Reviewer's report

Title: Limits to human enhancement: nature, disease, therapy or betterment?

Version: 0 Date: 24 Apr 2017

Reviewer: Anna Pacholczyk

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Review Report

This has been an interesting paper to read, it is especially strong descriptively and makes several strong points related to the current debate. I hope the below comments will be helpful.

p.2 [reviewer's comment: page numbers refer to the pages from the start of the body of the paper]

Line 51: Minor comment: perhaps rethink the use of word 'charitable.'

45: Minor comment: 'of course' - this is not self-evident

44: Minor comment: I'd suggest to reference opportunity costs in relation to enhancement

59: Minor comment: if this is widely debated, perhaps more references to important texts in order

P. 3

1: There is no need to assume that enhancement needs to be limited for some reason. It does not add to the argument in any way.

10: The reference to Harmonia Mundi is interesting and does not occur often in mainstream debate on enhancement

11: It would be good to demonstrate more fully how 'nature has been normative epistemically, aesthetically, and morally.' The example works, but the relation between those three dimensions are of interest.
22-24: This is a questionable claim that merits at least a reference; and I don't think that it is true that people tend to think about medicine in this way, although there is room for reasonable disagreement here. I'd suggest to qualify the statement to refer to 'a common understanding of medicine,' or 'some thinking that…' Additionally, there might be some threading on two meanings of 'natural' there (natural as referring to nature and medicine as natural science).

26-27 Minor comment: prima facie?

30-32: Enhancing humans or enhancing human nature? There is an important conceptual difference.

Section Arguments from naturalness. Perhaps the concluding sentence would serve its purpose better at the start of the section, to manage expectations as to the aim of the section.

P.4

1-2 & 6-8 It would be good to know more about the author's view about consequences of this multiplicity of conceptions of nature for the enhancement debate in relation to limits on human enhancement. Is Bess' argument convincing?

It is a little unclear to me what is the relation between arguments in the context of HE relating to nature in general and changing human nature specifically. Perhaps those links and distinctions could be drawn out more explicitly.

Limits to HE in nature: this section could be more accurately called 'limitations/future directions'

34-55 I think that the assessment here is accurate and I appreciate this section. Some more (brief) details of how those conceptions could play out in the context of HE would be enlightening, although not strictly necessary for this paper's argument.

50-51 There is little argument to support the conclusion that there is not knock-down argument: while the article does a very good job of reviewing various concepts/arguments/counterarguments and categorisations, it does not provide (so far) the evaluation needed to support the conclusion that none of those arguments are strong arguments for setting limits on HE.

p.6
3-4 Minor comment: I am not clear what 'needs differentiation' means in this context

11-12 Minor comment: perhaps: 'a prima facie argument in favour of limiting enhancement?'

44-45 Minor comment: therapy-enhancement-distinction: is this a hyphen typo?

36-40 Again, unfortunately I am not sure where this conclusion came from. The previous two sections are well organised and comprehensive descriptions of arguments and counter-arguments, but provide little evaluation of the arguments put forward. As a result, the conclusion is not justified on the basis of what is in the paper as it stands.

58-59 Such a strong normative/motivational standpoint can be attacked by arguing that even if the distinction between disease and enhancement can be established clearly, it does not have such a normative force (e.g. proposed be Harris); this is in addition to Savulescu-style arguments pointing out the vagueness of the distinction itself. It might be good to clarify the difference between those two arguments. This could provide a further link to the issues addressed in latter sections.

p.7 Strong & well-informed discussion

p.8

31-35 I suggest to rewrite and add: it is not clear why this is so. One needs a normative argument to add to the naturalistic concept of disease, otherwise it just will not fly as an ethical - therefore: action guiding - argument. The mention of humanistic axiology needs tying up to the argument. The counterargument relating to pragmatic considerations leaves one hanging.

p.9

31 Perhaps 'an apparent tendency' (?) (the author mentions that Earp & all address this, other proponents also of radical enhancements seems to regularly make similar qualifications). The debate has moved on from the 90s 'better, faster' and one would be hard pressed to find an enhancement proponent that does not qualify their claims. There indeed still might be a too strong emphasis on the quantitative enhancement of traits, but if there is a bias, it is not clear-cut.
55-57 I think the potential conflict between individual wellbeing and society's interest at large is a point well made, but this does not undermine the definition of enhancement proposed by Savulescu and others. This might simply mean that not all enhancements are good things all things considered from a wider consequentialist standpoint. This needs clarifying.

57-59 I think it is more accurate to say that there THEN remains additional work to show that something indeed is an enhancement on Savulescu's definition. There can be a reasonable disagreement here, but it does not undermine the usefulness of this definition of enhancement. Other criticisms can be raised against this definition of enhancement, but as it stands the conclusion on the next page is not supported. I think the author hits the nail on the head on the next page (lines 12-14), but the conclusion of this sections needs re-thinking.

p. 10

14-16: It might be a reasonable position but needs a bit more support - either elaboration, demonstration or signposting. For example, one may say that enhancement may well be defined in relation to increased wellbeing, but this is so wide as not to be useful. As it is, the paper asserts but gives me no stated reason to agree.

22-31

Nicely done. Minor comment: 22-23 this sentence should go I think; it is not a reason in itself, and reads somewhat rhetorical.

32-42 Works well

46-52 Good point

55-61: Is the challenge practical or normative then? Is it an evaluation problem?

p. 11

1-6. There seems to be the sustained conflation here - there is a difference between enhancement as better for individual and making world a better place. This needs to be tidied up.
Minor comment: I'd suggest to remove

Minor comment: Would this not belong in the introduction?

Minor comment: Repetition, can remove

The 'objections' section is rather weak. I'd join some points and add to discussion and distribute others earlier in the paper or remove. Alternatively, the conclusion needs to be more comprehensive and focused on the main points advanced by this paper.

General:

Background section (why should there be limits to enhancement) could be improved by removing unnecessary discussion of the premise that enhancement needs to be limited. This risks putting a cart before the horse and author's argument works well also without it.

I'd suggest to clarify the section-question relation. The 4 questions at the start provide a good roadmap to the paper but it is not immediately clear how all of those map onto the sections in the paper

The paper could be improved by more clear drawing out the reasons for authors’ evaluative claims (see also comments)

Generally interesting, detailed and clearly written, but at times the style could do with one more round of proof-reading.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Unable to assess

Does the work include the necessary controls?
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