

Positions on the ethics of human enhancement technologies can be (crudely) characterized as ranging from transhumanism to bioconservatism. Transhumanists believe that human enhancement technologies should be made widely available, that individuals should have broad discretion over which of these technologies to apply to themselves, and that parents should normally have the right to choose enhancements for their children-to-be. Bioconservatives (whose ranks include such diverse writers as Leon Kass, Francis Fukuyama, George Annas, Wesley Smith, Jeremy Rifkin, and Bill McKibben) are generally opposed to the use of technology to modify human nature. A central idea in bioconservatism is that human enhancement technologies will undermine our human dignity. To forestall a slide down the slippery slope towards an ultimately debased 'posthuman' state, bioconservatives often argue for broad bans on otherwise promising human enhancements.

This paper distinguishes two common fears about the posthuman and argues for the importance of a concept of dignity that is inclusive enough to also apply to many possible posthuman beings. Recognizing the possibility of posthuman dignity undercuts an important objection against human enhancement and removes a distortive double standard from our

field of moral vision.

TRANSHUMANISTS VS. BIOCONSERVATIVES

Transhumanism is a loosely defined movement that has developed gradually over the past two decades, and can be viewed as an outgrowth of secular humanism and the Enlightenment. It holds that current human nature is improvable through the use of applied science and other rational methods, which may make it possible to increase human health-span, extend our intellectual

and physical capacities, and give us increased control over our own mental states and moods.¹ Technologies of concern include not only current ones, like genetic engineering and information technology, but also anticipated future developments such as fully immersive virtual reality, machine-phase nanotechnology, and artificial intelligence.

Transhumanists promote the view that human enhancement technologies should be made widely available, and that individuals should have broad discretion over which of these technologies to apply to themselves (morphological freedom), and that parents should normally get to decide which reproductive technologies to use when having children (reproductive freedom).² Transhumanists believe that, while there are hazards that need to be identified and avoided, human enhancement technologies will offer enormous potential for deeply valuable and humanly beneficial uses. Ultimately, it is possible that such enhancements may make us, or our descendants, 'posthuman' beings who may have indefinite health-spans, much greater intellectual faculties than any current human being – and perhaps entirely new sensibilities or modalities – as well as the ability to control their own emotions. The wisest approach *vis-à-vis* these prospects, argue transhumanists, is to embrace technological progress, while strongly defending human rights and individual choice, and taking action specifically against concrete threats, such as military or terrorist abuse of bioweapons, and against unwanted environmental or social side-effects.

In opposition to this transhumanist view stands a bioconservative camp that argues against the use of technology to modify human nature. Prominent bioconservative writers include Leon Kass, Francis Fukuyama, George Annas, Wesley Smith, Jeremy Rifkin, and Bill McKibben. One of the central concerns of the bioconservatives is that human enhancement technologies might be 'dehumanizing'. The worry, which has been variously expressed, is that these technologies might undermine our human dignity or inadvertently erode something that is deeply valuable about being human but that is difficult to put into words or to factor into a cost-benefit analysis. In some cases (for example, Leon Kass) the unease seems to derive from religious or crypto-religious sentiments, whereas for others (for example, Francis Fukuyama) it stems from secular grounds. The best

¹ N. Bostrom. 2003. The Transhumanist FAQ, v. 2.1. *World Transhumanist Association*. Webpage: www.transhumanism.org/resources/FAQy21.pdf

² N. Bostrom. Human Genetic Enhancements: A Transhumanist Perspective. *Journal of Value Inquiry*, Vol. 37, No. 4, pp. 493–506.

approach, these bioconservatives argue, is to implement global bans on swathes of promising human enhancement technologies to forestall a slide down a slippery slope towards an ultimately debased, posthuman state.

While any brief description necessarily skirts significant nuances that differentiate between the writers within the two camps, I believe the above characterization nevertheless highlights a principal fault line in one of the great debates of our times: how we should look at the future of humankind and whether we should attempt to use technology to make ourselves 'more than human'. This paper will distinguish two common fears about the posthuman and argue that they are partly unfounded and that, to the extent that they correspond to real risks, there are better responses than trying to implement broad bans on technology. I will make some remarks on the concept of dignity, which bioconservatives believe to be imperilled by coming human enhancement technologies, and suggest that we need to recognize that not only humans in their current form, but posthumans too could have dignity.

TWO FEARS ABOUT THE POSTHUMAN

The prospect of posthumanity is feared for at least two reasons. One is that the state of being posthuman might in itself be degrading, so that by becoming posthuman we might be harming ourselves. Another is that posthumans might pose a threat to 'ordinary' humans. (I shall set aside a third possible reason, that the development of posthumans might offend some supernatural being.)

The most prominent bioethicist to focus on the first fear is Leon Kass:

Most of the given bestowals of nature have their given species-specified natures: they are each and all of a given *sort*. Cockroaches and humans are equally bestowed but differently natured. To turn a man into a cockroach – as we don't need Kafka to show us – would be dehumanizing. To try to turn a man into more than a man might be so as well. We need more than generalized appreciation for nature's gifts. We need a particular regard and respect for the special gift that is our own given nature³

³ L. Kass. Ageless Bodies, Happy Souls: Biotechnology and the Pursuit of Perfection. *The New Atlantis* 2003; 1.

Transhumanists counter that nature's gifts are sometimes poisoned and should not always be accepted. Cancer, malaria, dementia, aging, starvation, unnecessary suffering, and cognitive shortcomings are all among the presents that we would wisely refuse. Our own species-specified natures are a rich source of much of the thoroughly unrespectable and unacceptable – susceptibility for disease, murder, rape, genocide, cheating, torture, racism. The horrors of nature in general, and of our own nature in particular, are so well documented⁴ that it is astonishing that somebody as distinguished as Leon Kass should still in this day and age be tempted to rely on the natural as a guide as to what is desirable or normatively right. We should be grateful that our ancestors were not swept away by the Kassian sentiment, or we would still be picking lice off each other's backs. Rather than deferring to the natural order, transhumanists maintain that we can legitimately reform ourselves and our natures in accordance with humane values and personal aspirations.

If one rejects nature as a general criterion of the good, as most thoughtful people nowadays do, one can of course still acknowledge that particular ways of modifying human nature would be debasing. Not all change is progress. Not even all well-intentioned technological intervention in human nature would be on balance beneficial. Kass goes far beyond these truisms, however, when he declares that utter dehumanization lies in store for us as the inevitable result of our obtaining technical mastery over our own nature:

The final technical conquest of his own nature would almost certainly leave mankind utterly enfeebled. This form of mastery would be identical with utter dehumanization. Read Huxley's *Brave New World*, read C. S. Lewis's *Abolition of Man*, read Nietzsche's account of the last man, and then read the newspapers. Homogenization, mediocrity, pacification, drug-induced contentment, debasement of taste, souls without loves and longings – these are the inevitable results of making the essence of human nature the last project of technical mastery. In his moment of triumph, Promethean man will become a contented cow.⁵

The fictional inhabitants of *Brave New World*, to pick the best known of Kass's examples, are admittedly short on dignity (in at

⁴ See e.g. J. Glover. 2001. *Humanity: A Moral History of the Twentieth Century*. New Haven. Yale University Press.

⁵ L. Kass. 2002. *Life, Liberty, and Defense of Dignity: The Challenge for Bioethics*. San Francisco. Encounter Books: p. 48.

least one sense of the word). But the claim that this is the *inevitable* consequence of our obtaining technological mastery over human nature is exceedingly pessimistic – and unsupported – if understood as a futuristic prediction, and false if construed as a claim about metaphysical necessity.

There are many things wrong with the fictional society that Huxley described. It is static, totalitarian, caste-bound; its culture is a wasteland. The brave new worlders themselves are a dehumanized and undignified lot. Yet posthumans they are not. Their capacities are not super-human but in many respects substantially inferior to our own. Their life expectancy and physique are quite normal, but their intellectual, emotional, moral, and spiritual faculties are stunted. The majority of the brave new worlders have various degrees of engineered mental retardation. And everyone, save the ten world controllers (along with a miscellany of primitives and social outcasts who are confined to fenced preservations or isolated islands), are barred or discouraged from developing individuality, independent thinking, and initiative, and are conditioned not to desire these traits in the first place. *Brave New World* is not a tale of human enhancement gone amok, but is rather a tragedy of technology and social engineering being deliberately used to cripple moral and intellectual capacities – the exact antithesis of the transhumanist proposal.

Transhumanists argue that the best way to avoid a *Brave New World* is by vigorously defending morphological and reproductive freedoms against any would-be world controllers. History has shown the dangers in letting governments curtail these freedoms. The last century's government-sponsored coercive eugenics programs, once favored by both the left and the right, have been thoroughly discredited. Because people are likely to differ profoundly in their attitudes towards human enhancement technologies, it is crucial that no single solution be imposed on everyone from above, but that individuals get to consult their own consciences as to what is right for themselves and their families. Information, public debate, and education are the appropriate means by which to encourage others to make wise choices, not a global ban on a broad range of potentially beneficial medical and other enhancement options.

The second fear is that there might be an eruption of violence between unaugmented humans and posthumans. George Annas, Lori Andrews, and Rosario Isasi have argued that we should view human cloning and all inheritable genetic modifications as 'crimes against humanity' in order to reduce the probability that

a posthuman species will arise, on grounds that such a species would pose an existential threat to the old human species:

The new species, or 'posthuman,' will likely view the old 'normal' humans as inferior, even savages, and fit for slavery or slaughter. The normals, on the other hand, may see the posthumans as a threat and if they can, may engage in a preemptive strike by killing the posthumans before they themselves are killed or enslaved by them. It is ultimately this predictable potential for genocide that makes species-altering experiments potential weapons of mass destruction, and makes the unaccountable genetic engineer a potential bioterrorist.⁶

There is no denying that bioterrorism and unaccountable genetic engineers developing increasingly potent weapons of mass destruction pose a serious threat to our civilization. But using the rhetoric of bioterrorism and weapons of mass destruction to cast aspersions on therapeutic uses of biotechnology to improve health, longevity, and other human capacities is unhelpful. The issues are quite distinct. Reasonable people can be in favor of strict regulation of bioweapons, while promoting beneficial medical uses of genetics and other human enhancement technologies, including inheritable and 'species-altering' modifications.

Human society is always at risk of some group deciding to view another group of humans as being fit for slavery or slaughter. To counteract such tendencies, modern societies have created laws and institutions, and endowed them with powers of enforcement, that act to prevent groups of citizens from enslaving or slaughtering one another. The efficacy of these institutions does not depend on all citizens having equal capacities. Modern, peaceful societies can have large numbers of people with diminished physical or mental capacities along with many other people who may be exceptionally physically strong or healthy or intellectually talented in various ways. Adding people with technologically enhanced capacities to this already broad distribution of ability would not need to rip society apart or trigger genocide or enslavement.

The assumption that inheritable genetic modifications or other human enhancement technologies would lead to two distinct and separate species should also be questioned. It seems much more likely that there would be a continuum of differently modified or enhanced individuals, which would overlap with the continuum

⁶ G. Annas, L. Andrews & R. Isasi. Protecting the Endangered Human: Toward an International Treaty Prohibiting Cloning and Inheritable Alterations. *American Journal of Law and Medicine* 2002; 28, 2&3: p. 162.

of as-yet unenhanced humans. The scenario in which 'the enhanced' form a pact and then attack 'the naturals' makes for exciting science fiction, but is not necessarily the most plausible outcome. Even today, the segment containing the tallest ninety percent of the population could, in principle, get together and kill or enslave the shorter decile. That this does not happen suggests that a well-organized society can hold together even if it contains many possible coalitions of people sharing some attribute such that, if they ganged up, they would be capable of exterminating the rest.

To note that the extreme case of a war between humans and posthumans is not the most likely scenario is not to say that there are no legitimate social concerns about the steps that may take us closer to posthumanity. Inequity, discrimination, and stigmatization – against, or on behalf of, modified people – could become serious issues. Transhumanists would argue that these (potential) social problems call for social remedies. One example of how contemporary technology can change important aspects of someone's identity is sex reassignment. The experiences of transsexuals show that Western culture still has work to do in becoming more accepting of diversity. This is a task that we can begin to tackle today by fostering a climate of tolerance and acceptance towards those who are different from ourselves. Painting alarmist pictures of the threat from future technologically modified people, or hurling preemptive condemnations of their necessarily debased nature, is not the best way to go about it.

What about the hypothetical case in which someone intends to create, or turn themselves into, a being of such radically enhanced capacities that a single one or a small group of such individuals would be capable of taking over the planet? This is clearly not a situation that is likely to arise in the imminent future, but one can imagine that, perhaps in a few decades, the prospective creation of superintelligent machines could raise this kind of concern. The would-be creator of a new life form with such surpassing capabilities would have an obligation to ensure that the proposed being is free from psychopathic tendencies and, more generally, that it has humane inclinations. For example, a future artificial intelligence programmer should be required to make a strong case that launching a purportedly human-friendly superintelligence would be safer than the alternative. Again, however, this (currently) science fiction scenario must be clearly distinguished from our present situation and our more immediate concern with taking effective steps towards incrementally improving human capacities and health-span.

IS HUMAN DIGNITY INCOMPATIBLE WITH POSTHUMAN DIGNITY?

Human dignity is sometimes invoked as a polemical substitute for clear ideas. This is not to say that there are no important moral issues relating to dignity, but it does mean that there is a need to define what one has in mind when one uses the term. Here, we shall consider two different senses of dignity:

1. Dignity as moral status, in particular the inalienable right to be treated with a basic level of respect.
2. Dignity as the quality of being worthy or honorable; worthiness, worth, nobleness, excellence.⁷

On both these definitions, dignity is something that a posthuman could possess. Francis Fukuyama, however, seems to deny this and warns that giving up on the idea that dignity is unique to human beings – defined as those possessing a mysterious essential human quality he calls ‘Factor X’⁸ – would invite disaster:

Denial of the concept of human dignity – that is, of the idea that there is something unique about the human race that entitles every member of the species to a higher moral status than the rest of the natural world – leads us down a very perilous path. We may be compelled ultimately to take this path, but we should do so only with our eyes open. Nietzsche is a much better guide to what lies down that road than the legions of bioethicists and casual academic Darwinians that today are prone to give us moral advice on this subject.⁹

What appears to worry Fukuyama is that introducing new kinds of enhanced person into the world might cause some individuals (perhaps infants, or the mentally handicapped, or unenhanced humans in general) to lose some of the moral status that they currently possess, and that a fundamental precondition of liberal democracy, the principle of equal dignity for all, would be destroyed.

The underlying intuition seems to be that instead of the famed ‘expanding moral circle’, what we have is more like an oval, whose shape we can change but whose area must remain constant. Thankfully, this purported conservation law of moral recognition

⁷ J. A. Simpson and E. Weiner, eds. 1989. *The Oxford English Dictionary*, 2nd ed. Oxford. Oxford University Press.

⁸ F. Fukuyama. 2002. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York. Farrar, Strauss and Giroux: p. 149.

⁹ Fukuyama, *op cit.* note 8, p. 160.

lacks empirical support. The set of individuals accorded full moral status by Western societies has actually increased, to include men without property or noble decent, women, and non-white peoples. It would seem feasible to extend this set further to include future posthumans, or, for that matter, some of the higher primates or human-animal chimaeras, should such be created – and to do so without causing any compensating shrinkage in another direction. (The moral status of problematic borderline cases, such as foetuses or late-stage Alzheimer patients, or the brain-dead, should perhaps be decided separately from the issue of technologically modified humans or novel artificial life forms.) Our own role in this process need not be that of passive bystanders. We can work to create more inclusive social structures that accord appropriate moral recognition and legal rights to all who need them, be they male or female, black or white, flesh or silicon.

Dignity in the second sense, as referring to a special excellence or moral worthiness, is something that current human beings possess to widely differing degrees. Some excel far more than others do. Some are morally admirable; others are base and vicious. There is no reason for supposing that posthuman beings could not also have dignity in this second sense. They may even be able to attain higher levels of moral and other excellence than any of us humans. The fictional brave new worlders, who were subhuman rather than posthuman, would have scored low on this kind of dignity, and partly for that reason they would be awful role models for us to emulate. But surely we can create more uplifting and appealing visions of what we may aspire to become. There may be some who would transform themselves into degraded posthumans – but then some people today do not live very worthy human lives. This is regrettable, but the fact that some people make bad choices is not generally a sufficient ground for rescinding people's right to choose. And legitimate countermeasures are available: education, encouragement, persuasion, social and cultural reform. These, not a blanket prohibition of all posthuman ways of being, are the measures to which those bothered by the prospect of debased posthumans should resort. A liberal democracy should normally permit incursions into morphological and reproductive freedoms only in cases where somebody is abusing these freedoms to harm another person.

The principle that parents should have broad discretion to decide on genetic enhancements for their children has been attacked on the grounds that this form of reproductive freedom would constitute a kind of parental tyranny that would undermine

the child's dignity and capacity for autonomous choice; for instance, by Hans Jonas:

Technological mastered nature now again includes man who (up to now) had, in technology, set himself against it as its master . . . But whose power is this – and over whom or over what? Obviously the power of those living today over those coming after them, who will be the defenseless other side of prior choices made by the planners of today. The other side of the power of today is the future bondage of the living to the dead.¹⁰

Jonas is relying on the assumption that our descendants, who will presumably be far more technologically advanced than we are, would nevertheless be defenseless against our machinations to expand their capacities. This is almost certainly incorrect. If, for some inscrutable reason, they decided that they would prefer to be less intelligent, less healthy, and lead shorter lives, they would not lack the means to achieve these objectives and frustrate our designs.

In any case, if the alternative to parental choice in determining the basic capacities of new people is entrusting the child's welfare to nature, that is blind chance, then the decision should be easy. Had Mother Nature been a real parent, she would have been in jail for child abuse and murder. And transhumanists can accept, of course, that just as society may in exceptional circumstances override parental autonomy, such as in cases of neglect or abuse, so too may society impose regulations to protect the child-to-be from genuinely harmful genetic interventions – but not because they represent choice rather than chance.

Jürgen Habermas, in a recent work, echoes Jonas' concern and worries that even the mere *knowledge* of having been intentionally made by another could have ruinous consequences:

We cannot rule out that knowledge of one's own hereditary features as programmed may prove to restrict the choice of an individual's life, and to undermine the essentially symmetrical relations between free and equal human beings.¹¹

A transhumanist could reply that it would be a mistake for an individual to believe that she has no choice over her own life just because some (or all) of her genes were selected by her parents. She would, in fact, have as much choice as if her genetic

¹⁰ H. Jonas. 1985. *Technik, Medizin und Ethik: Zur Praxis des Prinzips Verantwortung*. Frankfurt am Main. Suhrkamp.

¹¹ J. Habermas. 2003. *The Future of Human Nature*. Oxford. Blackwell: p. 23.

constitution had been selected by chance. It could even be that she would enjoy significantly *more* choice and autonomy in her life, if the modifications were such as to expand her basic capability set. Being healthy, smarter, having a wide range of talents, or possessing greater powers of self-control are blessings that tend to open more life paths than they block.

Even if there were a possibility that some genetically-modified individuals might fail to grasp these points and thus might feel oppressed by their knowledge of their origin, that would be a risk to be weighed against the risks incurred by having an unmodified genome, risks that can be extremely grave. If safe and effective alternatives were available, it would be irresponsible to risk starting someone off in life with the misfortune of congenitally diminished basic capacities or an elevated susceptibility to disease.

WHY WE NEED POSTHUMAN DIGNITY

Similarly ominous forecasts were made in the seventies about the severe psychological damage that children conceived through *in vitro* fertilization would suffer upon learning that they originated from a test tube – a prediction that turned out to be entirely false. It is hard to avoid the impression that some bias or philosophical prejudice is responsible for the readiness with which many bioconservatives seize on even the flimsiest of empirical justifications for banning human enhancement technologies of certain types but not others. Suppose it turned out that playing Mozart to pregnant mothers improved the child's subsequent musical talent. Nobody would argue for a ban on Mozart-in-the-womb on grounds that we cannot rule out that some psychological woe might befall the child once she discovers that her facility with the violin had been prenatally 'programmed' by her parents. Yet when, for example, it comes to genetic enhancements, eminent bioconservative writers often put forward arguments that are not so very different from this parody as weighty, if not conclusive, objections. To transhumanists, this looks like doublethink. How can it be that to bioconservatives almost any anticipated downside, predicted perhaps on the basis of the shakiest pop-psychological theory, so readily achieves that status of deep philosophical insight and knockdown objection against the transhumanist project?

Perhaps a part of the answer can be found in the different attitudes that transhumanists and bioconservatives have towards posthuman dignity. Bioconservatives tend to deny posthuman

dignity and view posthumanity as a threat to human dignity. They are therefore tempted to look for ways to denigrate interventions that are thought to be pointing in the direction of more radical future modifications that may eventually lead to the emergence of those detestable posthumans. But unless this fundamental opposition to the posthuman is openly declared as a premise of their argument, this then forces them to use a double standard of assessment whenever particular cases are considered in isolation: for example, one standard for germ-line genetic interventions and another for improvements in maternal nutrition (an intervention presumably not seen as heralding a posthuman era).

Transhumanists, by contrast, see human and posthuman dignity as compatible and complementary. They insist that dignity, in its modern sense, consists in what we are and what we have the potential to become, not in our pedigree or our causal origin. What we are is not a function solely of our DNA but also of our technological and social context. Human nature in this broader sense is dynamic, partially human-made, and improvable. Our current extended phenotypes (and the lives that we lead) are markedly different from those of our hunter-gatherer ancestors. We read and write, we wear clothes, we live in cities, we earn money and buy food from the supermarket, we call people on the telephone, watch television, read newspapers, drive cars, file taxes, vote in national elections, women give birth in hospitals, life-expectancy is three times longer than in the Pleistocene, we know that the Earth is round and that stars are large gas clouds lit from inside by nuclear fusion, and that the universe is approximately 13.7 billion years old and enormously big. In the eyes of a hunter-gatherer, we might already appear 'posthuman'. Yet these radical extensions of human capabilities – some of them biological, others external – have not divested us of moral status or dehumanized us in the sense of making us generally unworthy and base. Similarly, should we or our descendants one day succeed in becoming what relative to current standards we may refer to as posthuman, this need not entail a loss of dignity either.

From the transhumanist standpoint, there is no need to behave as if there were a deep moral difference between technological and other means of enhancing human lives. By defending posthuman dignity we promote a more inclusive and humane ethics, one that will embrace future technologically modified people as well as humans of the contemporary kind. We also remove a distortive double standard from the field of our moral vision,