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Editado por:

Cristian Saborido (UNED)
Sergi Oms (U. de Barcelona)
Javier González de Prado (UNED / U. Nova de Lisboa)

Enhancement technologies and inequality[1]

Walter Veit
University of Bristol

1.Introduction

Recognizing the variety of dystopian science-fiction novels and movies, from Brave New World to Gattaca and more recently Star Trek, on the future of humanity in which eugenic policies are implemented, genetic engineering has been getting a bad reputation for valid but arguably, mostly historical reasons. In this paper, I critically examine the claim from Mehlman & Botkin (1998: ch. 6) that human enhancement will inevitably accentuate existing inequality in a free market and analyze whether prohibition is the optimal public policy for this objection as egalitarians might advise (Lamont and Favor, 2014). Of course, various moral theories will evaluate this claim, which I shall call the *inequality-objection*, differently. Yet, for the purposes of the present paper, I shall only consider whether the *inequality-objection* is a problem to the dominant moral framework in policy-making, i.e. utilitarianism. Whether enhancements it poses a problem for agents' well-being or not. In what follows I argue that the *inequality-objection* has several problems. My criticism is structured as follows: In ***Section 2*** I will attempt to bring the argument at stake into formal argument structure and clarify terms that are unclear. In ***Section 3.1*** I attack the claim that Human Enhancement leads to inequality. In ***Section 3.2*** I analyze why inequality decreases well-being and if it is the case that the benefits from human enhancements do not actually outweigh the costs, which is what utilitarians should be concerned with. In ***Section 3.3*** I attack the conclusion and analyze whether prohibition is actually the best possible policy in maximizing well-being. Lastly, in ***Section 4*** I will summarize my attacks on the argument and conclude that the *inequality-objection* does not sufficiently support the conclusion that human enhancement should be prohibited by policy-makers.

2.What is at stake?

Though perhaps having raised the largest concerns in the public perception of human enhancement, the *inequality-objection* is neither a very sophisticated argument nor a very new one, against the introduction of new technologies that

[1] A more advanced version of the argument presented here is published in the Journal of Cognitive Science (2018), taking a broader approach without the relying on utilitarianism.

could enhance humans beyond what might be considered 'normal'. In fact, the whole argument is old wine in new bottles. Concerning inequality, Bostrom and Roache claim that one could hold the justified worry that:

> *...people with radically enhanced cognitive capacities might gain vast advantages in terms of income, strategic planning, and the ability to influence others; in other words, an enhanced cognitive elite may gain socially significant amounts of power.* (Bostrom & Roache; 2007: p. 15)

Of course, it seems undesirable if an enhanced elite accumulates a lot of power, but whether this is even a plausible scenario is an open question. Rather than considering these extreme cases I focus instead on inequality in general, so those scenarios where inequality has the potential to decrease well-being.

From a utilitarian perspective the inequality-objection can be fleshed out as follows:

P1: Human enhancement leads to inequality.

P2: Inequality leads to a decrease in well-being.

P3: What leads to a decrease in well-being should be prohibited by policy-makers.

C: Therefore human enhancement should be prohibited by policy-makers.

In order to attack this argument in a precise and clear manner, let me begin by clarifying three crucial terms, i.e. human enhancement, inequality and utilitarianism. First, I adopt the definition of Bostrom and Roache who define human enhancement as interventions that "...aim to improve the state of an organism beyond its normal healthy state." (2007: p. 1). By inequality, I mean inequality in human capacities and focus on how this could decrease overall well-being. How does this connect to utilitarianism? Utilitarianism has this underlying consequentialist principle: *Good is the maximization of well-being or utility.* As the conclusion is a prohibition, we shall be concerned with whether a prohibition is what utilitarianism would actually advise. With this in mind let me now to turn to premise (1) and examine whether human enhancement leads to inequality.

3.1.Human Enhancement leads to Inequality?

Each of the following sections will be focused on one of the premises. Let me begin with the premise that human enhancement will increase inequality. This premise is empirical in nature and as such requires supporting evidence. While it is unclear what is evidence for the adequacy of this premise there is at least some evidence that seems to speak against it. More specifically, there are reasons to believe that human enhancement will not affect inequality at all, or even decrease it as Bostrom and Roache (2007: p. 16) suggest by making people "more equal" like it is the case with Modafinil (Randall et. al.; 2005). Bostrom suggests that we know far more about genes responsible for inheritable diseases then genes responsible for talents, intelligence and longevity, hence human enhancement might especially help the genetically worst-off in society (Bostrom; 2003: p. 18).

Furthermore, as Veit (2018, p. 12) argues, at least when it comes to genetic enhancements, we can expect them to get rid of a major source of inequality, i.e. the elimination of the natural lottery. What we have to be concerned with is, therefore, the plausibility of the *inequality-objection*. Erik Parens even claims that:

> *Those who already have economic resources will readily gain access to new technologies and those new technologies will make them stronger competitors for more resources.* (Erik Parens; 1998: S8)

If Parens claim is true than an implicit premise needs to be true, that is: Enhancing yourself e.g. cognitive capacities are good investments as they help you in the market. Otherwise, those who enhance themselves would not be better competitors. This means that some enhancements like an increase of cognitive capacities might enable agents to become better competitors. Considering this it seems unlikely that people wouldn't consider taking loans for enhancing themselves, in order to increase their expected wage. Banks might even give loans for human enhancement in a similar fashion to education loans. Instead of paying for advanced training courses, employers might consider paying for cognitive enhancements of their employees. Whether they will remain an open question, as the profitability and risks are currently unknown.

Even so, let us grant for the moment that the above worries are well-motivated. In what follows I consider the premise (2) and question whether inequality will really lead to a decrease in well-being.

3.2.Inequality leads to a Decrease in Well-being?

According to egalitarians, everyone should be equal. The conception of this equality might differ, e.g. economic equality, equality in well-being, equality of opportunity, etc. (Arneson, Richard; Summer 2013). Utilitarians, of course, are not concerned with these kinds of consequentialist theories, but rather the maximization of well-being. What matters then is how inequality has the potential to decrease the well-being in a population. Several reasons could come to mind: potential oppression, discrimination, unfairness, exploitation, envy or simply a preference for equality (Mehlman, Maxwell J. & Botkin, Jeffrey R.; 1998). Even if we grant that these are worrisome consequences of human enhancement, in the utilitarian framework we would still have to weigh the benefits against these costs. Proponents of prohibition often referred to as *Bioconservatives* (Bostrom, Nick & Roach, Rebecca; 2007) seem to either ignore the benefits of human enhancement or implicitly think that they do not outweigh the costs. To make their claim as strong as possible, I will give them the benefit of the doubt and tackle the latter. While we may grant that human enhancement might decrease well-being by introducing inequality, there are other areas where human enhancement can potentially increase well-being enormously. Bostrom and Roache (2007) discuss several of these areas e.g. health, intelligence, life extension. Whether the costs outweigh the benefits is an open question. However, as argued in Veit (2018), there could be potential solutions to keep the benefits of human enhancement while limiting the costs of inequality, most obviously state-

funding. Therefore what I analyze next is the possible solution of prohibition and how it compares to other alternatives.

3.3.Prohibition of Human Enhancement, the Best Solution?

Even if we accept that human enhancement has the potential to increase inequality in the society and the costs outweigh the potential benefits, the question arises whether a prohibition is actually the best way to maximize well-being. What we shall be concerned with are the consequences of this prohibition. I argue that it is wrong to think that we have the choice between status quo and a world where human enhancement takes place. As Vellemann (2014) outlines, one additional option alone can change the whole situation. Applied to human enhancement this means that a world where it is illegal does not equal a world where this technology is not available. This is because of several problems suggested in the literature, which need to be considered: First, Bostrom and Roache highlight that a legal prohibition of human enhancement requires distinguishing current practices of medicine from enhancements, which creates several problems (2007: p. 1–3). Second, the prohibition would have to be globally enforced, otherwise one could still access these technologies legally (Jacob Heller & Christine Peterson; 2006), but would only make them more expensive (Patrick Lin & Fritz Allhoff; 2008). Third, Anders Sandberg and Nick Bostrom claim that a prohibition will be an incentive for the creation of black markets, which as with drugs may tend to make these technologies even more expensive, while legal enhancements would become less risky and less expensive as time goes on (2009: p. 333). Fourth, Maxwell J. Mehlman and Jeffrey R. Botkin (1998: chapter 7) raise the question of how those breaking the law should be punished, for instance, will someone with genetic enhancements be forced to alter his DNA back to the point it was before or have to be sterilized? Will people who would have died without enhancements have to be sentenced to death by revoking their enhancements? These issues are not easily avoidable for legislators when effective prohibition is being implemented.

So even if the claim is correct that human enhancement will lead to inequality, the proposed solution of prohibition seems to face severe problems that proponents of prohibition are invited to address. In short, there are several reasons speaking against prohibition and some that speak in favour of other solutions. Let me shortly expand on them.

For instance, Nick Bostrom (2003: p. 17) proposes subsidies or free access for children of poor families. I agree with Lamont, Julian and Favor, Christi (Fall 2014: section 6) that the middle ground between open market access and prohibition needs to be considered. As such it seems that prohibition is not the best policy against this risk, it might even turn out to be worse than other kinds of regulation that address at least some of the concerns that proponents of the *inequality-objection* have brought forward.

4.Conclusion

In conclusion, there seem to be at least three major problems with the *inequality-objection*. First, there is no empirical evidence that human enhancement will lead to inequality. Second, even if we accept that human enhancement will lead to inequality, it is not clear whether this will outweigh the potential benefits of human enhancement. Third, even if it does, prohibition is not necessarily the best policy for maximizing well-being. This is because it is, for instance, plausible to assume that, given that human enhancement is possible and distributed via black markets, there are several plausible ways in which this will affect overall well-being negatively. In light of these concerns, I conclude that even if human enhancement leads to inequality, this is not sufficient to conclude that human enhancement should be prohibited by policy-makers.

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