Reviewer’s report

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

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Reviewer: David Lawrence

Reviewer's report:

The author offers a solid review of the broad state of the enhancement debate and gives focus to an area thereof which has probably had insufficient specific attention. Much existing literature has discussed limits as an element of a case for something else rather than in the explicit fashion of this article. Two works that are not referred to but which may be of interest to the author if they are not already aware are Nicholas Agar's Truly Human Enhancement: A Philosophical Defence of Limits, and Russel Blackford's Humanity Enhanced. These discuss at some length the ideas particularly around naturalness that are discussed by the present author, but the article is valuable in that it much more concisely delivers a comprehensive summation of the debate.

I recommend the paper for publication with some slight caveats the author may wish to consider.

1) It is not entirely clear what the (admittedly brief) discussion of hybrid conceptions of disease adds to the section it closes.

2) A number of points are raised all too briefly; including the idea of changing value systems and the propensity of enhancement to self-limit, and the ultimate suggestion of the piece which is to say the case for limits based on proving the betterment attained by an enhancement. This core thesis could use some expansion as while the case is presented clearly the proposed solution is given relatively short shrift. I cannot help but feel that it could be made more strongly if given a fuller discussion along the lines of that provided for why existing debates over setting limits are fruitless. The other promoted conclusion, that it may not be necessary to set the limits at all, is given still less attention despite being an apparently valid and interesting point. This is not to say that these arguments are not made well, quite the opposite. However, they do give the slight impression of being an afterthought considering the depth and scope of review given to the traditional sources of limit. It may suffice to introduce the suggested solutions at the opening of the paper, and thus contextualise the lengthy examination that forms much of the body. I acknowledge however that this may be a limitation of the style of article.

3) on page 8, it seems likely that the author means 'dietary supplement[s]'
4) On page 12, long-lividness, in reference to longevity, I believe should read 'long-liv[e]dness'

5) Line 6 of page 13, 'by far clear' would perhaps make more sense in context as [far from clear].

However these are all suggestions and it is my opinion that the paper is a worthwhile summation of the debate around limits, affording it succinct explicit attention that is perhaps lacking in other works. The suggestions for a solution to this stalemate are interesting and I would be keen to read an expansion of these ideas.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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