



BOOK REVIEW

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

Allen Buchanan's latest book, *Beyond Humanity*, is a refreshingly subtle, biologically informed defense of biomedical enhancement. Buchanan doesn't take a pro-enhancement position so much as (in his words) an 'anti-anti-enhancement' position (13). This distinguishes him from conservatives like Leon Kass and Michael Sandel, who decry the use of medicine to improve our existing capacities, but who tepidly embrace it to treat disease. But it also sets him apart from ethicists like Julian Savulescu, who recently suggested that we have a moral obligation to enhance ourselves and our children under certain conditions.

One of the common assumptions of the anti-enhancement view that Buchanan challenges is that there is a timeless 'essence' or 'end' of medicine, and that any deviation from this end by patients and physicians is wrong (27). Buchanan is skeptical of essentialist talk in medicine, and suggests instead that medicine is valuable to the extent that it can make our lives go better. In this sense, Buchanan argues, medicine is a lot like numeracy, literacy, and scientific knowledge: it can be used to make us better off or worse off, depending on the purposes to which we put it. Buchanan's response to the problem of risk is not to condemn science for giving us the power to create nuclear weapons or biotechnology for allowing us to create more aggressive soldiers. It is rather to face up to the fact that new ideas bring new responsibilities, and, if used appropriately, have the power to increase human welfare dramatically.

An often neglected aspect of enhancement, Buchanan thinks, is that people with improved capacities can benefit other people as well as themselves. Since free markets facilitate the division of labor and diffusion of ideas, a world with more people who have the creative capacity of Albert Einstein or Steve Jobs is a world in which many people can be made better off without worsening the lot of others. Moreover, Buchanan argues, some enhancements have network effects, so that as more people acquire them, more people benefit (48). An example is a well-functioning immune system. People with poorly functioning (but not necessarily diseased) immune systems are not only more likely to be infected with pathogenic microbes, they are also more likely to spread them to others. By contrast, when more people have

immunity to a particular pathogen (whether the immunity is produced through vaccination, genetic mutation, or gene therapy) everyone is better off. This is because the probability of contracting a transmissible disease is often related to the number of people infected. When this is true, those with poorly functioning immune systems benefit from other people's immuno-enhancements nearly as much as they themselves do, and the benefits to the unenhanced increase exponentially with the number and quality of others people's enhancements.

Of course, not all enhancements are like this. While many biomedical interventions can benefit both the enhanced and the unenhanced, others present unforeseeable risks to those who undertake them, and to those who decline but who have to suffer the social costs of other people's choices. For example, if some parents genetically enhance their male children to produce higher testosterone than average (with the hope, perhaps, that more assertive sons will be more successful), a predictable side effect is that in the aggregate we will have a more aggressive population, and possibly a higher rate of violence – costs that are borne both by those who choose to enhance their children, and those who forebear. Such choices are familiar to economists, and they could become common in the absence of proper social and legal constraints.

A more serious problem, perhaps, is that even relatively small physical and cognitive enhancements could exacerbate existing inequalities to the point at which unenhanced people cannot compete with enhanced people for access to social goods and political power. One need only consider that small differences in qualities like height, intelligence, and humor can produce big gains in wealth, opportunities, and access to mates. Sexual selection can produce significant differences in these qualities within a few generations, and rapid advances in biomedical technology could turn out to be like sexual selection on steroids.

The worry about stratification is a common one, and Buchanan has at least a couple of replies. One reply is that biomedical technologies like cognitive enhancement drugs would benefit the less well endowed much more than they benefit the better endowed: the relative gains of people who have a poor memory, for example, will be larger than those whose memory is already adequate to lead a reasonably good life. And when these drugs go off patent, they would be cheap and accessible, thus potentially *reducing* rather than *increasing* the gap between people's natural endowments. While this is no doubt true,

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it is not fully convincing, especially since rapid advancements in biotechnology might allow the wealthy to gain large advantages quickly. Thus, even with the eventual diffusion of drugs to the poor, if biotechnology advances quickly enough, and if the initial starting point is unequal enough, the gap between the enhanced and unenhanced could widen, and disparities in power or well-being may increase accordingly. Buchanan is well aware of this, and he spends a significant part of his book addressing precisely this problem.

In the final chapter, Buchanan outlines an ambitious plan for reducing global inequalities in access to biomedical enhancements. Buchanan's stated goal is to design political mechanisms that would reduce *unjust* inequalities 'without an unacceptable decrease in incentives for innovation' (266). The most obvious question here is what makes an inequality in access to biomedical technology *unjust*. Is it simply the size of inequality? Or is it instead the instrumental effects of inequality – for example, the extent to which unequal access to enhancements might produce unequal access to economic opportunities and political power? Buchanan seems to support the second view: there is nothing intrinsically wrong with inequality in the distribution of goods, provided it results from some people improving their own well-being without undermining other people's ability to improve theirs.

In the end, Buchanan argues that the best way to reduce unjust inequalities in access to biomedical

enhancements is to create a Global Institute for Justice in Innovation. The GIJI would receive its power from member states (much like the World Bank and World Health Organization) and would be tasked with two functions: incentivizing firms to produce biomedical innovations for people who normally wouldn't have enough money to create a viable market for such products; and pressuring firms to temporarily suspend some of their monopoly power over innovations that contribute to extreme inequalities. Although Buchanan's proposal strikes me as quixotic – especially because it would disproportionately affect a small handful of firms in a few powerful countries – it is a thought-provoking and carefully crafted plan that merits serious study.

Beyond Humanity is a breath of fresh air, and a welcome antidote to the pessimistic pill that many opponents of enhancement continue to prescribe. In place of the misty metaphors and specious arguments that have pervaded the enhancement debate for the last decade, Buchanan draws a clear and nuanced picture of the costs and benefits associated with using biomedical technology to improve ourselves and our children.

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