

1. Introduction

This handout is based on chapter 1 (“The Landscape of the Enhancement Debate”) of Allen Buchanan’s 2011 book *Beyond Humanity? The Ethics of Biomedical Enhancement*. The goals of this handout are to (i) summarize parts of chapter 1 of Buchanan’s book, (ii) introduce some important terminology, and (ii) consider, in outline, some key arguments in the debate over the ethics of enhancement.

2. The Definition, Types, and Modes of Enhancement

Before we discuss the various positions in the debate over the ethics of human enhancement, it is helpful to be clear about what we *mean* by “enhancement” and various types / modes of enhancement.

Biomedical enhancement: a *deliberate* act that applies biomedical science and technology to some part of the human body with the *aim* of improving or creating the capacities of human beings beyond those that normal beings typically have (see Buchanan, p.23).

A couple notes about this definition:

Note 1: Biomedical enhancements *aim* to make people better but they might not necessarily do so (overall).

Note 2: Some enhancements to humans are *not biomedical*, some are technological, others cultural (institutional)

Note 3: Biomedical enhancements are deliberate, i.e. they involve our intentional use of technology to try and enhance ourselves; they are not the result of natural processes.

In considering enhancement, there are at least five *types* of enhancement. These refer to the properties of human beings that we aim to enhance

FIVE TYPES OF ENHANCEMENT

- 1 To **physical** characteristics, e.g. strength, durability, height, endurance, speed, acceleration
- 2 To **cognitive** characteristics, e.g. reasoning, calculation, memory, information-processing, networking
- 3 To **affective** characteristics, e.g. emotion, motivation, mood, attention, temperament
- 4 To the **immunity system**, e.g. to resist disease, to fight disease more quickly, to reduce symptoms associated with infection
- 5 To **longevity**, e.g. to live longer, to extend youthfulness and compress old age

CDQ1: Which of the above types of enhancement are the most attractive? Which might be cited in favor of the enhancement enterprise?

CDQ2: Which of the above types of enhancement are the most problematic? Which might be cited in favor of the anti-enhancement position?

In implementing these different types of enhancement, there are a variety of different *modes* of enhancement. These refer to the biomedical technologies we employ to enhance one or more of the above modes.

Modes of Enhancement

- 1 Reproductive technologies, e.g. embryo selection, genetic engineering
- 2 Drugs, e.g. PEDS, doping, nanomedicine
- 3 Prosthetics, e.g. powered exoskeletons
- 4 Cosmetic enhancements, e.g. plastic surgery, orthodontics,
- 5 Genetically modified foods
- 6 Neural implants and brain-computer interfaces
- 7 Implantation with genetically-engineered organs and tissues

CDQ1: Some of the above modes of enhancement are existing while others are emerging or speculative. What other possible technologies could you imagine that might enhance human development?

CDQ2: Which of the above modes of enhancement do you find the least problematic, which the most?

3. Problems with Talking about the Ethics of Enhancement

The chapter is centered around *five* ways that the debate on enhancement is problematic.

Respect #1: Murky Rhetoric

The first claim is that some of the major figures in the debate on enhancement don't offer precise arguments for their positions.

For example, consider Sandel's argument against ETs:

ARGUMENT FROM GRATITUDE FOR THE GIVEN

- P1** Pursuit of enhancement is characteristic of someone that is not virtuous.
S/he lacks gratitude for what is given to us (“the given”) by nature.
- P2** Actions that lack gratitude for the given should be avoided.
- C** Therefore, the pursuit of enhancement should be avoided.

O1: **P1** is unclear. Buchanan's chief complaint is that the notion of “gift” isn't explained. And, the lack of explanation leaves us guessing about what Sandel means. “Gratitude” for something only makes sense if there is *someone* who gave us something. Therefore, the above argument controversially relies upon the assumption that (i) God exists and (ii) that God would not want us to enhance ourselves. But, Sandel wants to say that these are gifts from nature, but what does that mean?

O2: Even if nature does give gifts, **P1** still can be false. We can be (i) *grateful for what is good in life* yet (ii) *nevertheless try to improve our lives*. Especially since

O3: **P2** is false. Suppose what is “given” is uncontroversially bad, e.g. cancer, disease, etc. Why shouldn't we lack gratitude for having cancer?

A second example comes from Jürgen Habermas (*The Future of Human Nature*, 2013):

ARGUMENT FROM THE LOSS OF FREEDOM

- P1** Pursuit of enhancement and emerging biotechnologies that are targeted at our genetic structure violate our status as *equal* persons who are *free* insofar as they *determine* us to be one way rather than another.
- P2** Violating someone's autonomy (freedom) in this way is wrong.
- C** Therefore, the pursuit of enhancement and use of biotechnologies should be avoided.

The basic idea here is that we shouldn't allow parents to make choices about their child's genetic makeup because this would determine their child to be one way rather than another.

O1: Assumes genetic determinism, i.e. fixing one genes in a certain way determines how they will behave, what they will look like, etc. This view is false as environment plays a role.

O2: Ignores beneficial enhancements, e.g. increased immune system does not entail a loss of freedom.

Respect #2: Ignores Evolutionary Biology

Buchanan's complaint here is that figures in the enhancement debate make controversial claims about what it means to be human (i.e. about human nature) and many of these claims ignore key features of evolutionary biology.

Here is the type of argument that one might use in the enhancement debate:

ARGUMENT FROM HUMAN NATURE

P1 The pursuit of enhancement and emerging biotechnologies undermines *human nature* and expresses a morally deficient attitude toward the natural world.

P2 All activities that undermine human nature should be avoided.

C Pursuit of enhancement and emerging biotechnologies should be avoided.

O1: The notion of human nature is problematic as it is not just *biological givens* but what it means to be human is a product of cultural forces, and many of these are technological, e.g. literacy.

O2: You cannot develop an *ought* (a *should*) from an *is*. That is, just because this is how human nature *is* does not mean that it is how it *ought* to be.

O3: Relies on a false view of nature. Assumes that what is natural is *good, harmonious, stable, complete, satisfactory* whereas nature might equally be seen as *uncaring, chaotic, incomplete, wasteful, inefficient* (see p.8)

Respect #3: Unsupported Empirical Claims

Buchanan's complaint here is that figures in the enhancement debate make various empirical claims but they do not support these claims with any evidence.

One example is an example from Michael Sandel (*Against Perfection*) that concerns the *psychology* of those in favor of enhancement:

ARGUMENT FROM THE CRAZED PSYCHOLOGY

P1 Individuals who purpose to develop emerging biotechnologies for the purpose of enhancing human nature desire humans to be perfect, "they crave mastery", and they aim to be "masters of nature" (Sandel, pp.99-100)

P2 This attitude is crazed and threatens to remove all appreciation for life as a gift.

C Therefore, the pursuit of enhancement and use of biotechnologies should be avoided.

O1: P1 is not supported by evidence. Proponents of biotechnologies could be motivated by a desire to avoid the hardships of life, e.g. disease, death, forgetfulness, etc.

Another example (again from Sandel) concerns how ETs will impact our *relationships*:

ARGUMENT FROM THE DESTROYED HUMAN RELATIONS

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- P1** Pursuit of enhancement and emerging biotechnologies that are targeted at our genetic structure will undermine human relations, e.g. it will destroy family life as children will see themselves as *manufactured*.
- P2** It would be wrong to do any action that destroys human relations.
- C** Therefore, the pursuit of enhancement and use of biotechnologies should be avoided.

O1: **P1** is not supported by evidence (speculative). Biotechnologies could equally strengthen human relations by making us better connected and children might be thankful for not being afflicted with latent genetic deficiencies in their parents.

O2: **P1** seems to assume that biotechnologies used to enhance humans will be cosmetic or superficial in nature, e.g. choosing skin color, eye color, facial complexion.

Respect #4: Strawmen & Vague Theses

Buchanan's complaint here is that figures in the enhancement debate aren't clear about what position they are attacking.

On the one hand, critics of enhancement might argue as follows:

ARGUMENT FROM EXTREME DEVELOPMENT

- P1** Proponents of enhancement and emerging biotechnologies aim for the *extreme, uncritical, lacking in all caution, ignoring all danger* development of ETs.
- P2** This type of reckless pursuit of human enhancement is dangerous and should be avoided.
- C** Therefore, the pursuit of enhancement and use of biotechnologies should be avoided.

O1: **P1** is false. No one thinks reckless, un-checked enhancement is a good thing. Individuals that support human enhancement think that there should be a cautious approach. Thus, the above argument is ineffective as it attacks a strawman view.

On the other hand, critics of enhancement argue against ETs but then say that some ETs are acceptable without any explanation why. Buchanan (p.11) points to the following passage from Sandel:

Nor do I claim that people who bioengineer their children or themselves are necessarily motivated by a desire for mastery, and that this motive is a sin no good result could possibly outweigh. I am suggesting instead that the moral stakes in the enhancement debate are not fully captured by the familiar categories of autonomy and rights, on the one hand, and the calculation of costs and benefits, on the other. My concern with enhancement is not as individual vice but as habit of mind and way of being (*Against Perfection*, p.96)

But there are other cases, e.g. Sandel's chapter on Bionic athletes seems to be against the use of ETs, but then midway through he balks concerning the prohibition of ETs in sport when he writes:

Of course, not all innovations in training and equipment corrupt the game. Some, like baseball gloves and graphite tennis rackets, improve it. How can we distinguish changes that improve from those that corrupt? No simple principle can resolve the question once and for all. The answer depends on the nature of the sport, and on whether the new technology highlights or obscures the talents and skills that distinguish the best players (*Against Perfection*, p.37)

But this just looks like he is backtracking unless he offers an argument for why there can be no sport that involves an individual's ability to withstand the negative side effects or deal with the amazing positive benefits associated with ETs.

Respect #5: Pro-Enhancement vs. Anti-Enhancement?

Buchanan's complaint here is the debate is cast in terms of a *pro-enhancement* and *anti-enhancement* when proponents of biotechnologies for the human enhancement do not think that we should pursue human enhancement through the reckless development of biotechnologies. Instead, the debate over human enhancement is not a *pro-enhancement* vs. *anti-enhancement* debate. Rather, there are essentially two positions in the debate over enhancement:

Anti-Enhancement Positions (Bio-conservatives)	Human enhancement is <i>never</i> permissible. There are two varieties: those that think that all enhancement is wrong (Kass, Sandel) and those that opposed enhancement that involve modifying the human genetic code (George Annas, Habermas)
Anti-Anti-Enhancement Positions (Bio-enablers)	Human enhancement is sometimes permissible. Bio-enablers contend that (i) arguments by the bio-conservatives are unconvincing and (ii) there are many benefits associated with emerging biotechnologies that make enhancement permissible in certain cases.

CDQ: Which of the two positions do you think you accept and why? What are the main reasons supporting your view? What are the main reasons there might be resistance to your view?

CDQ: Which of these two views do you think most people accept and why?

Buchanan (who is a bio-enabler) thinks that (i) we should not focus on the pro- vs. anti- enhancement debate and instead focus on the real problem associated with the bio-enabler side. The *problem* is that most of the precautions offered as to how to avoid the problems of biotechnology are vague (see p.15). He writes

we are faced with a complex but undeniable fact: something momentous is happening on an increasingly large scale, there is every reason to believe it will continue, it is impossible to make sweeping claims about whether its effects are or will be good or bad overall, and there is no realistic prospect of stopping the development in its tracks. Instead, the task is to try to understand the phenomenon in all its complexity, to resist the tendency toward sweeping condemnation or praise, and, above all, to start thinking hard about practical responses that are ethically sensitive, true to the complexity of the phenomena, and realistic (Buchanan, p.11-12)

CDQ1: This position takes the assumption that technological development of biotechnologies is inevitable. Is it?

4. The Enhancement Enterprise & Reasons for Supporting it.

In sum, Buchanan thinks that (i) we should *reject* the anti-enhancement side, (ii) but the anti-anti-enhancement (bio-enabler) side is *vague*. His positive proposal is to clarify the bio-enabler side in what he calls “the *enhancement enterprise*.”

CDQ1: Buchanan characterizes the enhancement enterprise on pp.16-18. Write a couple key characteristics of this down. What is this enhancement enterprise?

There are at least four reasons to support the enhancement enterprise:

Reason 1: The potential social benefits are great

Reason 2: Given that the development of biotechnologies is inevitable, failure to support the enhancement enterprise will lead to the dissemination of such technologies through the “backdoor”

Reason 3: Certain biotechnologies can be supported with the aim of distributing them to everyone, and with just goals in mind.

Reason 4: Avoids increasing medicalization of enhancement technologies (this is costly and inefficient). “Oh, I’m sick, I need that biotechnology that *enhances* (no I mean *cures*) me.