

Towards a Moderate Stance on Human Enhancement*

Nikil Mukerji[†]

nikil.mukerji@lrz.uni-muenchen.de

Julian Nida-Rümelin[‡]

julian.nida-ruemelin@lrz.uni-muenchen.de

ABSTRACT

In this essay, we argue against radical ethical views about human enhancement that either dismiss or endorse it *tout court*. Instead, we advocate the moderate stance that issues of enhancement should be examined with an open mind and on a case-by-case basis. To make this view plausible, we offer three reasons. The first lies in the fact that it is difficult to delineate enhancement conceptually, which makes it hard to argue for general ethical conclusions about it. The second is that an appropriate view of the edifice of moral theory suggests that tenable moral judgements about human enhancement are the result of a careful consideration of the pros and cons that attach to the use of a specific enhancement technology. Lastly, we show that important normative factors in the enhancement debate can be used both in arguments for and in arguments against enhancement. The bottom line of our discussion is that we should treat issues of human enhancement like we do any other ethical issue, *viz.* by weighing up the reasons pro and con.

* We would like to thank Thomas and Theo Kaczmarek for their helpful comments on an earlier version of this paper.

[†] Ludwig-Maximilians-Universität München, Germany.

[‡] Ludwig-Maximilians-Universität München, Germany.

Introduction

In connection with human enhancement, many important ethical issues arise. Granted, certain technologies that are currently being discussed still belong in the realm of science fiction. Some of them may never be technologically feasible. Others, however, will sooner or later become very real and available. And once they are, we as a society need to be prepared. We need to have a clear comprehension of the ethical dimensions of these technologies before we can enshrine into law the rules that shall constrain their use. The current ethical debate about human enhancement is marked by a sharp dispute between enthusiasts and sceptics. In this essay, we try to steer a course between these two extremes. We want to make a case for a moderate stance, which avoids both overexcitement and undue scepticism. In our view, the ethical challenges of human enhancement should be approached like any ethical issue, *viz.* with an open mind and on a case-by-case basis.

We proceed in three steps. In the first section, we start with a few well-known remarks on the notion of human enhancement. In doing that, we seek to cast doubt on the idea that the enhancing use of biomedical technologies can be clearly delineated, e.g., from their therapeutic use. This lack of conceptual clarity suggests, in turn, that general claims about enhancement are hard to support. In the second section, we clarify, from a meta-theoretical stance, how one should go about discussing the ethical issues that enhancement technologies give rise to. We oppose rationalism and favour a broadly pragmatist conception, which takes our lifeworld seriously. The latter view suggests that the right way to approach the issue of human enhancement is to consider all normative considerations that may reasonably be seen as relevant to the issue at hand and to weigh them up in order to arrive at an all-things-considered moral verdict. This idea, too, casts doubt on any radical position. In the third section, we briefly consider a number of normative considerations that have been employed in the enhancement debate. We explain that all of them can be used in pro-enhancement and anti-enhancement arguments. This suggests that we had better examine each issue separately, carefully and with an eye to all relevant facts.

1. Human Enhancement – The Very Idea

The idea of human enhancement is not new. It has been a constant concern of scientists, philosophers, public intellectuals and politicians throughout the

course of history. In this connection, of course, Nietzsche's famous idea of the "Übermensch" comes to mind.¹ But there are various literature sources which attest that the notion of human enhancement dates back much farther than the 19th century. It can even be found in one of the earliest pieces of literature, the Sumerian *Epic of Gilgamesh*, in which the king Gilgamesh sets out to find a substance that can turn him into an immortal. Ever since, a fair share of writers has spun tales about the fountain of youth. And a number of explorers – most famously, perhaps, the Spanish Marquess Juan Ponce de León – have embarked on a quest to actually find it.² Their attempts have, of course, been to no avail. Science, however, has progressed to a point where it has become possible to enhance human beings in ways similar to the old speculations. And a number of incredible innovations may be just around the corner. Though significant ethical issues attach to the possible deployment of these technological advances, advocates of human enhancement paint an auspicious vision of a transhumanist utopia (e.g., Bostrom 2003).

But what is "human enhancement" anyway? As it turns out, it is quite hard to pin down the precise meaning of that term. There is a weak notion, according to which humans have been engaging in enhancement for a rather long time (see, e.g., Allhoff et al. 2009). Our ancestors developed all sorts of gadgets, e.g. bow and arrow, which helped them to become more effective hunters. The use of binoculars has helped them to improve their vision manifold. And through the use of pen and paper humans have vastly extended their recollection and reasoning capacities. Though these examples are undoubtedly forms of human enhancement in a weak sense, they are not enhancements of the problematic type that is at issue in the current debate. What, then, do ethicists talk about when they discuss human enhancement?

It seems that when ethicists use the term "human enhancement" they predominantly intend by it the more drastic types of intervention into the human body that use the means of modern biotechnology and biomedicine. But they do not mean all of them. Self-declared enhancement sceptics often insist that they are welcoming of the means of biotechnology when they are used purely for the sake of medical treatment (e.g. Kass, 2001 and 2003; Sandel, 2007). They oppose their use only in cases where they are deployed in order to give a person "supernormal" abilities.

¹ It is, however, contested whether Nietzsche should be seen as a precursor of today's transhumanists who advocates. See the exchange between Bostrom (2005a), Sorgner (2009) and Hauskeller (2010).

² Bostrom (2005a) offers an instructive overview over the history of transhumanism.

The enhancement/treatment distinction is often illustrated using the example of Ritalin. Ritalin is a psychoactive drug that was first developed in the 1960s in order to treat patients with attention deficit hyperactivity disorder (or ADHD, for short). Nowadays it is widely used by “normal” college students (particularly in the USA) to improve their ability to focus and to work longer hours.³ Sceptics about enhancement may, then, condone (or, perhaps, even welcome) the initial therapeutic use of Ritalin. But they would be critical of its second, enhancing use.

Prima facie the enhancement/treatment distinction seems to be a good way to draw the line between enhancing uses and non-enhancing uses of biotechnology. But well-known problems are associated with this distinction. It obviously presupposes the specification of a point of reference that defines “normality”. In principle, there are two options. One way to specify the reference point is with regard to a given individual. Call this the *intrapersonal rendering* of the treatment/enhancement distinction. Suppose that a given human individual naturally (i.e. without intervention) possesses a characteristic *C* to the extent *x*. *x* is, then, her “normal” level of *C*. Any intervention which would increase her level of *C* beyond *x* and to the point of, say, $x + e$ would then be viewed as an enhancement. In contrast, if the individual had lost *C* to the extent *i* (perhaps due to injury) and an intervention would restore *C* to its natural level $x (= x - i + t)$, then that invention would be considered a medical treatment. Now the problem with the intrapersonal rendering of the normal reference point is that every treatment of an inborn condition (e.g. ADHD) is considered an enhancement although, intuitively, it should count as the medical treatment of an inborn condition.⁴ The *interpersonal rendering* of the treatment/enhancement distinction gives rise to a different problem. If we specify the normal expression of *C* as lying within a certain range of deviation from some average level *x* in a given population, then we have to choose an arbitrary cut-off point. E.g., mental retardation is commonly defined as having an IQ of 70 or below (i.e. two standard deviations below the statistical mean). On the interpersonal rendering of the treatment/enhancement distinction, we would have to say, therefore, that the medication of a person with an IQ of 69 is

³ In connection with ADHD, there is, of course, the worry that “the borderline is shifting to include more people in disease and disorder categories.” (Schermer, 2007, p.34)

⁴ As Bostrom and Roache (2008) point out it also leads to the counter-intuitive conclusion that an unenhanced individual, who has a high natural level of *C*, can possess *C* to a greater extent than an enhanced individual, who happens to have a low natural expression of *C*.

a treatment, while the medication of a person with an IQ of 71 is an enhancement. This, of course, is unsatisfactory. A sharp treatment/enhancement distinction seems, thus, unwarranted.

There are, to be sure, various other attempts to draw a sharp line between enhancing and non-enhancing uses of biotechnology. Given the scope of this essay, we cannot address them here. Let us briefly remark, however, that all of them seem to us rather unsatisfactory.⁵ If we are right about this, then this is, of course, bad news for anyone who seeks to argue for a sweeping conclusion in favour of or against human enhancement. Does this mean, then, that issues of human enhancement are intractable? Of course, it does not. It is still possible to proceed on a case-by-case basis and to consider the reasons that speak for and against a specific enhancement measure. This procedure does not require a definition of enhancement. For if we only look at the issue at hand and the reasons pro and con, the question whether we are talking about an instance of human enhancement becomes irrelevant.

2. Human Enhancement and Moral Theory

In this section, we would like to strengthen our case further by making a few general remarks about the edifice of moral theory. It is clear that when we debate an ethical issue, such as human enhancement, we first need to agree – albeit implicitly – which view of moral justification we want to follow. For if we fail to do that, we fail to agree on the criteria that a tenable answer to our moral problem has to fulfil. This, in turn, will make it hard to reach agreement on the issue at hand. There are, broadly speaking, two views of moral justification. The first is based on the idea that all answers to moral problems follow – directly or indirectly – from a first principle that is absolutely certain and provides an unshakable foundation for knowledge (lat.: *fundamentum inconcussum*). This idea is often associated with the work of René Descartes. In his *First Meditation*, Descartes writes that it had occurred to him

that at some stage in my life the whole structure [of opinions, NM & JNR] would have to be utterly demolished, and that I should have to begin again from the bottom up (...). (Descartes, 1641/2008, p. 17)

⁵ Of course, it is possible to define enhancement in a strategic way, such that it becomes possible to support general conclusions. But this seems to require a gimmicky definition that would presumably not capture what we intuitively understand by the term “enhancement”.

Shortly after that, Descartes remarks that “up to now whatever I have accepted as fully true I have learned either from or by means of the senses” (Ibid., 18). His senses, however, have, on occasion, deceived him. And thus, he reasons, sensory data cannot provide an indubitable foundation for all of knowledge. In his view, only a rationalist position is tenable because only *a priori* truths, i.e. truths of *reason*, cannot be doubted. The one on which he chooses to rebuilt his system is, of course, the truth that he exists, which can be known *a priori* from the indubitable fact that he is thinking, as Descartes’ famous *cogito* argument has it. It provides the unshakable foundation for all knowledge. At any rate, so argues Descartes.

In ethics, the prime example of the Cartesian rationalist position is that of contemporary utilitarianism, as it is held, e.g., by Hare (1981), Singer (1979/1993) and Smart (1973). The utilitarian system contains one fundamental proposition – the “principle of utility”, as Bentham (1789/1838) called it – which does all the justificatory work. This principle says, roughly, that an act is right if and only if it maximizes total happiness.⁶ Utilitarians claim that all moral questions are answered in direct or indirect reference to that first principle. Accordingly, the practical challenges of human enhancement would have to be addressed as follows. First, we agree on the criterion for rightness and wrongness. That is, we agree that an act is right if and only if it maximizes the sum total of happiness in the universe. Then, we investigate the issue at hand. We examine the choice options – i.e. whether to enhance or not to enhance a given human being in a given case – and project their consequences for overall happiness. Finally, we simply choose the option that fares better in that comparison. Case closed.

There is an alternative to Cartesian rationalism that regards our lifeworld and the normativity it is laced with as the basis of ethical theorizing. It recognizes that our practice is interwoven with norms that regulate the way we interact in our lifeworld and views ethics as an attempt to explicate that practice as well as to systematize and revise it. Austin’s (1963) speech act theory may be seen as an attempt to do the former, while Rawls’s (1951 and 1971/1999) “reflective equilibrium” methodology is an attempt to do the latter. The interworking of those two bodies of theory can be illustrated as follows. Take, e.g., the speech act of promising. Suppose we observe that A promises B to Φ . In that situation, we observe an empirical fact, *viz.* that A promises B to Φ . As

⁶ For a more comprehensive statement and systematic critique of that doctrine, see Mukerji (2013).

members of our language community we understand, however, that by giving B the promise to Φ , A *ipso facto* incurs an *obligation* to Φ . In addition, therefore, we make a normative observation, *viz.* that A incurs an obligation to Φ . To that extent, then, A has a reason to Φ , which means, in all likelihood, that she should, in fact, Φ . As far as explicating the normative content of our lifeworldly institution of promising, this seems to be what we should say. Now where does reflective equilibrium come in? To see this, it is important to recognize that promises are but one aspect of our lifeworldly practice. We do believe that we should keep our promises. But we do not believe that our moral obligations are only a matter of living up to promissory obligations. There are other moral considerations that are important.⁷ This is easy to see. Suppose, e.g., that by breaking her promise, A can prevent some morally horrendous event. In that case, we would certainly judge that she should break her promise. At some stage, then, the question arises how our moral judgements fit together into a coherent whole. This is where the idea of reflective equilibrium comes in. We seek reflective equilibrium when we attempt to systematize our moral judgements, that is, when we attempt to work them into a dense network of logically connected claims that make up a moral theory. Systematicity, however, is not the only guiding idea. On occasion, it may turn out that our moral judgements are inconsistent. When they are, we need to revise and reformulate at least some of them in order to make them consistent. We do that according to the subjective degree of confidence that we invest them with. That is, we keep convictions that we are rather sure about and drop conflicting judgements that seem to us less certain (Nida-Rümelin 2009).

Having introduced the two views of the edifice of moral theory, we may ask which is more appropriate. Given the scope of this essay it is, of course, impossible to give a comprehensive answer to that question.⁸ For this reason, we shall confine ourselves to one brief remark, *viz.* that the rationalist view combines two rather incredible assertions. On the one hand, it holds that at least one view is absolutely certain, *viz.* the first principle that the whole of moral theory is built upon. On the other hand, there is radical doubt. Any moral judgement that collides with the first principle has to be given up. These two ideas seem maddeningly absurd. The notion that certain ideas cannot be given up *under any circumstances* appears to be plainly unreasonable. In fact,

⁷ Certain moral considerations can override promissory obligations. Some examples can be found in Mukerji (2014).

⁸ See, however, Nida-Rümelin (2009) for a thorough treatment.

this has long been recognized in the philosophy of science (see Nida-Rümelin 2009). It seems equally preposterous to suggest that we should be radically doubtful about all the moral beliefs that we currently entertain. The second view acknowledges both of these points. It is fallibilist insofar as it recognizes that any moral judgement may, in principle, be doubted. But it dispenses with radical doubt. For it acknowledges, as Wittgenstein has noted, that doubt can never be radical, but is intelligible only against the background of beliefs that are not doubted (Wittgenstein 1969). To that extent, then, our approach may be called “pragmatist”.⁹

This said, let us point out that our broadly pragmatist view contains an endorsement of what Allen Buchanan calls the “Balancing Approach”. This approach suggests that the right way to go about discussing issues of human enhancement (as well as any other issues) is to “look both at the considerations in favor of enhancement and those against and to strive for the judgment that reflects a proper appreciation of both.” (Buchanan 2011, 59) In other words, it suggests that any radical stance either for or against enhancement should be rejected and that the question about the permissibility of human enhancement and its ethical limits is an open question that can be answered only if all the reasons – pro and con – are duly considered and appropriately weighed on a case-by-case basis.¹⁰

3. Human Enhancement – Pro and Con

Up until now, we have given two reasons why sweeping generalizations about human enhancement seem dubious. Firstly, it is hard to see how such a view might be supported argumentatively, given that a clear definition of enhancement is not available. Secondly, the pragmatist conception of moral justification that we favour supports the Balancing Approach, which suggests that we

⁹ Note that calling a philosophical view pragmatist may mean different things. As Hookway (2013) points out, a philosophical view subscribes to “pragmatism in the narrow sense” if it accepts what C. S. Peirce’s “pragmatist maxim”. In contrast, it subscribes to “pragmatism in the wider sense” if it rejects the Cartesian quest for absolute certainty and accepts the fallibilist idea that “that any of our beliefs and methods could, in principle, turn out to be flawed.” What we said above, makes our view pragmatist in the wider sense, while we can allow ourselves to remain agnostic about pragmatism in the narrow sense.

¹⁰ The weighing of reasons, we should add, is a distinct capacity of human being as rational, free and responsible agents. To that extent, it cannot be algorithmized (see Nida-Rümelin, forthcoming), but demands, as Buchanan points out, a “proper appreciation” by human beings as moral agents.

should be wary of sweeping generalizations about human enhancement. But suppose, for argument's sake, that it was possible to come up with a clear and intuitively satisfactory definition. In that case, the Balancing Approach might support a general conclusion in favour of or against human enhancement. For it may turn out that all arguments line up on one side of the debate. In this section, we go through a number of normative considerations that are relevant in the context of enhancement, thereby making clear that that idea is rather doubtful.

3.1. The Human Good

The primary idea that drives supporters of human enhancement is, it seems, a concern for human welfare. Those who support enhancement mainly do so because they want human beings to live more fulfilling and better lives. As Steven Pinker points out, the advances made in the biomedical sciences, "if translated into freely undertaken treatments, could make millions of people better off and no one worse off." (Pinker 2008)

There are, of course, various views about the nature of human welfare. There is, e.g., the hedonist view, according to which a life goes well to the extent that the person living it enjoys pleasurable sensations (and is able to avoid unpleasant ones). According to the preferentist view, a life is good to the extent that the preferences of the person living it are fulfilled. And objective list theorists believe that well-being is to be seen as an index of goods. On their view, a life goes well to the extent that the person living it is healthy, emotionally intact, able to develop her capacities and so on. Since there are diverse views on the nature of human welfare, it is clear that the effects of a given enhancement technology may be judged differently depending on the theory of welfare that is used to evaluate it. Arguably though, there will be certain uses of human enhancement technologies that will increase human welfare on all plausible accounts of well-being. Increased health, e.g., is a good on all views. It is an intrinsic good on objective list accounts of well-being. The same holds on the preferentist view, at least if we can assume that every reasonable person should value health. On a hedonist view, improved health may count as an instrumental good because it is certainly one of the preconditions of a pleasurable life. There are, then, at least some welfare considerations that strongly speak in favour of certain forms of enhancement.

But welfare considerations may also be used to oppose certain types of enhancement. The extension of a human capacity does not necessarily add value to a life. This is easy to see. Suppose, e.g., that it was possible to improve the eyesight of a person up to a point where she can see at the microscopic level. This would certainly be helpful in a number of situations. But it would surely be quite a pain in many others. It would enable her to see all the microbes crawling around and the many tiny flaws in the skin of a loved one. It is thus plausible to regard the radical enhancement of our sense of vision as a doubtful “improvement” – one that is presumably not worth wanting.¹¹ If this example does not convince you, there are many others. The point is simply that enhancements do not necessarily increase human welfare. Whether they do depends on the empirical facts about the exact kind of enhancement that we are dealing with.

3.2.Risk

The promise of positive welfare effects seems to be the most prominent argument on the pro side of the human enhancement debate. In contrast, critics of enhancement technologies commonly emphasize their risks. The members of the President’s Council on Bioethics, e.g., warn in their report *Beyond Therapy* (2003) that

[t]he human body and mind, highly complex and delicately balanced as a result of eons of gradual and exacting evolution, are almost certainly at risk from any ill-considered attempt at “improvement.” (President’s Council on Bioethics, 2003, p. 287)

But even those who are generally sympathetic to the idea of human enhancement concede that the issue of risk has to be taken very seriously. This seems plausible. Even if the potential benefits of an enhancement should turn out to be enormous, it still seems inadvisable to jeopardize the comfortable level of existence that we enjoy now (at least in most parts of the Western world). This appears to hold even in the case of relatively small risks if the possible damage is significant. If we err, it seems, we had better err on the side of caution. This appears to hold, in particular, in the case of entirely new technologies that we have very little experience with. After all, even

¹¹ We owe this example to Allen Buchanan.

technologies that initially seem entirely benign may eventually turn out to involve quite significant risks.

It should be noted, of course, that considerations about the risks of enhancement do not give us a reason to oppose it categorically. They speak against a given enhancement measure only if the risk is so significant that it outweighs its expected benefits or the extent of the conceivable damage is quite large. That, however, is enough to oppose certain types of enhancements almost categorically – at least for now. It seems commonsensical, for this reason, to oppose any far-reaching interventions into the genetic makeup of humans and doubly so if these interventions can affect future generations through germ-line genetic modifications.

We may record, then, that certain considerations of risk speak against particular kinds of enhancements that are unsafe to use, at this stage anyway. But risk assessments may also be used to support a pro enhancement stance. Ingmar Persson and Julian Savulescu have done so in their recent book *Unfit for the Future* (2012). They argue that technological advances and modern-day problems, such as global warming, have tremendously increased the risks that humanity faces. E.g., in a liberal democracy the requisite knowledge to develop weapons of mass destruction is easy to come by and may, in fact, be used by a bunch of radicals in order to eradicate life on earth. In view of such immense risks, Persson and Savulescu propose to consider *moral* enhancement as a possible solution. They believe that we should try to deploy the means of biotechnology in order to make humans more moral and cooperating, thus mitigating the risks that they pose for others. There are further risk-based arguments that may be advanced in order to support certain kinds of enhancement. Nick Bostrom, e.g., homes in on health hazards. He argues that individuals who have an unenhanced genome may run risks “that can be extremely grave.” To him, this is a reason that might justify genetic human enhancement, as “it would be irresponsible to risk starting someone off in life with the misfortunate of (...) an elevated susceptibility to disease.” (Bostrom, 2005b, p. 212) As it turns out then, considerations regarding risk may speak for and against certain types of human enhancement.

3.3. Justice

Considerations of justice are further factors that are obviously important when it comes to issues of human enhancement. For one thing, there is the issue of

distributive justice. Critics of the use of enhancement technologies may object that these technologies will tend to favour the rich who will be able to use them to a greater extent. This will give them an even greater advantage (e.g. in the job market) and will, hence, exacerbate distributive injustices.

This argument is *prima facie* plausible, particularly when it is applied to forms of cognitive enhancement, which are likely to give those who have them a competitive advantage in the race for desirable positions in society. Note, however, that the reasoning is based on at least two assumptions. Firstly, it supposes that access to enhancements will be determined by markets which will discriminate against individuals who cannot afford them. Secondly, it assumes that enhancements will be expensive and that they will, hence, benefit only rich folks. Whether these two conditions are fulfilled depends, of course, on the specifics of the case. If there were suitable governmental programmes, enhancements could be shared out on a more egalitarian basis, such that their benefits would accrue to members of all social groups. And if the price of a given enhancement was low enough, market allocations would not be much of a problem because everybody would be able to afford their fair share. In addition, some proponents of cognitive enhancement have argued that certain psychoactive drugs may actually increase distributive justice, as they tend to work better for people at the low end of the IQ spectrum, thus mitigating a presumably unwanted source of socioeconomic inequality.

But justice not only relates to distributive socioeconomic outcomes and their inequality. Rights and liberties play a great role, too (Rawls 1971). Proponents of enhancement have used this aspect of justice to make their case. Anita Silvers, e.g., argues that

In an era that promises enormous expansion of control over our biological processes, liberal democratic theory should prize the right of citizens to be biologically different from one another, and to diverge from species typicality – from supposed biological norms – without restrictive social penalties being imposed. (Silvers, 2008, p. 79)

And the biologist Audrey de Grey tries to garner public support for his anti-aging research by appealing to what he takes to be a “fundamental right to avoid an unnecessarily early death.” (de Grey, 2005, p. 661)

Rights-based arguments, however, have not only been used by proponents of enhancement but also by critics. Francis Fukuyama, e.g., voices concerns that human enhancement might threaten the very foundation of human rights. By modifying our biology, he fears, we might “disrupt either the unity or the

continuity of human nature, and thereby the human rights that are based on it.” (Fukuyama, 2002, p. 172) It seems, then, that considerations of justice may be used to support both a pro-enhancement and an anti-enhancement stance. Which considerations weigh heavier can only be decided if we pay close attention to the specifics of the individual case.

3.4. Autonomy

A fourth factor that has played a great role in the enhancement debate is autonomy.¹² The basic notion behind it is that of self-government. A person may be seen as autonomous to the extent that the principles she lives by are self-imposed, such that she can conceive of herself as the *author* of her life. Autonomy is conceptually linked to other important philosophical ideas, *viz.* rationality and responsibility (Nida-Rümelin, 2001, 2005 and 2011). And it may be seen as the basis of human dignity, which is, of course, a further factor that has figured in the enhancement debate.

Jürgen Habermas has employed the notion of autonomy to make a case against genetic enhancement.¹³ He argues that the prenatal genetic enhancement of a human being “changes the initial conditions for the identity formation of another person in an asymmetrical and irrevocable manner” (Habermas, 2003, p. 81) The genetic designer, argues Habermas, “makes himself the *co-author of the life of another*, he intrudes – from the interior, one could say – into the other’s consciousness of her own autonomy.” (ibid., p. 81) The enhanced person cannot, in other words, conceive of herself as the *sole* author of her life and thus lacks “a mental precondition for coping with the moral expectation to take (...) the sole responsibility for her own life.” (ibid., p. 82).

But the idea of autonomy can also form the basis of an argument in favour of the permissibility of enhancement so long as the choice to be enhanced is made by an autonomous individual. We may believe that enhancement is risky. We may question its effects on human welfare. But if another person, who is capable of deliberating and choosing autonomously, decides that she wants to be enhanced and if this does not have any adverse effects on anybody else, then our respect for that person’s autonomy commands that we leave that choice up her.

¹² The term “autonomy” can, of course, refer to a number of related concepts. For a disambiguation, see Christman (2011).

¹³ Meanwhile, the argument has been widely discussed. For a critique, see, e.g., Bostrom (2005b).

We may conclude, then, that the various normative considerations (to do with welfare, risk, justice and autonomy) do not, in and of themselves, support a pro enhancement or an anti-enhancement stance. Discussants on both sides of the debate can draw on these factors to make their case. This, of course, does not show that every position in the debate is equally justifiable. Of course, some of the aforementioned arguments are better than others. And some ethical views about human enhancement are certainly more appropriate than others. But it seems unlikely that the most appropriate view is to think of all enhancements as permissible or to reject them all as impermissible. In fact, this would seem just as unjustifiable as the view that all medical treatments are permissible or impermissible. Obviously, a number of medical treatments are ethically justifiable. Others, however, are not. Likewise, we should expect that some enhancements are morally justifiable, while others are not. In order to find out which are which, we need to consider all morally relevant considerations and carefully weigh them on a case-by-case basis. General ethical conclusions about human enhancement are, it seems, not to be had.

Conclusion

In this essay, we have argued that radical views in favour of or against human enhancement are dubious and that we should, in effect, adopt a moderate stance. On our view, we should carefully consider the various ethical questions that arise in the context of human enhancement, approach them with an open mind and on a case-by-case basis. To make this view plausible, we showed that a clear definition of enhancement is hard to come by which, of course, makes it hard to support any sweeping conclusion about enhancement *per se*. Then, we showed that the broadly pragmatist view of the edifice of moral theory, which we take to be correct, lends further support to our thesis. Finally, we went through some important normative factors in the enhancement debate and showed that they can be used in arguments for and in arguments against enhancement. The bottom line of the reasoning that we have presented is that we should treat issues of human enhancement like we do any other ethical issue, *viz.* by carefully considering and weighing up the reasons pro and con.

REFERENCES

- Allhoff, F., Lin, P., Moor, J., Weckert, J. (2009). *Ethics of Human Enhancement: 25 Questions & Answers* (Version 1.0.1) http://ethics.calpoly.edu/NSF_report.pdf. (Accessed March 1, 2014)
- Austin, J. L. (1962). *How to do things with words*. Oxford: Clarendon Press.
- Bentham, J.. 1789/1838. *The Collected Works of Jeremy Bentham: Published under the Superintendence of his Executor John Bowring* Vol. 1. Edinburgh: Williams Tait.
- Bostrom, N. (2003). The Transhumanist FAQ – A General Introduction, <http://www.transhumanism.org/resources/FAQv21.pdf>. (Accessed March 1, 2014)
- Bostrom, N. (2005a). A History of Transhumanist Thought, *Journal of Evolution and Technology* 14(1), 1-25.
- Bostrom, N. (2005b). In Defense of Posthuman Dignity, *Bioethics* 19(3), 202-214.
- Bostrom, N., Roache, R. (2008). Ethical Issues in Human Enhancement, in Ryberg, J., Peterson, T., Wolf, C. (eds.). *New Waves in Applied Ethics*. Basingstoke: Palgrave Macmillan, 120-152.
- Buchanan, A. (2011b). *Beyond Humanity?* Oxford: Oxford University Press.
- Christman, J. (2011) "Autonomy in Moral and Political Philosophy", in Zalta, E. N. (ed.). *The Stanford Encyclopedia of Philosophy*, <http://plato.stanford.edu/archives/spr2011/entries/autonomy-moral>. (Accessed March 1, 2014)
- de Grey, A. D. N. J. (2005). Life extension, human rights, and the rational refinement of repugnance, *Journal of Medical Ethics* 31: 659-663.
- Descartes, R. (1641/2008). *Meditations on First Philosophy*. Translated by Michael Moriarty. Oxford: Oxford University Press.
- Fukuyama, F. (2002). *Our Post Human Future*. New York: Farrar, Straus and Giroux.
- Habermas, J. (2003). *The Future of Human Nature*. Cambridge: Polity Press.
- Hare, R. M. (1981). *Moral Thinking – Its Levels, Method and Point*. Oxford: Oxford University Press.

- Hauskeller, M. (2010). Nietzsche, the Overhuman and the Posthuman: A Reply to Stefan Sorgner, *Journal of Evolution and Technology* 21(1), 5-8.
- Hookway, C. (2013) "Pragmatism", in Zalta, E. N. (ed.). *The Stanford Encyclopedia of Philosophy*, <http://plato.stanford.edu/archives/win2013/entries/pragmatism>. (Accessed March 1, 2014)
- Kass, L. R. (2001). L'Chaim and Its Limits: Why Not Immortality?, *First Things* 113, 17-24.
- Kass, L. R. (2003). Ageless Bodies, Happy Souls, *The New Atlantis* 2003(1), 9-28.
- Mukerji, N. (2013). Utilitarianism, in Lütge, C. (ed.) *The Handbook of the Philosophical Foundations of Business Ethics*. Dordrecht: Springer, 297-312.
- Mukerji, N. (2014). Consequentialism, Deontology, and the Morality of Promising, in Jauernig, J., Lütge, C. (eds.). *Business Ethics and Risk Management*. Dordrecht: Springer, 111-126.
- Nida-Rümelin, J. (2001). *Strukturelle Rationalität*. Stuttgart: Reclam.
- Nida-Rümelin, J. (2005). *Über menschliche Freiheit*. Stuttgart: Reclam.
- Nida-Rümelin, J. (2009). *Philosophie und Lebensform*. Frankfurt am Main: Suhrkamp.
- Nida-Rümelin, J. (2011). *Verantwortung*. Stuttgart: Reclam.
- Nida-Rümelin, J. (forthcoming). Agency, Technology and Responsibility, *Politica & Società*.
- Persson, I., Savulescu, J. (2012). *Unfit for the Future*. Oxford: Oxford University Press.
- Pinker, S. (2008). The stupidity of dignity. *The New Republic*. <http://www.tnr.com/article/the-stupidity-dignity> (Accessed March 1, 2014)
- President's Council on Bioethics. (2003). *Beyond Therapy*. https://bioethicsarchive.georgetown.edu/pcbe/reports/beyondtherapy/beyond_therapy_final_webcorrected.pdf (Accessed March 1, 2014)
- Rawls, J. (1951). Outline of a decision procedure for ethics, *Philosophical Review* 60(2), 177-197.
- Rawls, J. (1971/1999). *A Theory of Justice*. Cambridge, MA.: Harvard University Press.

- Sandel, M. (2007). *The Case against Perfection: Ethics in the Age of Genetic Engineering*. Cambridge, MA.: Harvard University Press.
- Schermer, M. (2007). The Dynamics of the Treatment-Enhancement Distinction: ADHD as a Case Study, *Philosophica* 79, 25-37.
- Silvers, A. (2008). The right not to be normal as the essence of freedom, *Journal of Evolution and Technology* 18(1), 79-85.
- Singer, P. (1979/1993). *Practical Ethics*. Cambridge, UK: Cambridge University Press.
- Smart, J. J. C. (1973). An Outline of a System of Utilitarian Ethics. In Smart, J. J. C., Williams B. A. O. (eds.). *Utilitarianism: For and Against*. Cambridge: Cambridge University Press, 3-74.
- Sorgner, S. 2009. Nietzsche, the Overhuman, and Transhumanism, *Journal of Evolution and Technology* 20(1), 29-42.
- Wittgenstein, L. (1969). *On Certainty*. Edited by G.E.M. Anscombe and G. H. von Wright. Oxford: Basil Blackwell.

