

## HUMAN ENHANCEMENT AND THE QUESTION OF HUMAN BEINGS

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This article deals with the understanding of human beings in the project of human enhancement. It shows that, in the voices of some representatives of the latter, there is a naturalistic tendency to reduce human beings either to their environment or to virtual reality. In such cases, the resulting entity would lack interiority as well as the first-person perspective. In this paper, it is argued that the possibilities opened up by biomedical sciences cannot release us from employing a multi-dimensional and integral concept of human beings wherein interiority plays an important role. The human enhancement project is not only a matter of technical feasibility; it also fundamentally concerns the essence of humanness. Hence the question of the nature of human beings and their condition is an indispensable part of this enterprise.

**Keywords:** Human enhancement – Human beings – Environment – First person perspective

**Introduction.** In contemporary philosophy, discussions on human enhancement are well advanced. There is a huge body of literature on the topic with new subfields emerging. This debate is in tune with the constant longing of the human beings to improve their lives and wellbeing. Apart from appropriate personal efforts it has found expression in various educational and political programs and undertakings. Contemporary efforts to enhance the human being have the advantage of drawing on the latest discoveries in genetics, genetic engineering, pharmacology and even information technology. Although still at the beginning of their practical implementations and uncertain of how viable they are, relevant discussions between philosophers and futurologists are, by contrast, quite complex and nuanced.

There are many aspects of these discussions which are worthy of examining. This paper however concentrates on one issue only, namely who or what is the subject of those enhancing procedures. In other words, what is the understanding of the essence of the human being which is the subject of improvement. This issue is complex and can be approached from many angles. In this paper, the attention is limited to current discussions between different representatives and adherents of human enhancement, and by default their implied understanding of the human being. Finally a critical assessment is offered together with postulates for further discussion. However, at the outset some light should be shed on why such discussions take place at all and how they can be structured in a relatively straightforward way.

**Why Discuss Human Enhancement?** As mentioned above, there is a natural tendency for a human being to improve himself. This is so permanently present in human existence that it can be considered as a stable human feature. As a rationale, we can point to the fact that we are dynamic creatures and change and progress are permanently inscribed in our nature. By contrast, there are situations when an adequate change does not take place – is hindered by some factors – and an individual remains at a given level of development, say, psychological or biological. Understandably, this will amount to a state of considerable disorder and even pathology.

The question of why humans seek to modify themselves is answered by the fact that they live in an environment which is constantly changing and confronting them with novel challenges, and that certain instances also demonstrate the need to actively take part in the process of change rather than passively be subjected to it. Some philosophers involved in the debate claim that human individuals are not properly equipped to deal with contemporary predicaments.<sup>1</sup> Human personality traits were formed when humans lived in small communities and an accompanying environment was unspoiled due to non-existent technology. Nowadays, they must deal with environmental crises in a sphere of ubiquitous technology which, in many cases, is overwhelming. In such a context, natural human endowments may be insufficient to respond properly to the challenges faced. It becomes necessary to embark on new enterprises in order to survive and keep human dignity intact. In this respect all the essential human features may be considered candidates for improvement, including knowledge, emotions, morality, and lifespan and so on. Of course, the question of how far human beings can interfere in these important realms remains open. In other words, establishing a balance between what is “naturally” given and what is modified and endowed “artificially” is a subject for ongoing debate.

Human enhancement is variously classified. Here, it will be examined a proposal by Torbjörn Tännsjö who points to negative improvements, positive interventions and enhancing interventions (Tännsjö 2009, 316). The first are associated with the elimination of diseases and pathological states and are aimed at restoring health and the normal functioning of the human body and psyche. Thus, they are parts of standard medical practice. Positive interventions in turn are directed at improving a given characteristic within a range of traits already present in the human family. Their aim is to modify the DNA structure and increase the level of performance in a given respect. For instance, someone with a relatively low level of intelligence quotient, say, IQ 97, might be a subject of such a procedure in order to obtain, say, the level of IQ 115. Both IQ levels are present in the human population but the latter betters someone’s existence by giving him a competitive edge in a pluralistic and technology-oriented society. Finally, enhancing interventions seek to make humans into a higher class of creatures, so-called posthumans. These interventions are associated with a radical prolongation of our lives as well as with dramatic

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<sup>1</sup> For instance, Igmarr Persson and Julian Savulescu maintain that “the human beings are not by nature equipped with a moral psychology that empowers them to cope with the moral problems that these new conditions of create” (Persson, Savulescu 2012, 1).

improvements of our mental and personality-related capacities. Such proposals are usually considered in the context of so-called transhumanism (Kurzweil 2006).

Negative interventions are needed and they constitute indispensable parts of the contemporary medicine. Usually, they comprise of standard medical procedures aimed at elimination of diseases and pathological states. However, it happens that a set of procedures aimed at preserving human functioning is done via some improvement undertakings. In other words, in order to keep human organism on the average level of functioning some “reinforcements” should be applied (e.g. vaccines). Such interventions are undertaken within a preventive medicine and understandably resulting changes are not transmittable to next generations. However, a step further can be made and improvements can be employed for the sake of goals that are not strictly associated with treatment and prevention of any kind. It may happen that they are also useful in other spheres of our lives. This topic will be addressed later.

Radical enhancements can present as unclear and mysterious, breaching what are considered the borderlines of humanness and ushering individuals in new kinds of beings. Such proposals present complex difficulties. One of the problems is that it is not known what a posthuman state is like. For example, Nicholas Agar compares a passage from humanity to posthumanity to a passage from childhood to adulthood. In the former, humans have their guardians-parents who know the way and the final destination (adulthood). In the latter, however, there are no such figures. Thus, humans are not only devoid of practical assistance but also do not have any clear-cut knowledge about whom they might become in the future (Agar 2014, 74).

Another interesting critique of radical enhancement, useful for our investigations, has to do with the idea of person uploading. It is the part of agenda of making people into superior creatures. Basically it consists of two processes. First, making a total scan of human psychology and transferring that data to a computer (employing for instance nanobots). Second, replacing natural organs, especially those connected with the brain and nervous system, by artificial chips and circuits (Agar 2010, 57-58). In the former, the person is made into a huge bulk of information, which can be – at least in theory – further refined and upgraded by new generations of computers. At a certain point, it will be downloaded into a new vessel (i.e. new artificial body). In the latter, the biological brain will be replaced with artificial machinery. A person’s psychological features will be incorporated into that non-biological body and it will enable a connection and cooperation with computer-dominated networks. In both scenarios, the human world will be seriously modified and many unknowns will take place.

Critiques leveled against that prospect emphasize various dangers, including the end of the typically human world and the irreversible loss of what humans value in the human culture (Agar 2014a, 350-351). Additionally, it is highly problematic whether the identity of a given human individual will be preserved.<sup>2</sup> Rather, what is to be faced is an emer-

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<sup>2</sup> Agar drawing on critical voices declares directly, “uploading is nothing more than a novel way to commit suicide” (Agar 2010, 63).

gence of new creatures or – in a less optimistic scenario – cessation of human-like life altogether.

Positive enhancements are interventions between negative improvements and radical enhancements. They offer something more than treatment but at the same time do not lead human individuals to unknown states of existence. What is the rationale behind them? Why improve people's abilities and traits? One of the reasons has to do with adaptation to a society. Imagine that an individual entertains a strikingly low level of intelligence. Understandably, this situation puts its negative mark on his wellbeing as well as bringing about some disadvantages for the society. Just helping such an individual to become smarter is quite a worthwhile enterprise. Furthermore, positive enhancements can be tools to tackle new environmental challenges. For instance, imagine that natural environment is undergoing radical changes, say, associated with a substantial shift in the level and quality of sun radiation. Changing some sequences of human genetic make-up responsible for skin features will be necessary in order to avoid skin cancer or at least unpleasant discomfort (Harris 2016, 20). Moral assessment of positive enhancements depends on the means serving their implementation. In non-utilitarian thinking, not only noble ends and intentions should be taken into account but also a positive character of employed means ought to be stressed.

**Coming to Be: Between Genetic Make-up and Environment.** It is widely known that the specificity of a human being is not exclusively determined by his genes. Although, the latter play important roles and some genetic tendencies are very strong and difficult to eradicate (e.g. tendencies to some serious illnesses), humans are not in the total grip of their genes. What is equally important is the environment, which conditions gene expression to a considerable extent.<sup>3</sup> Thus both sets of factors have their influence on the human coming-to-be and flourishing. For the further analyses, the former will be called “internal factors” but the latter “external factors”.

Nicholas Agar considers a balance between genetic enhancement and environmental enhancement. He carries it out within a stance called “interactionist view”, claiming that “we result from the complex interaction of tens of thousands of genes and uncountable environmental influences. (...) Genes acting alone cannot make a human being. But nor can environments” (Agar 2014a, 344). He goes on to stress that in fact genetic interventions are not more severe ones for humans than changes introduced into their environment. The human beings already possess such technological powers that they can radically modify the natural world and the latter can indirectly but considerably modify them. Of course, it can be claimed that genetic engineering tools are far more powerful and, additionally, that they can be used with a higher precision. This is true but to only some extent. The opposite scenario could also be the case, depending on the society and its resources. For instance, some poor countries allow huge amounts of toxic materials to be

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<sup>3</sup> Environment is usually understood as a set of conditions that surrounds someone or something. In this paper, I will treat it as something, which is basically exterior of the human being.

dumped in their territories and as a result their public health is seriously endangered. At the same time, those countries offer few genetic therapies due to their limited healthcare resources, let alone any genetic amelioration. What comes from environment (dangerous influences) prevails over what comes from the natural and not improved genetic make-up (flourishing of genetic potential). Thus, Agar concludes claiming that “there is no reason to believe that environmental and genetic enhancement must differ in degree” (Agar 2014a, 346); they can represent similar strength.

The question that arises in this context is: how does Agar understand environment? In his critical discussion with Ray Kurzweil concerning his ideas on the radical transgressing of human nature, he envisages the human beings having cybernetic implants and neuroprostheses grafted to their bodies and minds in order to replace their natural organs and functions. At present, cochlear implants are inserted into human bodies in order to stimulate their auditory nerves and thus restore their hearing faculties. In the future, prosthetic hippocampuses could be applied to people suffering from loss of memory as a result of advancing Alzheimer’s disease (Kurzweil 2006). Agar is skeptical as to the rationale of these proposals but what is more important in this context is that he calls those procedures “environmental”.<sup>4</sup> In other words, the replacements of various parts of the human body, including those associated with the cerebral and nervous systems, he considers to be manipulations of the environment. Hence, it can be offered two possible interpretations of what the human body is about. On the one hand, a strong interpretation suggests that human body be relegated to the realm of surrounding becoming indeed pure environment. On the other hand, a modest interpretation depicts the human body as dominated by environmental factors. In the former interpretation, “internal factors” in human development are completely taken over by “external factors”; in the latter interpretation, the balance between them can be considered seriously disturbed (even if they remain still distinct).

**The Human Being: What Is It?** If human body is considered as a part of environment and then contrasted with human genetic make-up, a further question arises as to credibility of the thesis. It seems that this contrast is untenable in practice. In the order of feasibility, genetic make-up is vitally connected with the DNA structure and the latter, understood *prima facie* as a natural endowment, can also be a subject of replacement. For instance, Gregory Stock claims that soon researchers will be able to construct an artificial DNA structure and attach it to a natural one. This, he maintains, will increase human genetic potential by adding advantageous genes, which are not possessed naturally (Stock 2002, ch. 4). It suggests the possibility of replacing human entire genetic make-up in the future. If it can be added to the DNA and made working along with the natural DNA, then a more radical change is on the horizon (although now only in theory), namely a replacement of the natural structure with the artificial one altogether. If such a scenario is plausible,

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<sup>4</sup> To use his own words: “The procedures that will introduce these devices into human brain do not modify genes. They are environmental” (Agar 2014a, 346).

genetic make-up must also be treated like environment. This brings with it the consequences that the human being will be radically dependent on the environment and even will be a specific example of that.

There is also another possible interpretation. If human organs are treated as bio-devices and gene expression as a kind of software, then replacement of those natural bio-devices with artificial ones can be considered as replacement of hardware with a possibility of retaining software. Thus, if this new hardware is a part of environment, it can be imagined a scenario wherein software is reinstalled and made active with this new set of organs. In other words, new non-natural vessels are provided and they incorporate the remnant of the natural that is, a kind of operational program. The latter, as the software is subsequently improved and upgraded, is a part of the process of uploading of the person advocated by Kurzweil. Though easier to imagine when we think about software, identification of the human beings with environment as a set of replaceable hardware is highly problematic.

This mode of understanding of the human being has its analogy in the history of philosophy bearing some resemblance to René Descartes' theory of *res extensa* (extended substance) versus *res cogitans* (thinking substance), where the former can be a prototype of hardware and the latter of software. Of course, we employ here a kind of simplification because Descartes was a dualist and adherents of human enhancement (at least those radical ones) are naturalists. Particularly, the French philosopher was convinced that thinking substance has not so much to do with extended substance. Its nature is completely different than the body, although they constantly accompany each other. For human enhancement theorists, however, software is in a strong connection with hardware: software is produced by hardware and essentially dependent on it. Thus, if we can treat the latter position as an example of dualism, it indeed takes place within a broader stance of naturalism.<sup>5</sup>

Gilbert Ryle, in his critique of Descartes' theory, called it "the dogma of the ghost in the machine" (Ryle 2002, 15-16). Thus, thinking substance is compared to the ghost, whereas the extended one to the machine. The latter comparison is not so far from Descartes' perception because he himself considered the body as a machine-like reality. The thinking substance, in turn grasped as the ghost, is rather a kind of interpretation. However, let us accept it as such for the sake of further analyses. What is then important in conceiving the thinking substance as the ghost is that it is a kind of subject able to act, in a sense, independently. Hence, it has its own ideas, undertakes a process of cognition of these ideas and embarks on exerting some influence on the extended substance. In short,

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<sup>5</sup> Of course, there are human enhancement theorists who go beyond Cartesian understanding of the mind. They draw on other models of human mind, for instance on those worked out in cognitive sciences. I am grateful to an anonymous reviewer for drawing my attention to this point. However, a good number of philosophers still remain in the post-Cartesian tradition. For instance, Nick Bostrom a leading adherents of human enhancement project, in his latest book (Bostrom 2014), confirms this tendency. Thus, I am going to limit my remarks, including those critical ones, to this latter group.

it possesses its own perspective, intentions and causation powers, even if limited. Can similar faculties be ascribed to gene expression made into a bulk of information and downloaded onto a computer drive?

**From Bio-machine-like Man to a Real Human Being.** The perception of the human being as an entity composed of hardware and software is rather simplistic. Hence, there arises a fundamental question about human being, namely who or what it is. There are a variety of conceptions about the human being resulting from such a question and many offer new insights and perspectives. What really matters in formulating such conceptions is that the reality of the human being himself must be a starting point. It is important to reflect of what the human being is in his bedrock. Two essential functions concerning the human being can be pointed out and reconciled but in an ordered sequence: first, reading off of whom the human being already is and, second, projecting of whom he is to be. Even if a person is more concerned with the latter, as a transhumanist or an adherent of radical enhancement, he cannot detach from or neglect the former. Hence, the question of who I am should go before the question of who I want to become.

In this paper, it cannot be delved into all aspects pertinent to the human being; understandably it is impossible to carry it out in such a short discussion. The analyses are going to concentrate only on one important aspect of human life, namely on the reality of being the human subject. This aspect is important for Cartesian thought and also for cogent proposals formulated by adherents of human enhancement. It has been pointed out above that Cartesian *res cogitans* or the spirit can be accredited with the status of subject. This paper is not to assess the completeness or adequacy of such a subject. Many philosophers, including Gilbert Ryle, question its viability and veracity. Maybe it is an extra-worldly subject<sup>6</sup> and it does not exhaust the whole truth about human subjectivity. Nevertheless, for the sake of present analyses, it can be accepted.

In the terminology operating in contemporary philosophy, to deal with the subject is to point to a possession of the first-person perspective. It means that the human subject is 'equipped' with the faculties to get to know the world and make intentions and decisions from a personal stance. As a result such a personal entity is able to acquire a unique outlook on the world and on himself. In a sense, a subject with first-person perspective is a *sui generis* centre of various activities; he is "the single owner" (Sorabji 2006, 260) of his activities and undertakes them as if "from inside" and, hence, is not primarily stimulated "from outside". Can we ascribe such characteristics to a bundle of information acting as

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<sup>6</sup> Ludwig Wittgenstein offers us an interesting epistemological experiment aimed at finding the reality of consciousness. Thus, for him it is difficult to establish what *res cogitans* as a subject is all about. Of course, it is done from a position of empirical philosophy. He reasons as follows "But what can it mean to speak of "turning my attention on to my own consciousness"? This is surely the queerest thing there could be! It was a particular act of gazing that I called doing this. I stared fixedly in front of me – but *not* at any particular point or object. My eyes were wide open, the brows not contracted (...). No such interest preceded this gazing. My glance was vacant; or again like that of someone admiring the illumination of the sky and drinking in the light" (Wittgenstein 1968, § 412).

software? Even if it is advocated successfully that that software is not a random but structured set of information, it is much more difficult to prove that it constitutes the single owner. There is a striking lack of factors to make this software into a dynamic centre of thought and action. Such software is not a source of its own undertakings but a tool that can be used by proper subjects.

The first-person perspective as a main attribute of the subject is also able to make a reference to himself, that is, to his interiority. It means that the subject is fundamentally directed to himself in order to acquire personal knowledge as well as to discover the value and meaning of his existence. The two orders are inextricably connected with each other, namely the order of cognition and the axiological order. For instance, without this complex approach, understanding of Martin Heidegger's thesis on Being would be impossible<sup>7</sup> as well as other important concepts of the human subject formulated in phenomenology (e.g. Max Scheler's) and in existentialism (e.g. J.-P. Sartre's), to mention only a few.

However, can such thinking be accommodated to the software bundle of information? Is there any place here to undertake similar investigations? The answer seems to be simple and unequivocally negative. The bundle has no powers to reflect on itself and appreciate its existence. It is passive in itself and, as mentioned above, has no interiority, and therefore, as such, is all-encompassing exteriority that is a qualitatively one-dimensional set of information with no place for self-consciousness and self-experience.

**Conclusion.** Many of the ideas currently appearing within the human enhancement debates are mainly of interest to those involved in the biomedical sciences, information technology, or futurology. For philosophers, especially those subscribing to the continental philosophy, they bring with them some basically *prima facie* curiosity. In-depth analyses reveal an unjustified tendency to reduce the human being to something alien to the human world or something constituting merely a part of the latter (*pars pro toto*). Enquiries about the human being cannot be adequately answered because of the reductionist tendency in naturalistic philosophy whereby the human being is relegated to the constituents of his surroundings and to a virtual reality (i.e. bundle of electronically recorded information). If we accept such a tendency, we must then acknowledge that the specificity and uniqueness of the human person disappears and we do not know who or what the emerging creature would be.

This conclusion does not mean that the human enhancement project should be abandoned altogether. In itself, it contains some interesting intuitions and thus is worthy of further development. However, what is really essential is to determine the concept of the human being at the very outset. Thus, adherents of this enterprise should be aware who is to be improved and in what way. Only then can they place realistic expectations before

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<sup>7</sup> He claims as follows, "in each case Dasein is mine to be in one way or another. Dasein has always made some sort of decision as to the way in which it is in each case mine"; or "Dasein is an entity which, in its very being, comports understandably towards that Being" (Heidegger 1962, 68. 78). This emphasis on Dasein as "mine" brings with it an important axiologically-laden message: this Dasein is very dear to me.

enhancing procedures and engage scientists in a worthwhile enterprise. There are two indispensable postulates that should be taken seriously into account by European and continental philosophers. Firstly, that the concept of the human being as a multi-dimensional creature be accepted; secondly that future projects and advances in this area seeking to enhance the human being must include his exteriority as well as interiority.<sup>8</sup>

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<sup>8</sup> All in all, it is really important to introduce in such debates a non-naturalistic concept of the human person (see e.g. Holub 2016, 174-180).