

In his 2004 book, *Liberal Eugenics: In Defence of Human Enhancement*, Nicholas Agar argued that we ought to defend reproductive technologies enabling parents to enhance their future children, so long as those enhancements enriched rather than constrained the children's life plans. Taking on bioconservative writers such as Leon Kass and Bill McKibben, Agar denied that human enhancement might destroy life's meaning, seemingly endorsing the viewpoint that enhanced people would find meaning through newer, more difficult projects and more complex artworks. And his cautions about enhancement were few: that enhancement might have the tendency either to homogenize humans, as parents competed to instill the "best" traits in their children; polarize the enhanced and unenhanced; or exert a subtle racism or homophobia by engineering out traits such as darker skin or the genes that might influence homosexuality. Only in his final chapter did Agar emphasize the need for precautions with the introduction of new and untested technologies, and argue that the burden of proof about planned mitigation of harms lies upon those who would re-engineer humanity.

In his new book, *Humanity's End*, Agar seems to have stepped back a bit from his endorsement of enhancement, focusing on what he calls "radical enhancement" technologies. In a move that calls into question some of his arguments in his earlier book, he posits that such technologies – particularly uploading and SENS (strategies for engineered negligible senescence) research, but also certain kinds of germline engineering – have the potential to destroy the human species. Agar outlines reasons why posthumans and humans are unlikely to be able to coexist, and why, even if posthumans were to emerge, the loss to the world of *Homo sapiens sapiens* would be a tragedy.

Agar has structured his book in four main parts, each of which considers a different person notable within the world of radical human enhancement. Ray Kurzweil ("the technologist") and his ideas are taken to represent the story of strong Artificial Intelligence; Aubrey de Grey ("the

therapist”) stands as a symbol of SENS; Nick Bostrom (“the philosopher”) lays the moral groundwork in favor of radical enhancement; and James Hughes (“the sociologist”) sketches out the political future that ought to await us. Such a structure is a bit reductive, since it ignores many other, sometimes diametrically opposed, participants in the transhumanist discourse; but it is also rather clever. If each notion about radical enhancement is associated with a particular individual, rather than just being a free-floating idea, the reader learns about and appreciates the creative power of these four individual humans.

In each section of *Humanity’s End*, Agar describes the projects of each of his representative individuals and their arguments in favor of radical enhancement. In follow-up chapters, he fleshes out the objections that might be made. Many of Agar’s objections are based on the idea that for any action whose outcome is unknown and possibly bad, we ought to assume that the worst will happen, and address all possible contingencies before proceeding. “This book’s precautionary approach places the onus on radical enhancement’s defenders to show that the dark scenarios I describe can be avoided. What can radical enhancers do to ensure that their favored scenarios are not only possible but also very probable?” (p. 11). He notes that, even though some technological developments may be impossible to anticipate (a point often made by writers on the Singularity), to act in potentially harmful ways in the hopes of some *deus ex machina*, and to accuse others of “status quo bias” for pointing out possible problems, is intellectually lazy.

The crux of Agar’s argument is that humanity is intrinsically valuable from a species-specific perspective – that all of human culture, art, human relationships, and even morality itself, are important and threatened by the development of posthumanity. Lest anyone accuse Agar of being a “speciesist” or discriminating against uploaded humans on the basis of “substratism,” Agar argues that there is a qualitative difference between racism and sexism – attitudes that generate real harm against existing individuals – and “mere existential prejudice,” which concerns those whose existence is merely theoretical.

Unlike moderate enhancement technologies that don’t eclipse the abilities of the best-functioning “natural born” humans, radical enhancement has the potential to re-speciate us. Agar defines a species as a set whose members are normally able to and desire to reproduce with each other. One might object to Agar’s argument by noting that any future in which reproduction takes place mostly in a petri dish may make the idea of a species a bit obsolete, since one can imagine the creation of all kinds of chimeras. On the other hand, I would suggest that his argument about the importance of species-relative values can still hold if we define “species” as a group engaged in a common act of social reproduction.¹

Agar’s major objection to the creation of (radically enhanced) posthumanity is that we have no evidence that posthumans would share any of our values, relationships, or cultural products. Whereas Nick Bostrom optimistically projects that posthumans will still enjoy the simple pleasures of quantum physics and chess, Agar wonders about the basis for this conclusion, and I think he is right. We share some relationships with our next-nearest evolutionary ancestors, the chimps and great apes, but I know few humans who take great joy in picking lice out of each other’s hair or using sticks to eat ants out of logs. Humans and chimps cannot claim to be engaged in a common act of social reproduction.

In a case in which posthumans and the humans who chose not to radically enhance themselves were in conflict, Agar apparently no longer believes it to be likely that posthumans would protect or advance human interests. In *Liberal Eugenics* he described the “Jeffersonian condition,” in which one group of beings is so situated as to be able to ride the other booted and spurred. The huge differential in ability between posthumans and humans might be akin to that between

humans and chimps, making moral reciprocity between the two groups impossible, and opening the door for humans to be treated as a mere means. Agar notes that longevitists, with so many more years of life at risk than unmodified humans, would have good reasons to experiment medically on unmodified humans. Posthuman morality, with its emphasis on the survival of the most morally considerable species, might limit the autonomy of humans for reasons that we might not even be able to understand. Strong artificial intelligence, even if programmed to be friendly, contains within it the potential to see good reasons for eliminating humanity altogether.

Echoing such writers as Kass and Fukuyama, whom he skewered in *Liberal Eugenics*, Agar here argues that there is much to be admired about “mere humanity.” We can admire our reactions in the face of adversity, our ability to have stable identities and interests as adults, and our long-term human relationships. Posthumans who live forever, constantly expand their intelligence, and eliminate adversity from their environment are unlikely to share many of these traits. They are as likely to look down on those from whom they evolved as we are to laugh at stocky and beetle-browed Neanderthals.

To those whose gender, social position, and wealth put them toward the front of the line for radical enhancement, these may seem like weak objections. Who cares if posthumanity replaces humanity? After all, you can’t make an omelet without breaking a few eggs. But given the current differentials in power, wealth, and medical care between the developed and the developing world, to facilitate posthumanity is to condemn specific, identifiable populations to being eliminated. For the world’s poor, who lack the resources to avoid even easily-remedied diseases like malaria, there will be no making a choice between enhancement technology and remaining unenhanced; there will be no access at all. One could make a strong argument on either consequentialist grounds or the grounds of justice that people in the third world ought to have the first access to de Grey’s SENS technology; but if that were a stipulation of the development of such technology, both Agar and I doubt there would be much interest in developing it.

With an appreciation for these possible injustices, James Hughes has outlined the importance of “democratic transhumanism.” He predicts a happy future, in which, united by their common personhood, humans, chimps, and posthumans would have common rights and protections. As Agar notes, however, it is unclear how this moral epiphany about the importance of common personhood would be obtained. Chimps and great apes today are denied political participation and protection, and even animal-rights activists prioritize human welfare over animal welfare in lifeboat situations or other hard cases.

There is much to admire in *Humanity’s End*. Agar argues strenuously and analytically for the precautionary principle without falling back on arguments about “playing God” or mystical assertions about what is natural or what the essential nature of humanity might be. He advocates for some corrective to the unboundedly optimistic discourse of many transhumanists, but at the same time sketches out a middle ground that advances some enhancement technologies. *Liberal Eugenics* and *Humanity’s End* are written at a level of sophistication that would make them both useful in an undergraduate classroom and appealing to the general reader. The transhumanist community ought to welcome the spirited discussion about means and ends that *Humanity’s End* is bound to inspire.

Note

1. On the concept of social reproduction and its centrality to thinking about a species, see Michael Goldman, "A Transcendental Defense of Speciesism," *Journal of Value Inquiry* 35 (2001): 59-69.

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