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Human vs. Posthuman

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Human vs. Posthuman

To the Editor: In “Where to Transhumanism? The Literature Reaches a Critical Mass” (May-June 2007), Nicholas Agar correctly notes that Simon Young’s effort to ground transhumanism in a drive to evolve is a non-starter. Transhumanism, like all other human aspirations, is shaped by our evolved brains, yet at the same time, it is an effort to escape from evolved constraints. Transhumanism has much in common with spiritual aspirations to transcend animal nature for deathlessness, superhuman abilities, and superior insight, though transhumanists pursue these goals through technology rather than (or at least not solely) through spiritual exercises. In this sense transhumanism has ancient roots in the capacity our animal natures have endowed us with to desire better lives and a better world, even if it is not an evolutionary drive itself.

Agar is also correct to point out that procreative liberty needs boundaries just like other liberties do, and that threats to liberal democracy from genetic enhancement would be one reason for setting limits. Most transhumanists disagree not with the need for limits, but with the bioconservative calculus that argues that all enhancements should be forbidden as unsafe. We believe cognitive liberty, bodily autonomy, and reproductive rights require a higher standard of proof of harm, and that there are alternative means to address those harms. Yes, some genetic tweaks may be unsafe or harmful, but we can regulate those without forbidding life-extending and ability-enhancing therapies. Yes, if only the wealthy can cognitively enhance themselves and their children this might exacerbate inequality. But, as with literacy and laptops, the preferred method to address these gaps should be

to expand access to enhancement. Differences in biology and ability challenge social solidarity, but the Enlightenment argues for solidarity among equal citizens irrespective of biological differences.

On this last point Agar agrees with the transhumanists when he says “moral status . . . cannot be denied to posthumans.” He then attempts, however, to point out a supposed lacuna in our ethics, in which we remain “local” for valuing human accomplishments. He notes that respecting the moral status of another person is a universal and compulsory value, while valuing humanness is a voluntary local choice that gives life meaning. Again, I think we agree. As an extrapolation of liberalism, transhumanism asks that we respect one another’s choice to value our humanness or not, calling on the “universal” value of liberty or autonomy not to allow local valuations for mortality and human limitations to trump aspirations to greater life, health, ability, and happiness. Most transhumanists would be satisfied if we are each able to find our own set of local values, human or not.

Perhaps Agar is inadvertently pointing to two more subtle problems with transhumanist ethics, however—problems many of us grapple with. The first is the problem of balancing beneficent solidarism with strict noninterventionist liberalism. When, for instance, is someone’s choice to modify his brain equivalent to selling himself into slavery? Transhumanists need to articulate “the good life,” inevitably shaped by local values, to ensure that we are in fact enhancing and not simply changing. Second and related, transhumanists must be clear about the cognitive capacities we consider important for the posthuman polity. Would it be accept-

able for some posthumans to expunge all fellow-feeling for mere humans, or for any other persons? Whether local or universal values, ensuring that our descendants retain capacities for solidarity and egalitarianism will limit transhumanist liberalism and the space of posthuman possibilities.

James Hughes

Institute for Ethics and Emerging Technologies and Trinity College

To the Editor: I have argued that posthuman modes of being and having the opportunity to become posthuman may be *human values*. That is to say, many of us human beings may have reasons, available from our present human evaluative standpoint, to develop posthuman capacities. Having the opportunity to become posthuman can be good for us in much the same way that it is good for an infant to have the opportunity to mature into an adult.

In one of my papers cited by Nicholas Agar in his essay, I noted that even those who think that values are defined in terms of our current dispositions could accept that there are values we are unaware of that we might not be able to grasp with our present capacities. This would be possible given, for instance, David Lewis’s dispositional theory of value. Lewis offers that X is a value to you (roughly) if and only if you would desire to desire X if you were perfectly acquainted with X and you were thinking and deliberating as clearly as possible about X. There are well-known challenges to this theory, but it does account for many widely held beliefs about the nature of value. It illustrates how a theory can anchor value in human dispositions and yet allow that there could be values for us that can only be realized if we attain a posthu-

man state, and that we may not even be able fully to fathom until we become posthuman.

Agar objects: "If we are permitted to resist the argument that the olfactory superiority of dogs means we should accept some of their values as our own, then there seems no reason we should have to admit the kind of values that the superior intellects or senses of posthumans permit them to entertain." Agar is right that there is no general reason for us to admit that X is valuable just because some possible posthumans would value X. Posthumans may be mistaken about values, just as we may be. One might argue on "best judge" grounds that it would be rational for us to defer to a posthuman's judgments. But even if we are objectivists about values, such a best-judge argument would require additional premises. For example, there may be no reason to defer to a posthuman judge who, while in possession of superior intelligence and keen senses, is morally corrupt or lacks some specifically axiological sensibility. If we are subjectivists about values, there is even less *prima facie* reason to defer to posthuman opinion because the posthuman's values might not be our values.

The idea, however, is not that we should defer on matters of value to any arbitrary posthuman's (or dog's) opinions. Rather, the idea is that if we examine our own values carefully, we will find that they include values whose full realization would require that we possess posthuman capacities. (There is an interesting but separate question of whether we ought—on instrumental grounds—to try to build some specific kind of posthuman entity, such as a friendly superintelligence grounded in human values, that might be able to advise us on ethical and other issues.)

Some of these human values in posthumanity are rather obvious. Many of us greatly value remaining in excellent health over getting sick, demented, and dying; yet our present human bodies unfortunately make the full realiza-

tion of this value impossible. I find noteworthy that towards the end of his article, Agar argues for the existence of "universal values" and gives as an example of such a value "the elimination of horrible diseases." This sounds encouraging. He continues: "There doesn't seem to be anything spookily posthuman about someone who makes it through to a ripe old age without having succumbed to cancer." To Agar's point, the transhumanist merely adds that avoiding cancer and other horrible diseases does not cease to be desirable after some predetermined time interval has elapsed, such as seventy years from birth. If lethal diseases were eliminated (and other causes of death remained constant), our life expectancy would climb to approximately one thousand years. This is a distinctly posthuman duration and perhaps seems "spooky" to beings conditioned to expect much less. But if we are honest about our very human values, I think we must admit that they cry out for such "posthuman" health, life, and flourishing.

Nick Bostrum
Oxford University

Nicholas Agar replies:

Let me quickly state my view about transhumanism. I don't think that trying to become posthuman is intrinsically immoral or irrational. But I don't think that there is anything morally or rationally compulsory in dramatically extending your life or radically enhancing your intelligence, either. While James Hughes agrees with this, Nick Bostrom doesn't.

Hughes makes the apparently reasonable request that people with posthuman values be allowed to act on them. He doubts that unease about indefinite lifespans and enhanced intelligence meet the high standard of proof of harm that liberals demand before they restrict liberty. I admire Hughes's confidence in the appeal for both humans and posthumans of the Enlightenment ideal of solidarity. It's certainly something worth

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striving for. But we should be wary of proceeding on the assumption that this ideal will actually be realized. A piece of paper with your name on it should suffice to indicate a pile of money placed on a street corner as your property, but that's still not a sensible alternative to banking. If posthumans and humans really do acknowledge each other as moral equals, then all's well and good. But there's also the possibility that they will respond to the power differentials between them in the way that people always have. Then the consequences of radical enhancement could be really rather bad.

Bostrom says that careful inspection of the things that humans care about reveals values requiring posthuman capacities. This is why it's irrational to reject extended lives and enhanced intellects. He invokes David Lewis's dispositional theory of value to make this point. We can imagine that humans would enjoy many of the fantastically complex symphonies, poems, and games that entertain posthumans if only their meagre intellects did not prevent them from being fully acquainted with these things.

Bostrom's argument relies on a misreading of Lewis's view. Lewis is trying to elucidate the values we currently have—not the values we might hypothetically acquire after frontal lobotomies, or decades of heroin addiction, or radical intellectual enhancement. He explicitly warns against construing the exercise of imagining possible candidates for valuing in a way that changes what we value. He starts with the idea that our values are basically things we desire; the dispositional theory responds to the recognition that we can sometimes desire mistakenly. Consider the drunk who says she desires to drive home. This is not consistent with her values simply because full imaginative acquaintance with drunk driving would lead her to recognize dangers that she currently overlooks. The important thing about this imaginative exercise is that it includes facts about human capacities and

limitations. It's actually irrelevant how well rationally perfect beings manage to combine cars and alcohol—they probably drive faultlessly under any circumstances. The aesthetic sensibilities of posthumans are equally irrelevant to our assessments of human musical values.

I suspect that, for many of us, full imaginative acquaintance is likely to undermine the appeal of the transhumanist sales pitch. Some commentators are worried life extension might lead to overpopulation. A being with an indefinite lifespan could presumably have indefinitely many children. People who don't value morality might relish the prospect of being more fecund than Genghis Khan. But the rest of us will feel obliged to choose. Aubrey de Grey, the guru of negligible senescence, has opted for childlessness. But it doesn't seem mad to prefer kids.

Elsewhere Bostrom has rhapsodized about the wonderful experiences that radical intellectual enhancement would make possible. His willingness to part with wonderful experiences available only to humans to acquire these seems reminiscent of a home buyer prepared to purchase sight unseen. The idea that we should exchange wonderful experiences available only to humans for wonderful experiences available only to posthumans is certainly beyond the scope of Lewis's subjectivist theory. What Bostrom requires is an account of value that tells us that posthuman experiences are objectively better than human ones. Good luck!

The Dual-Use Dilemma

To the Editor: Michael Selgelid ("A Tale of Two Studies: Ethics, Bioterrorism, and the Censorship of Science," May-June 2007) has identified an important problem that cannot easily be dismissed even by the most ardent advocates of scientific freedom. But if Selgelid's proposal is adopted, it is not clear how he believes cases would be brought

to the attention of his board. Would all scientific papers have to be screened by the board, or only those identified by editors? The former process seems wildly impractical; the latter would only revive the same issues he discusses in his paper. It would be useful to know if he has another procedure in mind.

In addition to the publication problem that is the focus of Selgelid's paper, there are related (and perhaps even less tractable) problems concerning the proliferation of both expertise and materials. These issues have already been encountered in nuclear weapons technology, as well as in biological, chemical, and toxin weapons, especially in connection with the collapse of the Soviet Union. Ironically, government itself stimulates the growth of expertise and materials when it supports academic research that is intended to be defensive in nature.

Finally, Selgelid's paper is focused on technological transformation of biological processes that can make them become lethal. This is only one dimension of the dual-use dilemma. At the risk of repeating a cliché, ours is an era in which commercial airliners have been turned into missiles. It is unlikely that all malevolent purposes that do not require the kinds of laboratory transformations Selgelid describes can be frustrated, including those that seek to exploit already available material. The illusion of total security is surely one to be avoided and one that the defenders of openness in science may reasonably cite.

Jonathan D. Moreno
University of Pennsylvania

Michael J. Selgelid replies:

My article primarily addresses the question of who should have ultimate authority to prevent publication of dangerous discoveries. Jonathan Moreno correctly points out that it only provides a partial picture of a solution to the dual-use dilemma. However, an earlier version of the article led to a report titled *Ethical and Philosophical Consideration of the Dual-Use Dilemma in the Bio-*

logical Sciences (coauthored with Seumas Miller) for the Australian Department of Prime Minister and Cabinet. This report explores a broader range of policy issues and options.

Though I disagree with the NRC recommendation regarding voluntary self-governance of the scientific community in matters of censorship, I agree with the NRC that the role of Institutional Biosafety Committees should be expanded to include oversight of dual-use research, as well as research potentially posing environmental risks. The role I envision for IBCs, however, presumably goes beyond what the NRC has in mind. In my view, approval from such committees should be sought before dual-use research that meets specified criteria takes place and before findings from such research are disseminated. While expanding the role of IBCs would require also expanding IBC membership, the IBCs themselves would not need the full credentials of the panel described in my article. The latter panel would be like the Supreme Court of scientific censorship. Committees would be needed at various levels: IBCs at the institutional level, analogous bodies at regional levels, and the panel described in my article at the national (and perhaps international) level.

A legally binding code of conduct would require that, when specified conditions are met, scientists allow research proposals or papers that they intend to submit for publication to be reviewed by their local IBC to identify any dual-

use dangers. The IBC would then decide whether the scientists could go forward with publication. They would refer especially difficult cases to the regional committee, which would have a higher level of expertise, and the most difficult cases could go to the national or international level for consideration. We could allow an appeals process whereby scientists who disagree with lower-level IBC judgments could request that their study be reviewed again at the next higher level. It would be illegal for scientists or editors to publish certain studies (those meeting specified conditions) that were not approved by a system like this.

We want to avoid an overly burdensome system, so we would not subject every study to review. The conditions under which dual-use review would be required should be carefully specified. The NRC's categorization of "experiments of concern" is a useful place to start. Only the most problematic kinds of experiments and discoveries require approval before research or publication goes forward.

Moreno is also correct to point out that the dual-use dilemma can involve dual-use materials as well as dual-use knowledge. Additional policy is needed to deal with the former. As Ian Ramshaw suggests, requiring a license for the possession and use of problematic dual-use materials and technologies is a promising but underutilized solution.

Finally, I agree with Moreno that the dual-use dilemma is not limited to biol-

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ogy. As Stephen Clarke pointed out, "Even this piece of paper is dual-use because I could use it to set fire to a building containing thousands of people." There is also no reason that the concept of dual-use should be limited to the realm of security. Broadly speaking, something may be considered dual-use when it has both a good use and a bad use. Bad uses need not always involve death and destruction. Reproductive cloning might be considered a dual-use technology by those who consider fertility treatment to be a good thing and human enhancement to be a bad thing. There may be much to gain by more frequently framing bioethical debates in such terms. Be that as it may, extreme policy responses such as censorship might only be called for in contexts like that discussed in my article. The concern with weapons of mass destruction is not merely that something bad might take place or that security is threatened, but that the possibility exists for large scale catastrophic horror.