

Book Review: Beyond Humanity, by Allen Buchanan

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The debate about biomedical enhancements (BME), and in particular about the genetic engineering of human embryos, has taken a rather shrill tone and the quality of the exchange has often suffered from an inappropriate level of agitation. Allen Buchanan's new book aims to take a level-headed approach, putting the different forms of BME in perspective, comparing BME with other, much more common human enhancements, and defusing some of the flaky arguments based on ill-defined notions of "humanity" or "character". Buchanan's pragmatic approach deserves attention in a debate that is too often dominated by fear and unreasonably extreme scenarios.

According to Buchanan, a BME is defined as follows:

"a biomedical enhancement is a deliberative intervention, applying biomedical science, which aims to improve an existing capacity that most or all normal human beings typically have, or to create a new capacity, by acting directly on the body or brain." (p. 23)

This definition includes some fairly common practices, such as using prosthetic limbs or taking drugs to delay the effects of Alzheimer. But it also comprises much more controversial treatments, such as medication to improve concentration, stamina or strength (already widespread though largely illegal in professional sports), or the insertion of genes into the human embryo. In the future, it may even involve the implantation of genetically engineered tissue or brain-computer interfaces.

Buchanan begins by mapping the landscape of the enhancement debate. He notes a number of reasons for its poor philosophical quality: murky rhetoric, ignorance of evolutionary biology, sweeping but unsupported empirical claims, and a fundamental unclarity about the "bottom line" of many arguments. Buchanan's favourite targets are Leon Kass and the US President's Council on Bioethics under George W. Bush, as well as Michael Sandel and Francis Fukuyama. In general, Buchanan

is frustrated with the persistent tendency to frame the debate between “pro-” and “anti-enhancement” views, instead of using a more sensible distinction between “anti-enhancement” and “anti-anti-enhancement”. No sensible ethicist, Buchanan maintains, is unreflectively supporting enhancements, the real discussion is between those who reject *any* enhancements and those who want to consider the case for various enhancements and weigh the pros and cons. Buchanan is firmly in the latter camp.

Chapter 2 contains one of Buchanan’s core arguments against the radical anti-enhancement stance: enhancement is not a new story in the long history of human development. Many BME are not that different from other enhancements, such as numeracy, literacy, and science. Even physiological changes are not as novel as one would expect: recent evidence suggests that the human brain has changed with upcoming literacy. More generally, since humans are subject to co-evolution, genetic change is nothing new in human development. Buchanan challenges the anti-enhancement camp to show why BME should be evaluated differently than other forms of human enhancement that have very similar consequences.

Apart from this general challenge, Buchanan argues, more specifically, that the debate is skewed due to two framing assumptions that are widely accepted, but plausibly false. The first framing assumption is that the the most significant benefits from BME are private or personal goods; the second that BME will be market goods. If one accepts these two assumptions, the debate is likely to focus on the negative effects arising from the market competition for enhancements. This evokes the image of an uncontrolled race towards more intelligence, beauty, physical strength, or health, creating a population of ‘post-humans’, dominating those left behind. But Buchanan points out that the two framing assumptions are not necessarily true, and perhaps not even likely. Against the first framing assumption Buchanan argues that many BME come with social benefits that go beyond the benefits enjoyed by the individuals who are enhanced. Moreover, Buchanan conjectures that many BME will be subject to positive network effects, such that the value of an enhancement increases with the number of people being enhanced, in the same way as the usefulness of being literate increases when the rate of literacy goes up. Against the second framing assumption Buchanan argues that many conventional enhancements have not been market goods. Literacy is again a good example: even though it is highly beneficial, its main provision has been through state-regulated schools, not private markets.

Chapters 3 and 4 consider the notions of ‘character’ and ‘human nature’, which are frequently invoked by the BME skeptics. If it was true that BME either always stem from bad intentions or promote bad character, it would be a serious objection to BME. But Buchanan observes that such a general claim is hardly defensible.

While character considerations may give grounds for concern, they cannot plausibly form a decisive objection. It could be that BMEs offer such great advantages that character concerns are outweighed. In addition, some BME may even aim to improve character traits by enhancing our cooperative disposition, our empathy, or by reducing aggressive instincts. Yet again, a careful weighing of pros and cons is asked for. Buchanan also dismisses essentialist appeals to ‘human nature’ and claims that arguments for the preservation of human nature *exactly as is now* stand on feet of clay. It is entirely sensible to point to the dangers a careless BME programme might hold for society, but there is no good reason to believe that the status quo is best just because it is the status quo. In any case, most BME are of a limited and benign nature, a far cry from creating ‘post-humans’.

Chapter 5 assesses a less popular but quite original critique of BME: the conservative worry. Conservatives (in the sense of Burkean conservative thought) think that human nature imposes constraints on human progress, and that ambitious reform programmes are very likely to back-fire and result in harm. Therefore, conservatives support a very far-reaching application of the precautionary principle to projects of social reform. Could a similar argument be made against BME? Not so, objects Buchanan, because the possibility of BME undermines one central conservative premises—that human nature cannot be changed. If human progress is currently limited by our cognitive abilities and affective features, BME might even help us to overcome these limits. Ideas to reduce aggression and increase cooperative dispositions by BME point in this direction.

One core strength of Buchanan’s analysis is the careful incorporation of evolutionary theory, most evident in chapter 6. Buchanan debunks the view that the evolution of humans has reached a particularly valuable ‘end point’. Evolution typically produces suboptimal designs, is largely insensitive to the post-reproductive quality of life, is to a good extent driven by drift and local (not global) optimization, preserves evolutionary ‘hangovers’, and, perhaps most importantly, “selects for fitness, not human good” (p. 191). From this discussion Buchanan concludes that it is absurd to take the outcome of unintended evolutionary enhancement (the way it took place for millions of years) as an ideal to be defended. Improvements are certainly possible, and bringing them about by intentional BME is an option that should not be dismissed outright. Buchanan also adds a fascinating list of precautionary heuristics, based on evolutionary considerations, to minimize the risk of unintended bad consequences caused by BME.

Chapter 7 takes issue with the claim that BME could produce ‘posthumans’. It also addresses the severe differences in moral status or in rights held by ‘enhanced’ or ‘unenhanced’ humans that might occur, and considers the distributive implications.

Buchanan takes those egalitarian concerns seriously, and the subsequent chapter 8 is supposed to address some of these worries by proposing an institutional reform. Buchanan (with his co-authors Tony Cole and Robert O. Keohane) advances a policy proposal for a fairer diffusion of innovations. Chapter 8 has a much more applied political science focus and sits somewhat oddly with the theme of the book. I will not address it any further.

While I largely agree with Buchanan's broad perspective on BME and applaud his aim to bring more philosophical analysis to this debate, I want to raise a few critical points. To begin with, Buchanan is very optimistic about the positive network effects associated with BME, and on this he bases his optimism about a more or less egalitarian distribution of such benefits to promote the common good. It is, however, an open empirical question whether or which BME will see such network effects. In competitive settings, both between persons and between states, relative advantages may matter more than absolute gains, and techniques to (say) enhance cognitive abilities may lead to harmful forms of competition. In addition, even if there are positive network effects, this would raise fundamental questions about personal autonomy. Suppose, for instance, it turns out that the use of certain cognition-enhancing drugs is most useful if everyone takes them, but, as is the case with most drugs, they come with some side effects. The positive network effect of the drug implies that a minority refusing to take this drug (because they fear the side effects) would encounter grave disadvantages. Thus, positive network effects have a dark side: they may put pressure on people to play along with enhancements they would not choose otherwise.

A second worry stems from Buchanan's rather optimistic view of regulation. This leads Buchanan to largely ignore the harmful social consequences that could arise from BME. Chapter 7 takes on some of these problems, but focuses only on quite extreme cases ('posthumans'). The problems, however, may start at a much less spectacular level. Suppose (completely counterfactually!), that it is one day possible to determine the sexual orientation of children by genetic engineering. Further suppose that even though there is no discrimination against lesbians and gays in the society we are considering, it is true that growing up with a sexual orientation towards the same sex is a little harder (as it is usually harder to be part of a minority, even in a society free from prejudice). It is conceivable that many parents will then want to prevent their children from facing such difficulties, and opt for genetic engineering that blocks a same-sex orientation. The aggregate end result may be a less diverse society, which could be worse for everyone. Even though no one may prefer this aggregate result, it is easy to see how individual choices can bring it about. Buchanan must hope that suitable regulation will prevent such suboptimal

outcomes, but it is hard to see how a state could prevent such processes once the technology is available.

The third critical point I want to raise pertains to evolutionary theory. I am in full agreement with Buchanan that evolution has not produced some sort of ‘master-engineered’ ideal human, for the reasons described above. Nonetheless, there is a plausible conservative argument from evolution that is overlooked by Buchanan. In particular, the fact that the human race has evolved to the point it has, without becoming extinct, suggests that our current genetic setup has enabled humans to survive all kinds of environmental challenges. For instance, humans have a highly developed immune system that, whilst far from perfect, has so far prevented extinction despite the threat from many bacteria, viruses and parasites. This allows at least a limited inductive argument to the effect that humans are quite well prepared for future environmental threats. Clearly, this is not necessarily true—we may be very unlucky and face, for instance, a flu virus deadly enough to bring us to extinction. But the fact that the immune system has been going through a long process of evolution at least suggests that it is likely protect us reasonably well. An interfering BME is not nearly as well tested, and could for that reason be dangerous. Buchanan acknowledges this point indirectly in his guiding heuristics to prevent harm from BME, but his optimistic conclusions derived from evolutionary considerations dominate the book. They largely ignore the information we gain from the fact that a system has been selected for over time.

In summary, Buchanan’s book is a much needed philosophical antidote to a debate that has suffered from a lot of grandstanding and the occasional hysteria. The analysis cuts deep and will raise the standard of the debate. Buchanan’s proposals for assessing the risks of BME should also spark a new discussion on their regulation. It is likely that “Beyond Humanity” will soon be an indispensable work for all philosophers interested in the enhancement debate.

Allen Buchanan (2011). *Beyond Humanity? The Ethics of Biomedical Enhancement*. Oxford: Oxford University Press.