Journal of Ethical Urban Living

Evaluating Biomedical Enhancement: A Non-ideal Approach

Andrey Darovskikh
Binghamton University

Acknowledgments
An earlier version of this paper was presented at the Center for Cognition and Neuroethics' Ethics and Social, Political, and Legal Conference (Flint, MI) in November 2018. I am very thankful for the provided feedback.

Biography
Andrey Darovskikh is a PhD Candidate at Binghamton University. He holds MAs in Philosophy and Interdisciplinary Medieval Studies, and specializes in ancient philosophy with a particular focus on ancient biology and medicine. He has a developing interest in applied ethics, especially in bio and medical ethics.

Publication Details
Journal of Ethical Urban Living (ISSN: 2470-2641). March, 2019. Volume 2, Issue 1.

Citation
Darovskikh, Andrey. 2019. "Evaluating Biomedical Enhancement: A Non-ideal Approach." *Journal of Ethical Urban Living* 2 (1): 23–33.

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Abstract

The problem of how to assess technological capabilities of enhancing human nature and health has been haunting for scientists, philosophers and general audience for a significant period. However, in this paper, the author suggests to leave aside the question of normativity with regard to biomedical interventions. Instead of that, the focus is the evaluation of a particular act of enhancement provided that human enhancement in itself is a morally right thing to do. The discussion focuses on the debate about the retrospective (backward-looking) and the prospective (forward-looking) evaluations. On the one hand, the author verifies the validity of the argument that the backward-looking approach suffers from shortsightedness. On the other hand, the author objects to claim, that the only alternative to the backward-looking approach is to look forward to achieving an ideal, as if it is indispensable for qualifying both quantitative and qualitative chances as positive improvements. As a response, the author proposes an approach for evaluating human enhancement, which is both non-ideal and forward-looking at the same time. In the center of the argument is the idea that we can adequately evaluate a particular act of enhancement by comparing the improved state with some descriptively and normatively better state, which is not an ideal one. This better state is non-ideal, because it is a subject to revision depending on human nature, social circumstances and availability of technologies.

Keywords

Bioethics, Biomedical Enhancement, Ideal, Non-ideal, Forward-looking, Johann Roduit

Introduction

The goal of human enhancement is the pursuit of a better life. In the course of the history, people always tried to improve themselves: illiteracy eradication; urbanization; vaccination; development of technologies (e.g., we are flying, computing and the like). However, biomedical enhancement is a different case because of its potential power to affect efficiently human bodies and brains in so many ways and often times so quickly. In order to qualify a change as enhancement we need to look at the evaluation of its influence on the subject and answer the question whether we perceive the change as increasing functionality and capabilities or not. Biomedical enhancement is no exception in this regard. Within the scope of this paper, I will leave aside the problem of normative evaluations of biomedical enhancement in general. The ethical *pro & contra* debates about biomedical enhancement have been going on since science provided (or promises to provide) us with a means to improve human nature

more drastically than ever. However, let us for the sake of the argument allow the premise that biomedical enhancement in general is a morally right thing to do; not in the sense that it is something obligatory but it is at least permissible and at most advisable. Then the question arises; how do we evaluate every particular act of human enhancement? There are two ways of evaluating improvements in non-normative terms: 1) Retrospective evaluation (frequently referred to as *backward-looking*), which suggests assessing how far we managed to advance from some original position. 2) Prospective evaluation, which assesses how close we approached the state, which was considered as a goal of the improvement.

The retrospective approach assesses enhancement looking back to *status quo ante*. The s*tatus quo ante* is not some kind of a deficient state, nor is it an *average* condition*,* but it refers only to the way things used to be. In biomedical enhancement, it would be a physical or mental condition of a particular individual prior to biomedical intervention. Given the knowledge about that particular unfavorable state from the past, enhancement can be assessed based on how successfully those unfavorable conditions were overcome. On the other hand, there are several ways to talk about forward-looking evaluations, and one of them suggests a necessity of some kind of ideal ahead. Johann Roduit one of the proponents of this approach argues that an *ideal* seems indispensable when a comparison of an original and an improved state is needed. For this type of a *forward-looking approach* an ideal as a long-term goal is necessary because it allows qualifying either quantitative or qualitative change as a real improvement in case if it contributes to attaining the ideal (Roduit 2016, 71).

In this paper, I express some skepticism about the *ideal forward-looking* approach. I object to the claim that current circumstances with regard to human nature cannot influence the direction of enhancement. I will elaborate this position by expanding the scope of current circumstances to include not only the state of human nature but also social and technological factors. This does not imply that I advocate the backward-looking approach. On the contrary, I will verify the validity of the argument that this approach suffers from shortsightedness. However, I am going to refute the claim that biomedical enhancement cannot be properly understood without a reference to an ideal. I will propose an approach for evaluating human enhancement, which is both *non-ideal* and *forward-looking* at the same time. On the one hand, I will stick to the common argument from non-idealists that an ideal is not necessary for deciding which of two states (original or improved) is more favorable. On the other hand, I affirm that what matters here is not a comparison of an improved state and a *status quo ante*, but a comparison of improvement with some descriptively and normatively *better* state,

which is not a perfect or an ideal state. Finally, I will show that this *better* state is non-ideal, because it is open to revisions and depends on current individual and social circumstances and especially on availability of technologies.

The Case of Biomedical Enhancement

Human enhancement always aims to ameliorate unfavorable conditions. The question what is an unfavorable condition in human nature or health is problematic due to plurality of views and some ethical constrains. On the one hand, individual or cultural subjectivity suggests that the possible list of unfavorable human conditions has no limit. For example, small breasts or insufficiently long erection are unfavorable conditions for many by far; bad hearing or sight are as well; low IQ or inability to sleep three hours per night while being efficient during the day – all those states are possible targets of biomedical enhancement. On the other hand, different moral constrains force us to be careful with labeling that or another physical state as unfavorable on a large scale. For example, the arguments in favor of preventing the eradication of deaf culture are well known (See: Chadwick and Levitt, 1998).

The amelioration of an "unfavorable" condition, which restores the state of health and normal species functioning, is frequently referred to either as negative enhancement or therapy. Positive enhancement broadly speaking is a desire to get from good to better. It is a pursuit of improving the normal human functioning for the sake of getting an upper hand. In order to give a full account of the problem of biomedical enhancement the distinction between negative and positive enhancement should be multiplied by the distinction between somatic and genomic (or germline) interventions. If we combine this distinction, the full list would include four types of biomedical enhancement: 1) Somatic negative enhancement 2) Germline negative enhancement 3) Somatic positive enhancement 4) Germline positive enhancement.

The understanding of the distinction between somatic and germline interventions hinges on the understanding of the difference between somatic deviations (mutations) and germline deviations (mutations). Somatic deviations occur in a single body cell, which means that they affect only this particular individual and they cannot be inherited, because only the substance between derived deviated cells is affected. On the contrary, in the germline mutations the deviations occur in the gamete and will be transmitted to the offspring of this particular individual. The characteristics acquired in the process of this intervention will be inherited because the entire organism will be affected.

Despite the drastic relevance of the distinctions between different types of biomedical enhancement for debating the normative status of biomedical interventions, they seem to be less significant for the purposes of my argument, because the criteria to be used for evaluating particular enhancement are the same the type of biomedical intervention notwithstanding. Nevertheless, I do want to set a couple of limits for the kinds of biomedical enhancements, which will be in the focus. First, biomedical enhancement is something available only due to the development of biomedical science, i.e., limbs amputation is not biomedical enhancement, even though some might argue that life without legs is a desirable and more beneficial state. Second, enhancement can be instrumental or even indulging pleasures, as it in the case of prolonged erection, but enhancement can be practical and at the same time can have some intrinsic value. I mean that a certain enhanced state is conventionally desirable by a significant fraction of population as it *is*, in a particular set of historical, social and technological circumstances. For example, the constitution of our backbone is such that excessive sitting literally kills us, although it was not a problem even a hundred years ago when the majority of human kind population would move more. Thus, an enhancement of the spine's constitution in the nowadays conditions would be a good example of such a conventionally desirable state which is on the one hand instrumental; on the other hand it is intrinsically valuable. These desirable conditions vary immensely depending on time location and specific population but in each case, they target something that is generally perceived as an increase in well-being.

The Critique of the Backward-Looking Approach

The backward-looking approach to evaluating biomedical enhancement has two major problems: 1) it positively evaluates any improvement; 2) it does not take into account a distant perspective of improvements. Evaluation of enhancement in reference to an original state is problematic, largely because a quantitative improvement does not necessarily mean a qualitative improvement. If we consider enhancement as something more than just a restorative therapy, the backward-looking evaluation will be positive every time we depart from the original state and somehow improve a human being. In line with this logic, any enhancement is supposed to always make us better off. The problem of such a view can be easily displayed. Let us imagine that deafness is not desirable by anyone and we all opt for its eradication. Then, enhanced hearing of someone who was originally hearing-impaired is definitely an improvement of a life quality. However, drastically enhanced hearing of the same person makes him no

longer better off. Clearly, the ability to hear every single flap of the butterfly's wings makes life unbearable.

Furthermore, even a moderate enhancement of some functions, which seems to be beneficial at first sight, might turn out to be detrimental in a long-term perspective. First, some enhanced traits might not be desirable in the near future. If we look back, we can see that fencing skill or horse riding are barely desirable by majority in the 21st century, however it used to be so for a long time in the past. By the same token, something we long for now can become worthless in the future. Second, some types of enhancement can impede the enhancement of more important faculties. Here we can think about side effects of enhancement that interfere with both current faculties and faculties to be enhanced in the future.

Alternatives to the backward-looking evaluating approach suggest that its shortcoming primarily stems from the lack of an envisioned state lying ahead. This desirable state is used as a point of reference and is supposed to steer the whole process of enhancement toward a certain goal. In this paper, I oppose the view that the only way for biomedical evaluation to be forward looking is to refer to an ideal/perfect state. For this view, any kind of an unfavorable condition is a state of imperfection, which is simply caused by a lack of perfection. According to this view as long as we get rid of all imperfections, we achieve the state of ideal perfection; seemingly, without this ideal state, our desire to improve ourselves by means of biomedical enhancement cannot be properly understood.

In the interest of fairness, I need to note, that the more recent defenders of the necessity of perfection as an ideal state such as Johann Roduit put forward a recalibrated and more argumentative update of *perfectionism* theories in connection to human enhancement feared by, for example, Michael Sandel and Leon Kass (See: Sandel 2007; Kass 2003). According to that view debunked by the latter, the ultimate goal of enhancement is to acquire total mastery, perfection and even immortality. However, our desire to live better and to be better off does not imply a desire to achieve total mastery. Allen Buchanan was one of those who argued that such perfectionist claims have no evidence for support (See also: Caplan 2009, 201) and they are simply wrongheaded, because "the pursuit of biomedical enhancement is not the pursuit of perfection; it is the pursuit of improvement" (Buchanan 2011, 2).

While the title of Roduit's book (*The Case of Perfection*) explicitly refers to the idea of perfection and though he always uses the word *perfection* to describe the ideal state, doubtless his understanding of perfection is in fact not identical with total mastery and immortality. Rather, his perfect human being is an ideal, which complies

with a broad range of conditions necessary for a good life. As he claims, "It makes perfect sense to argue that having or being *enough* can well be a viable factor for determining human perfection" (Roduit 2016, 82). Roduit is reticent on the point how an ideal human being would look like, he simply does not see his task in talking about a precise ideal. He aims to solve a methodological issue and prove that we do need an ideal when we venture upon biomedical enhancement.

It might even seem that Roduit argues in favor of something other than an ideal. However, I insist that what he defines as a threshold for human well-being (Roduit 2016, 82) constitutes an ideal theory for an ideal human. It is this 'imperfect ideal' which is supposed to be taken into account for directing the pursuit of enhancement in any given circumstance, which is non-ideal. For Roduit, there has to be a suitable perfection as an ideal, and people committed to that ideal use biomedical enhancement as a tool to achieve it regardless of any present set of conditions. I argue that what makes Roduit's theory an ideal one is the lack of interest to the present biological state of humans, the state of the society, and especially the development of science.

The Forward-Looking Non-Ideal Evaluation

Let us imagine that the minimum threshold of an ideal life among other features includes a highly developed intellectual capacity. Given that mistakes, misfortunes and sometimes crimes reflect the ability to do something with deep convictions based on no information at all or false knowledge, the idea of increasing IQ seems to be a very desirable 'enhancement package'. Let us again imagine that biomedical science does have right now this kind of enhancement available. If we perceive human enhancement as something that aims to attain an ideal then this particular enhancement of intellect should be positively evaluated, because it brings us closer to the ideal. However, the highly developed state of intellectual capacity increases the risk of dissatisfaction, which stems from inability to find a suitable job and fulfill the thirst of actualizing this intellectual capacity. The dependence of modern economy on fossils, industry and agriculture with a high share of monotonous labor makes this side effect a real threat for an excessive number of people with highly developed intellect. The possible solution would be to use additionally some kind of mood or discipline enhancement. However, let us assume that at the current stage of development in biomedical science, the discipline enhancement would be incompatible with the mental enhancement. They neutralize each other and an enhancement package, which includes both, would simply be a waste of money.

Clearly, it is the non-ideal circumstances, such as current development of science, society and the state of human nature which affect an evaluation of the enhancement, even if we think that it objectively moves us toward the state of the ideal. The presence of good genes/nature themselves does not warrant the positive and useful realization of them in the future. In the aforementioned example with IQ the pursuit of well-being needs, as a prerequisite, an enhanced nature, which is *available* and a certain social structure, which is *not available*. Thus, the implementation of this enhancement ostensibly brings us closer to the ideal, but in reality it does not contribute to the well-being and consequently it cannot be evaluated as a positive intervention. It seems legitimate to argue instead that our evaluation of these would-be biomedical interventions should be practical rather than ideal.

When we face a choice, such as that described above, the evaluation of a possible human enhancement with an ideal yardstick will not suffice for our decision-making. Following Amartya Sen and his critique of ideal theory I affirm that the ideal approach is not only insufficient for assessing a current state, but it is also unnecessary (Sen 2011, 15-16; 87-112). Objectively, the similarity of methodology for talking about ideal and non-ideal scenarios in biomedical enhancement and in political philosophy seems to be obvious. Therefore, the application of some conclusions from the developed arguments about ideal/non-ideal theories in political philosophy to the field of bioethics does not look as something artificial and inconsistent. The irrelevance of an ideal for assessment of a current state is revealed by means of attention to present physical deficiencies (injustices in the case of social philosophy). A dissatisfaction with a particular trait of a human and a desire to enhance it does not necessarily signal our longing for an ideal state. Our dissatisfaction with an unfavorable state does not come from deprivation of an ideal state. Injustices (in social philosophy) and disadvantages (in biomedical science) have their own ontological ground, so to speak; they exist as unsatisfactory conditions regardless of whether we have an ideal in mind or not. Biological disadvantages or deficiencies can be defined as privations, which is an essential principle of change, and any enhanced state is possible only because the state of deficiency or disadvantage has a potential for a change. Thus, we need to have a concept of the opposite to privation, but this opposite is not necessarily an ideal state.

The unnecessariness of an ideal, according to Sen, comes from its inability to decide which of the two alternatives is preferable. In his famous example, Mona Lisa as a tentatively best masterpiece is of no help in deciding who is better Van Gogh or Picasso (Sen 2011, 101). Instead of a transcendental ideal Sen advocates a comparative approach according to which an evaluation of two alternatives can be made "without

a prior identification of a supreme alternative" (Sen 2011, 102). The two alternatives which qualify for independent comparison would be two states of justice for Sen. If applied to biomedical enhancement two alternatives for an independent comparison can be either an enhanced state vs the *status quo ante,* or an enhanced state vs some kind of other state. If one of the alternatives is *status quo ante* then evaluation immediately becomes backward-looking. The previously described shortsightedness of the backward-looking approach forces me to claim that the second pair of alternatives is the only available option.

So far, I have not stated explicitly what would be an appropriate way for evaluating enhancement. There has been enough said about what it would not be though. To be sure, the assessment of biomedical enhancement should not start with figuring out what the ideal of man is; it should not end with figuring out this question either. The starting point consists in figuring out a state liable to amelioration. This, I have argued, is a privation of a certain state, and this privation is an essential principle of transition to an enhancement state. At the same time, this evaluating approach is forward-looking in the sense that it is comparative and presupposes some *better* state, which is ahead of *status quo ante.*

The idea of a *better* state as a point of reference for evaluation of human enhancement has three crucial features, which help to qualify it as non-ideal. 1) It concedes multiplicity. Plurality of values does not allow sticking to one unified standard of better. Genetic augmentation of breasts or improvement of hearing is a desirable and legitimate enhancement for some but not necessarily for all. 2) The better state does not regulate all possible enhancements, but simply allows evaluating particular solutions based on shared values, which are necessary for a better life. 3) It is flexible, i.e., it can, and if need be it has to be revised depending on: a) current state of human nature; b) social factors; c) technological capabilities. Enhancement is a type of adaptation like evolution, which is not teleological, but is navigated by a better solution for a more convenient living and coping with present circumstances. For example, admittedly the constitution of our backbone is not suitable for the amount of everyday sitting we experience nowadays. Our nature definitely adjusts to these changes in lifestyle, but those natural processes are extremely slow. Up until our nature accommodates to these new challenges of 'environment' a large number of generations will suffer from pain, which is unbearable for many, due to disc herniation, pinched nerves, pressures on the spinal cord etc., simply because of sitting for longer time than our body can 'afford'. If we imagine that, a would-be enhancement can do the work of evolution, we will have an attuned nature more efficiently and faster. This

will be a definite improvement of our life, but it will not be an ideal one. This desired life with no pain in the back is not an ideal state, because its effectiveness depends on a number of contingent factors. Namely, for instance the molecular level of human organism requires our body to move, standing and moving activate the molecular processes in muscles and the cellular system: blood sugar, triglyceride, cholesterol, etc. Movement is something what works as a life pump for those processes; lack of movement results in a gradual but imminent attenuation, followed by deterioration and finally complete failure. Thus if we imagine that an enhancement package solves the problem of pain in the back but neglects these aforementioned problems, our better state with regard to this problem should be revised and has to take into account this peculiarity of human nature. Life without pain in the back is better and desirable but this enhancement cannot be evaluated positively if it does not address the influence of sitting on molecular processes.

In my example about enhancement packages which either include mood enhancement or intellectual enhancement, I tried to show that, given some social constraints, a mass non-cognitive enhancement can seem more appealing than improvement of the mental state. The better state, which would take into account that social constraints can give us a goal that is able to provide normative guidance for enhancement policy, which needs to be effective and technically possible.

Therefore biomedical enhancement as a pursuit of improvement is a phased process, whose length, intensity and trajectory are dictated by the three mentioned above factors (human nature, available technologies, and social structure). Upon completion of a particular phase the length, intensity and trajectory are subject to revision depending on the understanding of the next step of a better life and the ways it can be pursued. This better state resembles the concept of a desired functioning, and it should not be confused with some ideal, because this desired state is partly formed by our intentions and understanding of a good life, but at the same time a large number of contingent factors has a great deal of impact on it.

One of the contingent factors, which seems to me crucial for our inability to assess biomedical enhancement by means of ideals is the nature of human beings. Functioning of the organism from the point of view of evolutionary biology is not something optimal or harmonious but it is a result of a long developmental process, which has no notion of human well-being in mind. Despite the fact that desired functioning (the better state) is supposed to evaluate the enhanced state, as some product of creativity, which was designed to make us better off, human organism, even after the application of some enhancement is not a balanced or completed whole; we

are dynamic creatures who still evolve and enhancement is a part of this evolvement. Prior to any enhancement human nature is a "tentative, changing, perishing, cobbled-together *ad hoc* solutions to transient design problems, within blithe disregard for human well-being" (Buchanan 2016, 2). However, it does not mean that after several interventions by means of biomedical enhancement our nature is no longer a tentative solution to transient problems. It is exactly the opposite; gradual enhancement is nothing else but a number of tentative solutions on the way to a good life. It is worth noting that these tentative solutions are not arbitrary, but they are situational, and the following trajectory of the future solutions is to be revised along with every step of enhancement.

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