and hence of the concept of the distinctive rights that persons have?

To grasp this second concern, we need to distinguish between two scenarios. In the first, our world of persons is replaced, completely, through the sustained use of biomedical enhancement technologies, by a higher sort of being, post-persons. No mere persons remain; the concept of human rights, understood as rights distinctive of (mere) persons, becomes a concept without application.

Presumably, the new, enhanced beings will have rights appropriate to their capacities; call them *post-persons' rights*. If that is so, then there appears to be no problem. One concept of rights loses application and another comes into play. Post-persons will have no cause to regret the obsolescence of the concept of human rights.

In the second scenario, some human beings are enhanced to the point of becoming post-persons, but others are not. Under these conditions, there seems to be a genuine worry. Even if the concept of human rights (understood as the distinctive rights of persons) still applies to the unenhanced, it will be incapable of playing a distinctive moral role we assign to it now: it will no longer convey the idea that all who satisfy the conditions that are sufficient for personhood have the same moral status. In a world in which there are beings who have all the capacities that confer human rights but also higher capacities conferring a distinctive set of rights, saying that all persons have human rights will not have the moral force it does now. Even if mere persons retain their human rights, the *significance* of their having them will have diminished, because the Moral Equality Assumption will not obtain.

This article explores the implications of enhancement for moral status and for the concept of human rights. I will argue for six conclusions. (1) In a world in which some are enhanced and some are not, the concept of human rights, far from being obsolete, would be even more important than it is now. (2) The idea of a moral status higher than that of persons is dubious, given a plausible understanding of the notion of moral status; so the prospect of enhancement does not present a serious threat to the Moral Equality Assumption. (3) Even if we grant the dubious assumption that the emergence of beings with a moral

status higher than that of persons is possible, the emergence of post-persons would not extinguish whatever rights the unenhanced have by virtue of being persons. (4) Given the history and persistence of racism, there is a serious risk that the enhanced would treat the unenhanced as if they had a lower moral status, even if they do not. (5) Even if enhancements did not create beings with a higher moral status, or a mistaken perception of unequal moral statuses, they might result in a conflict of legitimate interests between the enhanced and the unenhanced, and a just accommodation of these conflicting interests might involve restrictions of *some* of the rights of the unenhanced. (6) The possibility that enhancements could mandate such a two-tiered system of rights is a serious moral cost that ought to be taken into account in our decisions regarding the pursuit of enhancement technologies. Exploring the implications of enhancement for moral status can illuminate the choices we may have to make about biomedical enhancements, but it can also spur us to develop a clearer understanding of what moral status is and of the relationship between moral status, rights, personhood, and human nature.

Modes and Types of Enhancements

To enhance is to augment, increase, improve, to make better. Our concern here is with how biotechnologies might be applied to human beings in order to enhance them in ways that either resulted in their having a higher moral status or in being perceived to have a higher moral status. 'Enhancing human beings' here means augmenting their capacities, either by improving existing capacities or creating new ones.⁶ Before exploring the implications of enhancement for moral status, it is necessary to have at least a rough idea of the prospects for enhancement. It is useful to distinguish between modes and types of enhancements.

6. It is worth noting that on this definition of enhancement, an enhancement need not improve one's well-being overall. Enhancement thus defined means an improvement in our capacities, but not all such improvements may make us better off. Nevertheless, enhancements would generally be pursued in the expectation that they would make us better off. That expectation might be unfounded in some cases. For example, improved cognitive performance might not make us better off overall.

Modes of biomedical⁷ enhancement include the following: genetic engineering of human embryos and gametes (the insertion or deletion of naturally occurring genes, either from humans or from other species; the insertion of artificial chromosomes or products of synthetic biology; and the manipulation of gene regulatory functions); pharmaceutical enhancements (administration of drugs that affect the mind or the body); human–machine interfaces; and laboratory-grown organs and tissues (presumably using stem cell technologies and possibly even synthetic biology). *Kinds* of enhancements include improved cognitive, affective, and motivational capacities; increased longevity; and greater resistance and/or complete immunity to various diseases. Cognitive and motivational enhancement drugs already exist, and many experts on aging predict that significant extensions of life will eventually become possible, through regeneration of tissues and organs employing stem cell technology or, more radically, by slowing or even arresting the processes of cell senescence.

II. ENHANCEMENT, HUMAN NATURE, AND HUMAN RIGHTS

Some bioethicists, including Leon Kass and Francis Fukuyama, express the worry about enhancement producing beings with a higher moral status in terms of human nature: they see enhancements as creating beings who are not human beings, but who are superior to humans in ways that are or might be thought to be sufficient for having a higher moral status. Others, including Jeff McMahan, think the possibility of the emergence of beings with a higher moral status and its moral implications can be framed without recourse to the concept of human nature.⁸

Although Kass and Fukuyama think it is obvious that enhancement could create posthumans, or beings whose nature was not human, others,

7. The qualifier 'biomedical' is important here, because as I have argued elsewhere, human capacities can be and have been enhanced by technologies (such as literacy, numeracy, and computers) that are not biomedical. In the rest of this essay, for the sake of brevity, I will sometimes omit the adjective 'biomedical', but unless otherwise specified the discussion will be limited to enhancements brought about through the application of biomedical technologies to humans.

8. McMahan, "Cognitive Enhancement and Moral Status" (unpublished paper); Wikler, "Paternalism in the Age of Cognitive Enhancement."

including Norman Daniels, are more skeptical.⁹ To determine which view is correct, we need a workable but non-question-begging definition of human nature. For purposes of the present discussion, I propose the following definition, which is designed to avoid the problematic notion that human nature is a natural kind with an essence, understood as a fixed set of traits that *all* human beings and *only* human beings have,¹⁰ and to be compatible both with what evolutionary biology tells us about human

9. See Leon Kass, "The Wisdom of Repugnance," in *The Human Cloning Debate*, 2nd ed., ed. Glenn McGee (Berkeley, Calif.: Berkeley Hills Books, 2000), pp. 68–106; Fukuyama, *Our Posthuman Future*; and Norman Daniels, "Can Anyone Really Be Talking about Ethically Modifying Human Nature?" in *Human Enhancement*, ed. Savulescu and Bostrom, pp. 25–42.

10. The difficulty in finding a trait or fixed set of traits that all humans and only humans possess is similarly seen in various attempts to define biological species. In fact, evolutionary theory suggests that variation within a species, and the vague boundaries between them, make species essentialism implausible. Marc Ereshefsky makes this point in his article, "Species," in *The Stanford Encyclopedia of Philosophy (Summer 2007 Edition)*, ed. Edward N. Zalta, (<http://plato.stanford.edu/archives/sum2007/entries/species/>). Accessed 28 December 2007. In the past, it was said that interfertility was a marker for "species boundaries," but given the development of assisted reproductive technologies and of asexual reproduction (in the form of cloning by nuclear transplantation), it is difficult to justify putting much weight on this criterion. More generally, the advent of technologies for transferring genetic material not only within but also across biological lineages renders the notion of "species boundaries" itself suspect. It is interesting to note that what may be the most detailed recent attempt to argue that there is a fixed human essence and that one can determine fundamental issues about which sorts of beings (e.g., embryos) have human rights simply *assumes*—contrary to contemporary biological science—that there is a fixed set of traits that all and only human beings have. Robert P. George and Christopher Tollefson, *Embryo: A Defense of Human Life* (New York: Doubleday, 2008), chap. 3.

In a paper pursuing the same strategy of trying to base claims about human rights on a biological notion of human beings that ignores what contemporary biology tells us about species, Robert George and Patrick Lee appear to make the mistaken inference: Typical, unimpaired, mature individuals of kind H (human beings) have properties that confer human rights. Embryos are human beings (members of kind H [human beings]). Therefore embryos have human rights. Patrick Lee and Robert P. George, "The Nature and Basis of Human Dignity," in *Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics* (Washington, D.C.: (<http://www.bioethics.gov>), 2008), p. 429. Lee and George simply assert—they do not argue—that "the criterion for full moral worth [and having human rights] is having a nature that entails the capacity . . . for conceptual thought and free choice—not the development of that natural capacity. . . ." But that assumption begs the very question at issue, namely, whether a being such as an embryo, which lacks the capacities ordinarily thought to confer the moral status of a person and the rights this entails, has the moral status of a person. For a detailed analysis of the difficulties of grounding conclusions about rights on appeals to human nature, see Allen Buchanan, "Human Nature and Enhancement," *Bioethics* 23 (2009): 14–50.

beings and with how we tend to think about human nature when we are not engaged in scientific inquiry or metaphysics:

Human nature is a set of characteristics (1) that most beings that are uncontroversially human have at this point in biological and cultural evolution (and have had throughout what is uncontroversially thought to be human [as opposed to prehuman] history); (2) that are relatively recalcitrant to being expunged or significantly altered by education, training, and indoctrination; and (3) that play a significant role in explanations of widespread human behavior and in explanations of differences between humans and other animals.

Notice that in this definition, unlike definitions of human nature that invoke the idea of essences, there is no assumption that the traits in question are literally universal among all those we rightly regard as humans. Nor does it assume that human nature is fixed; hence it avoids a trivially negative answer to the question ‘Could enhancements change human nature?’

On this definition of human nature, could a series of enhancements, undertaken on a large scale, eventually culminate in the emergence of *posthumans*—beings sufficiently different from us that it would make sense to regard them as other than human beings, as having a nature different from that of human nature (setting aside for now the question of whether such beings would have a higher moral status)? Given that we are only beginning to create biotechnologies that could be used for enhancement, it is difficult to say. However, there is one reason *not* to assume that the answer to the question is clearly negative: in the past, evolution has produced new kinds of beings, including human beings, and enhancement biotechnologies of the future may be able to produce similar changes, if not on their own, then in combination with evolutionary changes.

Once we give up the pre-Darwinian idea that species have fixed essences and think of the traits that we associate with human nature as historical products that persist for a time and are then replaced with new ones, we cannot rule out the possibility that similar changes could occur again, by deliberate human design. Nor can we rule out the possibility that at some point the cumulative effects of such changes might make it reasonable to conclude that a new kind of being, a being with a different nature from our own, had emerged. If this occurred, posthumans might

coexist with humans (as Neanderthals did for a time with *Homo sapiens*). Moreover, we cannot assume that coexistence would persist; the emergence of posthumans might eventually result in the extinction of human beings.

Before we are swept away by such giddy speculations, however, it is important to see that mere increases in strength, longevity, cognitive or emotional functioning, or resistance to disease—the sorts of enhancements now most discussed—would not result in posthumans. Our colloquial concept of human nature, as well as the biologist's concept of *Homo sapiens*, is presumably capacious enough to accommodate a good many such changes, so at this point predictions that enhancement will usher in a posthuman future may be premature. To produce a new conceptual-explanatory scheme in which the concept of a human being was replaced by that of a posthuman, the changes that enhancements brought would have to be widespread and would also have to produce significant qualitative differences, not merely higher levels of existing traits. For example, merely enhancing the human immune system, increasing average IQ by twenty points, and extending life by fifty years would not produce posthumans. These sorts of changes would not call for anything as radical as the recognition of a new hominid species.

Nevertheless, as difficult as it may be for us to imagine what sort of changes would require the recognition of a new species, we cannot dismiss the possibility that they could come about through the cumulative effects of increasingly powerful biomedical enhancements over a long period of time. In principle, biomedical enhancements appear to be capable of transformations as significant as those that evolution has produced in the hominid lineage in the past.

My aim here is not to argue conclusively for the claim that biomedical enhancements might eventually result in posthumans. Instead, I only hope to have made this possibility plausible enough to motivate the two questions with which I am concerned. (1) If enhancement did result in posthumans, what implications would this have for the concept of human rights: would it make that concept obsolete, as some have claimed; and if it did, would this be a moral catastrophe, as they have intimated? (2) Could the emergence of posthumans result in there being a moral status higher than that of persons and hence require a rejection of the widely held Moral Equality Assumption, the assumption that all who have the characteristics sufficient for being persons are of equal

moral status? In the remainder of this section, I will answer the first question; in the next section, I will answer the second. In Section III, I will argue that even if enhancements did not produce beings with a higher moral status, it might result in a system of *unequal rights* and that this would be a significant moral cost that should be taken into account in deciding whether to pursue enhancements. Whether a system of unequal rights implies unequal moral status depends on which rights are implicated in moral status and, I shall argue, it is not clear that any existing account of moral status (or of rights) can answer that question.

Those who worry that the emergence of posthumans would render the concept of human rights obsolete assume that human rights are rights we have *by virtue of our humanity*. What these critics of enhancement have failed to notice is that in human rights discourse the claim that there are certain rights we have by virtue of our humanity serves two functions: it conveys the idea that the possession of these rights does not depend upon their being recognized in law (in that sense, they are ‘natural rights’, not ‘positive rights’); and it signals inclusiveness or universality, by implying that these rights are not limited to any subset of human beings such as males, whites, or people of this or that religion, ethnicity, or race. On this understanding of the claim that human rights are rights we have by virtue of our humanity, and regardless of whether ‘humanity’ refers to humans as members of a biological species or to persons, the claim is merely that humanity is a *sufficient* condition for having these rights, not that it is a necessary condition.¹¹ Thus it could be true that we human beings have certain rights simply by virtue of our humanity, but also true that there are other beings—for example, non-human forms of intelligent life on other planets—who also have them, if those beings also had whatever it takes to confer (what we call) human rights. If ‘humanity’ refers to personhood, rather than to membership in the human biological species, and if we came to know that there were persons who were not of our biological species, then we might decide that what we have called human rights would be more accurately called *persons’ rights*. If ‘humanity’ refers to our biological species, it might be that those features of our biology that are sufficient for having what we

11. My concern here is not to defend this conception of human rights, but to plumb its implications for the prospect of biomedical enhancements. For a systematic critique of it, see Charles R. Beitz, *The Idea of Human Rights* (Oxford: Oxford University Press, 2009).

call human rights are shared by extraterrestrials of another species. The point is that a plausible understanding of the claim that human rights are rights we have by virtue of our humanity does *not* imply that the concept of human rights is applicable only to human beings.¹² But if that is so, then the emergence of posthumans, even if this were accompanied by the extinction of human beings, would *not* entail that the concept of human rights would no longer be applicable. The concept of human rights would still be applicable if posthumans had the capabilities or interests that ground (what we now call) human rights.¹³

Yet surely at least some of the rights we now call human rights are rights only for *human* persons. After all, at least part of what respect for human rights achieves is the protection of the conditions for a decent human life, under the conditions in which humans now generally find themselves. The point is that *the rights we now have as human persons reflect the way we are now*: not just our biological characteristics, but also the interests we have and the threats we now face, given the sorts of institutions we live under. If there are nonhuman persons, then presumably the conditions for a decent life for them are different, and to that extent their rights will differ also. If enhancement changed us sufficiently, then at least some of the rights we now call human rights might not apply to us and other rights might apply. So, in that sense, enhancement could perhaps lead to the obsolescence of human rights—if no (mere) human beings remained.

As I have already suggested, however, that would not be a moral catastrophe. Rather, it would be morally fitting. If we now have certain rights by virtue of our humanity or by virtue of the conditions under which we now live, then when we are posthumans we will have whatever rights are appropriate for posthumans.¹⁴ So, when bioethicists such as Fukuyama worry about the obsolescence of human rights, they must (or at least

12. Indeed, if 'humanity' refers to the class of persons, it does not even imply that the concept of human rights applies to all human beings in the biological sense, since not all of these are persons.

13. Most secular theories of human rights agree that human rights are grounded in the interests of capabilities that (normal) human beings have, but some theories hold that a sound justification for the ascription of human rights to individuals requires premises that refer not only to individuals' capabilities or interests, but also to facts about institutions. Nothing in these theories requires that only human beings have the interests or capabilities in question.

14. I am grateful to Janet Radcliffe-Richards for this point.

should) have something else in mind than the possibility that if we become posthumans we will have posthuman rights. Perhaps they are worried about the situation in which some are enhanced to the point of being other than human and some are not.¹⁵

The Importance of Human Rights in a World of Humans and Posthumans

In a world in which some but not all were enhanced to the point of becoming posthumans, the concept of human rights, far from becoming obsolete, would become even more important. The concept of human rights is a threshold concept, not a scalar one. What matters from the standpoint of the ascription of human rights is whether an individual has certain capabilities or interests; the fact that other individuals may have them to a greater degree is irrelevant. Similarly, according to theories that accord moral status (or the highest moral status) to persons, understood as beings who have the capacity for practical rationality or for engaging in practices of mutual accountability,¹⁶ what matters is whether one has the capacity in question. Once the threshold is reached, *how well* one reasons practically or *how well* one engages in practices of mutual accountability does not affect one's moral status.

It is precisely because the concept of human rights, like that of moral status, is a threshold concept that human rights would be extremely important in a world in which some but not all were enhanced. In fact, we already live in such a world: the world's worst-off people are unenhanced compared with the best off. On average, people in 'developed' countries are taller, stronger, healthier, better able to produce and create more, better able to develop their talents, better able to promote their own values, and longer-lived than people in 'less-developed' countries. What we call 'economic development' consists of a complex set of processes by which human beings come to be enhanced in certain respects; that is, they gain capacities they previously did not possess and some of

15. As indicated in n. 3, their concern may have another source: they may have tacit religious beliefs or strongly teleological beliefs of a nonreligious sort to the effect that there is a natural order and that the creation of beings with a higher moral status than humans (or persons) would destroy or disturb it. For a critique of this type of view, see Buchanan, "Human Nature and Enhancement."

16. See Darwall, *The Second Person Standpoint*.

their existing capacities are augmented.¹⁷ In a world in which gaps in economic development have resulted in some being enhanced (in some respects) while others are not, human rights discourse is of critical importance, for two reasons. First, it conveys the idea that individuals have basic moral entitlements that ground duties on the part of others, regardless of whether those individuals are ‘enhanced’ or not. Second, it is now widely thought to encompass the notion that these basic entitlements include access to the resources (such as education) that are needed for participating effectively in the processes of development—for becoming ‘enhanced’. For these reasons, the concept of human rights would be all the more valuable in a world in which the uses of biotechnology exacerbated the current gap between the enhanced and the unenhanced. Thus the anxious prediction by Fukuyama, Parens, and others that enhancement might make the concept of human rights obsolete is not only mistaken, but also deeply ironic, because it rests on a failure to appreciate the distinctive functions and value of that concept.

III. THE IDEA OF A HIGHER, ‘POST-PERSON’ MORAL STATUS

I have argued that, although our concept of human nature may be capacious enough to accommodate the kinds of biomedical enhancements that are now most widely discussed, we cannot dismiss the idea that biomedical enhancements might eventually result in posthumans: beings so different from us that the term ‘human being’ no longer applied to them, and that such beings might have rights that are different from human rights. Now I consider a different question: could biotech enhancements eventually produce post-*persons*, beings with a higher status than that of persons? Enhancements that produced posthumans would not necessarily produce post-persons; that this is so is clear from the possibility of nonhuman extraterrestrial persons. If personhood depends upon having a particular set of capacities, not upon having a particular morphology or a particular set of neurological

17. This description of “development as enhancement” is compatible of course with a recognition that the processes of development involve losses as well as gains and in no way implies that people in less-developed countries are inferior people. See Allen Buchanan, “Enhancement and Human Development,” *Kennedy Institute of Ethics Journal* 18 (2008): 1–34.

structures or a particular biological lineage, then, as I have already noted, nonhuman persons are a possibility. The prospect of the enhancement of human beings resulting eventually in posthumans is not difficult to understand, but their resulting in post-persons is another matter. If the idea of beings with basic moral rights, over and above those possessed by persons, makes sense, then a world in which there were persons and post-persons would be a world in which the Moral Equality Assumption would be false, even if the concept of human rights, understood as rights of (mere) persons, still had application and was still of great moral importance.

In contrast to the idea of posthumans, it is not clear whether that of post-persons makes sense. Merely augmenting the characteristics that make a being a person doesn't seem to be the sort of thing that could confer higher moral status. If a person's capacity for practical rationality or for engaging in practices of mutual accountability or for conceiving of herself as an agent with interests persisting over time were increased, the result presumably would be an enhanced person, not a new kind of being with a higher moral status than that of person. After all, some human persons are better than others at practical reasoning, are morally better, or are better able to envision their future existence, but that doesn't mean they have a higher moral status.

The point is that equality of moral status of the sort we associate with personhood can accommodate many inequalities, including inequalities in the very characteristics that confer moral status. That is what it means to say that the concept of moral status is a threshold concept. So it is hard to imagine how enhancement could create beings with a higher moral status than that of person.

Of course, we must take care not to confuse a failure of imagination with conceptual incoherence. Yet how can we explore the moral implications of what we cannot imagine?

For now, let us simply bracket the problem of imagining what sorts of new characteristics would confer a higher moral status than that of persons and consider *the moral structure* of a world in which such a higher status existed. Suppose there were three moral statuses.

- (i) *Post-persons, with Rights R1–R6 (post-persons' rights)*
- (ii) *Human persons (as we are now), with Rights R1–R4 (persons' rights)*

- (iii) *Nonhuman, nonperson animals, with Rights R1–R2 (or with a moral status that confers serious constraints on how they may be treated, though not rights)*

For many of us, the moral universe already includes the inequality of moral status marked by the distinction between *ii* and *iii*: we think it is perfectly plausible to say that humans (or at least those humans who are persons) have a distinct and higher moral status than, say, rats.

Different Moral Statuses versus Variable Moral Considerability

There are two main philosophical theories (or families of theories) that purport to explain the difference in moral status marked by the distinction between *ii* and *iii*: interest-based accounts, and intrinsic moral worth, or respect-based accounts. According to interest-based accounts, the moral status of a being depends, roughly, upon how much good its life involves.¹⁸ ‘Good’ here refers to the well-being of the individual in question, understood as being comprised of various interests. This view implies, among other things, that the wrongness of killing a being depends upon how much good will thereby be lost.

It is not clear that the interest-based view can support the morally momentous distinction between persons and nonpersons that is implicated in the commonsense idea that nonhuman animals have a lower moral *status*. Instead, the interest-based view, properly understood, seems to be a kind of debunking of the idea of different moral statuses, properly speaking, and a recommendation to replace it with something more like *a continuum or gradient of moral considerability*. One can imagine a range of interests, but it is harder to imagine a sharp division between types of interests that would justify the moral status difference that is represented by the distinction between *ii* and *iii*. The concept of moral status appears to be a threshold concept and because it is, the idea of greater or lesser good that the interest-based view operates with seems ill suited to it.

According to the respect-based account stemming from Kant’s moral philosophy, all beings that possess certain capacities have an intrinsic

18. This formulation is intended to be broad enough to cover the distinction Jeff McMahan makes between interests and time-relative interests. McMahan, *The Ethics of Killing*, pp. 232–242.

moral worth that in some sense confers *inviolability*. Here there is no room for the idea of degrees of moral considerability of the sort that the interest-based account apparently must recognize. Contemporary contractualist moral theorists, broadly considered, ground intrinsic moral worth in the capacity to engage in mutual accountability through the giving and heeding of reasons.¹⁹ Proponents of the respect-based view can admit that there may be a fuzzy lower boundary for this threshold: that it may be difficult to judge whether some human beings (for example, very young children or cognitively impaired adults) have the capacity for mutual accountability. Nonetheless, the respect-based view can identify uncontroversial cases of individuals possessing the capacity in question. More important, it can explain why any being who clearly has the capacity in question is owed *equal* respect and hence why having the psychological and motivational characteristics that constitute the capacity to a higher degree does not confer higher moral status. On broadly contractualist understandings of the respect-based view, the same capacity that is said to confer moral status also is the source of the moral principles that give content to the recognition of moral status, including those pertaining to the rights that accompany the moral status of person.

The fact that the respect-based view can explain why having the characteristics that confer status to a higher degree does not confer higher status seems to me to be a significant difference between the respect-based view and the interest-based view. Accordingly, the former seems better suited to provide an account of moral status, understood as a threshold concept, than the latter. On the respect-based view, it makes sense to say that even though the characteristics that constitute the capacity that confers moral status admit of degree, once one has the capacity, having those characteristics to a higher degree is morally irrelevant. In contrast, if having a good is what confers moral considerability, then having a higher good or being capable of greater well-being should always be relevant to how one ought to be treated.

19. This notion of mutual accountability encompasses a range of broadly contractualist views, including those of Stephen Darwall and T. M. Scanlon. Darwall, *The Second Person Standpoint*; T. M. Scanlon, *What We Owe to Each Other* (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1998). On such views it is the capacity to engage in certain kinds of *relationships* that counts, but these can rightly be described as capacities nonetheless.

It might be argued that there is another, perhaps even more fundamental difference between the interest-based view and the respect-based view. The respect-based view seems more plausible as an account of the moral status of persons, simply because it, unlike the interest-based view, focuses on persons. The interest-based view focuses not on persons, but on interests as the ultimate objects of moral concern. In that sense, it is committed to the somewhat odd view that persons, as such, have no moral status: that the phrase ‘persons have a moral status higher than that of animals’ is really a misleading way of saying that ‘certain interests are so morally important that it is appropriate to treat those beings whose interests they are as if they had a higher moral status’. So, if it is a requisite of a plausible theory of moral status that it makes straightforward sense of the idea that persons have moral status, it is not clear that the interest-based view is even in the running.²⁰

Can We Imagine Beings with a Higher Moral Status Than That of Persons?

If we assume the perspective of the interest-based view, it is *not* hard to imagine how biomedical enhancements could eventually produce beings of greater moral considerability: all we have to imagine is beings whose interests were ‘higher’ than ours, in something like the way most of us now believe that our interests are ‘higher’ than those of rats. For example, if the enhanced beings had psychological capacities that allowed them to have richer sources of well-being than we are capable of, then in that sense they would have ‘higher’ interests and would be capable of greater good. But if I am right in concluding that the interest-based view cannot explain differences in moral status, as opposed to differences in moral considerability (because the concept of moral status is a threshold concept), then being able to imagine beings with ‘higher’ interests than ours does *not* show that we can imagine beings with a higher moral status than that of persons.

From the perspective of the respect-based view, beings with a good that is as much ‘higher’ (or greater) than ours as ours is compared to that

20. Although I believe there is much to be said for the view that interest-based conceptions are implausible because they are committed to the view that talk of the moral status of persons is a misleading way of talking about the special importance of certain kinds of interests, nothing I say in the remainder of this article depends on that being the case.

of rats does nothing whatsoever to clarify the idea of a higher moral status. Nor does the possibility of beings that are *more skillful* at engaging in practices of mutual accountability. According to the respect-based view on the contractualist interpretation, what matters is whether one has the capacity for mutual accountability, not one's excellence in exercising that capacity. So if the question is whether biomedical enhancements could eventually produce beings with a higher moral status than that of persons, where we take the idea of moral status as a threshold concept seriously, there is a serious obstacle to answering it: we seem unable to imagine the possibility in question. To put the same point somewhat differently, from the perspective of the respect-based view, it is hard to imagine what a *higher threshold*—one that required a higher moral status—would be like. It does not seem plausible to say that it would consist simply of higher levels of the same characteristics that now constitute the threshold the respect-based view employs. In the absence of an account of what the higher threshold would be like, the claim that there could be beings at a higher threshold who would have a higher moral status is not convincing.

Loss of Status in the Face of a Superior Alternative?

Perhaps we can think through the implications of adding a third moral status to our world, in spite of the fact that we find it difficult to imagine what sorts of new characteristics might ground the new, higher status represented by *iii*. Consider an analogy. Suppose that rats evolved before humans. It seems clear that whatever moral status rats had on prehuman earth was not diminished by the emergence of humans. It would have been wrong for space travelers who were nonhuman persons to torture rats on prehuman earth just for fun, just as it is wrong for us to treat rats that way now. It seems, then, that the mere emergence of beings with superior moral status (if we can make sense of that) would not *by itself* affect the moral status of existing beings. So even if biotechnology eventually yields enhancements that are so radical as to call for a new, higher moral status category for the enhanced, the moral status of the unenhanced would not *thereby* be diminished.

Here it might be objected that there is a sense in which the advent of post-persons *would* diminish the moral status of (mere) persons. If the nonuniversal use of enhancements led to the emergence of beings who

are radically superior to us in moral virtue and intelligence, and who had interests that were as much more complex than ours as our interests are compared to the interests of rats, then it would be permissible for them to sacrifice us for their sake, in cases where tragic choices must be made. If, as many presumably now believe, many rats may be killed to save the life of one person, then surely two or perhaps more mere persons could be permissibly killed to save one post-person. In that sense, the moral status of persons would be diminished if enhancements produced post-persons.²¹ (For those whose intuitions are stimulated by the ethics of rail transport: consider a trolley problem with mere persons on one track and post-persons on the other.)

Inviolability and the Moral Status of Persons

This objection can be met, if (1) being a person confers the moral status of *inviolability* and if (2) *inviolability*, properly understood, is a threshold concept. On this view, meeting the requirements for being a person confers *inviolability* and that is what counts; having the characteristics that confer personhood to a higher degree does not confer greater *inviolability*. Hence, whatever exceptions there are to the assertion that persons may not be sacrificed for the sake of other persons apply *equally* to all who qualify as persons, mere persons and post-persons included. The respect-based view includes the idea that all who have the relevant capacity have equal moral worth and that beings of equal moral worth are equally *inviolable*.²²

A more sophisticated objection would run as follows. Even those who claim that persons are *inviolable* acknowledge, albeit reluctantly, that *inviolability* has its limit in “supreme emergency” cases: that even the most fundamental rights of a person can be permissibly infringed in order to avert a moral catastrophe, such as the violent deaths of a great

21. This objection was raised by Jeff McMahan, at a conference on Enhancement and Human Nature, in Hong Kong, December 7, 2007.

22. The notion of *inviolability* at issue here is one that limits *inviolability* to beings that have rights. Ronald Dworkin develops a different conception of *inviolability* that is not limited in this way. He uses ‘*inviolability*’ and ‘*sacredness*’ interchangeably, although he does not invoke the religious connotations of the latter. According to Dworkin, something (including inanimate objects such as great works of art) can have *inviolability* because of the creativity involved in their histories. Because I am concerned here with notions of *inviolability* that are spelled out in terms of rights, I will not pursue Dworkin’s discussion further.

many innocent people. If the inviolability of persons is not absolute, however, then surely there can be circumstances in which it would be permissible to sacrifice mere persons for the sake of post-persons, in tragic choice situations.²³

Perhaps a plausible understanding of the inviolability of persons should allow for the possibility that even the most basic rights of persons, including even the right to life, can be infringed in a supreme emergency, a tragic choice situation where the deaths of a great many innocent persons can be avoided only by killing a few innocent persons. But from the fact that inviolability is limited *in this way* it does not follow that the lives of mere persons count for less than those of post-persons. One can consistently acknowledge that there are extreme cases in which inviolability can be overridden, while denying that differences in the nature of the interests or capacities of the beings involved justify the exception. On this threshold understanding of inviolability, the justification for sacrificing some persons for the sake of others is not that the latter have higher interests or capacities, but some other principle, such as that when the most basic rights are at stake, massive violations of persons' rights ought to be avoided, even if this means violating the rights of a few. If this is the correct way to understand the inviolability of persons, then the emergence of post-persons would not diminish the moral status of persons; the lives of all who meet the requirements for personhood and the rights it confers, mere persons as well as post-persons, would count equally when tragic choices must be made.

This understanding of inviolability explains the intuition that if an innocent *person* may be sacrificed to save the lives of a great many *persons*, the choice should *not* be made on the basis of any judgment that the person who is to be sacrificed is inferior in some way to those who will be saved. Justifying the decision to sacrifice the one for the many in that way would fail to show the equal respect to which all persons are entitled; it would be a denial of their equal status as persons. It would be better, on this view, to use a fair lottery to choose the one to be sacrificed, than to rank persons according to some standard of worth or excellence and then sacrifice the person who scored lowest. Similarly, in the bifurcated world we are attempting to imagine, if all persons are inviolable simply by virtue of their being persons, then, if tragic choices must be

23. I thank Jeff McMahan for pressing this objection also.

made, the lives of post-persons should *not* count for more than those of persons. Even if it were true that the death of post-persons involves greater loss of the good because of the “higher” nature of their interests or capacities, it would still not follow that their lives count more. The threshold view of inviolability excludes taking such considerations into account.

My aim here is not to try to provide a theory of supreme emergency exceptions to the inviolability of persons. I have entertained the idea that there are such exceptions, because the more sophisticated of the two objections considered above argues that if such exceptions exist, then those who affirm the inviolability of persons are thereby committed to acknowledging that the lives of post-persons would count for more than those of persons. That inference, I have argued, is invalid, if the inviolability of persons is a threshold concept. Moreover, I have noted that this way of understanding inviolability accords with the intuition that if, in a “supreme emergency,” some innocent persons may be sacrificed to save a great many, the choice should be blind to differences in excellence or worth or capacity for well-being among persons: that inviolability requires every person to have a fair chance of avoiding the sacrifice or, to put the same point negatively, that all should be equally liable to being sacrificed.²⁴

Nevertheless, although I believe that the threshold understanding of inviolability sketched above is the correct one, I do not pretend to have demonstrated that this is so. Instead, I will settle for a more modest conclusion: at least on one plausible understanding of the view that personhood confers inviolability, namely, the threshold view, the emergence of post-persons (assuming we can make sense of that idea) would not in itself diminish the moral status of persons, if we assume that moral status is itself a threshold concept, distinct from the concept of a gradient of moral considerability. This modest conclusion has an important implication, however: even if enhancement produced beings that were as cognitively and motivationally superior to us as we are to rats, it would not follow from this inequality alone that they would have a higher moral

24. Of course, the claim that differences in capacities for well-being should not determine who is to be sacrificed means here only that having *relatively* greater capacity should not count. This is compatible with requiring that those who are to be eligible, in a fair lottery, for being saved through the sacrifice of others, must be capable of *significantly* benefiting from being saved.

status. That would only follow if the inviolability of persons were not a threshold concept. According to the threshold concept of inviolability, the reason that persons are inviolable and rats are not is *not* that persons have *greater* cognitive and motivational capacities than rats and consequently “higher” interests; it is that persons have the cognitive and motivational capacities that confer inviolability and rats do not. On this view, moral status is not a matter of relative superiority; it is a matter of sufficiency. That is what it is to understand moral status as a threshold concept.

To argue persuasively that biomedical enhancements could create beings for whose sake (mere) persons could be permissibly sacrificed, one would have to do one of two things. One would either have to supply what we do not now have, namely, a threshold conception of moral status different from that which broadly contractualist moral theories assign to persons and then argue that while ordinary, unenhanced persons do not meet that threshold, biomedical enhancements could produce beings who do; or, one would have to argue that the idea of moral status, understood as a threshold concept, ought to be abandoned in favor of the idea of a gradient of moral considerability.

Utilitarians take the latter option. For a utilitarian there are no differences in moral status properly speaking; there is only a gradation, a continuum of beings with lesser and greater capacities for well-being and harm, and sacrificing some beings for the sake of others further along the continuum is always in principle not only permissible, but even required. On this view, if biomedical enhancements produced beings with greater capacity for well-being than persons, then persons could be justifiably sacrificed for their sake. For reasons already noted, this utilitarian view is more properly characterized as a rejection of the idea of moral status than as a noncontractualist interpretation of it.

The broadly contractualist, respect-based understanding of the moral status of persons thus differs from the interest-based view in two ways. First, because it takes seriously the idea that moral status is a threshold concept, it fits better with our intuitions about moral status. In contrast, on the interest-based account, the idea of a threshold that affects how beings are to be treated is deeply problematic, because there is no reason to think that there are such sharp discontinuities in beings’ capacities for well-being. At most, on a utilitarian version of the interest-based account, a threshold notion of moral status might be a rough and ready

convention for orienting our behavior toward other beings in a way that tends to maximize utility. Second, the broadly contractualist view of moral status denies that the most fundamental requirements concerning how we ought to treat persons depend on their capacity for well-being, and this too seems to fit better with our intuitions about when it is permissible to sacrifice some persons to save other persons. In particular, as I have already noted, the broadly contractualist conception not only fits but actually explains the intuition that it is more in keeping with respect for persons to choose the one to be sacrificed by some random method than by ranking persons as to various excellences or according to their capacity for well-being.

Even if it is true, as I have suggested, that the understanding of moral status that best fits our moral intuitions makes it difficult to understand how biomedical enhancements could produce beings with a moral status higher than that of persons, I do not pretend to have settled that issue conclusively here. To do so would ultimately require a convincing resolution of the dispute between Kantian and utilitarian moral theories. Instead, I will opt for a more guarded, but still significant conclusion: Unless one adopts an interest-based view according to which it would be more accurate to speak of moral gradients rather than different statuses, the worry that biomedical enhancements for some but not all would create a new moral status of post-person is highly dubious. Further, the more weight one gives to the idea of moral *status*—as opposed to the idea of a continuum of moral considerability—the more difficult it is to imagine how biomedical enhancements could produce beings with a higher moral status than that of persons.

I have argued that whether we adopt an interest-based or a respect-based view makes a great deal of difference to the answer to the question, ‘Could biomedical enhancements eventually produce beings with a higher moral status than that of persons?’ If one adopts the interest-based view, then it is hard to rule out the possibility that the answer is ‘yes’, whereas from the perspective of the respect-based view the answer appears to be ‘no’ and the very possibility that an affirmative answer assumes seems unimaginable. I have also argued that the interest-based view is not so much an account of moral status as a debunking of the notion and a proposal to replace it with the idea of variable moral considerability. If that is the case, then, although adopting the interest-based perspective makes an affirmative answer to the question of

whether enhancements could produce beings with a higher moral status than that of persons more plausible, it does so only by deflating the significance of that answer. If the interest-based view is correct, then we have exaggerated the moral difference between persons and animals and should replace the idea of a difference in moral status (i.e., the threshold notion) with that of a continuum of moral considerability. But if that is so, then the prospect of post-persons is not such a dramatic change as we first thought. To the extent that the interest-based view *debunks* the notion of moral status, invoking that view to support the possibility of enhanced post-persons *deflates* the claim that such beings would have a higher moral status. So, the claim that enhancements could produce post-persons turns out to be either very implausible or not nearly as interesting as it first appeared to be.

A Practical Worry

Even if the emergence of beings with capacities far greater than ours would not in fact diminish our moral status (where moral status is understood as a threshold concept), these enhanced beings might *think* themselves so superior that they would treat (mere) persons as if they had a lower moral status than they have. Call this the Practical Worry. Thus George Annas warns that “. . . ‘improved’ posthumans would inevitably come to view the ‘naturals’ as inferior, as a subspecies of humans suitable for exploitation, slavery, and even extermination.”²⁵

Even if Annas’s talk of ‘inevitability’ is unwarranted, it would be a mistake to shrug off the Practical Worry as fanciful a priori moral psychology.²⁶ There is considerable evidence that human beings have been prone to make erroneous judgments about moral status and that these judgments have played a significant role in large-scale human rights violations. For example, Africans were thought by some to be less than

25. George Annas, “Cell Division,” *Boston Globe*, April 21, 2005. See also George Annas, *American Bioethics: Crossing Human Rights and Health Law Boundaries* (Oxford: Oxford University Press, 2005), p. 51.

26. For a perceptive and sensible effort to throw cold water on Annas’s confident predictions of “genetic genocide” perpetrated by the enhanced on the unenhanced and a clear articulation of the point that Annas has utterly discounted the widespread benefits that enhancement could bring, see Elizabeth Fenton and John D. Arras, “Bioethics and Human Rights: Curb Your Enthusiasm,” *Cambridge Quarterly of Health Care Ethics* (forthcoming).

persons—beings with a moral status akin to that of animals—and this belief may have contributed to the practice of slavery, or at least to its persistence into an era in which it was widely thought wrong to enslave human beings.²⁷ It may also be the case that where disparities of power are very great, the risk of making erroneous moral status judgments—or of merely ignoring the moral status of the weak in the headlong pursuit of one’s own interests—is exacerbated. To paraphrase Hume, perhaps the most the unenhanced could expect of the enhanced would be pity or charity, not justice.²⁸ The history of racism and of our treatment of ‘lower animals’ and mentally disabled human beings indicate that the Practical Worry is not to be taken lightly.

Putting the Practical Worry in Perspective

Nevertheless, the prognosis may not be quite as bleak as Annas assumes, if we attend to more recent history. *Some* inroads have been made against the worst abuses of racism and *some* improvement has occurred in the treatment of persons with mental disabilities. The modern human rights movement has done *something* to help protect the world’s ‘unenhanced’ humans and to articulate the demand that they should have access to resources needed to reap the fruits of development. And although nonhuman animals are still often horribly abused, there has been progress in our treatment of them as well, in spite of the fact that they, unlike persons, cannot speak for themselves, cannot politically organize, cannot invoke the idea that they have moral status—and cannot use weapons against us. So, it is premature to conclude that, in a

27. The hypothesis that mistakes about the moral status of Africans contributed to slavery is compatible with the hypothesis that the practice of slavery—more specifically, the interests it served and generated—helped foster and sustain those very mistakes.

28. “Were there a species of creatures, intermingled with men, which, though rational, were possessed of such inferior strength, both of body and mind, that they were incapable of all resistance, and could never, upon the highest provocation, make us feel the effects of their resentment; the necessary consequence, I think, is, that we should be bound, by the laws of humanity, to give gentle usage to these creatures, but should not, properly speaking, lie under any restraint of justice with regard to them, nor could they possess any right or property, exclusive of such arbitrary lords. Our intercourse with them could not be called society, which supposes a degree of equality; but absolute command on the one side, and servile obedience on the other.” See David Hume, *An Enquiry Concerning the Principles of Morals* 1777 ed., ed. J. B. Schneewind (Indianapolis, Ind.: Hackett, 1983), Section III, part I, p. 25.

world in which biotechnology exacerbated the ‘enhancement gap’ among humans, the enhanced would “inevitably” mistake or callously ignore the moral status of the unenhanced. Much would depend upon whether the enhanced were merely stronger and smarter or also were *morally* enhanced, with greater capacity for empathy, a clearer understanding of the real basis of moral status, and more impressive powers than we possess for resisting the temptation to exploit others.

The Practical Worry is extremely serious, but it is important to understand that it is a worry about the consequences of misunderstanding or ignoring moral status, not a problem that arises because our moral concepts are inadequate or will become obsolete in the face of the prospect of biomedical enhancements. Because my chief focus in this article is on the implications of biomedical enhancement for our most basic moral *concepts*, in particular, the concept of moral status and that of human rights, I will not explore the Practical Worry in any more detail here.²⁹

IV. EQUAL MORAL STATUS, DIFFERENT RIGHTS?³⁰

So far I have argued that even if the eventual cumulative result of biomedical enhancements (perhaps in combination with evolutionary changes) were the emergence of posthumans, the concept of human rights would not thereby be rendered obsolete and that the emergence of beings with a higher moral status would not in itself diminish the moral status of (mere) persons. I have also suggested that the idea that biomedical enhancements might produce post-persons, beings with a higher moral status than that of persons, is highly dubious, unless one is willing to embrace an interest-based view that in effect replaces the idea of status, understood as a threshold concept, with that of a continuum of moral considerability. I now want to consider a more subtle issue of equality that the prospect of biomedical enhancement raises. Could the use of biotechnologies to enhance humans eventually result in a

29. A plausible response to the Practical Worry would require two things: an adequate characterization of both the risks of enhancement (including the risk that the enhanced would wrongly treat the unenhanced as inferiors) and the benefits of enhancement, as well as a consideration of how fairly or unfairly the benefits are likely to be distributed.

30. I am grateful to Daniel I. Wikler for pressing me to consider this question in this article.

two-tiered system of rights, even if it did not produce a class of beings with a higher moral status than that of persons?³¹

Enhanced Cooperators

Consider this scenario. Suppose that some but not all human beings were enhanced in such a way that they came to have much greater cognitive abilities, including a significantly augmented capacity for complex practical reasoning, higher ‘emotional intelligence’, and much greater capacity for empathy and for impulse control. Suppose that when enough individuals came to have this package of enhancements, they became capable of much more sophisticated, more productive, and more morally admirable forms of cooperation—with each other.

This scenario is not as fanciful as it first seems. In fact, it will be familiar to those acquainted with recent work in evolutionary psychology. On some accounts, one branch of the hominid lineage—our ancestors—through some fortuitous combination of genetic change and cultural innovation, achieved a less robust package of just such enhancements, less than 100,000 years ago on some estimates.³² As a result of these enhancements, large-scale, stable cooperation became possible; some might even say that morality became possible. There is increasing evidence that these ‘enhanced cooperators’ coexisted for a time with another hominid lineage, the Neanderthals. At this point, little is known about what sort of interaction, if any, may have occurred between these groups. Some speculate that the enhanced cooperation of the *Homo sapiens* put the Neanderthals at a disadvantage and contributed to their extinction. Whether or not Neanderthals qualified as persons is perhaps an interesting question, but we probably know too little about them to answer it. The point of this excursion into prehistory, however, is simply that the idea of enhancements that radically change the possibilities for cooperation is far from fanciful.

The troubling future scenario is one in which not all become enhanced cooperators, but so many do that what might be called the dominant cooperative framework is profoundly transformed: the

31. The discussion that follows draws on my reflections in chapter 7 of *From Chance to Choice: Genetics and Justice* (Cambridge: Cambridge University Press, 2000).

32. See, for example, Spencer Wells, *The Journey of Man: A Genetic Odyssey* (Princeton, N.J.: Princeton University Press, 2002), pp. 84–88.

mainstream economy and the most important political processes are structured for enhanced cooperators. The result is that the unenhanced in effect become disabled: they are unable to participate, or unable to participate in a minimally competent way, in core economic and political processes that are designed for beings with quite different capacities.

The idea of a dominant cooperative framework requires careful elaboration. Although we often speak of 'the' economy, this is, of course, something of an idealization: there are sub-economies of various sizes, domains of production, and exchange that sustain some people, even if they are quite limited in scope and less sophisticated in their forms of interaction than the mainstream economy and are somewhat independent of it. For example, a small rural village could be said to have a subsistence-cum-barter economy, even if it is embedded in a country that is increasingly being integrated into a more complex, industrialized global economy that operates through currency exchanges and credit, not barter, and in which most production is for exchange, not consumption by the producer. Similarly, a person who is unable to participate in national political processes might still have considerable scope for political participation at the local level. Yet in the modern world, the highest level of political processes, at this point those that occur at the national level, have a profound influence on people's lives; and those political processes tend to focus on the mainstream economy. Because how well the vast majority of people fare depends upon the mainstream economy, there is a point to talking about 'the economy' even if this is shorthand for 'the mainstream economy'.

The mainstream economy and the most important political processes interact to such an extent that together they may be called the dominant cooperative framework. The most important political processes take as one of their primary objects the management of the mainstream economy, and the mainstream economy generates patterns of wealth distribution that influence the character of the most important political processes. The cooperative framework that is constituted by the interaction of the mainstream economy and the most important political processes is aptly called 'dominant' because, at least where it is highly developed, it is likely to operate in ways that systematically disadvantage other forms of economic and political activity.

If the gap between the enhanced and the unenhanced were great enough, the unenhanced would not be able to participate at all in the

mainstream economy or the most important political processes or both. They would be like young children who, although capable of playing the extremely simple card game “Go Fish,” are unable to play Bridge and find themselves in a venue in which the Bridge players are able to determine what game will be played. Of an ordinary three-year-old, we would not say that she is unable to play Bridge well or effectively; we would say she is unable to play Bridge.

If the gap between the enhanced and the unenhanced were not so great, the unenhanced might be able to participate to some extent, but not in a minimally competent way. To grasp the implications of such a scenario, the card-game analogy is again useful. Suppose there is a group of people, all of whom want to play cards. Suppose that half the group is capable of playing Bridge, but the other half can only play the child’s game “Go Fish” with minimal competence. If the group tries to play Bridge, then the game will be spoiled for those who can play Bridge, because the Go Fish types will mess up the play. If the group plays “Go Fish,” all can play effectively (because virtually no skill is required), but those who could play Bridge will lose a lot of enjoyment. Suppose also that the Bridge types do not stand in some special relationship to the Go Fish types that obliges them to ignore their own interests in playing a more rewarding game. In these circumstances, there is a conflict of legitimate interests: on the one hand, there is the interest of the Go Fish types in being included in the game; on the other hand, there is the interest of the Bridge types in playing a game that allows the exercise of their skills and makes possible the goods that come from the complex competition and cooperation that Bridge involves. Of course, this conflict of legitimate interests could be resolved if the group is allowed to split into two: one to play Bridge, the other to play “Go Fish.” This will not be possible, however, if there is only one deck of cards.

If a large majority of biomedically enhanced cooperators come to shape the mainstream economy and the most important political processes in their own image, as it were, then the situation will be analogous to that in which there is only one deck of cards. The functioning of the dominant cooperative framework will make it increasingly hard for unenhanced cooperation to thrive—unless the enhanced cooperators opt for a dominant cooperative framework that is far from suitable, from their perspective. Where ‘cooperators’ and ‘enhanced cooperators’ occupy the same cooperative space, where it is impossible or very costly

to avoid interactions that can be disruptive to their respective forms of cooperation, there can be a conflict of legitimate interests.

The situation I am describing is not fanciful. It exists in every complex society. In any such society, there are some individuals, now called 'people with developmental disabilities', who cannot function as well in complex social cooperation as 'normal' people.³³ The legal rights of such individuals are restricted: depending upon the degree of their mental or emotional impairment, they may not be able to enter into contracts, vote, marry, or hold certain kinds of jobs. The standard justification for these restrictions is paternalistic: we are protecting the developmentally disabled from injuring themselves or being exploited. However, as the card-game analogy suggests, there is another justification that is not paternalistic: some restrictions on the participation of 'simple cooperators' in complex cooperation may be justified from the standpoint of a just accommodation of the conflicting interests of the 'complex cooperators'.

Simple cooperators have legitimate interests in being effective participants in their society's dominant cooperative scheme, where this includes the interest in not being stigmatized as incompetent to participate, and not being regarded as dependent beings who do not contribute to social cooperation. Complex cooperators have a legitimate interest in being able to engage in forms of cooperation that allow for the exercise and development of their skills and an interest in the fruits of the greater productivity that complex cooperation can bring. The conflict of legitimate interests may be mitigated to some extent if the simple cooperators could be assured that (a) complex cooperation will produce goods that cannot be gotten through simple cooperation and that (b) they, the simple cooperators, will in fact have adequate access to these goods. But it would be wrong to *assume* that such goods would fully compensate for the simple cooperators' exclusion from participation in the dominant cooperative scheme and the stigmatization that this typically involves. Beyond a certain point, getting more of the goods that can be made available to them through the participation of others in the dominant cooperative scheme may be less important to the unenhanced than being able themselves to participate in the cooperative scheme. An

33. See Daniel I. Wikler, "Paternalism and the Mildly Retarded," *Philosophy & Public Affairs* 9 (1979): 377–92.

ineliminable conflict of legitimate interests may remain even if sincere efforts to compensate the unenhanced are undertaken.

Of course, the extent of the conflict may be mitigated if we assume that the individuals involved do not evaluate alternative cooperative schemes exclusively on the basis of how well they facilitate the satisfaction of their own preferences. They may also care about justice or value inclusiveness in its own right, whether or not they think it is required by justice.³⁴ Honoring the commitment to justice may require a mutual sacrifice of legitimate interests. Similarly, even if individuals value inclusiveness, the question remains as to how much weight this value ought to be accorded. So, the assumption that the enhanced, the unenhanced, or both have moral commitments regarding cooperation does not eliminate the conflict of legitimate interests. If a more demanding cooperative framework is chosen, the unenhanced will lose something they rightly value; if a less demanding one is chosen, the enhanced will lose something they rightly value.

Equally Legitimate Interests, Unequal Rights

If they both continue to operate in the same cooperative space—if there is to be only one dominant cooperative framework—then just accommodation of these conflicting legitimate interests may require that *both* groups settle for something less than their first choice as to what the dominant cooperative scheme will be like, if they only took into account the satisfaction of their own preferences (considerations of justice or inclusiveness aside). The complex cooperators—the enhanced—might have to settle for a less demanding (and less rewarding) cooperative framework than they are capable of participating in effectively; and at the very least they would have to compensate the simple cooperators for any restrictions on their participation, and in such a way as to acknowledge the costs of stigmatization and dependency that the simple cooperators would suffer. The simple cooperators might have to settle for some restrictions on their participation in the more demanding areas of the dominant cooperative framework. It is perhaps worth noting that the Americans with Disabilities Act—perhaps the most comprehensive existing attempt to avoid discrimination against persons with

34. I am indebted to an Editor of *Philosophy & Public Affairs* for this point.

disabilities—tacitly acknowledges that justice requires *mutual* accommodation, *not* the maximal promotion of the interests of persons with disabilities. It requires only “reasonable accommodation” of the special needs of persons with disabilities; it does not require that society make *whatever* changes are necessary, regardless of the losses to nondisabled people, in order to remove all impediments to full participation on the part of those with disabilities.³⁵

There is this important difference, however, between the sorts of compromises regarding the cooperative framework that might be required to accommodate the legitimate interests of unenhanced cooperators in our thought experiment and the modifications of the existing cooperative framework that are typically demanded by people with disabilities. When people with disabilities demand ramps for wheelchairs or braille panels in elevators, they are asking for changes that will give them access to the existing cooperative framework, but that do not make that framework any less suitable for the nondisabled. Unenhanced cooperators are not like short adults who need a higher chair to be able to reach the Bridge table; they are like three-year-olds who cannot play Bridge. To make it possible for the unenhanced to be effective participants, it might be necessary to “dumb down” the cooperative framework itself, thereby making it less valuable for the enhanced cooperators.³⁶

Suppose, then, that biotechnologies were used to develop a series of enhancements that eventually resulted in the emergence of a large group of enhanced cooperators, but that some remained unenhanced. Suppose that the new form of cooperation of which the enhanced cooperators were capable was not only more materially productive and much more rewarding to them than simpler forms of cooperation, but also was more morally admirable in the sense that it cultivated higher levels of moral virtues in the participants and facilitated more morally praiseworthy achievements and relationships. If enhanced and unenhanced cooperators competed for the same cooperative space, then there might be a conflict of legitimate interests. A just accommodation of the conflicting

35. The Americans with Disabilities Act of 1990, in Section 12111(9), requires “reasonable accommodation,” for example, on the part of employers but limits this requirement by “undue hardship,” defined as “an action requiring significant difficulty or expense.” See (9) and (10) of Section 12111 at (<http://www.ada.gov/pubs/ada.htm>). Accessed 27 December 2007.

36. I thank John Arras for this point.

legitimate interests might require some differences between the rights of the enhanced and unenhanced. The enhanced might have a range of rights that allow them participation in areas of the dominant cooperative scheme that are off-limits to the unenhanced. Both groups might enjoy the same *basic* rights, but the enhanced would have a richer set of rights in addition.

Notice that nothing in this scenario suggests that the unenhanced would have a higher moral status. The conflict of interest is between two different groups of persons. But even if we need not worry about biotechnologies producing beings with a higher moral status, we ought to consider the possibility that they might produce a two-tiered system of rights. The idea of a two-tiered system of rights is not novel, of course; I have already noted that it is exemplified in the legal system's treatment of people with developmental disabilities. At least from the standpoint of an understanding of rights that acknowledges that claims about their existence require justifications that appeal ultimately to the legitimate interests of persons, we must be willing to consider the possibility that a just accommodation of the conflicting interests of enhanced and unenhanced cooperators may involve different moral rights, not just different legal rights. Differences in the moral rights that various persons have already exist, because persons participate in special relationships that generate rights. Nevertheless, the prospect that the pursuit of enhancements may proliferate inequalities in rights is troubling.

Equal Moral Status, Different Rights?

Beings with the same moral status can have different rights, but only within limits, because the idea of moral status, at least in the case of persons, is intimately connected with the idea of rights. Indeed, as I noted earlier, the moral status of persons is typically explicated in significant part in terms of rights: persons as such are said to have certain basic moral rights. All persons having certain basic rights in common is compatible with their having different rights from one another, so long as the different rights are not basic rights. However, the distinction between the basic rights that help define moral status and other, non-basic rights may be difficult to draw and is certainly a contested matter in moral theory. We may need a clearer notion of moral status than we now

possess to be able to draw a plausible distinction between basic and nonbasic rights. Or we may need to develop better theories of rights to clarify our concept of moral status.

Is a Hierarchy of Rights Compatible with Public Recognition of Equality?

Whatever else is true about the moral status of persons, this much seems clear: proper acknowledgment of a person's moral status requires some sort of fundamental *public recognition of equality*.³⁷ But surely a commitment to the public recognition of the equality of persons places significant constraints on inequalities in the rights of persons, if only for the reason that human beings with inferior rights may find it hard to regard themselves—and harder to be regarded by others—as having equal moral status. The Practical Worry returns, in a more sophisticated form.

To that extent, the concern that enhancement could actually produce beings with a higher moral status and the Practical Worry that enhanced beings would act as if they possessed a higher moral status, even if they didn't, are not as crisply distinct as first appears. The commitment to equal moral status, if it is to be sincere and realistic, must take into account the facts, including the facts of moral psychology, that determine the conditions under which the ideal of equal moral status can be realized.

Equal Political Participation Rights and Equal Moral Status

Daniel Wikler suggests that the cognitively enhanced might reasonably conclude that the unenhanced were not fit to manage their own affairs.³⁸ He concludes that an unequal distribution of civil liberties would be justified. He does not consider whether unequal civil liberties are compatible with proper recognition of equal moral status. The more interesting question, in my judgment, concerns political participation rights, because, at least on some views, they are more intimately connected

37. Elizabeth Anderson emphasizes this recognitional aspect of equality repeatedly when she argues that egalitarian justice's "proper positive aim is not to ensure that everyone gets what they morally deserve, but to create a community in which people stand in relations of equality to others." See Anderson, "What Is the Point of Equality?" *Ethics* 109 (1999): 287–337, at pp. 288–89.

38. Wikler, "Paternalism in the Age of Cognitive Enhancement."

with equal moral status. Could a large, enhanced majority justifiably deny political participation rights to the unenhanced?

Jeremy Waldron has argued that, at least in the mainstream of liberal political thought, the struggle for equal political participation rights is based on the idea of equal status.³⁹ According to Waldron, Locke's view (at least when it is purged of sexist and racist distortions) is that the same capacity for rational self-direction that confers a distinctive, higher moral status when compared with nonrational beings also qualifies one for equal participation in governance. On this view, it is highly problematic, if not outright inconsistent, to assert that enhanced cooperators would not be of a higher moral status even though they had fundamental rights of political participation that the unenhanced did not possess.

Quite apart from the question of whether moral status and political participation rights are as intimately connected as Locke suggests, there is good reason to be skeptical about the claim that biomedical enhancements could justify the denial of political participation rights to the unenhanced. Consider the form that an argument for restricting political participation rights to the enhanced would take. The idea would be that only the enhanced should have political participation rights because only they can properly understand the complex workings of society or have the moral capacity to work for the common good in a consistent and farsighted way.

There are two points to notice about this argument. First, it is a very old one; Plato advanced it in *The Republic*. It is simply the argument that only the most intelligent (or the most intelligent and virtuous) are fit to rule. Second, whether this argument (or some refinement of it) is cogent does not depend upon how those with superior characteristics came to have them, so envisioning the possibility of biomedical enhancements seems to add nothing that can help us determine whether it is cogent.⁴⁰

The objections to the Platonic argument are so well known that it is not necessary to rehearse them all here. Instead, I will only mention two of the most prominent. The first is that even very considerable differences in intelligence and virtue do not qualify the superior to rule over others without their participation in governance because such an

39. Jeremy Waldron, *God, Locke, and Equality: Christian Foundations in Locke's Political Thought* (Cambridge: Cambridge University Press, 2002).

40. I am indebted to an Editor of *Philosophy & Public Affairs* for this important point.

arrangement is too risky for the nonparticipating: their interests will not be adequately represented. The second is that the value of political participation is not purely instrumental.

To argue convincingly that biomedical enhancement could justify unequal political rights, one would have to do one of two things: successfully defend the general form of the Platonic argument against the well-known objections to it; or show that a proposal for unequal distribution of political rights between the biomedically enhanced and the unenhanced would be immune to those objections. Neither option looks promising, in my judgment. The well-known objections seem cogent and also seem to apply with equal force to the biomedical enhancement version of the Platonic argument, unless one can adequately defend the very problematic assumption that the instrumental value to those who would lack political participation rights would be so great as to overwhelm the noninstrumental values of participation. Here a quite different analogy than that of the card game may be apt: suppose that human affairs could be run much more efficiently if God were to micromanage them, eliminating the need for human governance entirely. It is far from obvious that this gain in efficiency would justify the claim that human beings have no right to govern themselves. What is more, imagining a scenario in which biomedical enhancements elevate human beings to anything approaching the wisdom and beneficence attributed to the deity may be even more difficult than the task we confronted earlier, that of imagining how biomedical enhancements could create post-persons.

V. CONCLUSION

I have argued that if biomedical enhancements produced a sharp division between simple cooperators and complex cooperators, the result could be that individuals with the same moral status would have different rights (so long as these do not include the 'basic' rights that equal moral status entails). Thus, even if the prospect of biomedical enhancements does not challenge the assumption that all who qualify as persons have the same moral status (The Equal Moral Status Assumption) or render the concept of human rights obsolete, it may nevertheless pose a serious threat to equality. So, a moral assessment of the pursuit of biomedical enhancement technologies ought to take seriously the risk of this sort of inequality.